

A comparative socio-cultural study of  
design in Korea, Japan and Russia from  
World War II to the Millennium

MIN-CHUL CHOI

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Requirements of the University of Brighton  
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## **Declaration**

*I declare that the research contained in this thesis, unless otherwise formally indicated within the text, is the original work of the author. The thesis has not been previously submitted to this or any other University for a degree, and does not incorporate any material already submitted for a degree.*

*Signed*

*Dated*

*22<sup>nd</sup> December 2015*

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## **Abstract**

In this thesis, I will explore Korean<sup>1</sup> design in relation to the following factors: Imperialism, the Cold War, rapid industrialisation, an improving economy, the advancement of technology, globalisation, Eastern ideals, and sustainable and inclusive design. The purpose of this research programme is to help define the central characteristics of Korean design, and propose suggestions about its future trajectory. I compare the history of Korean design with that of Japan and Russia, partly because this will help to explore the ways in which Imperialism, the Cold War and industrialisation have affected Korean design. Analysis will be presented that demonstrates how the political, social and economic circumstances present in each of the three countries have impacted upon the nature of their design. Furthermore, American and British design policy and practice will be frequently referenced since it has exerted an important influence on Korea, Japan and Russia. In addition, analysis will also be made of the impact of globalisation on design in Korea, Japan and Russia (in so doing particular emphasis will be placed on the automobile and electronic industries since these have been important drivers of increased globalisation).

This study is important because Korean design, driven by technological advancements, could heavily influence other developing countries such as China and Vietnam, much like Japan did in the 1990s. However, to date the central characteristics of Korean design have not been fully explored in any real detail. I will argue that the historical circumstances in which Korea has found itself has meant that Koreans have struggled to establish a clearly defined social and cultural identity. As a result Korean designers in the late 20<sup>th</sup> and the present century have struggled to reflect Korean cultural identity since its distinguishing features lack satisfactory definition. This thesis aims to address this issue and define modern Korean design identity in relation to Eastern ideals (such as those derived from Buddhism, Confucianism and Daoism) that are embedded in Korean culture. This analysis then leads me to recommend that Korea embraces sustainable and inclusive design, and I also make other proposals about the future direction of Korean design philosophy.

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<sup>1</sup> Unless otherwise stated 'Korea' and 'Korean' will refer to South Korea and South Korean.

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## INTRODUCTION

Design is a creative activity which produces socio-cultural artifacts and which itself is a product of culture. As such, the nature of design is often said to be a cultural measure of the society in question - it is a tangible result of the reciprocal interaction of individuals within a given socio-economic substrate. Design conveys meaning, in the form of technology or art. Because they reflect the characteristics of the culture and society in question, the objects thus created, are able to represent the identity of a person, a company or a nation.

Very little has been written about the history of design in Korea. In the only significant publication by a Korean academic on the subject, Kim Chong-gyun claims that no one really understands this history.<sup>2</sup> In this thesis I seek to understand Korean design by examining not only its history, but also those of Japan and Russia. It is important to realise that the wide spectrum of political, social and cultural activity occurring in every society is relevant to the consideration of any particular society's national identity, and therefore its design identity. Each country in this study has experienced either capitalist and/or communist systems, and furthermore each country has been undergone industrial standardisation.

A crucial insight forming the central premise of this work is that design and socio-cultural practice are in fact mutually dependent processes. Design policy and practice have an influence on socio-economic and cultural factors, which in turn provide the context or 'socio-cultural environment' in which design policy and practice occur. It is for this reason that design history is important. This thesis provides a description of Korean design and design identity, as well as suggesting a strategic direction for the future of Korean design. Essentially, I approach the subject from an anthropological perspective, but I also draw on other disciplines such as sociology, cultural studies and economics.

At the beginning of the 20th century Korea was under Imperial Japan's control, and the Japanese were thus able to impose the design concept of 'Doan'<sup>3</sup> on Korean designers. Furthermore in the mid-20th century Japan's industry and

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<sup>2</sup>. Kim Chong-gyun, *Korea Design History: Read the History of Western Design a Hundred Times and You Still Won't Have the Context with Which to Understand the History of Korean Design (Hanguk Dijain-sa: Sogu ui Dijain-sa rul Paekpon Turyoda Poado Ihae Halsu Omnun Uri Dijain Iyagi)*, Seoul: Mijinsa, 2008.

<sup>3</sup> Strictly speaking, Doan means 'Pattern' as there is no word for design in Asian languages. Doan did not become synonymous with design until the early 20<sup>th</sup> century. The translated spelling varies from country to country; a Chinese translation is written as 'Tuan'; a Japanese translation uses 'Zuan'; while a Korean translation is written as 'Doan'. I use 'Doan' in this paper.

design became a model that Korea sought to emulate. Thus, Japan influenced Korean design not only via imperialism, but also through its post-war economic prominence. The Soviet socialist system that existed in Russia during the Cold War period influenced South Korean design by affecting the culture and political situation in North Korea. In the South there was a pervading sense of anti-communism, and the nature of the perceived threat from the North led to a strict political regime that valued conformism where design creativity was not encouraged.

This research undertakes a survey of design structures, design experiments, and socio-cultural environments in Japan, Russia and Korea. I have also defined design and design policy in relation to government, industry, education, and changes in the environment. Design policy and practice in each of the countries in the 20<sup>th</sup> century have been influenced by British and American design a fact which I make frequent reference to in this work.

Towards the end of the thesis I maintain that, in order for Korean design to advance further, it needs to acquire even greater individuality. In doing so I make suggestions about the future direction of Korean design by referencing the Eastern idea of Oullim (Harmony) and its relation to sustainable and inclusive design. This was a theme that has been taken up by the International Council of Societies of Industrial Design (ICSID) at its Congress in Seoul in 2001. I also argue that compassion for humans and the environment is embedded in Korean culture and, as such, this compassion should inform Korean design identity.<sup>4</sup>

### **Contribution to Scholarship**

My thesis continues on from projects such as Victor Margolin's work on the history of design, for example his article entitled 'A World History of Design and The History of the World,' in which he addresses the fact that 'design historians are only gradually confronting the question of how a world history of design might be

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<sup>4</sup> As this research is wide-ranging and involves sources in a number of languages, more footnotes than usual are necessary in order to clarify and provide additional supporting evidence. Furthermore, many of the footnotes address subjects that are inaccessible to a number of readers since the source material has never been previously translated into English. The footnotes are therefore necessary for a full understanding of this work.

written.’<sup>5</sup> However, this thesis aims to analyse not only how political and economic forces have shaped design conditions, but also how cultures across the world have sought to support and develop design in order to advance themselves materially. Design is intrinsic to the socio-cultural state of every nation, and may be seen to reflect and inform the economic state of many nations. Edward Said maintained that culture is a potential battleground, or ‘... theater where various political and ideological causes engage one another.’<sup>6</sup> More particularly I believe that design can also be that battleground or performative space, wherein political, social, and cultural forces conflict and converge. The following thesis demonstrates this contention, whilst also contributing and responding to a body of work by Jonathan Woodham. Woodham’s contention that a sound understanding of the history of design may afford us an enriched and enhanced understanding of the material world per se has informed the general ethos of this thesis.<sup>7</sup> Woodham also contends that the proliferation of Design Policy around the world has not actually brought about significant change in sustainable or ecological design, or indeed in social inclusivity. He suggests that the development of Design Policies require a re-think so that the values they purport to promote are reflected in the real world: this thesis addresses this concern.<sup>8</sup>

This work is also influenced by the notion that Oullim (harmony) is important to design, a concept first mentioned at the ICSID Conference in 2001. Since then theorists have neglected Oullim’s possible future contribution to sustainable and

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<sup>5</sup> Victor Margolin, ‘A World History of Design and The History of the World’, *Journal of Design History* vol. 18, no. 3, Oxford University Press, 2005, pp. 235-43. He has now written the first two of large volumes of his *World History of Design: Two-volume set*, Bloomsbury Academic, 2014. It is only in recent times that the history of design has taken much note of economic and political factors. As Margolin points out, with his example of the Great Exhibition in 1851, only recently has analysis considered the Imperialist aims and objectives of the exhibition. As such, design does not rest outside society but is firmly embedded within it. Governments make use of design to further economic aims and also to help build a nation’s identity (which, in turn, is used for economic purposes through international marketing, and so on). These social elements mean that the role of the designer can be understood as that of a social actor. The story of design can only really be understood by considering the role of the political, economic and social factors. Style, as such, tells little of the real story of design.

<sup>6</sup> Edward W. Said, *Culture and Imperialism*, New York: Vintage Books, 1994, p. 34.

<sup>7</sup> Jonathan M. Woodham, ‘Local, National and Global: Redrawing the Design Historical Map,’ *Journal of Design History*, vol. 18, no. 3, 2005, pp. 257-67.

<sup>8</sup> Jonathan M. Woodham, ‘Formulating National Design Policies in the United States: Recycling the “Emperor’s New Clothes”?’ , *Design Issues*, vol. 26, no. 2, Chicago, Ill. : MIT Press, 2010, pp. 27-46. The examples he gave included: The Cox Review (2005); the continued 5 year design plans of Korea (2003-2007); and the Japanese Kansei initiative. All of these have helped the economic growth of the individual countries concerned to a greater or larger extent, but they have so far done little to advance sustainable or inclusive design.

inclusive design. However, I have extended the concept of Oullim, and its importance not only to design, but also to societal harmony in general. In doing so I have drawn on Li Chenyang's analysis of Confucian harmony, and Deng Ming-dao's description of Daoist harmony.<sup>9</sup> Furthermore I have been influenced by Choi Joon-sik's views on how Daoist, Confucianist and Buddhist concepts of harmony have impacted upon Korean culture. My study also helps to construct a larger, more inclusive, 'world map' of design history in order to further contemporary knowledge regarding the development and progression of design across the world.

### **Research Approach and Objectives**

In this thesis the nature of design and design policy in Korea, Japan and Russia is evaluated, as are the ways in which design has impacted upon, been influenced by, and integrated into, the socio-cultures of these three countries under investigation. Japan and Russia were chosen as countries to be studied because each has had a distinctive and particular design history to contrast with Korean design.

Furthermore, both countries have influenced Korean design: Japan directly in the sense that Korea imitated Japanese design during the period of industrialisation from the 1960s to the 1980s; and Russia indirectly since its design was a major influence on North Korea. Russia's influence is relevant it is of considerable importance to juxtapose the western influenced design of South Korea with its main design rival in terms of ideology that is the communist design model favoured by the Soviet Union. The reason that this is significant is that in the concluding sections of this thesis I propose suggestions about the future direction of design, and, as such, it is prudent to consider two of the most influential ideologies in the history of design.

After WWII, Korea often mirrored Japan's industrial strategy. For example the Japanese bodies 'Ministry of International Trade and Industry' (MITI) and 'Japan Industrial Design Promotion Organisation' (JIDPO) had their counterparts in Korea in the form of the 'Ministry of Trade and Industry' (MTI) and the 'Korea Design &

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<sup>9</sup> Deng Ming-dao, *Everyday Tao: Living with Balance and Harmony*, New York: HarperCollins, 1996, pp. viii-ix. Several principles inform the lives of Daoists, including: simplicity, sensitivity, flexibility, inclusivity and independence. The philosophy of Dao encourages followers to keep their lives simple and not to pursue material ambitions. In addition followers of Dao avoid aggression, are respectful of others and love nature. Furthermore Daoists favour acting according to wisdom or experience rather than following the any political fad.



Packaging Center' (KDPC). From the 1950s until the 1980s MITI in Japan (now called the Ministry of Economy, Trade and Industry [METI]) supported technological R&D and design promotion, while the Korean MTI (now called the Ministry of Trade, Industry and Energy [MOTIE]) performed a similar function, albeit from the 1960s until the 1990s. MITI's support helped Japan to become extremely successful in the car and electronics industries in particular, while MTI's support helped Korea to achieve success in the electronics and IT industries. It should be noted that since the early 1970s both JIDPO (now called the Japan Institute of Design Promotion [JDP]) in Japan and KDPC in Korea (now called the Korea Institute of Design Promotion [KIDP]) have heavily influenced design policy and practice in their respective countries.

Given their importance in the early stages of the development of design policy and practice, America and Britain are a reference point throughout this comparative study. Two of the most important research questions I address are:

- ♦ How has design policy and practice developed in the context of each country's socio-culture and economic development?
- ♦ What are the key influences on Korean design?

Socio-cultural variables are studied in relation to design, as well as in relation to how they affect the inclusive and sustainable design movements and wider consumer society. In addition, the ways in which each country's national identity has been influenced by its design history are investigated, as is the importance of ideology and concept in the context of design. Furthermore, I examine the movement from product-based globalisation to a globalisation increasingly influenced by the creative industries. I also survey design experiments in the three countries under review. In conclusion I compare the history of Korean design to that of the other two countries and highlight how Korean design has achieved parity with its major competitors. I then go on to claim that Korean design would benefit from acquiring an individuality and spirit of its own. Following this I provide my own blueprint for Korean design that includes an emphasis on inclusivity and sustainability.

The final topic that I address involves the question of how Asian cultural ideals can influence sustainable and inclusive design and, additionally, how sustainability and inclusivity should in the future become synonymous with a Korean design identity. As well as these recommendations my survey provides a deeper

understanding of design history. This includes recent movements in inclusive and sustainable design.

## **Research Methodology**

My research methodology draws on various disciplines such as: sociology, anthropology, history, cultural studies and economics. Throughout my research, I have applied an inter textual and relational approach, attempting to strike a balance between an objective survey of the facts, and a more intellectually-informed reading of them in terms of their meaning and relevance to the future of design in Korea. This method of understanding design theory does not place separate emphasis on *values*, *design*, or *experience*, but rather focuses on the interconnecting threads between all three, drawing on and utilising 'hybrid' practices of academic design research, sociology and psychology. The outcome is a research informed survey that provides a deeper understanding of design history.

I have conducted a large amount of research in various countries (including those studied in my thesis), visiting design schools (such as Stroganov Moscow State University of Arts and Industry and Tokyo University of Arts), exhibitions (such as 1989 Nagoya World Design Exposition and 2010 Design Korea), conferences (such as 2001 ICSID Seoul and 2005 ICSID Berlin). Additionally I have translated several rare materials, including: *The Methodology for Artistic Design* by The State Science and Technology Committee of the USSR (1978); *Design Movement in Japan: History of Industrial Design* by Izuhara Eiichi (1996); and *A History of Modern Design in Japan, 1860's-1970's* by Nagata Kenichi, et al. eds. (2006). I also translated several copies of the magazines *Decorative Art of the USSR* (published by Soviet Artist's), and *Technical Aesthetics* (published by VNIITE) – the magazines I translated were all published somewhere between the 1960s and 1990s. More importantly KDPC and KIDP published a number of design reports from the 1980s to the 2010s, and I have translated several of these (KDPC became KIDP in 1991).

Furthermore, I undertook a survey of design policies and design experiments in the three countries studied before embarking fully on this PhD at the University of Brighton. From 1986 until 1996 I was employed by the KIDP, working variously

as a designer, researcher, lecturer and policy planner.<sup>10</sup> In 1995, as part of a KIDP initiative, I visited the Czech Republic, Slovakia, Poland and Hungary to establish a relationship with their design councils, exchange information, and arrange designer exchange programs. In June 1996 I went to Russia to study on a doctorate programme at Stroganov University<sup>11</sup> researching Soviet design history as it related to design in Korea. Natalia Mikhailovna, a language professor at the Stroganov University, helped me translate some of the rarer articles I found in the Soviet Union, and she was therefore extremely useful to me when researching this thesis. I used the knowledge gleaned from my Russian doctorate programme to foster good relations between the KIDP and VIINTE in 1997/8, which led to an exchange of design ideas between these two organisations. In order to conduct further research I have also:

- ♦ taken rare materials (including reports, journals and brochures) directly from the KIDP, the USSR Research Institute of Industrial Design (VNIITE) and JIDPO throughout the 1990s and 2000s.
- ♦ often targeted key government reports in order to analyse design policy.
- ♦ gathered information from books, old newspapers and journals that are housed at the British, Lenin, Khimki, Stroganov, Kyoto University, and The Korean National Libraries. Amongst the most important of these were: book titles or journals.
- ♦ interviewed several of the directors and employees of KIDP, VNIITE and JIDPO. In addition I interviewed designers and professors who were affiliated with these organisations. I conducted all these

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<sup>10</sup> During this time I also solely provided design consultancy to over thirty companies, and gave talks on Korean and Japanese design at numerous seminars. Furthermore I was the president of the Metal craft section of the Association of Korean Crafts Council (Hangug Gongyega Hyuphoe) for 2 years (1992-93), which further deepened my understanding of the inner workings of the Korean craft and design industry.

In addition in 1993, I worked on a short research project for the Japan Export Trade Research Organisation (JETRO), and in 1994 I took a course on recycling design at the European Design Centre (EDC) in Holland.

In 1995, I founded the International Design School for Advanced Studies (IDAS), which involved researching and devising the curriculum. In 1996, the Ministry of Industry and Energy, who had supported this venture from the beginning, secured substantial government funding which enabled the school to grow and subsequently become the internationally renowned school it is today.

<sup>11</sup> In 1919 the school became part of the State Free Art Schools (namely Vkhutemas and Vkhutein). Later in 1930 the school was renamed the, 'Moscow Institute for the Decorative and Applied Arts.' The school renamed again in 1996 when it became the, 'Moscow State Stroganov University of Industrial and Applied Arts'. Since in 2009 the school has been named 'Moscow State Stroganov Academy of Industrial and Applied Arts'.

interviews in the later 1990s and 2000s. Amongst the most important of these interviewees were: Park Han-yu (former vice-president of KIDP), L.A. Kuzmichov (former dilector of VNIITE).

- ♦ published research on the industrial design education systems of six leading design countries, including Britain and Japan (1995).<sup>12</sup>
- ♦ researched and published two volumes of a book on Japanese and Korean aesthetics in relation to colour, shapes, patterns and Korean design identity (1991-93).<sup>13</sup>
- ♦ conducted research between 1987 and 1989 about the history of traditional crafts and techniques,<sup>14</sup> which included studying the modernisation of production and design. I used interviews and questionnaires to inform this research.

All of the knowledge gleaned from the above experiences has proved invaluable for me when writing and researching this thesis. Furthermore, I have utilised information available at the V&A and the Design Archive at the University of Brighton. In addition the comments of my supervisor, Jonathan Woodham, have proved invaluable to me.

## Framework and Chapter Outline

In the introduction to the study, I set out its goal, methods, and scope.

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<sup>12</sup> Choi Min-chul, *Report on Industrial Design Education Systems (Sanup Dijain Kyoyuk Jedo Josa Yeongu Bogoser)*, Seoul: Kidp, 1995. This research helped me establish the IDAS, and write its curriculum.

<sup>13</sup> Choi Min-chul (et al.), *The Study of Characteristics of Korean Colours, Shapes and Patterns: Tableware (Hangug Saekchae, Hyeong, Munyang Teuksung-e Gwanhan Yeongu: Sikgi)*, vol. 1, 1992 and vol. 2, 1993. Published by MOCIE: The Korean Ministry of Commerce, Industry & Energy. This research was part of a 3 year project between Korea and Japan that was sponsored by both governments. Japanese researchers studied the Japanese characteristics, while Korean researchers studying Korean characteristics. Both sets of researchers then met to compare and define each other's findings. This lead in 1993 to the publishing of a co-authored book entitled *Colour, Shape and Pattern: Lifestyle Objects in Korea and Japan*.

<sup>14</sup> Choi Min-chul (et al.), *The Modernisation of Traditional Korean Craft: History, Material and Technique (Hangug Jeontong Gongye-ui Hyeondaehwa-reul wihan Josa Yeongu: Yeoksa, Jaeryo, Gibeop-eul Jungsim-euro)*, Seoul: Kdpc, 1987; Choi Min-chul (et al.), *Study on the Modernisation of Traditional Korean Craft Techniques: Skill and tools (Hangug Jeontong Gongye Gibeop-ui Hyeondaehwa-reul wihan Josa Yeongu: Gibeop mit dogu-reul Jungsim-euro)*, Seoul: Kdpc, 1988; Choi Min-chul (et al.), *Study on Industrialisation of Korean Craft Techniques: Patterns (Hangug Gongye Gibeop-ui Sanuphwa-reul wihan Josa Yeongu: Munyang-eul Jungsim-euro)*, Seoul: Kdpc, 1989. The aim of this research was to encourage modern manufacturing companies to utilise traditional Korean craft skills in order to help develop a modern design identity. The research also provided academic resources on this subject to universities, companies and national Libraries.

In chapter one I examine issues surrounding social and cultural variables in design, including those relating to inclusive and sustainable design, and consumer society. In chapter two, I highlight the ways in which design has impacted upon, been influenced by, and integrated into, the socio-cultures of the three countries under investigation. In addition I look at the ways in which each country's national identity has been influenced by its design history. In chapter three, I investigate the design policies of the three countries, including policy strategies relating to industry, education, marketing, and design consultancy. Chapter four explores design practice in the three countries since the end of the Second World War. Finally, the conclusion examines Korean design characteristics, and how eastern ideals could benefit both inclusive and sustainable design. My thesis culminates in a blueprint for Korean design and design policy.

### **Author's Note**

Korean, Japanese and Chinese names are written with the family name preceding the given name.

## List of Abbreviations

Abbreviations used throughout the text, including within the chronology.

ACA (Agency for Cultural Affairs, Japan)

ADRUS (Association of Designers of Russia)

AMO ZiL (Avtomobilnoe Moskovskoe Obshchestvo - Zavod Imeni Likhachova)

BDI (British Design Innovation)

BIS (Department for Business, Innovation and Skills, Britain)

BK21 (Brain Korea 21)

CAD (Computer Aided Design)

CDMA (Code Division Multiple Access)

CEPR (Centre for Economic Policy Research, Britain)

CGP (Committee for Globalisation Policy, Korea)

CI (Continuous Improvement)

CoID (Council of Industrial Design, Britain)

CPSU (Communist Party of the Soviet Union)

DCMS (Department for Culture, Media and Sport, Britain)

DIC (Design Innovation Center)

DIY (Do It Yourself)

DNA (Deoxyribonucleic Acid)

DPRK (Democratic People's Republic of Korea, or North Korea)

DRAM (Dynamic Random Access Memory)

EEE (Electric and Electronic Equipment)

EI (Employee Involvement)

ELVs (End of Life Vehicles)

EOL (End of Life)

ESRC (Economic and Social Research Council)

ETRI (Electronics and Telecommunications Research Institute)

FDI (Foreign Direct Investment)

GATT (General Agreement on Tariffs and Trade)

GAZ (Gorkii Automobile Factory, or Gorkii Avtomobilnyi Zavod)

GBP (British Pound Sterling)

GDP (Gross Domestic Product)

GSM (Global System for Mobile Communication)

HADRIAN (Human Anthropometric Data Requirements Investigation and Analysis)  
HCI (Heavy and Chemical Industry)  
HISP (Health Information Systems Program)  
ICA (International Cooperation Administration)  
ICOGRADA (International Council of Graphic Design Associations)  
ICSID (International Council of Societies of Industrial Design)  
IDEO (Innovation, Design Engineering Organisation)  
IAN (Industrial Art News, Japan)  
IARI (Industrial Arts and Research Institute, Japan)  
ICT (Information Communication Technology)  
IEEE (International Symposium on Electronics and the Environment)  
IFI (International Federation of Interior Architects/ Interior Designers)  
IMF (International Monetary Fund)  
JDF (Japan Design Foundation)  
JDP (Japan Institute of Design Promotion)  
JETRO (Japan Export Trade Research Organisation)  
JIDA (Japan Industrial Designer's Association)  
JIDPO (Japan Industrial Design Promotion Organisation)  
JIS (Japanese Industrial Standards)  
JIT (Just-In-Time)  
JPY (Japanese Yen)  
KDPC (Korea Design & Packaging Center, 1970-1991)  
KIDP (Korea Institute of Industrial Design Promotion, 1991-2001)  
KIDP (Korea Institute of Design Promotion, 2001-present)  
KAIST (Korea Advanced Institute of Science and Technology)  
KETI (Korean Electronics Technology Institute)  
KHDC (Korean Handicraft Demonstration Center)  
KIEP (Korea Institute for International Economic Policy)  
KIET (Korea Institute of Electronics Technology)  
KIST (Korea Institute of Science and Technology)  
KNSP (Korean National Standards Plan)  
KOCCA (Korea Creative Content Agency)  
KRW (Korean Won)  
LCA (Life Cycle Assessment)

LCD (Liquid Crystal Display)  
MCST (Ministry of Culture, Sports and Tourism, Korea)  
MEST (Ministry of Education, Science and Technology, Korea 2008-2013)  
MOE (Ministry of Education, Korea 2013-present)  
MTI (Ministry of Trade and Industry, Korea 1948-1993)  
MOTIE (Ministry of Trade, Industry and Energy, Korea 1993-1994)  
MOTIE (Ministry of Trade, Industry and Energy, Korea March 1994-1998)  
MOCIE (Ministry of Commerce, Industry and Energy, Korea 1998-2008)  
MKE (Ministry of Knowledge Economy, Korea 2008-2013)  
MOTIE (Ministry of Trade, Industry and Energy, Korea 2013-present)  
MCI (Ministry of Commerce and Industry, Japan 1925-1949)  
MITI (Ministry of International Trade and Industry, Japan 1949-2001)  
METI (Ministry of Economy, Trade and Industry, Japan 2001-present)  
MEXT (Ministry of Education, Culture, Sports, Science and Technology, Japan)  
MNEs (Multinational Enterprises)  
MOMA (Museum of Modern Art)  
MOST (Ministry of Science and Technology, Korea)  
NEP (New Economic Policy)  
OBM (Original Brand Manufacturing)  
OECD (Organisation for Economic Co-operation and Development)  
OEM (Original Equipment Manufacturer)  
ODA (Official Development Assistance)  
ODM (Original Design Manufacture)  
PLM (Product Lifecycle Management)  
R&D (Research and Development)  
RAM (Random Access Memory)  
RCA (Radio Corporation of America)  
RDC (Regional Design Center)  
RUB (Russian Ruble)  
SDO (Sustainability Design-Orientating) Tool-Kit  
SKB (Spetsialnoe Konstruktorskoe Byuro - Special-Purpose Design Bureau)  
SMBA (Small and Medium Business Administration)  
SMEs (Small and Medium-sized Enterprises)  
SNU (Seoul National University)



SQC (Statistical Quality Control)  
SSM (Smith, Scherr and McDermott)  
STR (Scientific Technical Revolution)  
TQM (Total Quality Management)  
TRIZ (Teoriya Resheniya Izobretatelskikh Zadatch – Theory of Inventive Problem Solving)  
UK (United Kingdom)  
USA (United States of America)  
USAMGIK (United States Army Military Government in Korea)  
USD (United States Dollar)  
USSR (Union of Soviet Socialist Republics) or SSSR (Soyuz Sovetskikh Sotsialisticheskikh Respublik) or CCCP  
V&A (Victoria and Albert Museum)  
VAP (Value-Added Productivity)  
VLSI (Very Large Scale Integration)  
VKhUTEMAS (Vysshkiye Khoduzhestvenno-Tekhnicheskiye Masterskiye - Higher State Technical Artistic Studio)  
VNIITE (Vsesoyuznyy Nauchno-Issledovatel'skiy Institute Tekhnicheskoy Estetiki) or (All-Union Scientific Research Institute for Technical Aesthetics) or (USSR Research Institute of Industrial Design)  
WEEE (Waste Electric and Electronic Equipment)  
WTO (World Trade Organisation)

## CHAPTER 1: 20<sup>th</sup> Century Design: Social, Cultural and Economic Variables

### 1.0 Introduction

In this chapter I trace the history of consumerism in both communist and capitalist political systems in the last century. Before commenting on how this history has affected design. I go on to examine inclusive and sustainable design. I conclude the chapter by suggesting that certain Eastern ideals can be used to ensure that a more socially and environmentally aware design practice is utilised in the 21<sup>st</sup> century.

One aspect of contemporary capitalist culture and society that has profoundly affected design is consumerism. Major design trends now involve designers working on product-service systems that enable consumers to buy more easily. Moreover, modern designers often focus on the full customer journey which involves the customer experience before, during, and after the purchase of a product.

In capitalist societies design was marketed to stimulate consumer demand, which in turn led to innovation and products that were attractive for consumers. In communist countries design served a more functional role in a planned economic system where production was a response to political demands rather than consumer demand. Under capitalism the desire for profit has meant that the most marketable products are beyond the purchasing power of less affluent consumers. On the other hand under communism the central planning of the economy, with its stress on quantity rather than quality, meant that the needs of ordinary consumers were often not satisfied either.

The Soviet economic system, in which there has traditionally been a lack of product choice, can be contrasted with the Western Capitalist model in which some would claim that there is too much choice, and thus increased waste. However a supposed feature of capitalist economies is the intrinsic competition among companies, which in turn leads to innovation in design and marketing, and thereby increased demand among consumers for the latest products. Innovative designs tend to be favoured by consumers, making the successful marketing of the product easier. Firms often need to innovate in order to survive, creating a strong connection between design innovation and competition.

## 1.1. Design and Consumerism

### 1.1.1 Modern Consumerism

The phenomenon of consumption began with modernity. Consumerism is a social, cultural, and economic phenomenon that involves the process of choosing goods. Consumption offers opportunities for consumers while at the same time imposing constraints.<sup>15</sup> A pre-requisite for a consumer culture is the existence of an expanding press to carry advertising, a well-developed retail culture, technological know-how, a well-developed manufacturing and distribution structure, and a moral acceptance of the notions of luxury and the acquisition of non-essential material goods.<sup>16</sup>

The ability to consume in the eighteenth century in both England and America, represented a new social phenomenon. The acquisitive aspect of society has played important social and political roles, such as marking the divinity of a king, or underlining the status of professionals.<sup>17</sup> In modern times, the inequality between consumption levels of the rich and poor can be seen in the contrast between rich and poor countries. In 19<sup>th</sup> century England, industrialization, and the resulting 'over-production' of many goods, helped spread the lavish consumption of the wealthy elite to a majority of the urban population, aiding the creation of 'mass consumerism.'<sup>18</sup> Advertisements in an expanding press helped drive consumerism, and companies such as Wedgwood took advantage of this, helping to boost the trend towards mass consumption in the ceramic market.<sup>19</sup>

The rise of consumerism in the United States depended on a change of buying habits, transforming what were previously considered luxuries into perceived necessities. Department stores became cultural and fashion centres where people could be told how to dress, what to buy, and how to spend their leisure time.<sup>20</sup> In

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<sup>15</sup> Sharon Zukin and Jennifer Smith Maguire, 'Consumers and Consumption', *Annual Review of Sociology*, vol. 30, Palo Alto, Calif.: Annual Reviews, 2004, pp. 173-97, esp. 173.

<sup>16</sup> Sara Pennell, 'Material Culture in Seventeenth-century "Britain": The Matter of Domestic Consumption' in Frank Trentmann (ed.), *The Oxford Handbook of The History of Consumption*, Oxford University Press, 2012, pp. 64-84, esp. 65-6.

<sup>17</sup> Neil McKendrik (et al.), *The Birth of a Consumer Society: The Commercialisation of Eighteenth-century England*, London: Hutchinson, 1983, p. 2.

<sup>18</sup> Richard Howard Robbins, *Global Problems and the Culture of Capitalism*, 4<sup>th</sup> ed. (first published 1999), Boston; London: Pearson/Allyn and Bacon, 2008, pp. 85-6.

<sup>19</sup> Pennell (2012), pp. 67-8.

<sup>20</sup> Robbins (2008), pp. 17-8.

William Leach's phrase, they 'democratised desire'.<sup>21</sup> Consumers were manipulated to see themselves surrounded by visions of beauty and to disregard common sense in order to follow individual dreams of self-enhancement.<sup>22</sup> The materialism that first flourished between 1880 and 1930 in Britain, France, Germany and especially the US, encouraged spending on objects that conveyed social status.<sup>23</sup> Indeed, the American model influenced European consumption patterns.

Modernist designers felt that design standards were debased when the market dictated design trends. What this uncompromising modernist approach to design in the 1920s and 1930s reveals to us is an absence of consideration for the consumer in terms of tastes or desires. Generally speaking, if the design process comprises creation, production and consumption, then modernist designers could be said to place an overwhelming emphasis on their own creativity and the demands arising from the processes of mass production and less emphasis on the consumer.<sup>24</sup> However this is not to say that the modernists were not committed to a social utopianism, for they felt that consumers had a responsibility to improve their taste; in this way consumers would improve their quality of life.

In the late 1920s and during the Depression, American manufacturers found that a designer or, more commonly, a stylist, could imbue a product with what is now called 'added value', but what was then termed 'eye appeal'.<sup>25</sup> To achieve this the American designer took as a starting-point symbols that were understood and

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<sup>21</sup> Zukin and Maguire (2004), pp. 176-77;

In his study of the John Wanamaker department store in New York and Philadelphia, Leach chooses to blame stores rather than consumers for the rise in mass consumerism. See William Leach, *Land of Desire: Merchants, Power, and the Rise of A New American Culture*, New York: Pantheon, 1993, pp. 32-5, and 130-38.

<sup>22</sup> Zukin and Maguire (2004), pp. 176-77; Leach (1993), pp. 43-6.

New Retail stores, advertisements, popular magazines and daily newspapers increased contact between consumers and goods and turned the consumer into a powerful role model. See Jim Wilson, 'Communications Artifacts: The Design of Objects and the Object of Design,' in Jorge Frascara (ed.), *Design and the Social Sciences: Making Connections*, London: Taylor & Francis, 2002, pp. 24-32, esp. 25.

<sup>23</sup> By the late 1890s 'eye-appeal', namely the attractiveness and eye-grabbing quality of shop displays, had become important. In 1905, stores began to employ artistic people in an effort to ensure that their advertisements 'appealed to the imagination', and 'induced buying'. See Leach (1993), p. 43.

<sup>24</sup> Nigel Whiteley, *Design for Society*, 2<sup>nd</sup> ed. (first published 1993), London: Reaktion Books, 1998, p. 10.

<sup>25</sup> *Ibid*, p. 13.

In the 1940s most American industrial designers had been trained in European modern architecture and design by Europeans who had immigrated to America. See Sarah Nelsen, *Projecting America, 1958: Film and Cultural Diplomacy at the Brussels World's Fair*, Jefferson, N.C. : McFarland; London: Eurospan, 2011, p. 156.

enjoyed by the consumer. At this time planned obsolescence also became popular with manufacturers.<sup>26</sup> The main justification offered by manufacturers for style obsolescence was that it was consumer-led: If the public demanded it, new designs and products must be made ever more beautiful, fashionable, and functional. In this regard, General Motors introduced an annual model change to its production line during the economic boom of the 1920s.<sup>27</sup>

During the 1920s, many American artists and designers were influenced by Art Deco, particularly after the 1925 exhibition 'International Exposition of Modern Industrial and Decorative Arts' held in Paris.<sup>28</sup> The 1930s saw the advent of 'streamlined design',<sup>29</sup> a style based on the public fascination with high speed aircraft and racing cars. The streamlining concept was partly derived from Art Deco design, but involved designers stripping designs of their ornamentation. Streamlined design instead utilized aerodynamic pure-lines that emphasised scientific notions of speed and motion. As such, streamline goods typically had rounded edges and smooth flowing lines. In addition, streamlining communicated to the consumer that an industrial designer had worked on the product, which in turn made the product more desirable.<sup>30</sup> Design, by the end of the 1930s, had succeeded in offering consumers a sense of identity that was linked to the products they bought, for these products were now imbued with meaning.<sup>31</sup>

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<sup>26</sup> Roy Sheldon and Egmont Arens, *Consumer Engineering: A New Technique for Prosperity*, New York and London: Happer and Brothers Publishers, 1932, pp. 52-6. Sheldon and Arens presented the case for a positive acceptance of style obsolescence by manufacturers.

<sup>27</sup> The modern concept of obsolescence began in 1923 when General Motors realised that they did not have to wait for their old cars to wear out before consumers bought a new one. This concept quickly spread to other industries such as watches, and was known as psychological or style obsolescence. 'Planned obsolescence' now refers to an assortment of techniques used to artificially limit the durability of products in order to force repetitive consumption. See Giles Slade, *Made To Break: Technology and Obsolescence in America*, Cambridge, Mass. ; London: Harvard University Press, 2007, pp. 4-5.

<sup>28</sup> Carroll M. Gantz, *Founers of American Industrial Design*, Jefferson, North Carolina: McFarland & Company, Inc., 2014, p. 17. The movement's modernist and decorative approach was of particular appeal to American designers. The influence of Art Deco can be seen in American skyscrapers built during the late 1920s and 1930s. One of these was the Chrysler Building, which was a highly impressive example of ornamented design, and a symbol of wealth and power.

<sup>29</sup> An important designer in this era was Norman Bel Geddes, whose book 'Horizons' (1932 published by Little, Brown & Co., Boston) helped convince engineers of the functional possibilities streamlining offered.

<sup>30</sup> Penny Sparke, *Consultant Design: The History and Practice of the Designer in Industry*, London: Pembroke Press, 1983, pp. 29, and 37-8. This design trend was not only established by in-house designers but also independent designers who were by the 1950s seen as a valuable resource to be used.

<sup>31</sup> Penny Sparke, *An Introduction to Design and Culture: 1900 to the Present*, 3<sup>rd</sup> ed. (first published 1986), London and New York: Routledge, 2013, p. 98. This sense of identity that design could offer was co-opted for political purposes to spread propaganda.

During the 1940s American manufacturers continued to stimulate consumer demand which resulted in a saturation of the market. J. Gordon Lippincott, in his book *Design for Business* (1947),<sup>32</sup> expounds a common view that such a saturation can be justified.<sup>33</sup> Lippincott maintains that, 'Any method that can motivate the flow of merchandise to new buyers will create jobs and work for industry, and hence national prosperity ... Our custom of trading in our automobiles every year, of having a new refrigerator, vacuum cleaner or electric iron every three or four years is economically sound.'<sup>34</sup> After the Second World War Western European countries, and America in particular, embraced consumption and individualism. Companies conducted psychological research into understanding and categorising people according to predictable behaviour patterns. Products were then created to cater for such patterns, allowing people to 'express their individuality' by buying products that had been manufactured to meet their specific needs, tastes and wants.

The 1950s was an era of miniaturisation, as for example with transistor radios and TVs. Furthermore designers created miniature electric motors which ran off the mains voltage and could fit into portable electrical appliances such as electric razors and 'Do it yourself' (DIY) equipment.<sup>35</sup> In the 1960s miniaturisation was brought to integrated circuits. This meant that by the 1970s cheap control systems could be placed in appliances such as washing machines and cookers, and these products quickly became objects of consumer aspiration, especially as they grew sleeker in design.<sup>36</sup> In the late 1970s high-tech electronic goods were associated with fashion, and thus became desirable.<sup>37</sup> The ideal of obsolescence arguably pervaded Western markets until the global economic crash of the late 1980s when there was, particularly in Japan, a period of slower development that continued into

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<sup>32</sup> J. Gordon Lippincott, *Design for Business*, Chicago: P. Theobald, 1947.

<sup>33</sup> Nigel Whiteley, *Reyner Banham: Historian of the Immediate Future*, MIT Press, 2003, p. 110.

<sup>34</sup> Lippincott (1947), p. 14.

This thinking arguably pervaded the market until the late 1980s but following the economic crash, particularly in Japan, a period of slow development ensued in the 1990s. Although obsolescence remains an integral part of many companies' market strategies, people have become more concerned about environmental issues, leading to a greater awareness of sustainability among designers.

In Korea, for example, the concept of 'Tankism', durability and long life, was developed by Daewoo in 1993. This is supported by changes both in the use of materials and in legislation. See ref. 1762.

<sup>35</sup> In addition smaller cars such as the Morris Mini became popular in the 1950s.

<sup>36</sup> Jonathan M. Woodham, *The Industrial Designer and the Public*, London: Pembroge Press, 1983, pp. 100-01.

<sup>37</sup> *Ibid.*, pp. 104-05.

the early 1990s. Although obsolescence remains an integral part of many companies' market strategies, people have become more concerned about environmental issues, leading to a greater awareness of sustainability among designers. Nevertheless innovation, in making existing technologies obsolete, has a direct influence on product life cycle.<sup>38</sup> As such, innovation not only drives the desire for new products and thereby consumerism, but also in effect forces other competing companies to produce up-to-date products in order to keep up with consumer demand.<sup>39</sup>

### 1.1.2 Soviet Consumers

The Soviets attempted to control the goods available for consumption via centralised economies, whereas capitalist societies tended to allow consumer choice to be determined by the market.<sup>40</sup> Communists felt that capitalist societies fetishised goods to evoke feelings of desire and envy.<sup>41</sup> In the Soviet Union consumption was approached very differently.<sup>42</sup> Indeed, in the old Soviet system, consumer choice was almost completely eradicated. The French political scientist Raymond Aron wrote in 1967 that in Russia 'the distribution of national resources between investment and consumption is dictated by the planners, and even the distribution of resources between various sectors of industry, or between industry and agriculture, is not determined by the consumers.'<sup>43</sup> A political decision was made within Soviet economies not to give consumers choice. The state controlled the price of goods, and taxed the difference between buying and selling prices.

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<sup>38</sup> Fariborz Damanpour and Deepa Aravind, 'Product and Process Innovations: A Review of Organisational and Environmental Determinants' in Jerald Hage and Marius Meeus (eds.), *Innovation, Science, and Institutional Change*, Oxford University Press, 2006, pp. 38-66, esp. 47.

<sup>39</sup> In the 1960s and 70s, innovation was commonly promoted as positive but not particularly necessary. But by the 1990s it was being regularly described as extremely important both to the economy and the consumer. See Lew Perren and Jonathan Sapsed, 'Innovation as Politics: The Rise and Reshaping of Innovation in UK Parliamentary Discourse 1960-2005,' *Research Policy*, vol. 42, no. 10, 2013, pp. 1815-828, esp. 1819-826.

<sup>40</sup> Carole Shammas, 'Standard of Living, Consumption, and Political Economy Over the Past 500 Years' in Trentmann, ed. (2012), pp. 211-26, esp. 222.

<sup>41</sup> Sheila Fitzpatrick, 'Things under Socialism: The Soviet Experience' in Trentmann, ed. (2012), pp. 451-66, esp. 451-52.

<sup>42</sup> However, at the beginning of the 1930s there existed several 'closed stores' that distributed goods to only elite members of society who were on their 'list'. These people therefore enjoyed a privileged access to goods, something that seemed to be at odds with communist ideology. See *ibid*, p. 455.

<sup>43</sup> Raymond Aron, *Main Currents in Sociological Thought*, New York: Basic Books, 1967, p. 109.

Planners therefore had the power to decide 'whether or not to satisfy the desires of this or that category of consumers.'<sup>44</sup>

In the period of Stalinisation consumerism was increasingly seen as a vice that had to be kept in check.<sup>45</sup> In retailing, since it was a nationalised activity, advertising in the western sense did not exist, but there was propaganda which informed customers of the correct attitudes to take towards consumption. At the Prague conference of Advertising Workers of Socialist Countries in 1957 the purpose of advertising in a socialist economy was defined in terms of improving the retail service, educating consumers in regards to their tastes and requirements, and informing about rational forms of consumption. During the 1950s and 1960s this austere ideology was replaced by the prospect of consumerism (consumer socialism began to appear in the early 1950s).<sup>46</sup> There was a period of austere consumerism under Stalin which included the placement of luxury shops in the high rise blocks that were erected around Moscow between 1947 and 1953. However Khrushchev recognised that this masked the reality of shortages and privation, and indeed Khrushchev claimed that the attainment of a high living standard for all was a precondition for transition to full communism.<sup>47</sup> In an effort to gain greater public support Khrushchev promised not only more products, but also improved products.<sup>48</sup> Between 1953 and 1958 the Soviet state invested heavily in education, health services, and house construction. Furthermore Khrushchev managed to expand foreign trade and increase the production of consumer goods.

In 1962 Khrushchev established a design centre (VNIITE), in response to public concerns about the quality of products available to them. The economic policies of the Khrushchev regime made it possible for many to attain the ideal of domestic comfort, partly through consumer consumption, although the government retained

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<sup>44</sup> Ibid, p. 110.

<sup>45</sup> Julie Hessler, *A Social History of Soviet Trade: Trade Policy, Retail Practices, and Consumption, 1917-1953*, Princeton and Oxford: Princeton University Press, 2004, pp. 11-2. In the late 1920s and 1930s, as well as the period after 1945, both a public and private market existed for luxury and specialised goods, but normally only those in high ranking government positions were able to indulge their consumer preference for luxury goods.

<sup>46</sup> Susan E. Reid and David Crowley, 'Style and Socialism: Modernity and Material Culture in Post-War Eastern Europe' in Susan E. Reid and David Crowley (eds.), *Style and Socialism: Modernity and Material Culture in Post-War Eastern Europe*, Oxford; New York: Berg, 2000, pp. 1-24, esp. 9-11. There were 'idealists' who regarded Western gadgets as a renewal of bourgeois mentality, and represented anti-socialist individualism. 'Realists' however, regarded consumerism as necessary for material improvement in the lives of the poor, and *therefore concurred with socialist ideals*.

<sup>47</sup> Reid and Crowley (2000), p. 12.

<sup>48</sup> Anne Ferebee, 'Design and Production in the Satellites and Russia,' *Industrial Design*, vol. 5, no. 6, New York: Whitney Publications, Inc., 1958, pp. 32-47, esp. 34.



control over the forms that this consumption should take. This represented an austere version of the promised universal abundance. For example, the emphasis on contemporary style and integrated design of furnishing for the new flats in mass housing schemes left little room for individual sense of taste or the ability of the occupants to customise their own homes.<sup>49</sup> However during the 1980s the economic reforms that accompanied 'Perestroika' and 'Glasnost' led to a more efficient market-driven economy, although the communist structure was maintained. After 1985, Western ideals, including those relating to consumerism, enjoyed more acceptance in the Soviet Union<sup>50</sup> (pro-market ideals had made some headway in the 1970s and 1980s).<sup>51</sup>

The Soviet system could not last without the market mechanism, as it continually failed to meet the aspirations of its consumers, i.e. there was a lack of product quality and choice. It made efforts to address needs but cared little for wants or desires. The system of planned production resulted in a constant scarcity of goods. By the time the 1990s had arrived concepts such as competition, free markets and consumerism had become common features of Russian economic and trade policy. With this change, product and process innovations<sup>52</sup> also became important factors in Russia. Capitalist countries have experienced product and process innovations throughout the 20<sup>th</sup> century, and they continue to be a driver of many Western economies today.<sup>53</sup>

### 1.1.3 Consumer-led Design

How is the consumer identified and targeted today? And who is the consumer? I have so far discussed consumers in developed countries, but a large proportion of mass production has moved to areas of the world where wages are lower, and less strict environmental and social regulations exist. This in turn fuels the rise of

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<sup>49</sup> Reid and Crowley (2000), pp. 12-3.

<sup>50</sup> Vladimir Shlapentokh, et al. (ed.), *The Soviet Union: Internal and External Perspectives on Soviet Society*, New York; Basingstocke: Palgrave Macmillan, 2008, p. 72.

<sup>51</sup> Thane Gustafson, *Capitalism Russian-Style*, Cambridge University Press, 1999, pp. 6-7.

<sup>52</sup> Damanpour and Aravind (2006), p. 41.

Process innovation generally results in a decrease in production costs. Process innovations also aim at a smaller delivery lead time and increased flexibility. So whereas product innovation involves products that have not been seen previously on the market, process innovation relates to new ways of manufacturing products (both existing and new).

<sup>53</sup> *Ibid*, p. 38. In addition the public began to seek out foreign brands more than ever before.

variants of consumerism in these areas.<sup>54</sup> During the 20<sup>th</sup> century consumption has been associated with mass culture and a loss of self. There is a wealth of critiques published on the topic depicting the consumer as a victim of the pressures applied by advertisers and marketers,<sup>55</sup> and during the present era of smart gadgets new design and technology is also seen as manipulating the desires of consumers.

Consumer culture is connected to a larger frame through which acquisition and use represent the values and systems which are reproduced and articulated through consuming. As Guy Julier has noted, consumer culture reflects the balance between a quest for achieving meaningful ways of life and the resources available to be able to do this. It therefore tends to lean heavily towards concepts of 'having' rather than 'being', where having is the dominant value of material society.<sup>56</sup> Design culture, as opposed to consumer culture, embraces complex visual, material, spatial and textual objects that provide routes into this complexity.<sup>57</sup>

Objects again act as carriers of meaning in the process of social interaction. Some critics, however, have questioned the effectiveness of such symbolic objects in promoting consumer demand, arguing that the consumer's role in consumer culture has been grossly underestimated. Manuel Castells and Zygmunt Bauman have argued for 'collective consumption' and dual consumption respectively. Castells' 'collective consumption' occurs '... not through the market but through the state apparatus,' although debate rages as to whether provision (e.g. of health or housing services) should be by public or private means.<sup>58</sup> Bauman has argued for

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<sup>54</sup> Yiannis Gabriel and Tim Lang, 'New Faces and New Masks of Today's Consumer,' *Journal of Consumer Culture*, vol. 8, no. 3, 2008, pp. 321-40, esp. 324.

<sup>55</sup> These criticisms tend to highlight class and gender prejudices. The impulsive or imaginative consumer is most often depicted as female, and as the spender rather than the producer of wealth. As Jane Pavitt notes, 'supermarket choices, the evaluation of one brand of soap powder over another and the search for bargains are usually skills assigned to women.' See Jane Pavitt (ed.), *Brand.New*, London: Victoria and Albert Museum (V&A) Publications, 2000, p. 158.

<sup>56</sup> Guy Julier, *The Culture of Design*, London: Sage, 2000, p. 48.

The social status and social role of a designer are factors used to base the stereotype of a designer as opposed to their actual design activities. See Beth Preston, *A Philosophy of Material Culture: Action, Function, and Mind*, New York and London: Routledge, 2013, pp. 171-73.

<sup>57</sup> Julier (2000), p. 3.

<sup>58</sup> Manuel Castells, *The Urban Question: A Marxist approach* (trans. Alan Sheridan), London: Edward Arnold press, 1977, pp. 460-61. Castells coined the term 'collective consumption' in his analysis of advanced capitalist cities in the 1960s. Collective consumption is the urban controversy over conflicts across the whole range of social groups in areas such as education, housing, transport etc.

the existence of two broad social groupings - the seduced and the repressed.<sup>59</sup> The former are free to make decisions in the market arena and are incorporated into consumer culture; the latter, lacking ecological and cultural resources, are excluded from the market. Bauman argues that the repressed are not simply 'marginal' figures in society but are an essential element of the social structure, for 'the maintenance of the self-identity of consumers' needs the constitution of non-consumers as its repugnant and detestable opposition... and is a threat to be vigilant against.'<sup>60</sup> The poor are therefore seen by society as something to be avoided, whereas the wealthy provide an example of what can be achieved – the ideal target to aspire to.<sup>61</sup>

Late 20<sup>th</sup> century technology has had a major effect on the way that people consume. In many ways, this is because of the access that people have to devices that allow them to consume (as well as the consumption of the devices themselves), for example computers and, more recently, smart phones. There has been an increasing emphasis on interactivity<sup>62</sup> enabling consumers to feel more 'part' of the process of consumption while at the same time becoming more closely identified with companies.<sup>63</sup> Technology and changes to demographics are key features in modern society.<sup>64</sup> For one thing, younger people are more technology 'savvy'; they grow up with technology, and by the time they are old enough to consume, or exert pressure on their parents to do so on their behalf, they have become more 'active' participants within the field of consumption. In other words, children have become more active in the consumption 'chain' than in previous generations. This has arguably been a market-led move as the younger generation

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<sup>59</sup> Zygmunt Bauman, *Legislators and Interpreters: On Modernity, Post-modernity and Intellectuals*, Cambridge: Polity press, 1987, pp. 149-87.

<sup>60</sup> *Ibid*, p. 186.

<sup>61</sup> Ed. Ayres, *God's Last Offer: Negotiating for a Sustainable Future*, New York; London: Four Walls Eight Windows, 1999, pp. 9-45.

<sup>62</sup> Tim Leberecht, *Smart Brands in the Connected Age: The Internet of Things is Giving Rise to "Social" and "Smart." Is Your Brand Ready to Adapt?* <http://designmind.frogdesign.com/articles/smart-brands-in-the-connected-age.html> (last accessed 17.03.2013).

<sup>63</sup> Lee Hyun-hwa (et al.), 'Consumer Satisfaction with A Mass Customized Internet Apparel Shopping Site', *International Journal of Consumer Studies*, vol. 35, no. 3, Blackwell Publishing Ltd., 2010, pp. 316-29.

<sup>64</sup> Hsu Sara (et al.), *Lessons in Sustainable Development from Japan and South Korea*, New York: Palgrave Macmillan, 2014, pp. 89-90. For example, Japan has invested in various smart grid projects that provide green and efficient energy to homes (Kyoto Keihanna District and the Toyota Rokkasho Village are two such projects). And Korea has also invested in smart grid development i.e. on Jeju Island.

constituted an 'under-tapped' market.<sup>65</sup> In today's society technology has become naturalised, and most no longer feel alienated from it. This lack of alienation has been crucial in modern consumer-led design.

#### 1.1.4 The Changing Face of Design in Consumer Society

Public spaces such as shopping centres, museums and public transport are increasingly emphasised as a designed consumption area.<sup>66</sup> Current trends of consumption in the public realm are often guided by eco-friendly and environmentally harmonised design. Designers today need more than ever to understand the more complex motivations that prompt consumer purchase decisions, which include the development of the eco-friendly consumer. It would seem that we are entering a period of responsible design and ethical consuming. However, our current production and consumption patterns are linked to environmental degradation and resource depletion, both of the which are exacerbated by increased wages (larger earnings are linked to increased consumption), and a lack of free time (consumers who work long hours often rate the convenience of a product over its environmental friendliness).<sup>67</sup> The discipline of industrial design, with its emphasis on product aesthetics and styling, can feed these destructive tendencies, and in turn damage human well-being.<sup>68</sup> Such design activities contribute to 'the creation of a material culture that is transient, superficial and bereft of qualities that are informed by and consistent with meaningful human values, values that are necessary for individual and societal growth and maturation.'<sup>69</sup>

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<sup>65</sup> Pat Thane, 'Old Age, Consumption, and Change over Time' in Ian Rees Jones, et al. (eds.), *Consumption and Generational Change*, New Brunswick and London: Transaction Publishers, 2009, pp. 81-91, esp. 88. The older generations are also active consumers and have been recognized as a 'new' market.

<sup>66</sup> Julier (2000), p. 50.

<sup>67</sup> Natalie Skinner (et al.), 'Twenty-first-century Life: How Our Work, Home and Community Lives Affect Our Capacity to Live Sustainably' in Steffen Lehmann and Robert Crocker (eds.), *Designing for Zero Waste: Consumption, Technologies and the Built Environment*, London and New York: Earthscan, 2012, pp. 35-52, esp. 47-9.

<sup>68</sup> The results of social science research over the last thirty years emphasise that there is more to well-being than just being well-off. Writers on ethics maintain that there is an ethical dimension to well-being, which includes notions of duty and being a good citizen. This feeds into modern concerns with the environment and sustainability. See Avner Offer, 'Consumption and Well-being' in Trentmann, ed. (2012), pp. 653-71, esp. 667.

<sup>69</sup> Stuart Walker, 'Beyond Aesthetics: Identity, Religion and Design,' *The Design Journal*, vol. 4, no. 2, Bloomsbury Journals, 2001, pp. 30-41, esp. 31.

In the 1960s and 1970s the consumer electronics industry flourished. However the proliferation of electronics goods created an environmental problem, both in terms of the harmful chemicals used to make the products, and the safe disposing of these products. Since today consumers are more environmentally aware, the question of profitability and the environment may be turned on its head. For companies now would not ask the question 'how can we remain profitable while being eco-friendly?', but instead would ask 'how can we remain profitable if we are not eco-friendly?' Science has given us a deeper understanding of nature and the effect that human activity has on it. The growing awareness of this impact has led to calls for a new design paradigm to meet the challenges posed by the environmental crisis.<sup>70</sup>

A further challenge to designers is reflected in the fact that in the 1990s, prior to the SMART electronic revolution, consumers were generally passive. However, this situation is changing and customers en masse are now driving the process of change and innovation, and determining the value of the product. There is, therefore, a challenge to designers to broaden the concept of usability to include the notion of 'interactive friendliness'.<sup>71</sup> The 'behavioural sciences'<sup>72</sup> can help in this endeavour by providing us with an insight into the way consumers interact with products, and what motivates purchasing decisions. Designers today often use this information to consider the emotional and functional impact of the product on the consumer. A product will give the consumer a better emotional experience if it is easy and intuitive to use. However, there is a close connection between aesthetics and usability so products also need to be aesthetically pleasing.<sup>73</sup> Hence, design

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<sup>70</sup> Tom Russ, *Sustainability and Design Ethics*, Boca Raton; London; New York: CRC Press, 2010, pp. 113-14.

<sup>71</sup> Marco Cantamessa, "Design...but of What"?' in Herbert Birkhofer (ed.), *The Future of Design Methodology*, London: Springer, 2011, pp. 229-37, esp. 230-36.

This interactive friendliness can be applied to so-called 'SMART houses' - such as the 'Arabianranta project in Finland, a site which combines design, technology and culture in housing and schools etc. - where the designer also needs to take account of social and domestic issues to ensure desirability for the customer. See Phillipa Marsh, 'Intelligent Housing for People and Technology: Examining Sustainable Housing Beyond the Technical and the Opportunities for Design,' in Philip Breedon (ed.), *Smart Design: First International Conference Proceedings*, London: Springer, 2012, pp. 57-63, esp. 61-2.

<sup>72</sup> For example, psychology, sociology and the emerging field of neuroscience.

<sup>73</sup> Riccardo Emmanuele and Barbara Simionato, 'Usability Perception' in William S. Green and Patrick W. Jordan (eds.), *Pleasure with Products: Beyond Usability*, London and New York: Taylor & Francis, 2002, pp. 345-52, esp. pp. 345-46; P.M.A. Desmet and P.P.M. Hekkert, 'The Basis of Product Emotions' in Green and Jordan, eds. (2002), pp. 61-8, esp. 62-3.

needs to take account of both these aspects.<sup>74</sup> A customer interacts with a product before, during and after purchasing, and if a company is to achieve loyalty it must ensure the customers' interactions are positive. The Apple iPhone and Samsung Galaxy phones are good examples of this as they have built up consumer loyalty using a combination of high tech and usable features with an aesthetically pleasing appearance.

To emulate the iPhone's success, designers must design products and services with the full product and customer lifecycle in mind. Here then behavioral science can be utilised to enhance service delivery and ensure customer loyalty.<sup>75</sup> Understanding the emotional state of the customer at each stage of the product journey can enable a designer to design with increased emotional impact.<sup>76</sup>

## 1.2 Rethinking the Social Priority of Design

As technology and design have created the possibility, and even the likelihood, of a global culture, cultural boundaries are increasingly being eradicated. Global entertainment companies can shape the perceptions and dreams of ordinary citizens wherever they live. Such a dissemination of values, norms and culture often tends to promote Western capitalist ideals. And we can therefore ask whether 'consumer' culture will come to replace many local cultures.

It could be said that technology and design are both fundamentally concerned with a form of persuasion. David Dickson argues that technology provides only

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<sup>74</sup> Ahmad Beltagui (et al.), 'Design in the Experience Economy: Using Emotional Design for Service Innovation' in K. Scott Swan and Shaoming Zou (eds.), *Interdisciplinary Approaches to Product Design, Innovation, & Branding in International Marketing (Advances in International Marketing)*, vol. 23, Bingley: Emerald, 2012, pp. 111-35, esp. 113-15.

For Norman (2004) emotional design involves three key elements, namely; behavioral design, visceral design and reflective design. Behavioral design concentrates on the functionality of a design, and ease of use. Visceral design concerns itself with sense stimuli including audio, visual, and tactile stimuli. Reflective design involves looking at abstract and non-verbal interaction between people and things. See Donald A. Norman, *Emotional Design: Why We Love (or Hate) Everyday Things*, New York: Basic Books, 2004, pp. 65-89.

<sup>75</sup> A common way to obtain brand loyalty is to encourage entrepreneurial users who themselves promote development of the product. In addition fashion houses sometimes support 'icon' users (e.g. Kate Moss) who will risk wearing the new designs, and therefore develop a brand loyalty among their followers. See John Hartly, 'Interaction Design, Mass Communication and the Challenge of Distributed Expertise' in Emma Felton, et al. (eds.), *Design and Ethics: Reflection on Practice*, London and New York: Routledge, 2012, pp. 111-25, esp. pp. 122-24; Justin O'Connor, 'From Allure to Ethics: Design as a "Creative Industry"' in Felton, et al., eds. (2012), pp. 33-42, esp. pp. 39-41.

<sup>76</sup> Beltagui, et al. (2012), pp. 128-29.

resources that are used to support a variety of arguments about practical living, reflecting different ideas and viewpoints on social life. Technologists themselves hold such ideas and have imposed them upon the human community in many ways.<sup>77</sup> Richard Buchanan writes that until the work of technologists is recognised as ‘persuasive and part of the practice of design, their ideas will remain implicit or naively unexamined. This aspect of the significance of design, being acknowledged only slowly, has direct consequences for understanding the environment of postmodern design communication.’<sup>78</sup>

Ernst Friedrich Schumacher (through his seminal work *Small Is Beautiful*, 1973),<sup>79</sup> and Ivan Illich (via the work *Tools for Conviviality*, 1973)<sup>80</sup> have influenced a number of social, structural and economic ideas that can be useful to sustainable design in the area of healthy and autonomous living.<sup>81</sup> However, whereas designers have long drawn inspiration from social and political critique as well as technology and city planning, only recently has there been evidence of a gradually growing interest in design among social and political commentators. Explicit reference is now often made to the significance of design achieving environmental and socio-economic goals at local, national and international levels.<sup>82</sup> In order for us to stop thinking of design solely in terms of the construction of graphics, products, services and systems, a better understanding of people, society, and the ecosystem is called for.<sup>83</sup> Objects always have operational impact, but deployed in a public space, they also have cultural impact, which in turn influences the way

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<sup>77</sup> David Dickson, *The Politics of Alternative Technology*, New York: Universe Books, 1974, p. 7. (Published in the UK as *Alternative Technology and the Politics of Technological Change*).

<sup>78</sup> Richard Buchanan, ‘Declaration by Design: Rhetoric, Argument, and Demonstration in Design Practice,’ *Design Issues*, vol. 2, no. 1, Chicago, Ill. : MIT Press, Spring 1985, pp. 4-22.

<sup>79</sup> Schumacher promoted a Buddhist economy as opposed the prevalent Western one. Buddhist economic thinking emphasises optimal rather than maximum consumption, as optimal consumption, using only what is a necessity, allows people to live without great pressure. See Ernst Friedrich Schumacher, *Small is Beautiful: A Study of Economics as if People Mattered*, London: Blond & Briggs Ltd, 1973, pp. 53-4.

<sup>80</sup> Illich proposed the idea of ‘conviviality’ as an autonomous and creative intercourse among people, and also the intercourse of people with their environment. He saw this as the opposite of the conditioned response to the demands of government led societal structures. Such responses involve people being mere consumers with no choices. Thus conviviality represents individual freedom, while at the same time working with others and the natural environment in a sustainable manner. See Ivan Illich, *Tools for Conviviality*, London: Calder & Boyats, 1973, pp. 11.

<sup>81</sup> Kate T. Fletcher and Phillip A. Goggin, ‘The Dominant Stances on Ecodesign: A Critique,’ *Design Issues*, vol. 17, no. 3, Chicago, Ill. : MIT Press, 2001, pp. 15-25, esp. 15.

<sup>82</sup> For example, concerns have expanded from issues such as energy efficiency, recycling, and design for the whole product lifecycle, to ‘functional innovation and the integration of new design concepts within systems of service delivery.’ See *Ibid*.

<sup>83</sup> Jorge Frascara, ‘People-centered Design: Complexities and Uncertainties’ in Frascara, ed. (2002), pp. 33-9, esp. 33.

people interact with other people and with things, contributing to the creation of a cultural consensus.

In the 1970s several design movements emerged including the Anti-design movement.<sup>84</sup> The movement began when a number of designers and arts students rejected advanced technology and mass-produced products that harmed the environment and aimed only at profit. Followers of Anti-design instead concentrated on craft techniques, and often set up small workshops that outputted short production runs. The early 1970s also saw the beginning of the 'Design for Need' movement which, as well as focusing on producing green products, concentrated on inclusive design by designing for people such as the elderly and disabled. In 1976 ICSID organised a well-attended conference on 'Design for Need' in London.<sup>85</sup> The 'Design for Need' movement was influenced by, among others, Victor Papanek, who claimed in his book, *Design for the Real World*<sup>86</sup> that designers should acquire a greater sense of responsibility and design for the real needs of man. As such design should focus on areas including housing in underdeveloped countries and appliances for the disabled.<sup>87</sup> He thus felt that the interaction between craft, art and design (symbolised by such movements as the craft revival) had become a blind alley for design. Papanek's *Design for the Real World*, was written in the 1960s during a time when progressive thinkers in North America and Europe were searching for a more ecologically responsive and socially responsible lifestyle. He was motivated to write the book by the mismatch he felt existed between the power and influence of design, and the lack of moral responsibility present in the design profession. In an age of mass production, design had become the most powerful tool with which man shapes both his

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<sup>84</sup> The Anti-Design movement (largely located in Italy) initially emerged in the mid-1960s, promulgating an idea that the 'sober, rational and unobtrusive was after all acceptable and even necessary.'

<sup>85</sup> Royal College of Art; Julian Bicknell and Liz McQuiston (eds.), *Design for Need: The Social Contribution of Design: An Anthology of Papers Presented to the Symposium at the Royal College of Art, London, April 1976*, Oxford: Pergamon for ICSID, 1977.

<sup>86</sup> Martina Fineder and Thomas Geisler, 're: viewing design writing. Design Criticism and Critical Design in the Writings of Victor Papanek (1923-1998),' *Journal of Design History*, vol. 23, no.1, Oxford University Press, 2010, pp. 99-106; Alice Rawsthorn, *Hello World: Where Design Meets Life*, London: Penguin Books, 2013, pp. 169-70; His book questions the commodity culture of the First World and envisions future fields of design and their implementation in education to meet the growing needs of the majority. See Whiteley (1998), p. 104.

<sup>87</sup> Sparke (1983), pp. 83-6.



environment and himself.<sup>88</sup> In 1984, these themes were re-examined after a revised edition of *Design for the Real World* was released.<sup>89</sup>

The 1990s saw the design industry embrace sustainable and inclusive design, both of which in the 2000s are included in the umbrella term 'socially responsible design'. The current socially responsible design model puts emphasis on products and systems that can realistically ease real world problems and significantly improve quality of life e.g. designs that help reduce crime. Designers are also being too encourage to address issues of health, fair trade, ecology and social inclusion.<sup>90</sup> To design truly democratically for the people and improve their quality of life, much attention must be given to what those people actually want and need. Empathy is therefore a crucial characteristic for any socially responsible designer.

### 1.2.1 Good Design, FDI and Globalisation

Before WWII most consumer goods had been mass produced, but after WWII and into the 1950s there was renewed interest in traditional handmade or craft goods. This was perhaps due to a desire on behalf of various countries to rebuild their national values. This era heralded a new modernism which combined mass production with techniques used by craftsmen. Mass produced items often included curved shapes that gave the impression of being handmade, and minor irregularities were incorporated into some patterns and forms in order to suggest that individual craftsmen had worked on the product in question. Influential organisations such as the Museum of Modern Art (MoMA) regularly displayed both mass produced and traditional craft items, encouraging the public to recognise good design.<sup>91</sup>

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<sup>88</sup> However, it could be argued that Papanek was one in a long line of persuasive, anti-industrialisation critics that began with such figures as Pugin, Morris and Ruskin a century earlier.

<sup>89</sup> Jonathan M. Woodham, *Twentieth-Century Design*, Oxford University Press, 1997, pp. 232-33.

<sup>90</sup> Caroline L. Davey (et al.), 'Design for the Surreal World? A New Model of Socially Responsible Design', *The Sixth International Conference of the European Academy of Design*, Bremen, Germany, 29<sup>th</sup>-31<sup>st</sup> March 2005, pp. 1-13; Graeme R. Newman, 'A Market Approach to Crime Prevention' in Paul Ekblom (ed.), *Design Against Crime: Crime Proofing Everyday Products*, Boulder; London: Lynne Rienner Publishers, Inc., 2012, pp. 87-105, esp. 99-101.

<sup>91</sup> Jennifer Scanlan, 'Handmade Modernism: Craft in Industry in the Postwar Period' in Jeannine Falino (ed.), *Crafting Modernism: Midcentury American Art and Design*, New York; London: Abrams, 2011, pp. 98-106, esp. 98-9. Although industry appeared to make a distinction between handmade and mass produced products, in reality there was and is generally an overlap.

In 1941 and 1947, the Walker Arts Center put on exhibitions entitled 'Idea House I' and 'Idea House II' respectively. These were both in fact functional homes, and were designed to promote awareness and appreciation of modern house design following the severe housing shortages caused by the Great Depression and WWII.<sup>92</sup> The exhibitions included displays of new technology that incorporated the use of traditional materials.<sup>93</sup> Despite their wide ranging influence on modern design, Idea House I and II are little remembered today, unlike the MoMA's Good Design campaign of the 1950s, which helped convince the American public that contemporary design was desirable. Several companies were allowed to put a MoMA Good Design label on products which then conferred a certain cachet. Society saw the purchasing of well-designed products as synonymous with living a modern life.<sup>94</sup>

The move away from mass production in the 1970s and 1980s encouraged innovation. This in turn has led to a rise in the influence of the creative industries,<sup>95</sup> where good design no longer exclusively focuses on aesthetics and/or function, but instead often encompasses eco-friendly design and efficient production processes.<sup>96</sup> From the 1960s until the early 1990s the term 'good design' was often associated with good business and thereby globalisation. And indeed by the mid-1990s the creative industries had become a driver of globalisation.<sup>97</sup>

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<sup>92</sup> Alexandra Griffith Winton, "'A Man's House is his Art': the Walker Art Center's Idea House Project and the Marketing of Domestic Design 1941-1947," *Journal of Design History*, vol. 17, no. 4, 2004, pp. 377-96.

The project was idealistic in its conception as most Americans had neither the time nor the resources to buy land, hire an architect and build a house. However the exhibition promoted improved living standards, well designed housing, and the importance of the consumer to both good design and the economy.

<sup>93</sup> Scanlan (2011), pp. 98-9.

<sup>94</sup> Nelsen (2011), pp. 159-60.

<sup>95</sup> Jonathan Sapsed (et al.), 'Disassembly and Reassembly: An Introduction to the Special Issue on Digital Technology and Creative Industries', *Technological Forecasting and Social Change*, vol. 83, 2014, pp. 1-9, esp. 3.

<sup>96</sup> In addition, recognizable branding can be crucial to a product's success. Good design has long been seen to involve concepts such as form, function, aesthetics and ergonomics. See O'Connor (2012), pp. 39-41.

Furthermore an important part of design can involve the meeting of industry standards that concern safety, industrial specifications, environmental and social issues. See Grete Rusten and John Bryson, 'Industrial Design, Competitiveness, Globalisation and Organisational Strategy' in Grete Rusten and John Bryson (eds.), *Industrial Design, Competition and Globalisation*, London: Palgrave Macmillan, 2010, pp. 1-22, esp. 11-2.

<sup>97</sup> Modern globalisation began around 1975 and was again led by the US and Great Britain. Globalisation continued through the 1980s, but by the 1990s the Western neo-liberal narrative was starting to be challenged by both the Japanese and Korean governments who felt that their national identities were being eroded. See Mark T. Berger, *The Battle for Asia: From Decolonization to Globalization*, London and New York: RoutledgeCurzon, 2004, pp. 117-42.

Globalisation has had divergent impact on design: on the one hand it has promoted large scale corporate capitalism and the homogenisation of production, and, on the other, it has internationalised quality standards and fuelled a demand for social design. The term globalisation is used to describe various things, one of which is the modern tendency for the world to integrate its economic markets, technology, regulations and trade. In addition the term can refer to the concept of global corporations dominating the world economy,<sup>98</sup> and is also commonly used to refer to the liberalisation of international trade and financial transactions that have occurred since the early 1960s.<sup>99</sup> The homogenisation of culture has been thought to accompany globalisation to varying degrees. Developing countries are often keen to follow the business and social organisation of developed countries, and this seeps into the local culture.<sup>100</sup> However, the degree of this homogenisation is a matter of debate since many maintain their core ethnic values rather than fully adopting western culture. Nevertheless, globalisation has not only integrated markets, but has also removed many obstacles to contact across national borders.<sup>101</sup> It is also associated with intense competition, both in terms of product quality, price, and design. In the 1980s a number of Western governments adopted policies that helped accelerate globalisation. These policies included increasing productivity, reducing bureaucracy, decentralisation, increased accountability, and improved communication with service users.<sup>102</sup> Designers were required to develop streamlined and efficient systems for public services with an increasing focus on software design.

One facet of globalisation is economic cooperation involving strategic alliances and joint ventures between countries that are often culturally different. This cooperation has led to the popularity of Foreign Direct Investment (FDI), a

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<sup>98</sup> Aristidis Bitzenis, 'New Industry Policy in the Post-communist Countries: Globalization, Regionalization, FDI and Multinationals' in Bruno S. Sergi, et al. (eds.), *Industries and Markets in Central and Eastern Europe*, Hampshire, England; Burlington, USA: Ashgate, 2007, pp. 1-19, esp. 5.

<sup>99</sup> James Petras and Henry Veltmeyer, *Beyond Neoliberalism: A World Win*, Burlington, VT: Ashgate, 2012, pp. 12-3. The 1960s which saw increasing transitions from state led national development to neoliberal globalisation is generally taken as the period in which modern globalisation began.

<sup>100</sup> Rabi S. Bhagat, 'Culture, Work, and Organizations: A Future Research Agenda' in Rabi S. Bhagat and Richard M. Steers, *Cambridge Handbook of Culture, Organizations, and Work*, Cambridge Cambridge University Press, 2009, pp. 518-25, esp. 521-22.

<sup>101</sup> Sakiko Fukuda-Parr, 'New Threats to Human Security in the Era of Globalisation' in Lincoln C. Chen, et al. (eds.), *Human Insecurity in A Global World*, Global Equity Initiative Asia Centre Harvard University Press, 2003, pp. 1-13, esp. 1-2.

<sup>102</sup> Donald F. Kettl, *The Global Public Management Revolution*, 2<sup>nd</sup> ed. (first published 2000), Washington, DC: Brookings Institution press, 2005, pp. 1-3.

phenomenon that became increasingly prevalent in the 1980s and helped design to become 'globalised'. FDI has allowed Multinational Enterprises (MNEs) to take advantage of local design knowledge, as well as design consultancies employing international designers. Although multinational corporations that engage in FDI are often seen to be in direct competition with the host countries' native companies,<sup>103</sup> modern development strategies that attempt increased growth rates often see FDI as a key component for success. In fact, roughly 90 percent of worldwide FDI belongs to MNEs, and MNEs have reduced the design gap between many countries, as well as standardising a number of design and production methods, thereby effectively internationalising design.

Despite the internationalisation of design, companies that do not recognise cultural diversity often suffer in local markets. A famous environmental design maxim states that we ought to 'think globally, but design locally'. Here the thought is that in order to create sound products one must understand the local context in which they will be used.<sup>104</sup> Products such as TVs seem to be used in roughly the same way across cultures, but other products do not fare well if they do not take account of local cultures.<sup>105</sup> For this reason companies such as Microsoft and Apple have conducted cross-cultural studies in order to understand local cultures and thereby have a better chance of making a profit in emerging markets.<sup>106</sup>

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<sup>103</sup> A. Vindelyn Smith-Hillman and Maktoba Omar, 'FDI, International Business and Regulation: The Behavior of UK Multinational Corporations', *European Business Review*, vol. 17, no. 1, Emerald Group Publishing Ltd., 2005, pp. 69-82, esp. 78; Andrei Panibratov, *Russian Multinationals: From Regional Supremacy to Global Lead*, London and New York: Routledge, 2012, p. 30; Solomon Polachek (et al.), 'Globalisation and International Conflict: Can Foreign Direct Investment Increase Cooperation Among Nations?' in Michelle R. Garfinkel and Stergios Skaperdas (eds.), *The Oxford Handbook of The Economics of Peace and Conflict*, Oxford University Press, 2012, pp. 733-62, esp. 734-36. MNEs have a tendency to use advanced technology and marketing skills in order to distinguish their products from their competitors.

<sup>104</sup> In the early 1970s Bruce Archer (1922-2005) argued that scientists was concerned with theory and was not necessarily interested in the practical application of this theory. See Bruce Archer (et al.), *A Framework for Design and Design Education: A Reader Containing Key Papers from the 1970s and 80s*, Design and Technology Association, Loughborough University Department of Design and Technology Design Education Research Group, 2005, pp. 8-15.

<sup>105</sup> In addition studies have shown that changing package advertising to take account of local preferences has a positive impact on product sales. See Lianne van den Berg-Weitzel and Gaston van de Laar, 'Relation between Culture and Communication in Packaging Design,' *The Journal of Brand Management*, vol. 8, no. 3, 2001, pp. 171-84.

<sup>106</sup> For example in the design of online stores, the Chinese tend to prefer products being displayed according to theme (i.e. a particular room in a house like the kitchen), whereas Americans like products grouped together according to their function. See Rau Pei-Luen Patrick (et al.), *Cross-Cultural Design for IT Products and Services*, Boca Raton; London; New York: CRC Press, 2013, pp. 12-5.

Michael Spence argues that FDI negatively affects trade deficits and income distribution.<sup>107</sup> He maintains that large FDI corporations often replace the domestic workforce with low paid foreign workers. Furthermore, he contends that a country that does not own its own manufacturing base cannot innovate.<sup>108</sup> Globalisation therefore has the effect of increasing capital's profits at the expense of lowering wages, and new jobs are only created in non-tradable services, for example hospital staff, barbers and restaurant workers, services which cannot be moved overseas. Designers fall into the category of tradable jobs, which produce services that can be produced in locations distant from their markets and are higher value added and therefore attract higher salaries. With tradable goods and services being offshored, non-tradable services tend towards low productivity domestic service jobs which require little education. Spence maintains that this results in the stagnation of consumer income and increase in inequalities in income distribution. The lack of growth in consumer income then leads to a fall in demand and resulting unemployment.<sup>109</sup> Despite Spence's reservations about FDI, one positive thing it has helped achieve is improved standards of design, which have been maintained by the introduction of international formal guidelines and standards for quality control management systems.<sup>110</sup>

An important event that helped economic liberalisation in the 1990s was the Uruguay Round, which was intended to lead to a better integration of world markets.<sup>111</sup> The settlement, although said by many to favour the USA, nevertheless introduced significant multilateral trade agreements, as well as extending rules relating to areas such as intellectual property rights. This system of trade rules was overseen by the World Trade Organisation (WTO).<sup>112</sup> Countries that strengthen their intellectual property rights see significant increases in their level of FDI, partly

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<sup>107</sup> Michael Spence (a Nobel prize-winning economist) in Paul Craig Roberts 'How Offshoring Has Destroyed the Economy'. Accessed at <http://www.counterpunch.org/2011/05/31/how-offshoring-has-destroyed-the-economy/> (last accessed 24.07.2011).

<sup>108</sup> The poor economic condition of many of the countries in the Commonwealth of Independent States gives credence to these claims. See Bitzenis (2007), pp. 14-7.

<sup>109</sup> Ibid.

<sup>110</sup> Such as ISO 9000 and AS 9100.

<sup>111</sup> Michele Di Maio, 'Industrial Policies in Developing Countries: History and Perspectives' in Mario Cimoli, et al. (eds.), *Industrial Policy and Development: The Political Economy of Capabilities Accumulation*, Oxford University Press, 2009, pp. 107-43, esp. 127.

<sup>112</sup> Ajit Singh, 'FDI, Globalisation and Economic Development: Towards Reforming National and International Rules of the Game', ESRC Centre for Business Research, *University of Cambridge Working Paper no. 304*, CBR, March 2005, pp. 16-28.

because companies are more willing to invest if their products cannot be easily copied.<sup>113</sup>

The 1990s also saw Asian countries' electronic exports grow by 13.3% yearly, while automobile exports only grew by 4.7%. However, most of this growth was possible because of large FDI investment. While many Asian countries were initially heavily reliant on Western technology and product design, leading to a preponderance of Original Equipment Manufacturer (OEM), Korea began to change this. Korea learned the production technology from their OEM partners, improved on it, and subsequently started to produce their own Original Design Manufacture (ODM), followed by their own Original Brand Manufacturing (OBM). Korea led the rest of Asia in this transition, with large companies such as Samsung actually producing ODM and OBM in the late 1980s, and most other companies following suit by the mid-1990s.<sup>114</sup>

The introduction of Netscape in 1994 helped global market integration. The internet meant that long distance trading in real time was now possible, helping to integrate areas such as finance and investment. The internet also enabled the free flow of information between people in various countries, thereby further accelerating globalisation.<sup>115</sup> The increased, and more entrenched, gap between the world's poorer nations and their rich counterparts that resulted from globalisation meant that a new improved movement for social design was required. One step towards this has been the introduction of formal guidelines and standards for quality control management systems,<sup>116</sup> such as ISO 9000 and AS 9100.<sup>117</sup> These two certification programmes have reduced the cost of international trade

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<sup>113</sup> Samuel Adams, 'Intellectual Property Rights, Investment Climate and FDI in Developing Countries', *International Business Research*, vol. 3, no. 3, 2010, pp. 201-09, esp. 201-04.

<sup>114</sup> Oikawa Hiroshi, 'Inter-Country Value Distribution in the East Asian Electronics and Automobile Industries: An Empirical Global Value Chain Approach' in Kawakami Momoko and Timothy J. Sturgeon (eds.), *The Dynamics of Local Learning in Global Value Chains: Experiences from East Asia*, Basingstoke: Palgrave Macmillan, 2011, pp. 167-206, esp. 171-73.

<sup>115</sup> Fukuda-Parr (2003), p. 3.

<sup>116</sup> Holly Alison Duckworth and Rosemond Ann Moore, *Social Responsibility: Failure Mode Effects and Analysis*, Boca Raton, Fla.: CRC Press, 2010, p. 3. The Quality Movement refers to product quality control techniques that began in the 1920s with Walter A. Shewhart's employment of statistical control methods. These techniques continued, often in a slightly modified form, through America's rebuilding after the great depression, on to Japan's rebuilding after the WWII, and up to the present day.

<sup>117</sup> Joseph A. Clougherty and Michael Grajet, *The Impact of ISO 9000 Diffusion on Trade and FDI: A New Institutional Analysis*, Industrial Organisation and International Trade Discussion Paper no. 6026, London: CEPR, 2007, p. 1. The ISO 9000 is certification programme designed to indicate the quality of a firm. Its set of standards are accepted globally. The ISO 9000 was first introduced in 1987, and by the end of 2002 had issued approximately 560,000 certificates.

and investment (by communicating vital information especially between developing nations), often resulting in increased export figures. In addition the diffusion of ISO has led to increased FDI in developing nations where product quality has become increasingly standardised.<sup>118</sup> In spite of cultural differences, globalisation has resulted in many product designs offering a 'global' identity. However, global brands often still display individual identity that sets them apart from the competition. In this way users can combine a global identity with a certain amount of individualism, since an individual brand often conveys a social message specific to that brand (for example the iPhone is often associated with an aspirational modern lifestyle). One competitive strategy that a number of firms have tried to employ is connecting their products with the concepts of sustainability and inclusivity. Associations such as this can greatly enhance a brand image.<sup>119</sup>

Modern design often involves multidisciplinary project teams that include designers, marketers, engineers and management, with emphasis on intercultural awareness and enhancement of specific skills. It is essential for professional teams to engage in open-ended problem solving (design thinking) in a diverse, multicultural team setting.<sup>120</sup> This pooling of skills and ability of the team to access knowledge of local culture and conditions makes it more likely that a product will succeed.<sup>121</sup>

## **1.3 Socially Conscious Design**

### **1.3.1 Design for Social Development**

As Margolin asserts, 'design for development' is not a new concept, having been around since the 1960s, although it can be argued that its history is relatively short. 'The tripartite structure of First World, Second World, and Third World, which dominated development thought after World War II, was based on a Cold War

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<sup>118</sup> Clougherty and Grajet (2007), pp. 19-20; Peter Gabrielsson (et al.), 'Globalizing internationals: Product Strategies of ICT Manufacturers', *International Marketing Review*, vol. 23, no. 6, 2006, pp. 650-71, esp. 668.

<sup>119</sup> Lena Hansson (et al.), 'Design and Gender with a Competitive Edge' in Rusten and Bryson, eds. (2010), pp. 169-94, esp. 169-71.

<sup>120</sup> Dana Elzey and Kerstin Steitz, 'Cultivating the Cross-Cultural Engineering: Key Insights' in Manuela Achilles and Dana Elzey (eds.), *Environmental Sustainability in Transatlantic Perspective: A Multidisciplinary Approach*, New York: Palgrave Macmillan, 2013, pp. 185-200, esp. 185-97.

<sup>121</sup> Rusten and Bryson, eds. (2010), p. 10.

ideology that identified capitalism as the favoured economic system.<sup>122</sup> As the Soviet Union crumbled, the three-world structure lost its ideological meaning, as did the term ‘third world,’ which had become short-hand for poverty and despair, eclipsing notions of progress and development.<sup>123</sup> The fall of the Soviet Union and the end of the cold war broke down barriers between Eastern bloc countries and the West, precipitating an increase in the pace of globalisation.

In 1975, ICSID held a congress in Moscow, ‘Design for man and society’, at which five members of Papanek’s ‘Working Group 4’ spoke: Paul Hogan, Victor Papanek, Jorg Glasenapp, Amrik Kals and Knut Yran.<sup>124</sup> Prior to this congress the same five people had gathered together for a pre-conference meeting. Discussing their main ideals and goals, the five men emphasised the need to understand and articulate the needs of people in developing countries and to meet those needs with industrial design (Papanek had previously argued for the need to establish design schools in developing countries). Papanek spoke of the increasing need to help children with diseases and the elderly; for example, by building wheelchairs from old bicycles. Glasenapp stressed his belief, shared by other speakers, that industrial design could play a very important role in trying ‘...to innovate without coming up with gimmicks or just superficial additions to existing products; to allow products to emerge through local cultural values, products which are then distinctive for that society or country and therefore have a chance to be accepted in international markets.’ Yran concurred that the Group was more concerned with the introduction of progressive products, helping local designers to create, rather than creating for them.<sup>125</sup>

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<sup>122</sup> Victor Margolin, ‘Design for Development: Towards a History,’ *Design Studies*, vol. 28, no. 2, Guilford: IPC Science and Technology Press for the Design Research Society, 2007, pp. 111-15, esp. 111.

<sup>123</sup> Some previously ‘third world’ nations experienced sufficient levels of economic growth to enable them to achieve the status of newly industrialised countries (NICs). See *Ibid.*

<sup>124</sup> In the 1970s Margolin claimed that Papanek ‘set up an unhelpful binary opposition in *Design for the Real World* between the irresponsible and wasteful products for which designers in the First World were responsible and the more meaningful products that he and his students designed for Third World use.’ See Margolin (2007), p. 112; Victor Papanek, ‘Proposal: For the Southern Half of the Globe,’ *Design Studies*, vol. 4, no. 1, Guilford: IPC Science and Technology Press for the Design Research Society, 1983, pp. 61-4, esp. 63-4.

<sup>125</sup> Mark Brutton (et al.), ‘Third World Cautions,’ *Magazine Design*, no. 322, Glasgow; London: Design Council, October, 1975, pp. 56-7. The main theme was the need to help ‘*particular* persons’ with ‘*particular* information.’ ‘Good morality’ and ‘commitment’ were the watchwords of the discourse.



Papanek noted that the group's sensitivity to cultural needs was in opposition to the 'high-tech bias of design expansionism.'<sup>126</sup> A principal objective of the school was apparently to address the realities of peripheral countries, which were best characterised by 'labour-intensive, small-scale economics.'<sup>127</sup> Margolin argues that Papanek's characterisation of peripheral country realities was substantially different from the objectives of the Ahmedabad Declaration in 1979,<sup>128</sup> noting that while the declaration acknowledged that design in developing countries had to utilise 'indigenous skills, materials and traditions,' it also stated that design had to absorb 'the extraordinary power that science and technology can make available to it'. Whilst one must be careful not to confuse assertion with fact (something that Margolin arguably does), it remains true that the commitment to science and technology, and the development of close links with industry, was a significant complement to Papanek's and Schumacher's community-oriented ideas about development.<sup>129</sup> Development theory must integrate the factors of trade, technology and cultural expansion; factors which Margolin argues affect the conditions for development.<sup>130</sup>

Design can be seen as a manifestation of the society in which it takes place. In this way it is linked to social wellbeing. Against this backdrop more recent design movements do not just aim at financial success, but also try to benefit society, and designers are able, through their designs, to draw people together.<sup>131</sup> For example, Natalie Jeremijenko has designed a robotic dog that can be programmed to find toxins in public spaces. Another example of design that benefits society without forcing people to pay for products is the increasingly popular phenomenon of open-source software. This software is considered public property, and in most cases

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<sup>126</sup> Victor Papanek, 'Design in Development Countries 1950-1985: A Summing-up,' *Art Libraries Journal*, vol. 11, no. 2, 1986, pp. 44-50, esp. 46, quoted in *Ibid.*

<sup>127</sup> Papanek (1983), pp. 61-4. Quoted in *ibid.*

<sup>128</sup> Margolin (2007), pp. 112-13.

<sup>129</sup> *Ibid.*

<sup>130</sup> In fact, Margolin feels that the current remit of design for development is far too narrow: 'design for development needs to broaden its brief from an emphasis on poverty alleviation to include the strategic creation of products for export.' Whilst he does not argue against debt relief and charitable funding, he emphasises the need for a strengthening of the national economies in developing nations in order to compete in global markets. See *Ibid.*, p. 114.

<sup>131</sup> Russ (2010), pp. 117-18; For example the Buddhist view of the use of natural resources in manufacturing differs greatly from the Western view, which does not take into account how much mineral or living matter it destroys in the production process. A Buddhist economy values maintaining the ecosystem with people as a part of it. See Schumacher (1973), pp. 54-5.

anyone can contribute to testing and refining it. These examples of 'social design' are set to be a growing feature of design in the 21<sup>st</sup> century.<sup>132</sup>

The two exhibitions 'Design with the other 90%' and 'Design with the other 90%: Cities' were groundbreaking in that they focused on ways of improving the lives of the majority of people around the globe, and in particular on the problems that rapid urbanisation had brought.<sup>133</sup> The designs at the exhibition attempted to find solutions for many of the problems faced by marginalised and poor populations, including issues of healthcare, the economy, clean water, sanitation and education.<sup>134</sup> For example, UNICEF has designed a *Solar-powered computer kiosk that includes education and public health information*.<sup>135</sup> *The kiosk was built in Uganda using oil drums, basic grinders and a metal arc welder.* This type of socially aware design is an increasing feature of new design, and shows that the social design process can benefit from the input of end users and other participants. But it can also benefit from a reflection on the history and systems present in the society in which a product is to be used. In this way designers continue to be active students, identifying things such as a community's strengths by sustained engagement with the communities in question.

'Participatory Design' is playing an important role in empowering developing countries.<sup>136</sup> Participatory design is based on the belief that the people who will ultimately use a product are entitled to have some input into how the product is designed. In addition this approach to design also attempts to involve and take account of other interested parties i.e. experts on inclusivity etc.<sup>137</sup> In this way

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<sup>132</sup> Ellen Lupton, 'Design and Social Life' in Barbara Bloemink (et al.), *Design Life Now: National Design Triennial 2006*, New York: Smithsonian Cooper-Hewitt, National Design Museum, 2006, pp. 24-32, esp. 26-8.

<sup>133</sup> Cara McCarty, 'Introduction' in Cynthia E. Smith (et al.), *Design with the Other 90%: Cities*, New York: Cooper-Hewitt, National Design Museum, Smithsonian Institution, 2011, pp. 8-9.

<sup>134</sup> However it should be noted that sponsors of 'alternative design' initiatives such as these can be large corporations that are attempting to penetrate the participatory design market purely to increase their profits rather than because they subscribe to the alternative design ideal.

<sup>135</sup> [www.unicef.org](http://www.unicef.org) (last accessed 14.06.2013).

<sup>136</sup> Even in the early days of participatory design these principles were active: in the 1970s Emery maintained that 'the fundamental and proven assumption of participative design is that maximal effectiveness is obtained only by designing in the unique circumstances of people and environment, in your place.' See Merrelyn Emery (ed.), *Participative Design for Participative Democracy*, 2<sup>nd</sup> ed. (first published 1989), Canberra: Centre for Continuing Education Australian National University, 1993, pp. 14-7.

<sup>137</sup> Participatory design has been strengthened by modern interactive networking on social media sites like Twitter, YouTube, Facebook and user forums. See Alastair Fuad-Luke, 'Re-defining the Purpose of (Sustainable) Design: Enter the Design Enablers, Catalysts in Co-design' in Chapman and Gant, eds. (2007), pp. 18-52, esp. 37-8; Tobias Raun, 'DIY Therapy: Exploring Affective Self-Representations in Trans Video Blogs on YouTube' in Athina Karatzogianni and Adi Kuntsman

participatory design aims to produce products that fully meet end user's needs. For example the Health Information Systems Program (HISP) is helping countries such as Kenya by improving online web base services and cloud computing.<sup>138</sup> In this way people have easy access to health data which then empowers local communities. Participatory design has been used to help define the Public Health Information Toolkit, a World Health Organisation (WHO) backed suite of applications that aims at standardising data exchange. This move from individual to multiple interconnected systems has been useful in areas such as Himachal Pradesh in India, a region that is developing integrated health information architecture. The state can now monitor, among other things, bed occupancy, hospital infection rates, average length of patient stays, and death rates.<sup>139</sup> Such information can of course be used to radically improve the health service in developing regions such as this. Here we can see one of the key concepts of participatory design coming to the fore, namely designing for the common good.<sup>140</sup>

Two important documents for social designers are the Innovation, Design Engineering Organisation (IDEO)'s 'Human-centred Design Toolkit',<sup>141</sup> and 'Social Impact: A How-To Guide'.<sup>142</sup> The first document provides important information for those conducting ethnographic research, while the How-To guide gives an overview of issues that may be encountered when working with a community. Another well-known resource is the 'Design Revolution Toolkit'<sup>143</sup> which provides designers with a range of tactics to ensure that their designs benefit society. These documents can help designers achieve a common vision with community members,

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(eds.), *Digital Cultures and the Politics of Emotion*, Palgrave Macmillan, 2012, pp. 165-180, esp. 167-76.

<sup>138</sup> Jørn Braa and Sundeep Sahay, 'Health Information Systems Programme: Participatory Design within the HISP network' in Jesper Simonsen and Toni Robertson (eds.), *Routledge International Handbook of Participatory Design*, London and New York: Routledge, 2013, pp. 235-56, esp. 248.

<sup>139</sup> Ibid, p. 251.

<sup>140</sup> Human-centred design considers the 'common good' to revolve around a 'what vs how' debate, where the designer must consider the question of 'what' they are making before they consider 'how' they would make a product. See Emily Pilloton, 'Design Can Change the World' in Emily Pilloton (Foreword by Allan Chochinov), *Design Revolution: 100 Products that Empower People*, New York: Metropolis Books, 2009, pp. 10-47, esp. 28.

<sup>141</sup> 'Human-Centered Design Toolkit,' IDEO website, accessed July 2009, See <http://www.ideo.com/work/human-human-Cetered-design-toolkit>; Andrew Shea, *Designing for Social change: Strategies for Community-based Graphic Design*, New York: Princeton Architectural Press, 2012, pp. 8-9.

<sup>142</sup> 'Design for Social Impact: A How-To Guide,' IDEO website, accessed October 2009, [http://www.ideo.com/images/uploads/news/pdfs/IDEO\\_RF\\_Guide.pdf](http://www.ideo.com/images/uploads/news/pdfs/IDEO_RF_Guide.pdf).

<sup>143</sup> 'Design Revolution Toolkit,' Design Revolution Road Show website, accessed 20<sup>th</sup> February 2010, [http:// designrevolutionroadshow.com/toolkit](http://designrevolutionroadshow.com/toolkit).

as well as helping designers find ways of raising awareness of issues important to the community.

Social entrepreneurship is becoming a valuable method of helping the world's poor through design and enterprise. The International Development Enterprise is a non-profit organisation that, among other things, distributes bamboo treadle pumps to small-acreage farmers in Bangladesh to enable these poor workers to increase productivity and profits, and thereby escape poverty. In addition these specially designed pumps are produced locally which in turn creates local jobs and enterprises. Social entrepreneurship in particular aims at sustainable profit making and the empowering of the disadvantaged, and good social design can help achieve these aims. The success of a socially designed product in this context is often defined not only by its profitability but also by its social impact (although increasingly companies are realising that social value is economic value). In fact IDEO's 'Human-centred Design Toolkit', and 'Social Impact: A How-To Guide,' funded by the Rockefeller Foundation, were in part an attempt to encourage firms to embrace social entrepreneurship. Polak believes that the need to encourage firms to behave in this way is made all the more urgent as, 'the majority of the world's designers focus all their efforts on developing products and services exclusively for the richest 10 percent of the world's customers'.<sup>144</sup> Polak maintains that designers can easily design affordable products for poor customers if they take account of common sense design principles for producing cheaper products.<sup>145</sup> However some maintain that the 90/10 view is unhelpful because in it encourages an 'us versus them' mentality and thereby uses difference as the starting point for the design process, whereas what in fact we require is the concept of unity in design.<sup>146</sup>

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<sup>144</sup> Paul Polak, 'Design for the Other Ninety Percent' in Cynthia E. Smith (ed.), *Design For The Other 90%*, New York: Cooper-Hewitt, National Design Museum, Smithsonian Institution, 2007, pp. 18-25, esp. 19; Pilloton (2009), p. 18.

<sup>145</sup> Paul Polak, *Out of Poverty: What Works When Traditional Approaches Fail*, San Francisco: Berrett-Koehler Publishers, Inc., 2008, pp. 78-9. These principles include identifying the most important component, as well as the most expensive part. Acquiring knowledge of the customer's needs can help a designer utilise alternative low cost parts.

<sup>146</sup> Pilloton (2009), p. 38.

### 1.3.2 Inclusive Design

Inclusive design, known as 'universal design' in the USA, refers to environments, products, services and interfaces made for almost all people regardless of their age and abilities. In this way inclusive design attempts to widen a product's target group without affecting profit goals. This movement emerged from collaborations between researchers, designers, industry and educators.<sup>147</sup> With an increasingly aging population Japanese companies have appeared to lead the way in inclusive design and the issue of demographic change.<sup>148</sup> The UK has also addressed the issue of inclusive design. For example, the Design Council works with the UK government to understand differences among consumers, and to integrate these findings into the design and development of new products.<sup>149</sup> However, inclusively designed products can face a viability problem if the needs of a small group of users is catered for at the expense of the wider consumer group. Nevertheless, if a product is redesigned to be easier to use, a smaller group of disabled users can now use it without the redesign impacting adversely on the experience of the wider group.<sup>150</sup> The Design Council, in an effort to raise the profile of inclusive design, joined forces with a number of partners<sup>151</sup> including the Helen Hamlyn Research Centre. The centre organised 48 hour inclusive design challenges in Japan (2006-2010), as well as Korea (2009-2010).<sup>152</sup>

Inclusive design may save a government many millions of dollars a year by increasing the independence of the old and disabled. Hence it might be beneficial to introduce legislation to ensure that certain products are produced with an acceptable level of usability. In addition, incentives could be offered to companies

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<sup>147</sup> Roger Coleman (et al.), 'From Margins to Mainstream,' in John Clarkson, et al. (eds.), *Inclusive Design: Design for the Whole Population*, London: Springer, 2003, pp. 1-25, esp. 10.

<sup>148</sup> John Bound and Roger Coleman, 'Commercial Advantage from Inclusive Design,' *Design Management Review*, vol. 16, no. 3, Summer 2005, pp. 56-63, esp. 56. At design conferences in Rio de Janeiro and London in 2005 companies such as Fujitsu, Matsushita, Panasonic, Oki, Toshiba and Toyota presented innovative products such as bone induction phones, accessible websites, tilted-drum washing machines and disability-friendly cars.

<sup>149</sup> The Design Business Association (DBA) Inclusive Design Challenge was created in 2000 as a collaboration between the Royal College of Art's Helen Hamlyn Research Centre (HHRC) and the DBA. It is an annual design competition focused on innovation through inclusive design and the idea of how design can enhance the quality of life for older and disabled people, and all members of society. See Bound and Coleman (2005), pp. 57-60; Design Council, *Living Longer: The New Context for Design*, London: Design Council, 2010.

<sup>150</sup> Coleman, et al. (2003), pp. 10-3.

<sup>151</sup> Design Council (2010a).

Other partners included Cambridge Engineering and Central Saint Martins College of Art & Design.

<sup>152</sup> <http://www.hhc.rca.ac.uk/4584/all/1/Tullamore-2011.aspx> (last accessed 19.03.2013).

to encourage them to produce products that can be used by a wide range of users.<sup>153</sup> However, even without these measures inclusive design solutions have repeatedly proved to be commercially viable, especially when target user groups are researched carefully. For instance, the over-50s, with their increasingly high level of disposable income, represent an untapped market.<sup>154</sup> One way for designers to appreciate the problems faced by a section of end users is to employ the ergonomic approach, which involves designers wearing restrictive clothing in order to help them understand and empathise with the issues facing impaired users. Such an approach can stimulate creative solutions to problems that arise for inclusive designers. However, some critics claim that the ergonomic approach ignores social and interactional models of disability i.e. the approach fails to promote a more inclusive environment.<sup>155</sup>

## Human Diversity

Arguably, designers should understand the users' goals, the way a disabled user interacts with a product's interface, and the features that such a user would desire.<sup>156</sup> So at the very least, designers should employ user-centered techniques to allow them to understand the interactions between users and new design concepts.<sup>157</sup> Designers can now use virtual techniques that involve software applications such as Human Anthropometric Data Requirements Investigation and Analysis (HADRIAN) and INCLUSIVE CAD in order to simulate things such as hearing loss. This in turn makes it easier for designers to make assessments about the suitability of certain products.<sup>158</sup> For example, HADRIAN uses a database of a hundred people of varying capabilities to initiate 'virtual user trials' that thereby

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<sup>153</sup> Susannah Clarke, *A Case for Inclusive Design: Technical Report (CUED/C-EDC/TR142)*, University of Cambridge, 2007, pp. 18-9.

<sup>154</sup> Nina Warburton, 'Everyday Inclusive Design' in John Clarkson, et al., eds. (2003), pp. 250-69, esp. 255-58.

<sup>155</sup> Darren Reed and Andrew Monk, 'Inclusive Design: Beyond Capabilities towards Context of Use,' *Universal Access in the Information Society*, vol. 10, Issue 3, 2011, pp. 295-305, esp. 296; Anna Mieczakowski (et al.), 'Understandable by Design: How Can Products be Designed to Align with User Experience?' in Patrick Langdon, et al. (eds.), *Designing Inclusive Systems: Designing Inclusion for Real-world Applications*, London: Springer, 2012, pp. 133-42, esp. 134.

<sup>156</sup> Ibid, p. 135; Gunilla Bradly, *Social and Community Informatics: Humans on the Net*, London and New York: Routledge, 2006, pp. 66-8.

<sup>157</sup> E. Zitkus (et al.), 'Design Advisor: How to Supply Designers with Knowledge about Inclusion?' in Patrick Langdon, et al., eds. (2012), pp. 145-54, esp. 145.

<sup>158</sup> Ibid, pp. 146-47.

provide anthropometric and capability tests.<sup>159</sup> In an effort to ensure that designers empathised with those they are designing for, HADRIAN's creators avoided statistical tables, and instead put pictures of real people in the program to represent users.<sup>160</sup> It allows designers to call up the personal body dimensions and physical capabilities of people who are 'designed out' of a product, which then aids efforts to change the product so it becomes a 'design for all'.<sup>161</sup> This tool is now being used to develop journey planners for individuals by comparing their physical, cognitive and emotional skills to the demands of any given journey, including those that involve buses, trains, walking through public spaces etc.<sup>162</sup> Because data in HADRIAN is presented using photographs and video clips, it could be described as 'emotional data'. The variety of data collected in this way allows design teams to save a great deal of time, although it should be said that, because it only provides data from one hundred individuals, it is not entirely representative of the entire population (HADRIAN designers hope to increase the programme's sample of people soon).<sup>163</sup> The Exclusion Analysis Tool, developed for the 1996/1997 Great Britain Follow-up Survey, is another program that can aid inclusive design since it includes information about the sensory and motor capabilities of the UK's disabled population. This tool allows designers to describe a product's interaction with its users in order to determine roughly what proportion of the UK's population will be excluded from using a product.<sup>164</sup>

Rather than specifically targeting disabled people as a minority, inclusive design seeks the widest possible accessibility by ensuring that the products can be used by everyone.<sup>165</sup> William Green and Patrick Jordan consider human diversity within the context of the 'four pleasures framework', a framework first postulated by Canadian anthropologist Lionel Tiger, and subsequently adapted for use in design.

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<sup>159</sup> Umesh Persad (et al.), 'Characterising User Capabilities to Support Inclusive Design Evaluation,' *Universal Access in the Information Society*, vol. 6, Issue 2, 2007, pp. 119-35, esp. 119.

AUNT-SUE is a multi-disciplinary consortium that includes researchers from UCL and the London borough of Camden. Members of the consortium are experienced in such diverse areas as transfer policy and ergonomics. The AUNT-SUE project aims to develop decision support tools to help designers. See J. Mark Porter (et al.), 'Developing the HADRIAN inclusive design tool to provide a personal journey planner,' in Philip D. Bust (ed.), *Contemporary Ergonomics 2006*, The Ergonomics Society, Taylor & Francis Press, 2006, pp. 470-74, esp. 471.

<sup>161</sup> J. Mark Porter (et al.), "'Beyond Jack and Jill": Designing for Individuals Using HADRIAN,' *International Journal of Industrial Ergonomics*, vol. 33, 2004, pp. 249-64, esp. pp. 254-55.

<sup>162</sup> Porter, et al. (2006), p. 473.

<sup>163</sup> Russell Marshall (et al.), 'HADRIAN: A Virtual Approach to Design for All,' *Journal of Engineering Design*, vol. 21, no. 2-3, April-June 2010, pp. 253-73, esp. 268-71.

<sup>164</sup> Persad, et al. (2007), p. 120.

<sup>165</sup> Catherine McDermott, *Design: The Key Concepts*, London: Routledge, 2007, p. 132.

The four pleasures are: 'Physio-pleasure', which is pleasure to do with the body and the senses; 'Socio-pleasure', which is pleasure to do with inter-personal and social relationships; 'Psycho-pleasure', which is pleasure to do with the mind; and 'Ideo-pleasure', which is pleasure to do with values. As Green and Jordan note, this framework provides a semi-structured approach to human diversity and its implications for design, something central to the design and manufacture of useful, usable and pleasurable products. Furthermore, physio-pleasure objects avoid the fiddly quality of switches, making them easy to use by people with afflictions such as arthritis.<sup>166</sup>

## Human Factors (HFs)

Inclusive design obviously has huge commercial implications, as consumer behaviour is becoming increasingly complex; manufacturers must consider this complexity in order to gain commercial success. The term 'human factors' incorporates several aspects of social design, including ergonomics, human engineering, psychology, and usability.<sup>167</sup> The term 'user-friendly' describes a product which involves design aspects centred on such HFs.<sup>168</sup> HF specialists involved in product design need to define user requirements, advise on how the product can be tailored to meet these requirements, and then evaluate product concepts to ensure that these requirements are met.<sup>169</sup> The popularity of HF design engineers has increased, with many companies now employing more of them. Their importance should not be underestimated as they essentially perform two roles. Firstly, they represent the potential user, looking at product ease of operation, safety, workload and so on. Secondly, the HF engineer acts as an

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<sup>166</sup> William Green and Patrick Jordan, *Human Factors in Product Design*, 2<sup>nd</sup> ed. (first published 1999), Philadelphia: Taylor & Francis, 2001, p. 172.

<sup>167</sup> An international standard for assessing the usability of products was outlined by ISO 9241-11, which defined usability as 'the extent to which a product can be used by specified users to achieve specified goals with effectiveness, efficiency and satisfaction in a specified context of use'. See Achim Ebert (et al.), *Human-Computer Interaction*, KI - Künstliche Intelligenz, vol. 26, issue 2, 2012, pp. 121-26, esp. 121; Emmanuele and Simionato (2002), p. 346.

<sup>168</sup> Usability – defined as the quality of use in context in terms of effectiveness, efficiency and satisfaction – may be contrasted with utility. Utility is primarily concerned with a product's functions, features and technologies, whereas usability is concerned with how well people are able to utilise such features. See Green and Jordan (2001), p. 28.

<sup>169</sup> The inventors of 'The Exclusion Analysis Tool' and HADRIAN could be described as both researchers and practitioners in the 'Human Factors' discipline, and possessing skills in both these areas can be seen as a distinct advantage in creating successful inclusive designs. See W. Ian Hamilton, 'Human Factors Past and Present' in Philip D. Bust (ed.), *Contemporary Ergonomics 2009*, The Ergonomics Society, CRC Press, 2009, pp. 291-99, esp. 297-98.



evaluator, evaluating people as components of the product and measuring their contribution to product effectiveness. Furthermore, the HF engineer is involved with a variety of design issues, such as safety, human function allocation, user information accessibility, and design of tools and controls.<sup>170</sup>

HF designers can improve the safety, efficiency and comfort of users by using anthropometry (the science of measuring physical characteristics) to design products like workwear, support equipment and clothing. Other design modelling and testing techniques used by HF designers include mock-ups and simulation. Since the late 1970s, over 50 types of human modelling have been developed.<sup>171</sup> Early human modelling usually only involved the limb needed to operate the product e.g. hands or arms. Today's models have evolved to include whole body representations such as computer simulations, 3D printing and physical models like the crash test dummy. However, the relative novelty of this human modelling technology has resulted in a variety of suppliers creating their own modelling software programmes, all very different in their functionality and user interface. This has produced models with widely differing looks and behaviour and also produce drastically different results when performing the same task. To counter this, the Society of Automotive Engineers (SAE) formed the Human Modelling Technology committee to formulate global standards to govern the cohesive growth of this technology. They have identified three major criteria - user requirements, human model definition and software standards - with a fourth category under consideration that would cover the creation of human performance models to measure error prediction, human workload, and task time estimation.<sup>172</sup>

Ergonomic design revolves around human factors and as such can be considered part of the inclusive design movement. In the early 1970s the Swedish firm *Ergonomi Design Gruppen* produced a number of ergonomically designed products. One of these was a kitchen knife that was easier for people to grip, which in turn helped improve standards of living for the disabled.<sup>173</sup> Another classic

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<sup>170</sup> Dennis F.X. Mathaisel (et al.), *Engineering for Sustainability*, Boca Raton; London; New York: CRC Press, 2013, pp. 352-54.

<sup>171</sup> Mathaisel, et al. (2013), p. 377.

<sup>172</sup> Ibid, pp. 377-79.

<sup>173</sup> Ingrid Sommar, *Scandinavian Design*, London: Carlton Books, 2011, p. 58.

*Ergonomi Design Gruppen*, which was established in 1969, produced a number of award-winning products under their motto 'Innovation for People'. Many of their 'democratic' designs from the 1970s and 80s are still produced today and reflect the equality inherent in Swedish culture. *Ergonomi Design Gruppen* has continued to design inclusive, and sustainable, products utilising

example of inclusive design is the 'Oxo Good Grip' range of kitchen utensils, which employed universal usability to show that elderly or disabled consumers could be treated as equal rather than 'special'.<sup>174</sup> Ergonomic designers can help move a project's focus towards human-centred concerns by concentrating on the context in which a product will be used, as well as ensuring that end-users help test and evaluate prototypes.

Inclusive design became increasingly popular in the early 1970s with the publication of Papanek's *Design for the Real World*.<sup>175</sup> Since then, designers have sought to develop design programmes focusing on social needs, ranging from those of developing countries to the special needs of the elderly and disabled. Yet whilst these efforts have supported the notion of an alternative to the current marketed product design, they have not led to a new model of social practice.<sup>176</sup> Victor and Sylvia Margolin do not see the 'market model' and the 'social model' as binary opposites, but instead view them as 'two poles of a continuum.' The difference is defined, not by modes of production and distribution, but by the priorities of the commission: 'Many products designed for the market also meet a social need but we argue that the market does not, and probably cannot, take care of all social needs, as some relate to populations who do not constitute a class of consumers in the market sense. We refer here to people with low incomes or special needs due to age, health, or disability.'<sup>177</sup> They argue that, by harshly criticising the market economy, Papanek limits the options available for a social

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stakeholder collaboration and research into its user's needs. In 2012 the company changed its name to 'Veryday'.

<sup>174</sup> McDermott (2007), p. 132; John Heskett, *Design: A Very Short Introduction*, Oxford University Press, 2005, p. 118; David Yelding, 'Power to the People' in John Clarkson, et al., eds. (2003), pp. 104-17, esp. 106-07; Clarke (2007), p. 13.

The Good Grip (OXO international 2007) measuring jug is seen as desirable by a wide range of users despite being designed for less able users. OXO was founded in 1990 and embraced the concept of 'universal design' from its inception.

<sup>175</sup> Already in the 1920s, some German designs were innovative and inclusive. For example, the kitchen was redesigned to introduce what we recognise today as a galley kitchen which made it easier for people to move around and reach all necessary appliances. Furthermore in the 1920s Berlin was a centre of Modern architecture where architects like Walter Gropius and Bruno Taut designed buildings that were intended to improve the lifestyles of ordinary people. See Woodham (1997), pp. 46-50.

<sup>176</sup> Fineder and Geisler (2010), p. 105. Fineder and Geisler point out that although the book's design proposals were constantly dismissed, especially in the years immediately following publication, its ideas have since been validated.

<sup>177</sup> Victor Margolin and Sylvia Margolin, 'A "Social Model" of Design: Issues of Practice and Research,' *Design Issues*, vol. 18, no. 4, Chicago, Ill. : MIT Press, 2006, pp. 24-30, esp. 25.

designer, and offers destructive criticism rather than constructive guidance.<sup>178</sup> However, using as a framework a socially-oriented design office, Papanek provides a helpful catalogue of the kinds of social products designers might create. Among these are 'teaching aids of all kinds including aids to transfer knowledge and skills to those with learning difficulties and physical disabilities; training aids for poor people who are trying to move into the work force; medical diagnostic devices, hospital equipment, and dental tools; equipment and furnishings for mental hospitals; safety devices for home and work; and devices that address pollution problems.'<sup>179</sup> Research is important here, including participant observation, which enables designers entering social settings to observe and document social needs.

Designers must recognise that they should not, and are not able to, make decisions for users, and also recognise that users have the right to actualise and modify designs to make them more suitable for their needs and desires.<sup>180</sup> User-participatory design therefore means different things to different users, and also involves a diversity of environmental issues, as well as physical, cultural, social, political and religious ones. In user-participation design, Siu argues that designers should actively adopt two important roles: 'The first is as coordinators, gathering together different interested groups and professionals, and then as facilitators, assisting users in participating, modifying, experiencing, creating, producing and actualising the design.'<sup>181</sup> The process of design, from its initial stages to the finished product, thus represents an important element in patterns of consumption, which in turn indicate the involvement of design in forming future patterns of human society and living.<sup>182</sup>

The user-oriented participatory approach still produces user-unfit designs. As I have outlined above, one reason for this is that user needs often are not seriously researched and addressed. Designers dealing with design problems related to the 'public interest,' such as public space and the things installed in it, tend to set up restrictive standards that may not meet the actual needs and preferences of the

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<sup>178</sup> Believing that many professionals share the goals of designers who want to do socially responsible work, the Margolins propose that both designers and helping professionals find ways to work together. See *Ibid*, p. 27.

<sup>179</sup> *Ibid*, pp. 28-9.

<sup>180</sup> S. Cecacci (et al.), 'How to Use Virtual and Augmented Reality Techniques to Design Useable Human-machine Interfaces,' in Patrick Langdon, et al., eds. (2012), pp. 65-74, esp. 65-71.

<sup>181</sup> *Ibid*.

<sup>182</sup> Inclusive design is beneficial to the design industry and consumers because it encourages innovation and the creation of new products that are designed to benefit all members of society.

users.<sup>183</sup> An example of a method designed to help designers' deal with these kinds of problems is MUST, a participatory design framework that outlines processes for information projects. MUST places emphasis on problem setting during the first stages of design, and in this way attempts to highlight goals and solutions very early on in the design process.<sup>184</sup> MUST is one of several participatory design methodologies (STEPS, CESD etc.) available to designers today, although it is fair to say that no one methodology is universally adopted. This indicates that participatory design is continually being defined and redefined. However, participatory design is in danger of falling into the same trap as the Bauhaus and its followers which despite their social and democratic pretensions, ended up as an elitist group, saturating the market with functionalist objects designed for the mass market.<sup>185</sup> One way of addressing this problem is to focus on 'design for social innovation'. In this area new ideas emerge from those directly involved in the design situation that needs to be addressed, i.e. local institutions and people, civic organisations, and end users. Here then, design can be seen not merely as something that produces functional objects, but instead as a vehicle for change that, among other things, supports sustainable lifestyles and develops environments.<sup>186</sup> Throughout this process the core concepts of participatory design should be remembered, namely that projects are not only organised around identifiable stakeholders but that they aim at the empowerment of the weak and pay attention to democratic principles. The growth of green energy is one example of this.<sup>187</sup>

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<sup>183</sup> Siu Kin Wai Michael, 'Users' Creative Responses and Designers' Roles,' *Design Issues*, vol. 19, no. 2, Chicago, Ill. : MIT Press, 2003, pp. 64-73, esp. 66. In *the Condition of Post modernity*, the user of a built environment is seen as an 'escapee' whose practices are not completely determined by the built form.

<sup>184</sup> Tone Bratteteig (et al.), 'Methods: Organising Principles and General Guidelines for Participatory Design Projects' in Simonsen and Robertson, eds. (2013), pp. 117-44, esp. 121-25. The MUST framework provides four principles that form the spine of projects, suggestions about how to break the project down into four phases, and techniques and tools that are tailored to specific purposes.

<sup>185</sup> Liam J. Brannon and Pelé Hen, 'Design: Design Matters in Participatory Design,' in Jasper Simons and Toni Robertson, eds. (2013). pp. 37-63, esp. 38.

A movement of the time that embodied optimistic social ideals was *Die neue Wohnkultur* (the New Living Culture) which existed in the Weimar Republic in the late 1920s and early 1930s. It was modernist in outlook and emphasised simplicity and the desire to live without unnecessary objects. There was a belief that design could create a better society through principles of abstraction and the standardisation of machine production. See Jeremy Aynsley, *Designing Modern Germany*, London: Reaktion Books, 2009, pp. 69-72.

<sup>186</sup> Bannon and Ehn (2013), p. 55.

<sup>187</sup> Another example of socially innovative design is 'smart' devices, such as those that control your household appliances remotely (particularly useful for the elderly) or the many interactive apps available that cover a wide spectrum of activities and interests.

The concept of participatory design can of course be applied not only to products, but also to larger projects like designing cities. A city that encourages people to seek out public spaces in their leisure time promotes a sense of shared experience amongst the city's population.<sup>188</sup> Participatory design can achieve goals such as this, since a combination of residents and designers will come closer to achieving a design that reflects a spirit of connectedness and belonging. This may lead to a feeling of responsibility towards fellow citizens, which can in turn bring about a more harmonious society.

### 1.3.3 Sustainable Design

Environmentalism, also referred to as 'Sustainable Development', began in the 1960s and 1970s with the aim of publicising the damage caused by industrialisation, mass production, and the use of unsustainable materials and production techniques. The 1970s also saw the emergence of the ecological design movement.<sup>189</sup> The 1980s and 1990s saw the second wave of environmentalism appear, which focused on the buzz word of 'sustainability' and promoted the idea of 'green design', which emerged in the mid-1980s.<sup>190</sup> In the field of design this period saw a shift from 'alternative design' and 'design for need' to 'eco-design', 'green design' and 'environmentally affirmative design', which reflected the social and political attitudes of that era (attitudes that came to the fore at the Earth Summit in Rio in 1992).<sup>191</sup> Adopting Fletcher and Goggin's short-hand

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<sup>188</sup> Randolph T. Hester, *Design for Ecological Democracy*, Cambridge, Mass.; London: MIT, 2006, pp. 8-10.

<sup>189</sup> Pauline Madge, 'Design, Ecology, Technology: A Historiographical Review', *Journal of Design History*, vol. 6, no. 3, 1993, pp. 149-66, esp. 152-53. This movement consisted of several interconnected strands which included: voices of dissent in the design profession (predominantly Victor Papanek and Gui Bonsiepe); the Appropriate Technology movement, which was associated with E.F. Schumacher and the Intermediate Technology Development Group (ITDG); and Alternative or Radical Technology, developed from the counter culture of the 1960s. The context for the first wave of alternative technology and 'design for need' in the 1970s came from the growth/non-growth debate and the first UN conference 'Only one Earth' in 1972.

<sup>190</sup> Madge (1993), p. 159. In 1986 John Elkington helped to organise the 'Green Designer' exhibition, which was held in London at the Design Centre. This exhibition set 10 questions for the green designer, including 'Is the product energy efficient?', 'How long will it last?', and 'Will it appeal to the green consumer?'

<sup>191</sup> Ann Thrope, 'Design's Role in Sustainable Consumption,' *Design Issues*: vol. 26, no. 2, Chicago, Ill. : MIT Press, Spring 2010, pp. 3-16, esp. 4; Nevin Cohen (General editor), Paul Robbins (Series editor), *Green Cities: An A-to-Z Guide*, Los Angeles; London; New Delhi; Singapore; Washington DC: Sage, 2011, pp. 8-9. Of course, environmental issues are not new to the design professions. William Morris, for example, was among the first to consider the environmental and the social

terminology, I will take the term 'eco-design' to represent the wide range of design-environment approaches that are labeled 'green design,' 'ecological design,' and 'sustainable (product) design', among others. Pauline Madge, in her 1993 and 1997 articles on 'Ecological Design' drew a distinction between these terms, which correspond to differences between issues of scale, ease of implementation, potential environmental benefits, and the focus of design activity.<sup>192</sup>

Dominant approaches to eco-design focus mainly on pollution (and thereby low impact resources), and resource use in production, rather than human choices and actions.<sup>193</sup> Promoting a 'people focus in eco-design', many theorists suggest that more consideration should be given to ways of satisfying fundamental human needs: 'different satisfiers have different implications not only for those involved, but also for external factors such as the environment. A focus on needs and the way they are satisfied does not exclude the design and production of products, services, or systems.' On the contrary, a focus on the design of products, services and systems is unsustainable without concern for people's needs. 'Implicit within this,' argue Fletcher and Goggin, 'is a requirement to deal with issues underlying consumer actions, to understand behaviour in many contexts, and connect with people's aspirations and expectations.'<sup>194</sup> In the 1970s and 1980s designers to be appeared allied to business interests, most principally those relating to profit. However, recent initiatives by the US government have sought to make industrial goals compatible with sustainable development.<sup>195</sup>

At the start of the 1990s, there were problems with the quality of 'green' products. A report in *Design* magazine revealed that consumers found the products did not perform as well as their 'less green' counterparts. The author of the report, however, had the foresight to assert that 'the "green revolution" is here to stay.'<sup>196</sup> 'Practically everything we do is unsustainable,' wrote the author of another report in *Design* magazine: 'the way we generate and use energy; the way we extract and

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implications of his work in his book 'News from Nowhere'. Both Buckminster Fuller in the 1930s, and Victor Papanek more recently have explored and encouraged eco-design concepts.

<sup>192</sup> Pauline Madge, 'Ecological Design: A New Critique,' *Design Issues*, vol. 13, no. 2, Chicago, Ill. : MIT Press, 1997, pp. 44-54; Fletcher and Goggin (2001), p. 16.

<sup>193</sup> Fletcher and Goggin (2001), p. 25.

<sup>194</sup> Ibid.

<sup>195</sup> Nicola Morelli, 'Design as a Problem and Design as a Solution for Sustainability,' *International Journal of Innovation and Sustainable Development*, vol. 6, no. 3, 2012, pp. 265-80, esp. 270.

<sup>196</sup> Paul Burall, 'Blueprints for Green Design,' magazine *Design*, no. 503, London: Design Council, November 1990, pp. 34-5, esp. 34.

use minerals; the way we produce and distribute food.’<sup>197</sup> Arguing for the need to introduce a ‘strong sustainability dimension’ to British designers, the report highlighted materials as a source of sustainable design: ‘No disposable products please.’ Design work should focus on ways in which lifestyle choices can contribute to a product’s sustainability.<sup>198</sup> As Catherine McDermott notes, the evolution of what might broadly be called ‘environmental design’ is characterised by a progression from green to eco-sustainable design.<sup>199</sup> Sustainable design’s commitment to issues concerning environmental and social responsibility clearly parallels that of inclusive design.<sup>200</sup> Focusing on systems rather than products, sustainable design seeks to optimise function. Fundamentally altruistic, it represents a move in the design sector from product and material, to human and environment.

### **Recycling and Product Lifecycle**

The concept of recycling became an issue for eco-design when questions were asked about how easy it was to separate and recover materials from discarded products. And today it is still common for products to be labeled recyclable without these issues being taken into consideration. Furthermore, the practicality of recycling a product will depend on the cost of, and energy consumed in, the recycling process. Therefore when a product is designed to be truly recyclable the designer must consider factors surrounding such matters as the collection, transportation and disassembly of the product.<sup>201</sup> Another issue to be addressed is

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<sup>197</sup> Thrope (2010), p. 4.

<sup>198</sup> Ibid.

A design proposal relating to this uses shirts as an example. Instead of focusing on consuming efficiently by buying two shirts instead of six, focus on laundering (which is one of clothing’s biggest eco-impacts) and design a ‘no wash’ shirt. See Jonathan Porritt, ‘The Future is Green,’ magazine *Design*, London: Design Council, summer 1997, pp. 4-5.

<sup>199</sup> McDermott (2007), p. 217. In this sense, sustainable design is the emergence of an increasingly critical perspective on a progressively broadening theoretical and practical design scope.

<sup>200</sup> A report published in 2002 entitled ‘Agenda 21 for Sustainable Construction in Developing Countries – a Discussion Document’ highlights the need for a complete paradigm shift in the way we move forward with the construction industry. The report suggests that developing countries are best placed to do this because they have had to be innovative to overcome difficulties, and can therefore get more done with less. See World Summit on Sustainable Development (ed.), *Agenda 21 for Sustainable Construction in Developing Countries: A Discussion Document*, The International Council for Research and Innovation in Building and Construction (CIB) and United Nations Environment Programme International Environmental Technology Centre (UNEP-IETC), the CSIR Building and Construction Technology, 2002.

<sup>201</sup> Design Council, *More for Less: Design for Environmental Sustainability*, London: Design Council 1998, pp. 6-9; Carlo Vezzoli and Ezio Manzini, *Design for Environmental Sustainability* (trans. Kristjan Pruul), London: Springer, 2008, pp. 246-47.

that of biodegradability since although it is common for eco-designers to use materials that are easily re-integrated into the environment, a material that biodegrades quickly may entail a shorter lifespan.<sup>202</sup>

Over 80% of product costs are already committed at the early planning and product development stages, therefore the initial design of the product can play an important role in reducing its environmental impact. 'Life Cycle Assessment' (LCA) was introduced in the 1990s, and is a means of evaluating the environmental impact of a product, highlighting and quantifying energy and materials used, as well as the waste that will be released into the environment. This information is then used to positively affect environmental changes. It is currently the most widely used method for estimating the environmental influence of a product throughout its lifecycle.<sup>203</sup> LCA takes into account the whole lifecycle of the product, rather than focusing on isolated stages of its development. However, it is dependent on product specific data and is time consuming and often unaffordable. A pared down version of LCA is often used instead but this then renders it incomplete or inaccurate or both. Further, LCA tools are often not integrated into the design process, but are used to validate the design rather than to shape design decisions. This needs to be corrected, with the design process being completely integrated with LCA methods during all stages of development from the initial to the detailed stage.<sup>204</sup>

The increasing popularity of LCA encouraged the use of the expression 'Life Cycle Design' amongst designers, many of whom now considered the whole life cycle of a product when designing it, and so took into account factors such as biodegradability and the cost of recycling.<sup>205</sup> However since full LCAs are time consuming and expensive, simplified LCA processes have been developed which continue to allow the identification of ecologically problematic areas of the

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<sup>202</sup> Vezzoli and Manzini (2008), p. 248.

<sup>203</sup> Srinivas Kota and Amaresh Chakrabarti, 'Understanding the Evolution of Product Lifecycle Information with Respect to Lifecycle Assessment in Design' in Abdelaziz Bouras, et al. (eds.), *Product Lifecycle Management: Going Beyond Product Development and Delivery*, Geneva: Inderscience Enterprises, 2006, pp. 300-13, esp. 300-03; Vezzoli and Manzini (2008), p. 258.

<sup>204</sup> Kota and Chakrabarti (2006), pp. 303-12; Alexander Walker, 'Life-cycle Thinking, Analysis and Design' in Lehmann and Crocker, eds. (2012), pp. 145-67, esp. 157-65. To accurately assess the environmental impact of a product in the design stages, the material mass, manufacturing process, the packaging mass, product mass, assembly process, transportation type, distance travelled, energy use required and after use stream all need to be meticulously considered.

<sup>205</sup> Walker (2012), p. 155.

LCA attempts to put the environmental impact of a product into a format that is measureable.



product's lifecycle. LCAs can be useful to a company in terms of positioning them as leaders in sustainability, thereby attracting customers who are keen to purchase green products. In recent years, companies have increasingly used Product Lifecycle Management (PLM) in order to give themselves a competitive edge in the marketplace. The growing popularity of this strategy can be seen in the broad use of the term across several platforms. For example, the PLM roadmap, PLM in product design processes, and collaborative design processes in PLM systems.<sup>206</sup> PLM covers the whole product lifecycle, including the design phase.<sup>207</sup> PLM was developed by KAIST<sup>208</sup> (a government research oriented science and engineering institution) and has become popular globally due to the comprehensive nature of the programme. KAIST has also devised a PLM educational programme that involves both universities and industry (the programme aims to secure the future of Korean manufacturing and IT companies). Lecturers consist of both academic and industry experts who also collaboratively write textbooks. The curriculum is taught to engineers and managers, thereby helping to promote correct PLM project management.<sup>209</sup>

### **Electrical and Electronic Goods**

The second half of the 20<sup>th</sup> century saw a dramatic increase in the production of consumer electric and electronic goods. This was accompanied by a growing realisation that these goods needed to be recycled in an environmentally friendly way. From the 1990s onwards designers generally paid more attention to this need to recycle. Consumer awareness of ecological issues is today important consideration for electrical and electronics manufacturers, as is the recognition that environmentally motivated changes are beneficial to waste minimisation<sup>210</sup> In an

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<sup>206</sup> Tamaki Kinya (et al.), 'A professional training programme design for global manufacturing strategy: investigations and action project group activities through industry-university cooperation,' *International Journal of Business Information Systems*, vol. 18, Issue 4, 2015, pp. 451-68, esp. 453-54.

<sup>207</sup> Souheil Zina (et al.), 'Multi-view Model for Contextual Configuration Management in PLM Applications' in Bouras, et al., eds. (2006), pp. 53-62, esp. 53-4. Therefore a PLM solution pulls together various elements such as modelling, documentary management, numerical analysis, and know-how capitalisation, as well as information system components that help track the product through the phases of production and commercialisation to deletion and/or recycling.

<sup>208</sup> KAIST: Korea Advanced Institute of Science and Technology. KAIST became a university in 1975.

<sup>209</sup> Kinya, et al. (2015), pp. 458-59.

<sup>210</sup> Richard Ciocci and Michael Pecht, 'Impact of Environmental Regulations on Green Electronics Manufacture', *Microelectronics International*, vol. 23, no. 2, 2006, pp. 45-50, esp. 45.

effort to increase environmental responsibility, US legislators proposed the 'Lead Exposure Reduction Act' in the early 1990s. However a successful lobbying effort by the electronics industry saved lead-based solder from restrictions. Nevertheless, the US Environmental Protection Agency did an inventory of all lead-containing products, and those that presented unreasonable risk to human health were banned from being produced. The 1993 'Lead Tax Act' placed a per dollar charge on all lead smelted in the US and on the lead content of imported products, although neither has had a measurable effect on the electronics industry.<sup>211</sup>

In January 2003, the European Parliament and the EU council passed a pair of directives aimed at reducing the effects of the production, use, treatment, and disposal of Electric and Electronic Equipment (EEE) on human health and the environment; these directives also applied to Waste Electric and Electronic Equipment (WEEE). The directives identified lead as a material manufacturers must include in EEE after July 2006, with the goal of improving the environment.<sup>212</sup> Japan began their WEEE initiatives in 2001, and today they are considered global leaders in WEEE recycling. Japan was motivated to change due to a number of reasons including: the increasing use of electronic products; the physical limitations of the country in relation to household waste products; and the recognition that waste products often contained valuable materials. Japan took further measures in the early 2000s including allowing only certain landfill sites to accept the dumping of lead (dumping lead involved a cost premium), and passing the Home Appliance (Electronics) Recycling Law which requires companies to take back end-of-life electronics.<sup>213</sup> The Home Appliance Recycling Law (which was passed in 1998 but came into force in 2001) moved the obligation for collection and recycling of waste appliances to the producers of those appliances. Furthermore manufacturers were

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<sup>211</sup> Ciocchi and Pecht (2006), p. 47.

<sup>212</sup> Ibid, p. 46. These directives aimed to improve the performance of all companies directly involved in the handling of WEEE, particularly those involved in the waste treatment of the goods. EEE covers categories such as household appliances, telecommunications equipment, and other consumer products.

In January 2014, the UK passed a new set of WEEE regulations, replacing the 2006 EU directive. The new regulations extended the range of products covered with effect from January 2019. See <http://www.hse.gov.uk/waste/waste-electrical.htm> (last accessed 19/09.2015).

<sup>213</sup> Ciocchi and Pecht (2006), p. 47.

The twentieth century saw the progression from mass production and mass consumption to mass disposal, which led Japan to improve the handling of their end-of-life products. For example as the gross domestic product (GDP) of Japan grew from USD 2,004 in 1970 to USD 24,593 in 1988, the number of colour televisions per 100 house holders rose from 26.9 to 224.0 over the same time span. See Ibid, p. 46.

now required to foot the cost of recycling their products. The law was phased in by increasing yearly the number of products that must be returned to the producer for recycling. In 2001, colour televisions were included, thus directly affecting the electronics industry.<sup>214</sup>

In 2003 the Korean government passed a regulation requiring manufacturers of EEE to take responsibility for the recycling their products at their end of life (EOL).<sup>215</sup> In 2013, Korea was identified as one of the countries required by the Post-Kyoto Protocol to reduce its greenhouse gas emissions, and it experienced increased pressure with regard to its recycling of WEEE products.<sup>216</sup> The fact that companies such as Samsung and LG have participated in the establishment and operation of recycling centres is a positive sign for the future of sustainable design in Korea.<sup>217</sup> In addition, LG have won several awards in sustainable and recycling design.<sup>218</sup>

## The Automobile Industry

Since the 1970s the automobile industry has increasingly sought to recycle as many End of Life Vehicles (ELVs) as possible. Currently, most countries recycle about 75% of their ELVs, with the remainder (25%) going to landfill. However, a 2000 EC directive requires all member states to increase this percentage to 85% by the end of 2015.<sup>219</sup> In 1992 in the US alone, approximately 9 million vehicles reached their end of use. This number had increased to between 12 and 15 million

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<sup>214</sup> Other products included in the law were air conditioners, refrigerators, and washing machines.

<sup>215</sup> Kim Hyun-soo (et al.), 'Reverse Logistics Using a Multi-depot Vehicle Routing Problem Approach for Recycling End-of-Life Consumer Electronic Products in South Korea,' *International Journal of Sustainable Transportation*, vol. 5, 2011, pp. 289-318, esp. 290-92. However, Korea faced a logistical problem known as Vehicle Routing Problem. This problem involves the efficient movement of EEE from collection centers to recycling centers, but one solution suggested was to model the logistics of this movement on a multi-depot vehicle routing system.

<sup>216</sup> In 2007 the UN Intergovernmental Panel on Climate Change observed that the average global temperature climbed 0.74°C in the 10 years from 1996 to 2005, and concluded that global +warming is escalating due to human activity. If countermeasures are not taken, the temperature could climb a maximum of 6.4°C by the end of this century. See Hiroshi Hamasaki and Tatsuyoshi Saijo, 'New International Framework Beyond the Kyoto Protocol' in Sumi Akimasa, et al. (eds.), *Climate Change and Global Sustainability: A Holistic Approach*, Tokyo; New York; Paris: United Nations University Press, 2011, pp. 152-63, esp. 152.

<sup>217</sup> Kim Hyun-soo, et al. (2011), pp. 289-316.

<sup>218</sup> For example in 2015 LG won the 'Design for Recycling Award' from the 'Institute of Scrap Recycling Industries'. LG received this award for their TV designs. In the same year the Environmental Protection Agency presented LG with the 'Energy Star Partner of the Year Award' for the company's sustainable design.

<sup>219</sup> Alessandro Santini (et al.), 'Auto Shredder Residue Recycling: Mechanical Separation and Pyrolysis', *Waste Management*, no. 32, issue 5, 2012, pp. 852-58, esp. 852-53.

by 2012. In an attempt to reduce their environmental impact, the US car industry has continuously decreased the mass of their vehicles. In 1976 the average mass of a car was 1709 kg, but by 1994 this had decreased to 1441 kg. The US recycled 75% of their ELVs in 2007, and the country set itself the target of increasing this figure to 95% by January 2015.<sup>220</sup> It should be noted that cars today account for roughly 20 percent of all worldwide carbon emissions. In 2011, in an effort to help reduce these emissions, US president Obama pledged to make efforts to put an additional 1.2 million electric vehicles (roughly 10 % of annual car sales in the US) onto American roads.<sup>221</sup>

Korea currently recycles 85% of their ELVs and aims to increase this figure to 95% by the end of 2015. In 2003, Following Japan's lead, Korea introduced WEEE guidelines. The success of Korea's WEEE recycling is based in part on its 2-tier policy for paying WEEE processing fees. If the consumer buys a new replacement product for his or her current ELV, then no taxes are paid for the recycling service. If, on the other hand, the consumer simply wants to dispose of their ELV, then he or she has to pay taxes for the collection and disposal of the vehicle. WEEE dismantling is more difficult than ELV recycling due to the size and complexity of the component parts.<sup>222</sup> However, ELV has a greater impact on personnel and the environment due to the amount of oxygen reduction it generates. This knowledge can help designers to incorporate easier and greener dismantling features when designing new vehicles.

## **Sustainable Design and Economic Success**

The term 'creative communities' has been coined to describe social experiments where self-organised citizens ensure, among other things, that their community is eco-friendly. In cases such as this there is often a close relationship between urban

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<sup>220</sup> B.J. Jody and E.J. Daniels, 'Technologies for Recycling Shredder Residue' in Society of Automotive Engineers (SAE); SAE World Congress (2007: Detroit, Mich.), *Design for Recyclability and the Environment*, Warrendale, PA: SAE, 2007, pp. 23-37, esp. 23-4. This target includes an aim to ensure that at least 40% of shredder residue is recycled, and also that 80% of dismantled vehicles are recycled.

<sup>221</sup> Michael F. Ashby, *Materials and Sustainable Development*, Amsterdam: Butterworth-Heinemann, 2015, pp. 151-53.

<sup>222</sup> Tian Jin and Chen Ming, 'Sustainable Design for Automotive Products: Dismantling and Recycling of End-of-life Vehicles', *Waste Management*, vol. 34, issue 2, 2014, pp. 458-67, esp. 460-61; Jung Hyun-tae (et al.), 'Status of Recycling End-of-life Vehicles and Efforts to Reduce Automobile Shredder Residues in Korea', *Journal of Material Cycles and Waste Management*, vol. 9, no. 2, 2007, pp. 159-66, esp. 160.

space professionals and sustainable designers.<sup>223</sup> In addition, recycling engineers and recycling centres can be even more sustainable by utilising tools and equipment already in use for other purposes. Furthermore, tools that are highly specialised should arguably be avoided in the recycling process since this allows less skilled workers to be employed in recycling centres.<sup>224</sup>

Increasingly companies view sustainable design as crucial to their success in terms of improving profits and achieving a better market position.<sup>225</sup> Not only does sustainability create stakeholder value, but during the 2008 US financial crisis, those companies committed to it outperformed the industry standard.<sup>226</sup> This embracing of sustainable design proved unpopular with UK companies who seemed reluctant to undertake the necessary changes. A Design Council survey in 2001 showed that the 47% of UK companies who saw sustainable design as a threat, did so mainly due to the prohibitive costs involved. Sweden, by comparison, is a leader in the field of sustainable design, as evidenced by Swedish product development and company profits.<sup>227</sup> However, in recent years consumer demand has driven the sustainable product market, as have an array of legislative requirements placed on manufacturers. Such developments have meant that producers have attempted to make environmental decisions at the earliest possible stage of the design process, e.g. the concept or product strategy stage.<sup>228</sup> This means that the route to sustainability begins even before development and specification. Some of the most sustainable products will be those built in a modular system, meaning that modules can be removed from products at the end of their life cycle, and then used in other products.<sup>229</sup>

The need to focus on sustainable design is apparent when we consider that some studies have indicated we should reduce our use of natural resources by 90-

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<sup>223</sup> Vezzoli and Manzini (2008), p. 261.

<sup>224</sup> Mathaisel, et al. (2013), pp. 354-55.

<sup>225</sup> Kenji Doi (et al.), 'Construction of an Optimum System Design Method Considering Product Lifecycle,' *International Journal of Sustainable Engineering*, vol. 2, no. 3, 2009, pp. 171-83.

<sup>226</sup> Cathy L. Z. Dubois and David A. Dubois, 'Strategic HRM as Social Design for Environmental Sustainability in Organisation,' *Human Resource Management*, vol. 51, no. 6, 2012, pp. 799-826, esp. 799.

<sup>227</sup> As well as Sweden, Germany and the Netherlands have also engaged in this activity more than the UK or France. See Design Council, *Design Council European Survey of Manufacturing Companies' Attitudes Towards Design for Sustainability* (Fieldwork completed by IFF Research March 2001, Research Conducted by Hannah Curtis and Jeremy Walker), London: Design Council, 2001, pp. 2-10.

<sup>228</sup> Design Council (1998), pp. 10-11.

<sup>229</sup> *Ibid*, p. 21.

95% within the next 40 years to ensure future resource sustainability.<sup>230</sup> The important role that design plays in this process is immediate and obvious. Over the last 20 years, sustainable design has become ever more important. Previously, technological and cultural concerns dominated a designer's thoughts, but now it is impossible to consider these elements separately from sustainability. Designers have a social responsibility to investigate and understand the world around them. Likewise, education is pivotal in deepening understanding among students about their responsibilities as designers. These concerns were apparent in the 2010 National Design Triennial, 'Why Design Now?' (at the Cooper-Hewitt National Museum in New York) which considered the role design can play in developing cleaner energy, improving global healthcare, and ensuring that wealth is more equally distributed. Underlying these concerns was the desire to reduce conflict between people and protect the ecosystem.<sup>231</sup> Also, in 2010 the Design Museum in London hosted the Sustainable Futures Exhibition. A big part of the exhibition focused on ways to reduce the impact of design on the environment. The exhibition highlighted this issue by showing the staggering amount of resources that were used in packaging one pair of trainers. Exhibitors also proposed various solutions to the possible environmental impact of design activities; one exhibit included a model for a carbon neutral city.<sup>232</sup>

It is a common view that the responsibility to make environmentally friendly products rests with the design sector (although many would claim that ultimately responsibility, and power, rests in the corporate sector) and that 90% of a product's environmental impact is fixed during the design stage.<sup>233</sup> The response of designers to this has traditionally been to create greener products and rely on an

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<sup>230</sup> Helen Lewis (et al.), *Design + Environment: A Global Guide to Designing Greener Goods*, Sheffield: Greenleaf Publishing, 2001, pp. 186-87; Russ (2010), pp. 9-13. Furthermore we are still facing rapid population growth, and with this an increasing strain on the environment in terms of a larger demand for housing, services etc.

<sup>231</sup> Cara McCarty (et al.), with contributions by Andrea Lipps, *Why Design Now? National Design Triennial*, New York: Cooper-Hewitt, National Design Museum, Smithsonian Institution, 2010.

<sup>232</sup> Helen Charman, 'Critical About Design' in Nicholas Addison and Lesley Burgess (eds.), *Debates in Art and Design Education*, London and New York: Routledge, 2013, pp. 121-37, esp. 133-34. Perhaps inspired by this, the UK Technology Strategy Board launched a Design for Future Climate Competition (2010-2014), with the aim of encouraging building projects to seriously consider the impact of building on climate change. See Fionnuala Costello and Anastasia Moylona, *Design for Future Climate: Case Studies*, London: Chartered Institution of Building Services Engineers, 2014.

<sup>233</sup> Paul Hawken (et al.), *Natural Capitalism: The Next Industrial Revolution*, 2<sup>nd</sup> eds. (first published 1999), London; Washington DC: Earthscan, 2010.

'informed choice approach' with regards to consumers.<sup>234</sup> More recently an approach called 'Design for behavior change' has found prominence. This seeks to inform consumers about a product's environmental impact, but it also uses technical controls or spatial organisation to direct customer behavior.<sup>235</sup> It is a matter of debate as to how ethical a practice is when it positions the power of environmental decision-making between the consumer and the producer.<sup>236</sup> However, modern consumers are increasingly astute, which makes them less likely to be taken in by false claims of sustainability. Nevertheless, the risk remains that through familiarity or over-use the current sustainable 'trend' will ultimately fade away. One way to help avoid this is to design products whose sustainability features are well articulated and clearly presented. This increases the chances of commercial success while avoiding inauthentic duplication.<sup>237</sup>

### **Tool-Kits for Sustainable Design**

A number of design tool-kits exist internationally for designers including the 'Sustainability Design-Orientating (SDO) Tool-Kit', which arose as a result of the Methodology for Product Service System research. The SDO aims to help designers achieve more sustainable solutions by, among other things, improving the environmental aspect of: system lifespans; transportation and distribution; consumption; emissions and waste; renewability and biocompatibility; and non-toxicity. These aims are displayed in idea tables that include guidelines, one of which involves verifying a design concept by comparing it with existing systems.<sup>238</sup> Another model produced for sustainable development is Porter's 1980 five-point management plan, which covers issues relating to customers, rivals, new companies and suppliers. This plan was further enhanced by Samuel Ho's series

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<sup>234</sup> Thorpe (2010), p. 7. The basis of this informed choice approach is that green and eco-designers redesign their products to make them more environmentally friendly, in the hope that once consumers have been informed about which products are better for the environment, they will then choose to purchase those products.

<sup>235</sup> Russ (2010), pp. 34-5; Thorpe (2010), pp. 7-8. Examples of this are designs to reduce refrigerator door opening, or prevent consumers over-filling their tea kettle.

<sup>236</sup> Thorpe (2010), p. 16. In terms of design, Thorpe believes it is the implementation of strategies to enable manufacturers to meet needs with fewer purchased solutions that could lead to more sustainable consumption.

<sup>237</sup> Jonathan Chapman and Nick Gant, 'Conclusion' in Jonathan Chapman and Nick Gant (eds.), *Designer, Visionaries and Other Stories: A Collection of Sustainable Design Essays*, London: Earthscan, 2007, pp. 136-44, esp. 144.

<sup>238</sup> Vezzoli and Manzini (2008), pp. 247-50.

of 5S (5-S, 5S\*, and 5S+) models for sustainable development,<sup>239</sup> which were written between 2008 and 2010, and influenced heavily by the 'Total Quality Management' (TQM) production system employed by Toyota in the late 1980s (TQM was Japan's modified version of American Quality Control Techniques).<sup>240</sup> These 5S models refined the 'Lean' TQM standards for sustainability and competitiveness,<sup>241</sup> and have been especially successful in changing the fortunes of many Asian institutions, for example the Tao Heung Group of restaurants, Ocean Empire and the HK hospital authority.<sup>242</sup> The difference between the 5S plans and the ISO systems is that 5S endeavours to make its audit check-points on its audit checklist as simple and concise as possible. In this way the 5S attempts to make sure its standards provide a wide scope for interpretation and application, thereby ensuring the plan can be used by the largest number of organisations possible.<sup>243</sup>

### 1.3.4 Design Aesthetics and Eastern Ideals

#### Design Aesthetics and Eastern Ideals

Aesthetics is traditionally associated with the physical appearance of an object, in particular with reference to that object's form, shape, colour and texture, and how these elements relate to its perceived beauty. Aesthetics is important to design since an attractive appearance can sway customer choice, often because it is

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<sup>239</sup> Samuel K.M. Ho, 'Global Sustainable Development through the Integrated Lean Management (Green 5-S) Model for TQM,' *Nang Yan Business Journal*, vol. 1, no. 1, 2012, pp. 27-37. These models involve a 5 point checklist, namely: Structurise (i.e. throw away rubbish & return to store); Systematise (i.e. 30 second retrieval of a document); Sanitise (i.e. individual cleaning responsibility); Standardise (i.e. transparency of storage & fool-proof); Self-discipline (i.e. do 5-S daily & 5-S audit). Although the 5S programme began at Toyota, it was Malaysian Professor Samuel Ho who standardised the practice and introduced it to many Asian countries including Malaysia.

<sup>240</sup> Whereas American quality control techniques focused mainly on how to increase mass production, TQM also placed a great emphasis on what the customer wanted. TQM sometimes referred to as either the 'Toyota Production System' or 'Lean Production System'. See Amasaka Kakuro, *Science SQC, New Quality Control Principle: The Quality Strategy of Toyota*, Tokyo: Springer-Verlag, 2004, p. 5.

<sup>241</sup> The concept of Zero waste (which aims to ensure that no waste involved in a product's whole lifecycle goes to landfill, and also that any organic waste associated with the lifecycle gets returned to the soil) may have its origin in TQM since Zero waste reduces costs and increases efficiency. See Nicholas Chileshe (et al.), 'Construction Management and a State of Zero Waste' in Lehmann and Crocker, eds. (2012), pp. 284-306, esp. 286-97.

<sup>242</sup> Samuel K.M. Ho, 'Integrated Lean TQM model for Sustainable Development,' *The TQM Journal*, vol. 22, no. 6, 2010, pp. 583-93, esp. 589.

<sup>243</sup> Ho (2012), p. 29.



associated with a better performing product. Aesthetics almost always influence consumers in their assessment of a product.<sup>244</sup> We decorate our homes beyond the necessities of comfort and function, or lay the dinner table a particular way when we have guests because these personal, seemingly mundane, choices are a part of our daily interaction with design aesthetics. Modern design concepts are starting to explore the rich aesthetics of the everyday in order to positively affect human lives more directly (this often involves incorporating moral and social considerations into the design process).<sup>245</sup>

One of the reasons behind this is that design aesthetics should not be detached from the cultural and historical traditions of native art. This is not to say that a design should retain or necessarily even physically resemble the form or shape of a traditional design; rather, as Finnish architect Juhani Pallasmaa proposes, its design principles should represent 'a cultural deep structure' bound by the values of a cultural or ethnic ideology. Design aesthetics should convey a national brand identity through projecting a cultural experience inspired by traditions and values. Hence, a respectful attitude towards history and tradition need be neither regressive nor conservative. Instead, it can be a source of aesthetic inspiration in design principles.<sup>246</sup> The pursuit of newness and uniqueness in design can result in a loss of integrity and lack of inspiration, due to the absence of deep meaning and ideological influences of products and art which are inspired by traditional forms. Tradition is valuable because of its profound and fundamental significance in the origins and development of cultural identity, and leads to a firm foundation of principles in contemporary design aesthetics.<sup>247</sup>

The ancient Chinese art of Feng Shui not only considers the beauty of a space, but its function and most importantly its effect on people's everyday quality of life, including their emotional balance. Feng Shui practitioners draw on multiple correlations between space perception, form, and human well-being. Having been popular in the West since the 1980s, many designers are influenced by its

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<sup>244</sup> Jane Foesey, *The Aesthetics of Design*, Oxford University Press, 2013, p. 184.

<sup>245</sup> *Ibid*, pp. 1-7.

<sup>246</sup> Juhani Pallasmaa, 'Newness, Tradition and Identity: Existential Content and Meaning in Architecture', *Architectural Design* (Special Issue: Human Experience and Place: Sustaining Identity), vol. 82, issue 6, 2012, pp. 14-21, esp. 15.

<sup>247</sup> *Ibid*, pp. 17-9.

concepts.<sup>248</sup> Feng Shui is based on the Daoist Yin/Yang theory (which is a theory of harmony) which underpins much of Eastern philosophy. The concept of Harmony is still relevant to East Asian people today, and Daoism, Confucianism and Buddhism have all contributed to the rich meaning of harmony.<sup>249</sup> Western interpretations of harmony often differ from those in the East.

Western philosophy has tended to associate Eastern conceptions of harmony with a conformity that precludes individuality. However, Confucianism in fact requires its adherents to take into account differences, tensions and resistance, and to reach agreements that do not prevent individual choice. This harmony is intended to be long lasting and pervasive, having been achieved via a realistic consideration of all factors involved.<sup>250</sup> Confucianism is based on governance that prescribes rites and norms that regulate political and social behaviour.<sup>251</sup> In addition, it incorporates 'ren' (human benevolence) and 'yi' (morality) into a coherent moral and social system.<sup>252</sup> However, Daoism is based on respecting nature, and the belief that the showing of this respect can help people achieve harmony with nature and others.<sup>253</sup> The Daoist concept of the human environment includes not only visible physical geography, animals, and plant life, but also the metaphysical, such as deities and ancestors. Maintaining harmony between nature, both physical and metaphysical, and human beings is fundamental to Daoist

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<sup>248</sup> Ritu Bhatt, 'Traditional Knowledge for Contemporary Uses: An Analysis of Everyday Practices of Self-help in Architecture' in Ritu Bhatt (ed.), *Rethinking Aesthetics: The Role of Body in Design*, New York and London: Routledge, 2013, pp. 181-203, esp. 182-83.

<sup>249</sup> Daoism was founded by Laozi who lived in China during the 6<sup>th</sup>–5<sup>th</sup> Century BC. Confucianism was founded by Kongzi who also lived in China from 5<sup>th</sup> to 4<sup>th</sup> Century BC. Buddhism however was founded in Northern India by Siddhartha Gautama during the 5<sup>th</sup> to 4<sup>th</sup> BC. All these religions are still practiced today, and Buddhism is now the fourth largest religion in the world with an estimated 376 million followers. See Lee Hyo-dong, *Spirit, Qi, and The Multitude: A Comparative Theology for the Democracy of Creation*, New York: Fordham University Press, 2014, p. 62; Fung Yu-lan, *A History of Chinese Philosophy: The Period of the Philosophers* (trans. Derk Bodde), Peiping: Henri Vetch; London: George Allen & Unwin Ltd., 1937, pp. 43-58.

<sup>250</sup> Li Chenyang, *The Confucian Philosophy of Harmony*, London and New York: Routledge, 2014, pp. xi.

Since Confucius' time, the notion of harmony has always been a goal in Confucian philosophy and has played a central role in peace keeping. See John H. Berthrong, 'Confucian Formulas for Peace: Harmony Hwa (和)', *Society*, Symposium: Formulas of Peace, vol. 51, issue 6, Springer Science+Business Media, New York, 2014, pp. 645-55, esp. 646-47.

<sup>251</sup> Furthermore, Confucianism sees harmony as a way of life, so that a person aims to harmonise internally with themselves and externally with others in the community. See Li (2014), pp. 167.

<sup>252</sup> Confucianism centres around harmony between humans and heaven. See Yao Xinzong, *An Introduction to Confucianism*, Cambridge University Press, 2000, pp. 169-70.

<sup>253</sup> Henri-Claude de Bettingnies (et al.), 'Practical Wisdom for Management from the Chinese Classical Traditions', *Journal of Management Development*, vol. 30, no. 7/8, 2011, pp. 623-28, esp. 625-26.

living.<sup>254</sup> Furthermore, respecting nature is crucial for maintaining good governance since this requires harmony.

The contemporary notions of design ethics described in the previous section are strongly reminiscent of East Asian ideals, the most central of which is perhaps Oullim (Great Harmony), an ancient tradition which shares some core principles with Daoism, Confucianism and Buddhism, including encouraging harmony and hospitality between people.<sup>255</sup> These concepts, in turn, encompass a large part of East Asian cultural identity, and can be adapted to inform inclusive and sustainable design concepts. The Oullim principle encompasses not only the Daoist notion of 'Yin' and 'Yang', but also the Confucian notion of 'Li' (Principle) and 'Chi' (Force). The world is dynamic in this sense because it is Chi which manifests itself in Yin and Yang, both of which penetrate everything in the universe. It is for this reason that Chinese philosophers do not view things in separation from each other. This tendency has filtered into the various Eastern religions, and thereby, much of East Asian thought. The differences between the ways in which East Asian and Americans prefer to view products online can be traced back to this particular East Asian way of thinking about things in the world as being interconnected. As such, designers are increasingly taking into account cognitive differences between people from different cultures when designing.<sup>256</sup> In fact, the concept of Oullim as it is applied to the design world often refers to the creation of harmony between man, nature and machine, as well as increased harmony between the East and West.

Confucianism is associated with a number of ideals including humility, duty, and following the dictates of superiors. The work of the famous 16<sup>th</sup> century Korean Confucian philosopher Yi Hwang (Toegye, 1501-70) involved systematic scientific

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<sup>254</sup> Paul Jackson, 'Ideas in Daoism Relative to Ecology and the Environment,' in Carmen Meinert (ed.), *Nature, Environment and Culture in East Asia: The Challenge of Climate Change*, Leiden; Boston: Brill, 2013, pp. 41-68, esp. 43.

<sup>255</sup> Sam Crane, *Life Liberty, and the Pursuit of Dao: Ancient Chinese Thought in Modern American Life*, Chichester, West Sussex: Wiley Blackwell, 2013, pp. 13-36; Li Chenyang, 'Chinese Philosophy' in Jay L. Garfield and William Edelglass (eds.), *The Oxford Handbook of World Philosophy*, Oxford University Press, 2011, pp. 9-12, esp. 9-10.

Daoism promotes a number of values: Benevolence, propriety, faithfulness, justice and wisdom. Daoist thought involves a notion of the natural order of things as well as a moral order. It is easy to see how these virtues could help increase the proliferation of inclusive design. Furthermore, inclusive design is strongly linked to the East Asian concept of Oullim.

<sup>256</sup> Li (2011), pp. 10-11. Chi, Yin and Yang are Chinese concepts that play an important role in much of Asian philosophical thought. Chi refers to the primary energy of the universe, and can manifest itself in tangible and intangible forms. Yin and Yang are parts of Chi, with Yin representing things such as dark and feminine, and Yang representing things such as light and masculine. In order for things to experience harmony Yin and Yang must be in balance.

study and methods.<sup>257</sup> Between the late 17<sup>th</sup> and early 19<sup>th</sup> century his thought influenced the 'Sirhak' (Practical Learning) school which arose in response to the metaphysical and ritualistic nature of Neo-Confucianism (Neo-Confucianism arose during China's Song dynasty [960-1279] as a result of the interaction between Confucian philosophy, Daoism and Buddhism's exploration of metaphysics).<sup>258</sup> The school stood against the rigidity of Confucian society, supported peasant farmers in their struggle for land reform, and advocated the increasing use and study of science and technology. Toegye wrote extensively on practical learning and political ideals. One of his central beliefs was that Neo-Confucian education should involve practical and empirical teaching in scientific, economic, social, moral and political areas. This reflected Toegye's interest in the practical areas of Neo-Confucianism rather than its theoretical and subjective aspects.<sup>259</sup> During the Joseon Dynasty (1392-1897) Neo-Confucian scholars felt that art could convey Confucian truths to the public. In fact, artists could often find themselves criticised if their paintings disregarded their social obligation to educate the public in Confucian matters.<sup>260</sup>

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<sup>257</sup> Lee Hyo-dong (2014), pp. 38 and 119-20.

According to the scholar Yulgok (1536-84), Li has no beginning or end. Li cannot act independently, but it can act and move when it rides on Chi. However, Toegye believed that both Li and Chi can take form, so that practice and theory are not separate. Therefore, Li and Chi must work together to produce both inner cultivation (self-improvement) and respect for society, nature and your fellow man. See Yun Koo-dong, *The Holy Spirit and Ch'i (Qi): A Chiological Approach to Pneumatology*, Eugene, OR: Pickwick Publications, 2012, p. 83.

<sup>258</sup> According to Neo-Confucianism human nature referred to the 'substance' of the human mind, while emotions are described as emanations. Mencius (372-289 B.C.) classified humannature as consisting of four basic mental states (pity, shame, reverence and judgement) and the emotions into seven feelings i.e. joy, anger, sadness, fear, love, hatred and desire. Confucianism in Korea was heavily influenced by famous Four-Seven debate, which was a scholarly debate between the Korean Confucianists Toegye and Ki Taesung. The debate centered on the relationship between Mencius' four basic mental states and the seven Confucian feelings. See Bae Jong-ho, 'The "Four-Seven" Controversy in Korean Confucianism' in Chun Shin-young (ed), *Korean Thought*, Seoul: International Cultural Foundation; Si-sa-yong-o-sa Publishers, 1982, pp. 37-52, esp. 37-9; Cho In-soo, 'Confucianism and the Art of the Joseon Dynasty' in Woo Hyun-soo (ed.), *Treasures from Korea: Arts and Culture of the Joseon Dynasty, 1392-1910*, New Haven and London: Yale University Press, 2014, pp. 1-11, esp. 7.

<sup>259</sup> Edward Y.J. Chung, *The Korean Neo-Confucianism of Yi T'oegye and Yi Yulgok: A Reappraisal of the 'Four-seven Thesis' and Its Practical Implications for Self-cultivation*, Albany: State University of New York Press, 1995, pp. 22-3, and 154-61.

Toegye tried to help implement a number of reform measures including government by 'public opinion', which can be considered a democratic theory of government. See Yi Tae-jin, *The Dynamics of Confucianism and Modernization in Korean History*, Ithaca, New York: East Asia Program Cornell University, 2007, pp. 313-16.

<sup>260</sup> Cho In-soo (2014), p. 8. During the 17<sup>th</sup> century Confucian art began to incorporate a literary style in which the exploration and representation of subjective emotions became important. This style aimed to reveal inner aspects of the mind.

In the 17<sup>th</sup> century Confucianism in China was influenced by rationalism and practical ideology (for example the famous 17<sup>th</sup> century Chinese Confucian philosopher of science Song Ying-xing's methods mirrored natural philosophers and scientists from the West).<sup>261</sup> In Japan, Confucianism became heavily embedded in the culture and permeated national consciousness (elements of Confucianism fused with beliefs from the native Shinto religion). Confucianism helped Japan establish practical rules for social behaviour.<sup>262</sup> In the twentieth century, Confucianism played an important role in aiding the acceleration of Japanese industrialisation and modernisation, particularly in the emergence and power of the 'Zaibatsu'.<sup>263</sup> Elements of Confucianism continue to be influential within Japanese society, and these elements are often altered by the prevailing economic and military powers so as to fit in with the nation's social, political and economic circumstances.<sup>264</sup>

An important influence on East Asian design has been Feng shui, which dates back to the Chou Dynasty (1030-722 BCE). Feng shui incorporated various traditions as well as popular trends and thus, defies a single categorisation. Nevertheless, design in the Feng shui tradition holds that a person's environment profoundly affects their well-being.<sup>265</sup> Such Feng shui principles have influenced design in the West,<sup>266</sup> where designers widely hold that architecture can be a force for good since the interaction between people and spaces can elicit positive psychosomatic responses. Matthew E. May maintains that Western design has

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<sup>261</sup> Dagmar Schäfer, *The Crafting of the 10,000 Things: Knowledge and Technology in Seventeenth-Century China*, Chicago and London: The University of Chicago Press, 2011, pp. 262-66. Song's 'Artificer's Record' became a central text for learning pragmatic and practical statecraft. His work showed that different cultural ideologies do not always produce different methodologies, and that Confucianism is compatible with rationality and the search for objective knowledge. Song's writings helped modernise areas including cotton pressing and transportation. He placed his work within the category of Chi, and in this way Song showed that Confucian ideals were compatible with practical advancements.

<sup>262</sup> Unlike in China and Korea, Japan did not introduce a Confucian education system, and the influence of Confucian teaching was mainly seen in the conscience of the bushido (this term relates to the moral values of the samurai warrior). See Yao (2000), pp. 125-26.

<sup>263</sup> Ibid, p. 126. Furthermore, the Confucian ideal of unity between morality and economics led to Confucianism being promoted by business pioneers. Confucianism was thus important for the successful emergence of capitalism..

<sup>264</sup> Ibid, p. 137.

<sup>265</sup> Bhatt (2013), pp. 183-84. As such, a Feng shui-designed house would take account of the prevailing Yin and Yang energy (Chi) in its environment to ensure the house was in the best possible position to interact with local microclimates, vegetation and soil qualities. These measures would mean the house was in the ideal state and location to harness the harmony of nature, including its Chi. This in turn would have a positive effect on the human occupants who are themselves a part of nature.

<sup>266</sup> Ibid, pp. 184-98.

been influenced by the Seven Zen 'Shibumi' principles, namely: simplicity; naturalness; stillness, tranquility, break from routine; imperfection, asymmetry; austerity and subtlety.<sup>267</sup> The term 'Zen design' is widely recognised in the West, and is especially synonymous with simplicity and tranquility.<sup>268</sup> A further important concept within East Asian culture is what might be termed 'eco-harmony', namely the concept that in order for society to enjoy peace and prosperity it must reflect both ecological and social ideals. These values form part of the East Asian cultural DNA (as do the philosophical and religious values above), and thus also form part of East Asian *design* DNA since designers absorb the values from a young age.<sup>269</sup> Such a design background has been vital in creating the successful brand DNA of many East Asian companies, including Sony and Samsung, whose products often reflect not only technological innovation, but also the design concept of interface simplicity.

With the advent of globalisation, visual and artistic aesthetics are becoming increasingly homogenised. At the same time, consumers are now often attracted to a product's functions, especially if these are pioneering and useful. Functions may include specific applications, compatibility with other consumer items, specific functionality and user capability, as well as technical aspects such as speed, memory and power. It is therefore important to recognise the attractiveness of functionality and functions, rather than just concentrate on the appeal of visual aesthetics. Here is where Korean products can stand out from their competitors. The principles within traditional Eastern philosophies are no less relevant to the technical and function aspects of design than the visual. The way in which a product benefits its user should indeed be tied-up with the concept of Oullim, and particularly inclusivity and sustainability. While not forgetting or neglecting the ability of a Korean design identity to influence a product's visual and artistic

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<sup>267</sup> Matthew E. May, *The Shibumi Strategy: A Powerful Way Create Meaningful Change*, San Francisco: Jossey-Bass, 2011, p. 2. Also see his article 'The Shibumi Seven Design & Creative Principles Inspired by Zen' in [http://www.splusb.fr/THE\\_SHIBUMI\\_7.pdf](http://www.splusb.fr/THE_SHIBUMI_7.pdf) (last accessed 09/05/2013). Yanagi also refers to the Shibumi principles, claiming that a true artwork involves an intentional imperfect beauty which brings out the artistic side of the viewers themselves. See Yanagi Soetsu, *The Unknown Craftsman: A Japanese Insight into Beauty* (Adapted by Bernard Leach, Foreword by Hamada Shoji), Tokyo; New York; London: Kodansha International, 1989, pp. 123-34.

<sup>268</sup> Zen is the Japanese pronunciation of the form of Buddhism originally developed in China in the 6<sup>th</sup> century, known as 'Chan'. This school of Buddhism was known as 'Seon' as it developed in Korea from the 7<sup>th</sup> century and spread to Japan in 12<sup>th</sup> century.

<sup>269</sup> Lee Devin and Robert D. Austin, *The Soul of Design: Harnessing the Power of Plot to Create Extraordinary Products*, Stanford University Press, 2012, pp. 101-04.

aspects, suitable work needs to be put into developing smart, easy-to-use, innovative and holistically beneficial technology.

#### **1.4 summary**

In this chapter I have examined the history of consumerism throughout the 20<sup>th</sup> century and the effect it has had on the history of design. Both communism and capitalism failed to meet people's real needs, whilst at the same time both have had negative effects on the environment. As an alternative solution I proposed a new approach to design that aimed to overcome the negative effects of both capitalist and communist attitudes towards consumption. This proposal emphasises the ideals of inclusivity and sustainability that are embedded in Eastern culture i.e. the principles of Oullim. Such ideals often involve the notions of harmony in society (which includes inclusivity and is derived in part from Confucianism), and sustainability (derived in part from Daoism). I also maintained that the concept of Oullim should be applied to a product's functionality, and that this could help provide a basis for Korea's design identity.

## **CHAPTER 2: Design Identities with Particular Reference to Korea, Japan and Russia**

### **2.0 Introduction**

This chapter briefly outlines the socio-cultural values, religious identity, and various political features of the three countries under consideration in order to define their national characteristics, and to explain how these countries have shaped their respective design identities. In addition this chapter also examines the success of Korea's design from the 1990s onwards, and how Korea is still searching for a distinctive design identity.

The various elements that help construct a nation's group identity infuse its people's creativity. From the complex conjunction of sociological, psychological, and anthropological factors involved in the making of a nation, a design identity emerges. Despite the transition from the industrial age to the information age, and the pressures of globalisation, these identities remain alive in traditional cultural sources, and are arguably more precious now than ever before. Artefacts created within a culture often reflect that culture's values. However, as well as reflecting the values and practices of a culture, design can also influence and create culture. As such, design can be seen as a cultural measure of the age and the society. Throughout history, design has been determined by, and helped to determine, changes in the socio-cultural environment. For example, design in the capitalist market economy of the 20<sup>th</sup> century has contributed to the emergence of a 'consumer society'.

After the Second World War, US-led modernisation occurred in many countries including Japan and Korea. During this post-war period well-designed goods began to play a key role in the interaction between consumer and supplier, which in turn led to the creation of demand, and an increase in industrial economies. Industrial designers, particular in the United States, helped shape the taste culture of the middle classes since products now reflected the owner's identity and lifestyle. In the 1950s and 60s, good design in the Western world and Japan was shown to add value to products and as such became a basis for economic competitiveness. Advances in technology led to the production of time-saving mechanical goods such as kitchen appliances. These became highly sought



after, as was their 'modernist' aesthetic style.<sup>270</sup> In the 70s and 80s, with the introduction of electrical and computer technology, goods became smaller and 'greener', using less energy. This was due to advancements in scientific technology that led to things such as 'memory semiconductor technology'. During the 1970s, when creative design was considered crucial, minimalism became the most important design style, driven by environmental issues and the rise of responsible design. In the 1980s the spread of postmodern culture and influence of neo-liberal policy led to accelerated deindustrialisation and increased individualism. In this post-industrial society, people placed greater emphasis on brand and symbolic value. Since many countries could produce goods that were equally functional, much of design now focused on brand (including cultural tradition) in order to create demand. However due to its planned economy, Soviet design did not witness many of these innovations and trends.

From the 1990s until the present day, the interaction between products and users has increased in importance. The aesthetic side of products has also become more varied and artistic, due to the necessity of maintaining a close relationship between the products and their users. Therefore design has played a key role in converting materials into products that not only have functional, but also cultural, value. In this way design has influenced socio-cultural environments, just as these environments have influenced design.

## **2.1 Japan**

### **2.1.1 Socio-Cultural Values and Identity**

The Japanese character has often been described as quiet endurance offset by occasional displays of extreme emotions. It is also strongly influenced by the climate and ecology of the country and the volatile natural conditions that exist

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<sup>270</sup> In the USSR however, the Stalinist era was characterised by 'tasteless' aesthetic ideals. But following Khrushchev's coming to power, there was a state response to the perceived lack of cultural awareness in the Soviet population. Art was brought into public life in a more robust fashion, and state media railed against 'philistines'.

there.<sup>271</sup> In addition, Japan has been influenced by the ideas of 'Ie' (House) and 'Mura' (Village) that provide the foundation for groupism. 'Ie' and 'Mura' were developed from 'Wa', a sense of harmony (balance) that was required from the early days of Japanese history to overcome agricultural and environmental difficulties.<sup>272</sup> As such, there is an emphasis within the culture to repress individual feelings for the benefit of the wider group. The importance of others is also emphasised in Shinto, the indigenous religion of Japan, which practices ancestral worship, and prioritises society.<sup>273</sup> In addition Japanese Zen Buddhism has also profoundly influenced Japan's spiritual and cultural identity. Zen Buddhism fused the ideas of compromise and harmony, a concept that is still prevalent in Japanese society today.<sup>274</sup> In recent history, Japanese culture has been a hybrid between Japanese ideas and western ideas. Additionally, the emphasis on the group has been challenged by Western concepts such as liberalism and individualism.<sup>275</sup> Indeed, the development of 'Quality Control' is a unique mix of American and Japanese ideas. Perhaps the conflict between the two different cultures has provided the platform for some quite original designs and concepts and, in turn, these have strongly influenced the way that we have come to perceive Japanese-ness.

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<sup>271</sup> Watsuji Tetsuro, *Watsuji Tetsuro's Rinrigaku* (trans. Yamamoto Seisaku and Robert Carter), State University of New York Press, 1996 (Originally published in Japanese by Iwanami Shoten, Tokyo, 1937), p. 5; Christopher Jones, 'Politicising Travel and Climatising Philosophy: Watsuji, Montesquieu, and the European Tour', *Japan Forum*, vol. 14, no. 1, March 2002, pp. 41-62.

<sup>272</sup> Shimizu Ryuei, *The Japanese Business Success Factors: How Top Management, Product, Money and People's Creativity Contribute to Japanese Enterprise Growth*, Tokyo: Chikura Shobo, 1989, p. 41. Shimizu argues that after the Meiji Restoration, and in particular, after the WWII, groupism is particularly high in Japan in comparison to the rest of the world and that these characteristics have been instrumental in the development of Japanese companies.

<sup>273</sup> The importance of Shinto in forming Japanese identity was increased when Kitabatake Chikafusa wrote the *Jinno Shotoki* ('Chronicle of the Direct Descent of the Divine Sovereigns') which emphasized Japan's spiritual supremacy over China and India.

<sup>274</sup> Shin Hyun-seung, 'An Acceptance of Neo-Confucianism and Kogaku's Spirit of Japan' ('Shin yuhak-ui Suyong-gwa Gohak-ui Ilbon Jungshin'), in Kim Hyun-gu, et al. (eds.), *Japanese Thought in East Asia: An Inquiry into the Generation of 'The Egotistical World View of Japan' with the Flow (Dong Asia segye-ui Ilbon sasang: 'Ilbon Chungsim-jok Segyegwan' Saengsong-ui Sidae-byol Kochal)*, Seoul: Northeast Asian History Foundation (Dongbuga Yoksa Jaedan), 2009, pp. 154-96 and 260-62.

<sup>275</sup> Shimizu (1989), p. 41; Kate Wildman Nakai, 'Chinese Ritual and Native Identity in Tokugawa Confucianism' in Benjamin Elman, et al. (eds.), *Rethinking Confucianism: Past and Present in China, Japan, Korea, and Vietnam*, UCLA Asian Pacific Monograph Series, Los Angeles: University of California Press, 2002, pp. 258-91, esp. 281.

## Cultural Characteristics

Buddhism and Shintoism have had a profound effect on shaping Japanese identity.<sup>276</sup> Not only is the aesthetic form of self-cultivation is fundamental to Confucian, Daoist and Buddhist spirituality, but these three ideologies have also encouraged the practice of the arts. In this way the fields of the aesthetic and spiritual overlap, and artistic activity is seen as providing a unique access to truth and the cultivation of self-knowledge.<sup>277</sup> This concept is known as 'gei do' - the way of the arts. For example, during the Muromachi period (1337-1573) Zen Buddhism had a great influence on the relationship between the artist and society.<sup>278</sup> Since Buddhists felt that an unmediated experience of reality could be achieved by transcending the ego, artists brought this attitude to their experience of objects, treating the material they used with respect.<sup>279</sup>

One of the frameworks for understanding Japanese culture is offered by Ruth Benedict, who saw '*characteristics of groupism*' as a hierarchical system of social relations in which it was essential for each individual to 'take one's proper station' within the group.<sup>280</sup> This suggests that Japanese people's faith in the hierarchical system is the root and framework of social relations. The uniquely Japanese concepts of *On*, *Giri*, and *Gimu*<sup>281</sup> are crucial in reproducing this system. Appropriate behaviour in Japan is conditioned by standards enacted by the group, leading people to social expectations and judgments which Benedict describes as

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<sup>276</sup> Hasegawa Nyozeikan, *The Japanese Character: A Cultural Profile* (trans. John Bester), Tokyo and Palo Alto: Kodansha International, 1966, pp. 3-4. In the mid-Tokugawa period there was a movement for the study of ancient Japanese classics which took over from Buddhism and Confucianism as an important influence on Japanese character.

<sup>277</sup> Mara Miller, 'Japanese Aesthetics and Philosophy of Art' in Garfield and Edelglass, eds. (2011), pp. 317-33, esp. 327-30.

<sup>278</sup> Kato Shuichi, *Form, Style, Tradition: Reflections on Japanese Art and Society* (trans. John Bester), Tokyo; New York & San Francisco: Kodansha International, 1981, p. 12.

<sup>279</sup> Saito Yuriko, 'The Moral Dimension of Japanese Aesthetics' in Bhatt, ed. (2013), pp. 158-80, esp. 163.

<sup>280</sup> Ruth Benedict, *The Chrysanthemum and the Sword: Pattern of Japanese Culture*, London: Secker & Warburg, 1947.

<sup>281</sup> Benedict (1947), pp. 114-15. This burden of debt which 'On' is obligated to repay is the foundation of Japanese culture. On indicates that support received from government to one's parents results in obligations which must be repaid. Repaying 'On' requires continuous repayment, which is Gimu. These obligations amount to infinite indebtedness to the Emperor, law, nation, parents and ancestors. Giri are obligations equal to the favour received, making them finite. There are Giri to the world, master, parents and others. Giri in the modern world might amount to social pressures to honour social expectations and conform, making Giri central to Japanese society.

'shame culture'.<sup>282</sup> This 'groupist' culture continues to be applied within employment practices of industrial organisations.

The cultural practice of identifying with the organisation one works for is reproduced through socialisation within homes and schools, and is even said to be a part of the Japanese *psyche*.<sup>283</sup> The model of 'Ie' (House) is an important organisational principle of Japanese management,<sup>284</sup> displaying the characteristically Japanese approach to industrial relations and labour management.<sup>285</sup> This in turn is based on a lifetime employment system, a seniority system, a company trade union and company benefits. During the rapid growth period of the 1950s to 1980s, 'groupist' culture created cooperative personnel relations in order to bring about rapid economic growth. This theory of management remains crucial when analysing Japanese industries.<sup>286</sup> Regarding the nature of power in Japanese society, Van Wolferen argued that it is without a centre but with a multitude of semi-autonomous regulating institutions.<sup>287</sup> Clammer contributes to this discussion by adding that ideas and discourses around 'groupism' being 'natural' and the 'Japanese way' seek to legitimise unbalanced power relationships and the prioritisation of social discipline, while concealing the real operation of Japan's economic machine to the world and to its own citizens.<sup>288</sup> He also argues that the distinction between 'individualism' and 'groupism', so often discussed by Western theorists, creates a false dichotomy that impedes a more nuanced objective comparison between the cultures and their interactions. Some

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<sup>282</sup> If Christian society stresses 'sinful culture' due to suffering from guilt, Japanese society is a 'shame culture' whereby shame consciousness constructs social expectations and judgments. See *Ibid*, pp. 133-44.

<sup>283</sup> Ezra F. Vogel, *Japan's New Middle Class: the Salary Man and His Family in a Tokyo Suburb*, 2<sup>nd</sup> ed. (first published 1963), Los Angeles: University of California Press, 1971, pp. 54-60.

<sup>284</sup> James C. Abegglen, *The Japanese Factory: Aspects of Its Social Organization*, London: Asia Publishing House, 1959, p. 101. Japanese industries have social relations based on customs, pre-modern loyalty and groupism which although different to the West, brought surprising success and prosperity when combined with new production techniques imported from the West during the early stages of industrialisation.

<sup>285</sup> Ezra F. Vogel, *Japan as Number One: Lesson for America*, Cambridge, Mass: London, Harvard University Press, 1979, pp. 94-9. He suggested that after analysing the employment practices that brought Japanese economic growth, it was a system that America should adopt. It was indicated that management practices of lifetime employment, seniority system, employee training and different types of events created a strong loyalty and pride towards an individual's employer. Also see Keith Jackson and Miyuki Tomioka, *The Changing Face of Japanese Management*, London and New York: Routledge, 2004, pp. 78-81.

<sup>286</sup> Shimizu (1989), pp. 57-9; Chalmers Johnson, *MITI and the Japanese Miracle: The Growth of Industrial Policy, 1925-1975*, Stanford University Press, 1982, pp. 11-4.

<sup>287</sup> Karel van Wolferen, *The Enigma of Japanese Power*, London: Papermac, 1990, pp. 163-65.

<sup>288</sup> John Clammer, *Difference and Modernity: Social Theory and Contemporary Japanese Society*, London: Kegan Paul, 1995, pp. 20-1.

Japanese scholars<sup>289</sup> argue that the concept of '*Kanjinshugi*', better characterises the nature of social solidarity in Japanese culture. It emphasises interdependence and trust in interpersonal relationships rather than the idea of a totalitarian 'group' control over the individual.<sup>290</sup>

Japanese culture is further characterised by the concept of 'Wa'. Lee O-young<sup>291</sup> emphasises how the concept of 'Wa' is restrained in individuals, yet expanded in the whole.<sup>292</sup> In order for Japanese people to assimilate into 'groupist' culture, 'Wa' is required as individuals inevitably restrain the self for harmonisation, and therefore many individual characteristics and tendencies are expressed through the group. Hence to minimise conflict, people in the group tend not to show emotions or their real intentions by following the concepts of '*Honne*' (repress true feelings in the interests of the group) and '*Tatemae*' (follow the group's common opinion in the interests of group harmony).

### **Religion and National Character**

National character is not an unchanging absolute but develops along with social and cultural forms. Different eras demand different characteristics of the nation and the individual.<sup>293</sup> The influence of Confucianism in the Tokugawa period (1615-1868) is reflected in the principles of *Ninjo*; the personal emotions common to all human beings, and *Giri*; a feeling of belonging and a sense of duty towards your

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<sup>289</sup> Hamaguchi E., *Japan: The Interpersonalistic Society (Kanjinshiki no Shakai: Nihon)*, Tokyo: Toyo Keizai Shinposha, 1982; Murakami Y. (et al.), *Familial Society as a Pattern of Civilisation (Bunmei Toshite no Ie-shakai)*, Tokyo: Chuo Koron-sha, 1979. Hamaguchi, Murakami, Kumon and Sato all disputed the dichotomy between groupism and individualism and argue that it is a Western construct. They argue that *Kanjinshugi* (contextualism or interpersonalism) better characterises the nature of Japanese relationships.

<sup>290</sup> Clammer (1995), pp. 118-19.

<sup>291</sup> Lee O-young published '*The Shrinking-Oriented Japanese*' in Japan in 1982. He was Minister of Culture, Sports and Tourism in Korea from 1991 to 1992, and is a true renaissance man, being a renowned scholar, educator and writer.

<sup>292</sup> Lee O-Young, *The Shrinking-Oriented Japanese (Chukso Jihyang-ui Ilbon-in)*, Seoul: Kirinwon, 1991, pp. 75-109. Originally, published under the title *The Shrinking-Oriented Japanese (Chijimi Shiko no Nihonjin)* by Tokyo: Gakuseisha, 1982. English-language edition published under the title *Smaller is Better: Japan's Mastery of the Miniature* (trans. Robert N. Huey) by Tokyo and New York: Kodansha International, 1984. pp. 25-71. He identified six character traits that Japanese people possess; I feel these traits are often reflected in Japanese products and product design characteristics. For example the trait inclusivity is reflected in 'Ireko' box, and the tendency to be harmonious is represented by the 'Bento' box.

<sup>293</sup> For example the modernisation and opening up to the West of the Meiji period demanded openness and tolerance towards foreigners that had not existed during the previous Edo time. See *Ibid*, pp. 5-10.

community. Sometimes there is conflict between these notions as Ninjo is related to the individual and Giri is related to community.<sup>294</sup>

During the Meiji era, the Japanese government promoted the 'Shinto' religion, an ancient spiritual practice which sanctioned and promoted the unity between state and religion. The government designated it as the official state religion, a move that was supported by Buddhist leaders who did not want to see a separation between Buddhism and Shintoism.<sup>295</sup> By the late 19<sup>th</sup> century Shintoism had become the dominant spiritual practice, with the worship of the landscape and history contributing to Japanese nationalist ideology. Shintoism however, was strongly associated with political authoritarianism and right-wing ideology during the 1930s and 1940s.<sup>296</sup> The pre-war state control of religion may be summarised in the following way; Christianity was viewed as insufficiently patriotic; other newly formed religions were suspected as being anti Shinto and as possibly harbouring sedition.<sup>297</sup> In fact, until the end of WWII Shinto religion centred on the figure of the Emperor as a living God, which was very convenient for such a fascist regime.

Alongside this State Shinto, a varied assortment of different Shinto and Buddhist sects existed. Whilst Shinto was the religion of living spirits (*kami*), who affected everyday living, Buddhism was a religion of death, focusing on one's ancestors and the life to come. These beliefs were supported through a calendar of ritual and social custom. Since WWII Japanese society has experienced dramatic secularisation. One of the reasons why institutional religion in Japan is weak is that the public view the involvement of religion in politics negatively. Nonetheless, ritual

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<sup>294</sup> Minamoto Ryoen, *Moral Obligation and Sympathy (Giri to Ninjyo Nihon teki Shinjyo no Ikk)*. Tokyo: Chuokoron-sha, 1999, pp. 15-27; Herman Ooms, 'Human Nature: Singular (China) and Plural (Japan)?' in Elman, et al., eds. (2002), pp. 95-115. The importance of Confucianism in the period of the Shogunate lies in the fact that it concerned the relationships between superior and inferior in the social order, which can be seen most clearly in Samurai society. For the merchant class, who were intent on making and spending money Confucianism merely represented Samurai society.

<sup>295</sup> Kim Young-tae, 'Korean Buddhism's Efforts to Establish Itself as a Modern Religion, and Its Political Subjugation to Authorities in the Process' in Koh Seung-hak, et al. (eds.), *The State, Religion, and Thinkers in Korean Buddhism*, Seoul: Dongguk University Press, 2014, pp. 195-232, esp. 195-97.

<sup>296</sup> Louis D. Hayes, *Introduction to Japanese Politics*, 5<sup>th</sup> ed. (first published 1994 by Marlowe & Company), New York: M.E. Sharpe, Inc., 2009, p. 155.

<sup>297</sup> Helen Hardacre, 'After Aum: Religion and Civil Society in Japan' in Frank J. Schwartz and Susan J. Pharr (eds.), *The State of Civil Society in Japan*, Cambridge University Press, 2003, pp. 135-53, esp. 137.

is still widely practiced. For the majority of citizens, religion has become a way of life, defining their identity and helping to strengthen family and community ties.<sup>298</sup>

During the early part of the 20<sup>th</sup> century, nationalism was strong, and the Japanese attempted to rediscover tradition and return to their cultural roots. They also saw spirituality as having higher value than the material affluence they were now experiencing.<sup>299</sup> These cultural roots found expression in 'Mingei' (the aesthetics of 'folk crafts' based on the Buddhist concept, developed by Yanagi Muneyoshi in the late 1920s)<sup>300</sup> which came to influence many modern products from the late 1940s onwards and which remains a dominant notion in Japanese design to this day.<sup>301</sup>

Following the economic success of the 1950s and 1960s, the early 1970s saw a rise in Japanese patriotism as people regained confidence and began to reassert their identity.<sup>302</sup> Strong economic growth, coupled with a rise in popular culture fuelled by increased availability of visual media such as 'Manga' (Japanese comics), led to a consumerist pop culture replacing the politically conscious mind set of the post WWII generation.<sup>303</sup> Manga in particular gained mass popularity in the 1960s in the aftermath of the anti-US-Japan Security Treaty demonstrations. Many manga comics reflected this anti-American feeling, with Japanese heroes regularly defeating foreign villains.<sup>304</sup> This pop culture continued into the 1980s and early 1990s, and was heavily influenced by the West. Despite this, Japanese society in the late 1970s and the 1980s also embraced the notion of *Nihonjinron* (the study of the 'distinctiveness' of Japanese people and culture) which arose

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<sup>298</sup> Shimazono Susumu, 'Traditional Japanese Religious Society' in Mark Juergensmeyer (ed.), *The Oxford Handbook of Global Religions*, Oxford University Press, 2006, p. 134.

<sup>299</sup> Lise Skov and Brian Moeran, *Women, Media and Consumption in Japan*, Surrey: Curzon and Honolulu: University of Hawaii Press, 1995, p. 10.

<sup>300</sup> Yanagi Muneyoshi (1889-1961), also known as Yanagi Soetsu.

<sup>301</sup> For example, the Yoyogi National Gymnasium was built in 1964 for the Olympics, by Tange Kenzo (1913-2005). The roof of the Gymnasium was a blend of tradition and Modernism, most noticeably Le Corbusier. Through this and other modern 'brutalist' buildings he became renowned for his adaptation of Modernist functionalism to Japan's post-war needs, See William H. Coaldrake, 'Contemporary Architecture in Japan' in Victoria L. Bestor, et al. (eds.), *Routledge Handbook of Japanese Culture and Society*, London: Routledge, 2011, pp. 201-12, esp. pp. 203-04; Uchida Shigeru, *A History of Design in Postwar Japan (Sengo Nihon Dezain-shi)*, Tokyo: Misuzu Shobo, 2011, pp. 96-7.

<sup>302</sup> Shimazono (2006), p. 11.

<sup>303</sup> Saito Kumiko, 'Regionalism in the Era of Neo-Nationalism: Japanese Landscape in the Background Art of Games and Anime from the Late-1990s to the Present' in John A. Lent and Lorna Fitzsimmons (eds.), *Asian Popular Culture: New, Hybrid, and Alternate Media*, Lanham: Lexington Books, 2013, pp. 35-58, esp. 35.

<sup>304</sup> Marilyn Ivy, 'Formation of Mass Culture' in Andrew Gordon (ed.), *Postwar Japan as History*, Berkeley; Los Angeles; Oxford: University of California Press, 1993, pp. 239-58, esp. 248.

from the feeling of 'Japanese exceptionalism' or 'uniqueness', and national pride in their culture.<sup>305</sup> The government encouraged people to draw on their two thousand years of tradition to create a national identity, rather than continue to rely only on economic successes.<sup>306</sup> One way in which Japan has tried to establish its identity is through aesthetics.<sup>307</sup> Befu Harumi argues that the popularity of *Nihonjinron* in the 1980s involved an attempt to maintain Japanese identity against an overwhelming tide of internationalisation.<sup>308</sup> With the deterioration of US-Japan relations in the late 1980s, *Nihonjinron* took on more nationalistic arguments, demanding Japanese cultural autonomy on the global stage.<sup>309</sup>

Following the economic difficulties that began in the early 1990s, Japan saw a resurgence of political consciousness which was evident in the expanding media sector, for example in 'anime' (Japanese animation), manga, and computer games, all of which were influenced by Japanese traditional culture.<sup>310</sup> The government actively encouraged companies to go back to traditional values such as *Mingei* when designing and producing new products, in order to help maintain a unique Japanese character in design. They expanded this idea to include a number of other areas including the car, new technology, IT and electrical industries. This strategy continued into the 2000s with Ministry of Economy, Trade and Industry (METI) launching the 'Japanesque Modern'; and 'Kansei (Japanese sensibility)

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<sup>305</sup> *Nihonjinron* ideas (which include collective sensitivity and stable, cohesive teamwork) have influenced both Japan's management style and international management techniques. See Tanouchi Koichi, 'Japanese-Style Marketing Based on Sensitivity', *Dentsu Japanese Marketing/Advertising*, vol. 23, Tokyo: Dentsu Inc., 1983, pp. 77-81

<sup>306</sup> Rupert A. Cox, *The Zen Arts: An Anthropological Study of the Culture of Aesthetic Form in Japan*, London: Routledge Curzon, 2003, pp. 198. *Nihonjinron* is a collection of texts that address issues surrounding Japanese identity. This literature draws on diverse areas including: philosophy, anthropology, biology and psychology.

<sup>307</sup> Miller (2011), pp. 318-20; Jackson and Tomioka (2004), p. 70.

Yoshino Kosaku draws a distinction between the *Nihonjinron* of the 1970s and 1980s, and the nationalism of the Meiji era (1868-1912). He suggests that while in the Meiji era the Japanese became conscious of national identity, the *Nihonjinron* was not as self-aware. See Yoshino Kosaku, *Cultural Nationalism in Contemporary Japan: A Sociological Enquiry*, Nagoya; London and New York: Routledge, 1992. pp. 158-202.

<sup>308</sup> Befu Harumi, 'Internationalization of Japan and Nihon Bunkaron' in Mannari Hiroshi and Befu Harumi (eds.), *The Challenge of Japan's Internationalization: Organization and Culture*, Nishinomiya: Kwansei Gakuin University, 1983, pp. 232-65.

<sup>309</sup> Iida Yumiko, *Rethinking Identity in Modern Japan: Nationalism as Aesthetics*, London and New York: Routledge, 2002, pp. 164-65.

<sup>310</sup> Kumiko (2013), pp. 35-7.



initiatives'. These initiatives were often used to restore a sense of national pride, and still are today.<sup>311</sup>

### **Japanese Design Aesthetics**

In the early Heian period (794-1192), the elite regarded art as a means for showing good taste or demonstrating social status. Art later came to be influenced by the tea ceremony, which was a communal cultural activity in which people gathered together socially. Tea, which was introduced to Japan by Chinese Buddhist monks, initially gained popularity in the court of emperor Saga (809-823). This popularity grew and by the 14<sup>th</sup> century the consuming of tea had become a highly aesthetic pursuit enjoyed in aristocratic circles. The spread of Zen Buddhism led to a more frugal version of the tea ceremony based on the Buddhist principle of simplicity, but still encompassing the aesthetics of beauty and refinement. The basis of the modern tea ceremonies practiced today is the 16<sup>th</sup> century 'Rikyu revival'. The tea master Sen Rikyu (1522-1591) established the methods by which a tea ceremony could be measured by successfully blending the spiritual with the aesthetic.<sup>312</sup> Art in the Heian period was characterized by refinement, subtlety and metaphoric inferences. It generally avoided bold emotional statements, much like the societal norms of the time. The communal ritual of the tea ceremony reflected this desire for beauty in subtlety, and was intended to encourage personal insight through repetitive but finely nuanced action.<sup>313</sup> In contrast, the Edo period (1615-1868) favoured bold, colourful and decorative art that reflected the excitement of a country united after a century and a half of war. The city of Edo, known today as Tokyo, was the seat of government. The Edo period saw the growth of cultural expression, from kabuki theatre and tea ceremonies to martial arts and porcelain. Rapid urbanisation, increased wealth, high literacy rates, good transportation and communication networks, as well as the embracing of cultural liberty, all contributed to the success of artistic development during this period. During the

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<sup>311</sup> Fujita Yuiko, *Cultural Migrants from Japan: Youth, Media and, Migration in New York and London*, Plymouth: Lexington Books, 2009, pp. 60-4.

This national pride is especially important at the present time because there is now an acceptance in Japan that the prosperous and stable post-war social model is no longer valid. The national identity is constructed of several, often conflicting strands of thought and practice, including the push towards, and pull away from, foreign cultures. Japanese culture remains a mix of indigenous and Western influences.

<sup>312</sup> Cox (2003), pp. 54-6.

<sup>313</sup> Ibid, pp. 61-2.

Edo period's 250 years of isolation, the aesthetic principles of the Heian period Zen artists became tradition, and these principles can still be seen in contemporary design.<sup>314</sup>

Important Japanese traits are reflected in traditional Bonsai trees. These trees bring 'large' nature into a small space,<sup>315</sup> encapsulating 'wabi-sabi', a Japanese concept that relates to the seeking of naturalness, and the purity of natural imperfection.<sup>316</sup> These spiritual elements, including a strong work ethic and the tendency toward minimalism,<sup>317</sup> continue to be a major influence on modern Japanese design. In fact minimalism is a central characteristic of Japanese design and is related to the culture's respect of 'emptiness'. This respect is seen in the frequent dismissal of ornamentation in favour of 'austere beauty' and 'elegant rusticity' (wabi).<sup>318</sup> Unadorned utensils and small, ceremonial tearooms are an example of such respect. The characteristics of Japanese ornamentation are encompassed in the word 'Funkinsei', which means 'without balance' or 'without symmetry'. It describes the asymmetry that can give Japanese design a fresh and surprising look, as opposed to the more symmetrical preferences of Western design.

In his essay entitled 'Japanese Aesthetics', Donald Keene enumerates four principles that have been characteristic of Japanese taste: suggestion, irregularity, simplicity, and perishability.<sup>319</sup> Felice Fischer maintains that these principles are still relevant to understanding what is 'Japanese' about modern Japanese

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<sup>314</sup> Heinrich Dumoulin, *Zen Buddhism: A History. vol. 2. Japan* (trans. James W. Heisig and Paul Knitter), New York: Macmillan; London: Collier Macmillan, 1988-90, pp. 271-72; Keene (1969), p. 297.

<sup>315</sup> Deborah Koreshoff, *Bonsai: Its Art, Science, History and Philosophy*, London: Croom Helm, 1984, p. 227. Space in a Bonsai tree is important since it create depth and perspective. The Chinese held that a good tree tells a story of its life while at the same time symbolising the spirit of humans. However the work of the artist is intended to be hidden so that the tree looks as if it has grown naturally. Nevertheless some Japanese Bonsai artist's criticise Chinese approaches because they feel that Chinese styled Bonsai do not display beauty or the value of naturalism.

<sup>316</sup> Lim Sunamita, *Japanese Style: Designing with Nature's Beauty*, Layton, Utah: Gibbs Smith, 2007, p. 34; Herbert Plutschow, *Rediscovering Rikyu and the Beginnings of the Japanese Tea Ceremony*, Folkestone: Global Orient, 2003, p. 114; Nippon Bonsai Association, *Classic Bonsai of Japan* (trans. John Bester), Tokyo; New York: Kodansha International, 2003, p. 139.

<sup>317</sup> The tendency towards minimalism predates the Meiji Restoration by centuries.

<sup>318</sup> Japan's product design has always reflected to some extent contemporary national issues. A current example is the nation's increasing environmental awareness and ageing population. From broad social concerns during Japan's design history, concepts of 'universal design' and 'ecological design' has arisen, which have sought to make the product as usable and environmentally friendly as possible.

<sup>319</sup> Donald Keene, *Landscapes and Portraits: Appreciations of Japanese Culture*, Tokyo: Kodansha, 1971, pp. 13-25; Donald Keene, 'Japanese Aesthetics,' *Philosophy East and West*, vol. 19, no. 3, Hawaii: University of Hawaii Press, 1969, pp. 293-306.

design.<sup>320</sup> The notion of 'suggestion' can be traced back to Japanese poetry with its ambiguity and the power of unspoken implications and multiple layers of meaning. An example of this is Haiku poetry, which is constructed using only 17 syllables. This forces the poet to infer rather than explicitly show, thereby reflecting the way we understand or feel nature.<sup>321</sup> The principle of 'irregularity' reflects a rejection of perfection because it leaves no room for the imagination. According to Keene, the perfect object 'asks for our admiration rather than our participation'. One rose is never exactly the same as the next, and it is this very irregularity that is its attraction. 'Simplicity', derived from Zen philosophy, is the practice of using the most economical means to gain the desired effect. For example, a notable feature of Zen buildings is their austerity and lack of decoration.<sup>322</sup> Simplicity requires master craftsmanship to bring out the beauty of the object, and reflect the stillness of nature. The Tea ceremony is a good example of simplicity and irregularity, with the wabi-sabi tea bowls in particular embodying both. As such these bowls invite the user to appreciate their uniqueness and functionality. The final principle mentioned by Keene is 'perishability'. He points out that the Japanese have always had a preference for forms of beauty that are impermanent.<sup>323</sup> This principle can be particularly applied to package design, for example Bento (lunch) boxes which are designed to be thrown away.

### **2.1.2 Transition to Modern Society**

By the mid-19<sup>th</sup> century, Western Europe was in the midst of what became known as European Enlightenment. This was largely a response to new discoveries in the human and natural sciences by people like Locke, Galileo and Newton.<sup>324</sup> These ideas were introduced to Japan by Fukuzawa Yukichi, a Japanese civil rights activist and liberal ideologist. He helped Japan modernise into the country that it is

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<sup>320</sup> Felice Fischer, 'Genji Meets Masamune: Traditional Aesthetics and Contemporary Design,' Amy Vladeck Heinrich (ed.), *Currents in Japanese Culture: Translations and Transformations*, New York: Columbia University Press, 1977, pp. 353-66, esp. 353.

<sup>321</sup> Yuriko (2013), p. 161.

<sup>322</sup> Keene (1971), pp. 19-20; Dumoulin (1988-90), pp. 223-27.

<sup>323</sup> Keene (1971), pp. 13-25; Fischer (1977), pp. 353-64.

<sup>324</sup> Albert M. Craig, *Civilization and Enlightenment: The Early Thought of Fukuzawa Yukichi*, Cambridge, Massachusetts, and London, England: Harvard University Press, 2009, pp. 11-3.

today, as his ideas about social institutions strongly influenced Japan during the Meiji era.<sup>325</sup>

Japanese technological culture combines the strength of Western technology and Japanese culture. The idea of separating Japanese culture from foreign influence can be traced back to the old idea of 'Wakon-kansai' ('Japanese spirit, Chinese skills'). However by 1854 (when Sakuma Shozan coined the phrase 'Eastern morality, Western techniques'), the Japanese were more interested in borrowing from the West. This gave rise to the hybridism slogan 'Wakon-yosai' ('Japanese spirit, Western technology') which became popular during the Meiji era, and in which the phrase 'Japanese spirit' symbolised the Confucian values in Japanese society.<sup>326</sup>

During the Meiji Restoration (1868-1912), the government promoted modernisation and industrialisation with the slogans: *shokusan kogyo* (increase products and promote industry) and *fukoku kyohi* (enrich the country and strengthen its arms).<sup>327</sup> This modernisation involved adapting western technological, economic, military and social policies to the Japanese situation. Although the Meiji Restoration marked a new socio-political structure for the Japanese, Japan's prehistory (characterised by the Edo period culture) remains vitally important for understanding Japanese cultural identity.<sup>328</sup> However, after the Meiji Restoration, traditional Japanese cultural values came under the influence of western ideas.<sup>329</sup> In the early 1870s the Meiji government began to establish engineering education programs such as the Imperial College of Engineering (1873-1886), which later became the Faculty of Engineering at the University of Tokyo. Such programs quickly spread to both imperial and private universities:

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<sup>325</sup> Ibid, pp. 163-64; Aoki Koichi, *Fukuzawa Yukichi and Asia (Fukuzawa Yukichi no Ajia)*, Tokyo: Keio Gijyuku Daigaku Shuppankai, 2011, pp. 3-20.

<sup>326</sup> Morris Low, 'Bridging the Technology Gap in Japan: Technology, Culture and Identity from the Late 19<sup>th</sup> to the 21<sup>st</sup> Century' in Bae Young-soo and Park Buhm-soon (eds.), *Bridging the Technology GAP: Historical Perspectives on Modern Asia*, Seoul: Seoul National University Press, 2013, pp. 1-32, esp. 2-3; Yao (2000), p. 136.

<sup>327</sup> This modernisation and industrialisation was motivated in part by the harsh treaty imposed by the United States on Japan in the early 1850s following Matthew Perry's expeditions.

<sup>328</sup> Kato (1981), p. 24.

During this period the isolationist, individualistic side of the national character was emphasised, whereas after the opening up of the country following the Meiji restoration, more liberal and tolerant characteristics came to the fore. See Hasegawa (1966), p. 3.

<sup>329</sup> Shimazono Susumu, 'State Shinto and the Religious Structure of Modern Japan,' *Journal of the American Academy of Religion*, vol. 73, no. 4, 2005, pp. 1077-098; Martin Bronfenbrenner, *Academic Encounter: The American University in Japan and Korea*, New York: The free press of Glencoe, Inc., Bureau of Social and Political Research, Michigan State University, 1961, p. 22.

aeronautic programs became particularly popular. In 1876 the Art School of the Ministry of Public Works (Kobu Bijutsu Gakko), which was part of the Imperial College of Engineering, was established in order to help Japanese industry improve aesthetics and utilise Western techniques.<sup>330</sup> Educational institutions in Japan often modelled themselves on Western universities (such as the Massachusetts Institute of Technology) and were frequently staffed by British experts in their field.<sup>331</sup>

The Japanese were initially unsure about adopting western ideas and technologies during the Meiji period. Many saw a clash between their own indigenous ideas and those of the Occident.<sup>332</sup> The early half of the Meiji period therefore saw a rise in Japanese nationalism, although the nationalists supported economic modernisation. Indeed in the mid- to late 1800s Japan focused on achieving economic and technological modernisation,<sup>333</sup> a policy that stood in opposition to traditional feudalism which was being systematically abolished by the modern nation state bureaucracy.<sup>334</sup> At this time, there was a boom in export revenues helped by larger exports of manufactured goods. Tax revenues were also increased and the money spent on education, transport infrastructure, and communications.<sup>335</sup> This era also saw the formation of Zaibatsu, large-scale conglomerate industrial groups,<sup>336</sup> as well as Japan investing heavily in its military

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<sup>330</sup> It was the first government school to teach Western-style art, later focusing purely on Fine Arts education. It closed in 1883. See Amagai Yoshinori, 'The Kobu Bijutsu Gakko and the Beginning of Design Education in Modern Japan,' *Design Issues*, vol. 19, no. 2, 2003, pp. 35-44.

<sup>331</sup> Nishiyama Takashi, *Engineering War and Peace in Modern Japan, 1868-1964*, Baltimore: Johns Hopkins University Press, 2014, pp. 7-9.

Two British textbooks, *Illustrated London Drawing Book* (1852), and the *Self-aid Cyclopaedia for Self-taught Students* (1863) were translated into Japanese by Kawakami Togai in the 1870s. Also 'Drawing for Use in Elementary Schools' ('*Shogaku Hutsu Gagakubon*', Miyamoto, 1878) is a further example of the British influence on Japanese art education in the 1870s. See Okazaki Akio, 'European Modernist Art into Japanese School Art: The Free Drawing Movement in the 1920s' in Mervyn Romans (ed.), *Histories of Art and Design Education: Collected Essays*, Bristol: Intellect, 2005, pp. 229-38, esp. 229.

<sup>332</sup> The Occident refers to a stereotyped view of the West. Some Japanese intellectuals recognized the need for westernisation but worried about how this would affect traditional Japanese identity. See Kikuchi Yuko, *Japanese Modernisation and Mingei Theory: Cultural Nationalism and Oriental Orientalism*, London and New York: RoutledgeCurzon, 2004, p. 77.

<sup>333</sup> An influential enlightenment thinker of the time was Fukuzawa Yukichi (1834-1901) who invented the slogan 'sodo sogi' which referred to the feeling that Japan needed to adopt facets of Western civilisation in order to become fully civilised. See Yi Tae-jin (2007), p. 317.

<sup>334</sup> In contrast with the British Industrial Revolution, Japan underwent both its industrial and agricultural revolutions at the same time in the Meiji Restoration period.

<sup>335</sup> Roberto Mazzoleni and Richard R. Nelson, 'The Roles of Research at Universities and Public Labs in Economic Catch-up' in Cimoli, et al., eds. (2009), pp. 378-408, esp. 389-91.

<sup>336</sup> Hayes (2009), p. 40; Park Seung-rok and Yuhn Ky-hyang, 'Has the Korean Chaebol Model Succeeded?' *Journal of Economic Studies*, vol. 39, no. 2, Emerald Group Publishing Ltd., 2012, pp.

in order to secure its imperial ambitions.<sup>337</sup> Japan's involvement in three successive wars (Sino-Japanese War [1894-95], the Russo-Japanese War [1904-05], and WWI) saw engineering education further improve and expand.<sup>338</sup> This expansion made the connection between education and the state even closer.<sup>339</sup> After the Sino-Japanese War, Japan moved from nationalism to imperialism. In addition, this period saw more ideas surrounding the concept of the Japanese aesthetic begin to emerge in the political realm.<sup>340</sup> This included the work of the philosopher Yanagi Muneyoshi, who sought to develop a definition of the Japanese aesthetic in arts and crafts. He articulated this definition within the Mingei Movement which he established in the early twentieth century. Yanagi's Mingei idea of the Japanese aesthetic still influences modern-day Japanese design.

### 2.1.3 Modern Movements in Arts, Crafts and Design

Traditional Eastern modes of living and working became increasingly influenced by modern Western ideas, particularly with respect to methods of design in fields such as art, architecture and town planning. In pursuit of this, Japan sent its first diplomatic mission to the West in 1871. Led by Tomomi, it toured educational, industrial, and municipal facilities and the findings would inform the radical transformation of Japan.<sup>341</sup> Meiji leaders embraced Western architectural styles, which they thought would project a contemporary, dignified image, standing as a tangible expression of their aspirations to modernity.<sup>342</sup> In the 1880s images of

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260-74, esp. 261-62. Following the war the dynamic relationship between large-scale (capital intensive) industry and small-scale (labour intensive) industry would become a defining feature of the Japanese industrial system characterised by outsourcing from the big firms to the small ones. This arrangement would survive US attempts to break-up the Zaibatsu when they came to occupy the country after WWII.

<sup>337</sup> E. Wayne Nafziger, *Economic Development*, 5<sup>th</sup> ed. (first published 1984 by Wadsworth Pub. Co.), Cambridge University Press, 2012, p. 59; Hayes (2009), p. 20.

<sup>338</sup> Nishiyama (2014), p. 11.

<sup>339</sup> Ibid, p. 23.

<sup>340</sup> Karatani Kojin, 'Uses of Aesthetics: After Orientalism' in Paul A. Bové (ed.), *Edward Said and the Work of the Critic: Speaking Truth to Power*, Durham and London: Duke University Press, 2000, pp. 139-51, esp. 147.

<sup>341</sup> Fujita Haruhiko, *Design Theory and History of Modern Japan (Gendai Dezain-ron)*, Kyoto: Shouwadou, 1999, pp. 13-5; Hannah Sigur, *The Influence of Japanese Art on Design*, Layton, Utah: Gibbs Smith, 2008, p. 16.

<sup>342</sup> Jonathan Reynolds, 'Japan's Imperial Diet Building: Debate over Construction of a National Identity,' *Art Journal*, vol. 55 (Tokyo, Fall 1996), pp. 38-47; Muramatsu Teijiro, *Westerners in the Modernisation of Japan*, Tokyo: Hitachi, Ltd., 1995, pp. 44-50; Michael McDonagh, 'Joseph Conder: Enduring Legacies of a "high collar" expat,' *The Japan Times*, 10<sup>th</sup> June 2001; Hatsuda Toru, *The Spatial History of Imitation and Creation in Japanese Modern Architecture (Mohou to Souzou no*

western lifestyles became commonplace and Japanese graphic design would come to be influenced by advertising techniques.<sup>343</sup> Furthermore at the end of 1880s, Western-style painting began to flourish in Japan.<sup>344</sup>

## The Japan Craze

The Meiji government saw the opportunity to create export revenue from Japan's reputation as a nation of crafts. To promote Japanese crafts, pieces were shown in European exhibitions<sup>345</sup> as early as 1875 leading to what became known as the 'Japan Craze' or 'Japonisme'. This style of the art and craft products was, for the most part, determined by the interest of enthusiastic Westerners,<sup>346</sup> although the movement was also fed by Japanese exports and international expositions. For Japan, whose technological level was far behind the West, the significance of handicrafts lay in the fact that they were considered to be original export products and thus did not need to compete with western products. In response to the 'Japan Craze' the Meiji government set up the 'Company for Founding Industry and Commerce' ('Kiryu' or 'Kiritsu' Kosho Kaisha) in 1874, in order to produce and export Japanese 'art and craft'.<sup>347</sup> Japanese craftsmen often exhibited their pieces as works of art at international expositions because these shows tended to consider 'art' superior to 'craft'.<sup>348</sup> Japan's craft industry expanded significantly

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*Kuukanshi - Seiyō ni Mananda Nihon no Kin-Gendai Kenchiku*, Tokyo: Shokokusha, 2005, pp. 10-7.

<sup>343</sup> Richard S. Thornton, *Japanese Graphic Design*, London: Laurence King Ltd., 1991, p. 38.

In 1880 Kaiseki Sada produced the poster 'Advice to National Enrichment' which was the first lithography poster in Japan. The Sino-Japanese War of 1894-5 brought business to Japan growing the advertising activities of Japanese enterprises further. See Okubo Itsuo, 'History of Posters in Japan and the Present State of Their Documentation,' *Art Libraries Journal*, vol. 11, no. 4, 1986, pp. 11-8, esp. 15.

<sup>344</sup> Yamanashi Emiko, 'Western-style Painting: Four Stages of Acceptance' in J. Thomas Rimer (ed.), *Since Meiji: Perspectives on the Japanese Visual Arts, 1868-2000* (trans. Toshiko McCallum), Honolulu: University of Hawaii Press, 2012, pp. 19-33, esp. 24.

<sup>345</sup> Mirjam Gelfer-Jørgensen, *Influences from Japan in Danish Art and Design 1870-2010* (trans. Joan F. Davison), Copenhagen: The Danish Architectural Press, 2013, p. 23; Sigur (2008), p. 101. However Japanese crafts were shown in small quantities as early as the 1850s in cities such as London.

<sup>346</sup> For example, during the 1860's large numbers of Japanese colour prints were imported to America. See Carol Clark, *American Japonism: Contacts between America and Japan 1854-1910*, from the exhibition catalog of Cleveland Museum of Art, Cleveland, Ohio: the Cleveland Museum of Art, 1975.

<sup>347</sup> Izuhara Eiichi, *Design Movement in Japan: History of Industrial Design (Nihon no Dezain Undou: Indasutoriaru Dezain no Keifu)*, Tokyo: Perikansha, 1996 (first published 1989), pp. 59-60; Ajioka Chiaki, 'Aspects of Twentieth-Century Crafts: The New Craft and Mingei Movements' in J. Thomas Rimer, ed. (2012), pp. 408-44, esp. 409-10. The Kiryu Kosho Kaisha company started in 1874 and closed in 1891.

<sup>348</sup> Fujita (1999), pp. 10-1; Chiaki (2012), p. 410.

during the years of the Japan Craze, however *Art Nouveau* eventually became the new trend that would come to replace the works of the Japan craze in western markets.

## Doan Design

In the late 1800s the government supported the Japanese craft industry further by funding the Onji drawing books (Onchi zuroku), which were collections of craft design sketches published by the Kiryu Kosho Kaisha Company between 1875 and 1881.<sup>349</sup> These books were originally used by the government to promote Japanese products at certain international exhibitions (for example the 1876 Philadelphia Centennial International Exhibition; the 1877 Japanese National Exhibition; the 1878 Paris International Exhibition; and the Second National Exhibition in 1894). The books themselves were produced by Japanese craftsmen and artists who were inspired by western drawing books of the time.<sup>350</sup> The Kiryu Kosho Kaisha company was focused on exports, and indeed had branch offices in a number of cities including New York (1877) and Paris (1878) that among other things gathered information on western customs and tastes.<sup>351</sup> This information was used to inform their products, including the Onji drawing books.<sup>352</sup>

In 1887, the first private drawing school in Japan - the Kanazawa School<sup>353</sup> was established by Noutomi. The Japanese government set up publicly funded drawing schools in Tokyo (1896) and Kyoto (1902), with the aim of encouraging

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This in turn led to a flourishing of 'art craftsmen'. However Japan was eventually forced to accept international conventions that dictated that art pieces should be produced by genuine artists.

<sup>349</sup> Ito Yoshiaki, 'Craft design of World Expo - Focusing on ceramics' (Bankoku Hakurannkai no kougei dezain – Touji wo chuushin ni) in Nagata Kenichi, et al. (eds.), *A History of Modern Design in Japan, 1860's-1970's (Kindai Nihon Dezain-shi 1860's-1970's)*, Tokyo: Bigaku Shuppan, 2006, pp. 47-61, esp. 51-2; Izuhara (1996), pp. 62-3.

<sup>350</sup> Sato Doshin, 'Historical Significance of "Onji Drawing Books"' ("Onchi Zuroku" no Rekishi-teki Igi) in Tokyo National Museum (ed.), *Report of Research on 'Onji Drawing Books': A collection of Craft Design Sketches of the Meiji Era (Meiji Dezain no Tanjo: Chosa Kenkyu Hokokusho 'Onchi Zuroku'*, Tokyo: Kokushokankokai Corporation Ltd., 1997, pp. 122-39, esp. 122-31. The above Tokyo National Museum report claimed that the last Onji drawing books were in fact published in 1885, but this is disputed.

<sup>351</sup> Chiaki (2012), pp. 409-10; Tokyo National Museum, ed. (1997), pp. 13-24.

<sup>352</sup> French models include: Émile A. Reiber et Charles Sauvageot, *L'art Pour Tous, Encyclopédie De L'art Industriel et Décoratif*, Paris: A. Morel et Cie, 1861-1872; Monsieur A. Morel (ed.), *Recueil de Cent Planches Extradites de L'art Pour Tous, Encyclopédie De L'art Industriel et Décoratif*, Paris: A. Morel, 1868.

<sup>353</sup> Izuhara (1996), pp. 62-6.



drawing (Doan) which was equivalent to design education.<sup>354</sup> These institutions would later become colleges with active art departments. The first government-supported Doan education department was established in 1896 in the Tokyo School of Fine Arts. Following this, the government established many design universities. In 1910, the modern Japanese art education system began when the Ministry of Education issued *Shintei Gacho* (New Textbooks of Drawing) for the elementary school grades.<sup>355</sup> With further expansion in the education system during the early 20<sup>th</sup> century, universities in Tokyo and Kyoto offered art and Doan courses. At the same time, 'Doan' began to be used in newspaper and magazine advertisements, as well as being the subject of many exhibitions.<sup>356</sup>

Japan's industrial craft industry would expand significantly during the years of the Japan Craze, and a major contributing factor to this expansion was the demand for new lifestyles that had developed as a result of the growing Westernisation of Japan.<sup>357</sup> In the late 19<sup>th</sup> century the Japanese saw crafts, painting and sculpture as equally important, from both an economic and aesthetic standpoint.<sup>358</sup> The 1893 Chicago World's Fair seemed to reflect this principle, and displayed some of the crafts exhibits entered in the Art Pavilion as works of art. However, exported Japanese crafts gradually fell out of vogue as their quality declined. Consequently by the Paris World's Fair in 1900, the popularity of Japanese crafts had already

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<sup>354</sup> Nagata, et al., eds. (2006), pp. 120-24 and 302-04; Izuhara (1996), pp. 62-75. The first government supported Doan education department was established in 1896 in the Tokyo School of Fine Arts (Tokyo Bijutsu Gakko). Following this the government established many design universities around 1900, including the Kyoto High School of Crafts in 1902 which became Kyoto Institute of Technology (Kyoto Kogei Seni Daigaku).

<sup>355</sup> Okazaki (2005), p. 230.

The Free Drawing Movement (Fiyuga Undo in Japanese) which developed in the 1920s was historic in the development of modern Japanese art education. This movement gave elementary school teachers the possibility to develop their own curricula and changed attitudes of Japanese art educators towards a view of art as individual expression from the previous view of industrial drawing. See *ibid*, pp. 232-35.

<sup>356</sup> Kayano Yatsuka, *A Cultural History of Modern Japanese Design 1868-1926 (Kindai Nihon no Dezain Bunkashi: 1868-1926)*, Tokyo: Firumu Atosha, 1992, pp. 232-34.

<sup>357</sup> For example, 1880s Japanese manufacturers saw an opportunity: it was these ingrained American tastes for *borro vacui* (box) that inspired Yamanaka & Company's bizarrely oxymoronic Horiuji sofa. Japoneseque interiors became highlights of the exploding art book and periodicals industry of the 1870s and '80s. See Sigur (2008), pp. 110-16.

<sup>358</sup> Kanko states that the development of modern art and design in Japan can be traced from the Nihonga style of the Shijo school and Nan-ga (1868-1901), through to the influence of foreign elements such as Egyptian motifs and the Art Nouveau style (between roughly 1902 and 1920), and on to the incorporation of Art Deco, Russian Constructivism, Bauhaus and American industrial design from 1921 to 1945. See Kenji Kaneko, 'Design in Tradition – From the Shijo-ha School to Photomontages' (trans. Katsuya Keiko) in Crafts Gallery, The National Museum of Modern Art, Tokyo (ed.), *Design in Transition, 1868-1945 (Zuan no Henbo, 1868-1945)*, Tokyo: Tokyo Kokuritsu Kindai Bijutsukan, 1988, pp. 17-21.

waned. This downturn was not helped by the Paris Fair's rules which clearly divided art and crafts. However the 1900 Paris World's Fair was a vital turning point for Japanese industrial artists as it was the first time that they became aware of the Art nouveau design revolution.<sup>359</sup> This led to a reimagining of the definition of crafts. Prior to WWI, craft was regarded as an abbreviation of 'industrial art' while still retaining the traditional meaning of craft. This was distinct from the English definitions of industrial or applied arts. From the 1920s, the word 'Sangyo' or industry was combined with the Kogei (craft) concept, and the economy was boosted by the introduction of traditional craft techniques and aesthetics into mass production.<sup>360</sup>

### The 'Mingei' Movement

In the mid-1920s, the Japanese government was increasingly concerned by the lack of traditional crafts in the country. Unlike many European countries who had established traditional craftwork that they were able to market globally, Japan was overly influenced by different countries and so had nothing that could be called a national craft. The government sought to redress this situation by developing 'original' Japanese crafts, both to foster a sense of national identity and to stimulate global trade. The slogan 'Crafts as an export industry' was used by the government throughout the 1920s to embed the idea that uniquely Japanese crafts could boost the export economy and promote Japanese culture abroad.<sup>361</sup>

The Mingei movement (established by Yanagi Muneyoshi in the late 1920s) was in part an attempt to rediscover traditional Japanese crafts, and occurred during a period of huge growth in industrial production.<sup>362</sup> Mingei was based on the Shin Buddhist concept of 'Tariki' or 'other power'. In Buddhism, *Tariki* refers to the act of surrendering to a higher power. Rather than relying on the self ('Jiriki' or self-

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<sup>359</sup> Kida Takuya, 'Art Nouveau in Japan 1900-1923: Crafts as "New Art"' in Crafts Gallery and the National Museum of Modern Art, Tokyo (eds.), *Art Nouveau in Japan 1900-1923: The New Age of Crafts and Design (Nihon no arunovo 1900-1923: Kogei to Dezain no Shinjidai)*, Tokyo: Tokyo Kokuritsu Kindai Bijutsukan, 2005, pp. 176-83, esp. 176-77.

<sup>360</sup> Suga Yasuko, 'Modernism, Nationalism and Gender: Crafting "Modern" Japonisme', *Journal of Design History*, vol. 21, no. 3, Oxford University Press, 2008, pp. 259-75, esp. 259.

<sup>361</sup> *Ibid*, p. 263.

<sup>362</sup> Nick Pearce, 'The Rise of the Mingei Movement' in Japan Folk Craft Museum (ed.), *Mingei: Masterpieces of Japanese Folkcraft*, Tokyo; New York; London: Kodansha International, 1991, pp. 19-24, esp. 21. This period saw which an expansion of the Zaibatsu (1914-1931), a system of family-run conglomerates. Yanagi also helped to establish the Japan Folk Crafts Association (Nihon Mingei Kyokai), which aimed to preserve knowledge of traditional crafts within Japan.

power), the individual is encouraged to allow Buddha to guide his or her life.<sup>363</sup> In aesthetic terms, Yanagi believed that this reliance on a higher power produced pure, beautiful and superior folk art as the removal of the self during the creative process allowed for the natural harmony of the universe to manifest in the work, rendering it more practical and aesthetically pleasing than crafts reliant only on the vision of an individual artist.<sup>364</sup> This idea drove his attempt to define Mingei, and he differentiated it from the prevailing Asian, including Japanese, aesthetic ideologies of the time which he referred to as 'Occidental'. Occidental aesthetics, according to Yanagi, favoured the individual artist, whereas Buddhist aesthetics emphasized the creativity or 'Buddha self' in all living beings. Occidental aesthetics involved the beliefs that art: was created by the power of the artist (self-power or *jikiri*); often required genius; was difficult to master; and that the finished object should be signed by the artist. Buddhist aesthetics however took the view that art: was created by the common people; was created using 'other power' or *Tariki*; did not require 'mastery' as the ego was absent in the creation process thereby allowing the 'Buddha nature' to control this process; and that finished products should not be signed.

Occidental aesthetics also involved the views that: fine art was the only 'true' art; there was a clear distinction between beauty and ugliness; to create a thing of beauty required plenty of leisure time; and that products should be unusual, distinctive, innovative, and made in small quantities by individual artists. Yanagi's Buddhist aesthetics emphasized that objects should be: functional; produced by hand; made in large quantities with no distinction between beauty and ugliness; made for everyday use;<sup>365</sup> made by anonymous craftsmen; be inexpensive to make; used by the masses; and representative of their region of origin.<sup>366</sup> He thus appreciated the beauty in the ordinary. The influence of Mingei persists today, with

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<sup>363</sup> Indeed Yanagi spoke of the intrinsic nature of beauty and emphasized his belief that beauty could not exist without a close connection to the Buddha self which is within all people. See Elisabetta Porcu, *Pure Land Buddhism in Modern Japanese Culture*, Leiden; Boston: Brill, 2008, pp. 150-51.

<sup>364</sup> Elisabetta Porcu, 'Aesthetics and Art in Modern Pure Land Buddhism', *Japanese Religions*, vol. 32 (1&2), 2007, pp. 53-68, esp. 53.

<sup>365</sup> Porcu (2008), pp. 160-61.

<sup>366</sup> Porcu (2007), pp. 59-60. Yanagi further states that Mingei objects are products of everyday life and thus represent the purest form of craft as their beauty is revealed with use. This beauty relies on *Tariki* (the 'other power') since craftsmen are generally uneducated with no formal artistic training.

its ideas of beauty in the everyday appealing to the common man both emotionally and spiritually.<sup>367</sup>

In the early 1930s the Mingei Movement grew in popularity among art and craft collectors as well as artists who sought to spread their ideas among the local elite and representatives from government agencies.<sup>368</sup> The concept of Mingei gained political traction during the years leading up to and including WWII as the government realised the potential of Mingei ideology to unite the country. Mingei activists saw this acceptance as an opportunity to realise their vision of social and cultural reform, and as such they redoubled their efforts. Between the late 1930s and mid-1940s the Mingei movement expanded rapidly.<sup>369</sup> By 1940 the central institutions of the movement, such as the Japan Folk-crafts Museum and the Mingei Association (Mingei Kyokai) were formed, and had attained semi-official status which eventually led to the dissemination and acceptance of the official version of Mingei that endures today.

Yanagi's views on arts and crafts were also heavily influenced by John Ruskin and William Morris (the men behind the British Arts and Crafts Movement, whose socialist ideas were introduced into Japan as early as 1888).<sup>370</sup> Much of their work was translated into Japanese between the late 1880s and early 1900s.<sup>371</sup> The rise in social movements during the 1920s contributed to the ready acceptance by Japanese intellectuals of Morris's ideas.<sup>372</sup> Morris's ideas are not only reflected in

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<sup>367</sup> The Mingei movement has been appropriated in modern times by various governments in order to increase nationalist sentiment.

<sup>368</sup> Kim Brandt, *Kingdom of Beauty: Mingei and the Politics of Folk in Imperial Japan*, Durham and London: Duke University Press, 2007, pp. 79-82. Most Mingei reformists however, were from the educated elite and often imposed rules on local craftsmen. This sometimes resulted in uniform products which represented the exact opposite of Mingei aesthetics. See *Ibid*, p. 96.

<sup>369</sup> Brandt (2007), pp. 125-27. In 1934, Yanagi founded the Mingei Association (Mingei Kyokai), and in 1936 he established the Japan Folk-crafts Museum (Nihon Mingeikan) in Tokyo.

<sup>370</sup> Pearce (1991), p. 21; Karatani (2000), pp. 147-49; Aso Noriko, 'Mediating the Masses: Yanagi Soetsu and Fascism' in Alan Tansman (ed.), *The Culture of Japanese Fascism*, Durham and London: Duke University Press, 2009, pp. 138-54, esp. 139. Both Yanagi and Morris were interested in Western philosophy, and Yanagi made efforts to introduce some of its concepts (along with Western art and literature) to Japan. Morris's later interest in political and socialist ideas was not emulated by Yanagi, who took a more spiritual path.

<sup>371</sup> Kikuchi (2004), pp. 25.

<sup>372</sup> Izumo Masashi, 'The Reception of William Morris in Early 20<sup>th</sup> Century Japan', *The Review of Economics and Commerce*, vol. 42, no. 1, 2006, pp. 25-35, esp. 26-33. Japanese social movements like the Social democratic party (1901), the Society for common people (1903), and the Japanese Socialist Party (1906), were all repressed by the government, and by 1910 there was very little socialist activity in Japan. In the early 1920s however, Marxism permeated Japanese intellectual society, and although such ideologies were still subject to severe repression, the writings of Morris and Ruskin escaped this censorship, allowing intellectuals to criticize the political system of the time.

the theoretical aspects of Yanagi's ideology, but also in practical projects such as the 1927 'Kamigamo Folk crafts Cooperative' (Kamigamo Mingei Kyodan).<sup>373</sup>

Yanagi encouraged people to 'find the beauty in practicality'. In the 1930s, Mingei-inspired goods were handmade in large numbers; these goods were generally cheap everyday items. In addition, they reflected the local practices and traditions of the regions in which they were produced.<sup>374</sup> Like William Morris, Yanagi placed greater emphasis on the user's perspective than that of the producer, claiming that everyday objects could not be separated from art. Yanagi was influenced by Morris in his separating of *bijutsu* (fine arts) from *kogei* (crafts), a distinction which continues to influence modern Japanese design. However, it was several years before Mingei effectively replaced other popular phrases to describe this view of arts and crafts. 'Getemono,' (low-grade things) was initially more commonly used by enthusiasts, including Yanagi.<sup>375</sup> In his 1926 essay 'the Beauty of Getemono' (Getemono no bi), Yanagi stated that although Japan could not compete with China or Korea in terms of artistry, its folk art did have its own unique simplicity. This simplicity came neither through copying nor imitation, but had its own inherent creativity. Yanagi believed that Japanese craft would be able to compete with the best in the world if it followed Mingei principles, and he made it his mission to reintroduce Mingei to the nation. And indeed Yanagi successfully brought folk art into the national consciousness, a legacy that exists to this day.<sup>376</sup>

Despite being inspired by William Morris, whom he saw as the pioneer of social consciousness in design, Yanagi felt that his ideas on aesthetics were superior. In addition Yanagi felt that Mingei displayed a passion for both aesthetics, beauty and functionality, whereas Morris dismissed fine artistry.<sup>377</sup> However, he was arguably more influenced by Morris's ideas than he was willing to admit. Evidence of Ruskin's and, particularly Morris' influence, can be found in Yanagi's

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<sup>373</sup> Ibid, p. 29.

<sup>374</sup> Yanagi was fascinated by the way in which Japanese artists such as the cha-no-yu – or tea - masters discovered beauty in everyday objects originally designed for their usefulness rather than for art. See Yanagi Soetsu (trans. Sakabe Shigeyoshi), *Folk-crafts in Japan*, 2<sup>nd</sup> ed. (first published 1936), Tokyo: Kokusai Bunka Shinkokai, 1937, p. 10; Yanagi (1989), pp. 93-4; Gelfer-Jørgensen (2013), pp. 248-49; Nagata, et al., eds. (2006), pp. 348-53.

<sup>375</sup> Getemono means ordinary household objects which are handmade by local craftsmen, and some of which Yanagi considered to be of extraordinary beauty.

<sup>376</sup> Brandt (2007), pp. 47-58.

<sup>377</sup> Brandt (2007), p. 59; Pearce (1991), p. 22.

private book collection where volumes such as 'William Morris Prose Selections' and 'Post Industrialism' are filled with his extensive reading notes.<sup>378</sup>

Between 1926 and 1940, having also been influenced by Mingei, Japanese designers travelled abroad extensively and were exposed to western art movements like Art Nouveau and the Vienna Secession, as well as to international styles such as Bauhaus.<sup>379</sup> Indeed, in the 1930s the New Architecture and Industrial Art Technology Institute began teaching Bauhaus principles.<sup>380</sup> An example of the growing European influence on Japanese design was the Keiji Kobo studio, a design research group established in 1928.<sup>381</sup> Despite its small size, its progressive western-influenced design concepts constituted one of the pioneering efforts in modern Japanese design.<sup>382</sup> One prominent designer to begin working at Keiji Kobo was Toyoguchi Katsuhei, who went to work at the Crafts Instruction Institute in 1933. While he was there he regularly wrote about Japanese furniture design for *Craft News*, and more importantly devised new methods of making and testing furniture.<sup>383</sup>

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<sup>378</sup> The author Jugaku Bunsho, a contemporary of Yanagi, recalls how enthusiastic Yanagi was about the ideas expressed in John William Mackail's biography of Morris. Yanagi read this book before he began the Mingei movement. See Kikuchi (2004), pp. 24-6; Soetsu Yanagi (1937), p. 8.

<sup>379</sup> Nagata, et al., eds. (2006), pp. 209-10 and 240; Thornton (1991), p. 56.

Japanese travelers brought Bauhaus concepts back to Japan mainly in the form of posters, books and other printed material. Nakada Sadanosuke wrote an article (for Mizue art magazine) in 1925 that introduced Bauhaus to Japan. Bauhaus concepts then became popular in many commercial art courses offered by Japanese art schools. Although Japanese designers adopted international techniques, they were less committed to conceptual work than their European counterparts.

<sup>380</sup> Mizutani studied at the Bauhaus from April 1927 to March 1929, returning to Japan in 1930, having embarked on a foundational course in design, learning the design and production of furniture, as well as city planning and architecture. After establishing the Institute in Tokyo in 1932, he taught design principles there. See Petra Ruick, 'Takehiko Mizutani: A Reconsideration of His Bauhaus Years' ('Bauhausu Ryugaku Saikou Autor: Mizutani, Takehiko') in Proceedings of annual meeting of Hokuiku Chapter, *Architectural Institute of Japan*, vol. 48, July 2005, pp. 361-64.

<sup>381</sup> Kashiwagi Hiroshi, 'On Rationalisation and the National Lifestyle: Japanese Design of the 1920s and 1930s,' in Elise K. Tipton and John Clark (eds.), *Being Modern in Japan: Culture and Society from the 1910s to the 1930s*, Honolulu: University of Hawaii Press, 2000, pp. 61-74, esp. 64-5.

<sup>382</sup> Fujita (1999), pp. 98-9; Nagata, et al., eds. (2006), pp. 274-79; Kashiwagi Hiroshi, *The Ideology of Modern Japanese Industrial Design (Kindai Nihon no Sangyo Dezain Shiso)*, Tokyo: Shobunsha, 1990 (first published 1979), p. 97. The group's design scope was broad, and included: surveys, prototypes, experiments, research, exhibitions, lectures, sales, advertising and writing. It promoted craftwork and everyday functional products such as furniture.

<sup>383</sup> Publishing House (ed.), *From Keiji Kobo to Toyoguchi Katsuhei: 50 Years of Design (Keiji Koubou kara-Toyoguchi Katsuhei to Dezain no Hanseiki)*, Tokyo: Bijyutsu shuppan-sha, 1987, pp. 66 and 100-20; Takehara Akiko, et al. (eds.), *The Concise History of Japanese Modern Design (Kindai Nihon Dezain shi)*, Tokyo: Bijyutsu shuppan sha, 2003, pp. 54-5; Industrial Arts and Research Institute (IARI) ed., *Industrial Art News (IAN, or Kogei Nyusu)* vol. 17, no. 2, 1949, p. 21. Toyoguchi's unique and innovative idea of testing the ergonomics of chairs consisted of utilising the compatibility and malleability of snow. Testers were asked to sit in the snow and find a comfortable position and then the snow was used as a modelling material, making a cross section of the shape and employing it in his furniture design.

From the 1930s onwards Japanese design, despite being influenced by international design, was nevertheless affected by the growing nationalism present in Japan. This nationalism encouraged designers to embrace indigenous styles and traditions, commonly referred to as 'Japan taste'. There was renewed interest from both the government and the public at large in *Japan taste*, a concept that was closely associated with Mingei ideas.<sup>384</sup> The advent of the war in 1937 further cemented this nationalistic trend, making Mingei and *Japan taste* even more relevant in everyday manufacture and design.<sup>385</sup>

#### 2.1.4 Social Reform and Its Influence

WWII saw Japan devastated, not least by the atrocities of Hiroshima and Nagasaki. After their humiliating defeat in 1945, the US occupation of the country saw the introduction of democratic and land reforms,<sup>386</sup> and a failed attempt to break-up the Zaibatsu. A decade of reconstruction began immediately after the war under the authority of US occupation. Nonetheless this period is characterized by endemic poverty and a collapse of national pride. From 1945 to 1965, Japan saw sustained annual growth of 3.3% in agricultural production due to mechanisation and the introduction of fertilizer. Japan would continue to support its fledgling industries through incentives and subsidies.

It now became essential for Japan to regain some of its pre-war eminence as an exporting nation and re-establish its economy.<sup>387</sup> In the 1950s and 1960s the Ministry of International Trade and Industry (MITI), formed in 1949, played a major role in formulating and implementing Japan's international trade policy, and

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<sup>384</sup> Pearce (1991), p. 24. Although Mingei was commercially successful in the 1930s, the form was generally not appreciated for its everyday utility, or the natural lifestyle it attempted to embody.

<sup>385</sup> Brandt (2007), pp. 122-23.

<sup>386</sup> The Occupation launched social and cultural reforms: A democratic constitution and political system; universal adult suffrage; the emperor's renunciation of divinity; the separation of religion from state control; agricultural land reform; the dismantling of major economic and industrial combines; the expansion of education; language reform; and expanded civil liberties. See J.W. Smith, *Economic Democracy: The Political Struggle of the Twenty-first Century*, New York: M.E. Sharpe, 2000, p. 188.

<sup>387</sup> Aoki Tamotsu (Japan's Director General of the Agency for Cultural Affairs [ACA] from 2007 to 2009), *The Transformation of Theories of Japanese Culture: The Post-war Japanese Culture and Identity (Nihon Bunkaron no Henyo: Sengo Nihon no Bunka to Aidentity)*, Tokyo: Chuokoron-shinsha, 1999, pp. 54-165.

developing domestic industry.<sup>388</sup> In 1954 MITI was able to promote Japanese design globally due to the absorption of the Japan Export Trade Research Organisation (JETRO) into MITI. The foreign showrooms used by JETRO were utilised by MITI in order to introduce impeccably designed Japanese products to the world.<sup>389</sup>

After WWII, Japan adopted a modified capitalistic economic structure<sup>390</sup> with the 'Keiretsu' system playing a key role in the rapid economic development.<sup>391</sup> This system involved close relationships between large companies and banks; the big-size companies would generally be served by a number of subsidiaries that were owned by the parent company.<sup>392</sup> The economic model here can be referred to as Confucianist in character in that it relies on the cooperation inherent in groupism.

At the national level, the main focus of the economy is capital expansion rather than consumption, as profits from economic growth are reinvested to produce more growth. The fact that firms have reinvested profits into new factories and equipment, along with high input into personal savings, ensures national savings stay high.<sup>393</sup> However the social infrastructure in terms of education, welfare<sup>394</sup> and

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<sup>388</sup> Jim Tomlinson, 'British Industrial Policy in a Japanese Mirror: Why no MITI in Britain?' in Abé Etsuo and Terry Gourvish (eds.), *Japanese Success? British Failure?: Comparison in Business Performance since 1945*, Oxford University Press, 1997, pp. 45-60, esp. 48-9. MITI was at its most influential in the 1950s and 60s due to its controlling much of Japan's commercial policy. MITI's influence waned somewhat in the 1970s when Japan liberalised a great chunk of its foreign trade..

<sup>389</sup> Sakurai Teiji, 'JETRO and Japan's Postwar Export Promotion System: Messages for Latin American Export Promotion Agencies', *Institute of Developing Economies (IDE) Discussion Paper, no. 127*, Chiba: JETRO, 2007, pp. 7-8. There were actually three JETROs: The first was established in Osaka in 1951 and was called Japan Export Trade Research Organisation on the initiative of the mayor, Okama Bunzo; the second in 1954, when MITI took over; the third in 1958, when JETRO became an international association and was renamed The Japan External Trade Organisation (also called JETRO). It was a government-related organisation that worked to promote mutual trade and investment between Japan and the rest of the world.

<sup>390</sup> After the great depression, capitalism could not maintain a supply oriented economy (Say's Law), and the government actively intervened in the market. This resulted in modified capitalism, or namely a government regulated Keynesian economic system, and thus differed from pure capitalism.

<sup>391</sup> Edward Lincoln, *Arthritic Japan: The Slow Pace of Economic Reform*, Washington DC: The Brookings Institution Press, 2001, p. 26.

<sup>392</sup> This structure allows for the sharing of risk and profits. This encouraged investment which contributed to economic growth between the 1950s and 1970s. The Mitsubishi Corporation for example, has always been one of Japan's most powerful Keiretsu and was regularly listed by fortune as the largest company in the world during the 1980s and early 1990s. See Joe Peek, 'The changing Role of Main Banks in Aiding Distressed Firms in Japan' in Hamada Koichi, et al. (eds.), *Japan's Bubble, Deflation, and Long-term Stagnation*, Cambridge, Massachusetts; London, England: The MIT Press, 2011, pp. 309-42, esp. 311; Jackson and Tomioka (2004), p. 199.

<sup>393</sup> Horioka Charles Yuri, 'Are the Japanese Unique? : An Analysis of Consumption and Saving Behavior in Japan' in Sheldon Garon and Patricia Maclachlan (eds.), *The Ambivalent Consumer: Questioning Consumption in East Asia and the West*, Ithaca, N.Y. ; London: Cornell University Press, 2006, pp. 113-36, esp. 134-35.



retirement has not benefitted from this economic development to the same extent.<sup>395</sup>

## **Economic Development and Competition**

In the mid-20<sup>th</sup> century Japan developed her own production methods, including just-in-time (JIT) production and Total Quality Control (TQC) which were both based on American Quality Control (QC) techniques.<sup>396</sup> JIT and TQC significantly improved Japanese management structures and product quality. Another important factor in Japan's economic development has been MITI.<sup>397</sup> Between 1949 and 1960, it exerted tight control over industrial policy,<sup>398</sup> but after that until 1980 it began to lessen its intervention in order to help the country adapt to foreign demands for economic liberalisation. MITI also had access to financing, and was able to channel monies into industries it deemed were important for economic development. In addition, it was the driver of a number of laws that aimed to promote specific industries, often providing the industry in question with easier access to finance.<sup>399</sup>

From the end of WWII until 1970, economic growth led to new industrial facilities in several cities. As a result the urban population tripled, with 70 percent of the population living in urban areas.<sup>400</sup> Japan's economic growth reflected their industrial policy of 'economic nationalism'; a policy that existed from 1950-69.<sup>401</sup>

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<sup>394</sup> Margarita Estévez-Ave, 'State-society Partnerships in the Japanese Welfare State' in Schwartz and Pharr, eds. (2003), pp. 154-72, esp. 163-64.

<sup>395</sup> Hayes (2009), pp. 160-62.

<sup>396</sup> Hitomi Katsundo, 'Manufacturing Technology in Japan,' *Journal of Manufacturing Systems*, vol. 12, no. 3, Dearborn, Michigan: Society of Manufacturing Engineers Press, 1993, pp. 209-15, esp. 211-12.

<sup>397</sup> Kenneth Brown, 'Conservative Government, British Decline and Japanese Success, 1979-1990', *Contemporary British History*, vol. 25, no. 3, 2011, pp. 365-85, esp. 379.

<sup>398</sup> Abé Etsuo, 'The State as the "third-hand": MITI and Japanese Development after 1945' in Abé and Gourvish, eds. (1997), pp. 17-44, esp. 22-5.

<sup>399</sup> For example the 1957 Temporary Measures Act for the Promotion of the Electronics Industry. See *Ibid.*

<sup>400</sup> Edwin Mills and Ohta Katsutoshi, 'Urbanization and Urban Problems,' in Hugh Patrick and Henry Rosovsky (eds.), *Asia's New Giant: How the Japanese Economy Works*, Washington DC: Brookings Institution Press, 1976, pp. 673-752, esp. 680-82.

<sup>401</sup> Bai Gao, 'The Search for National Identity and Japanese Industrial Policy, 1950-1969,' *Nations and Nationalism*, vol. 4, no. 2, 1998, pp. 227-45.

Between 1953 and 1965 Japan's average rate of economic growth was 9%, falling to 8% between 1965 and 1970. Also, Japan's economic development was characterised by high levels of investment. Between 1955 and 1964 investment averaged 28.8%. See Kenneth Brown, *Britain and Japan: A Comparative Economic and Social History since 1900*, Manchester and New York: Manchester University Press, 1998, p. 141; Andrew Gordon, *A Modern History of Japan: From Tokugawa Times to the Present*, 3<sup>rd</sup> ed. (first published in 2002), Oxford University Press, 2014, pp.

During this period Japan began to export small and light products like the Honda 'Super Cup' scooter, and Sony's 'Micro TV', to America. These Japanese products formed a niche market partly because they contrasted with big and bold American designs. Following the Oil Crisis of the 1970s Japanese products became highly popular, mainly because they were generally small, affordable, compact, energy efficient, and embodied the concept of simplicity.

The 1960s and 1970s saw a series of export led booms. Key industries included the motor, machinery and electronic industries which continued the focus on smaller products.<sup>402</sup> This era also saw companies focus on quality and satisfying consumer demand. A key part of the emphasis on quality was, and still is, the unique Japanese style of Management (TQM) which observers have credited for the country's rapid economic growth in the post-war era. As part of TQM, the JIT production system enabled companies to reduce costs and produce goods at a lower price than foreign competitors. The West began to take notice in the 1960s, particularly following the success of the 1964 Olympics. But it was Japan's overcoming of the 1970s oil shock that ensured that TQM became universally renowned. The economic instability caused by the 'oil price shock'<sup>403</sup> slowly subsided in the late 1970s, and Japanese life became more affluent than ever before. Accordingly there was more emphasis placed on the appearance of products rather than functionality, and this emphasis appealed to a new consumer desire for luxury goods and status symbols.

In the 1980s, the boom in Japanese style management spread throughout North, Central and South America and the rest of Asia.<sup>404</sup> In the 1980s and 1990s, in order to make TQM completely successful in Japan, several techniques from scientific management were taught to employees and management, including techniques relating to sales, manufacturing, and quality product design.<sup>405</sup> Managers also improved employees' motivation and cooperation by using attitude

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245-46. Gordon notes that Japan's GNP increased by an average annual rate of over 10% from 1950 (USD 11 billion) to 1973 (USD 320 billion); Arthur Alexander, *The Arc of Japan's Economic Development*, London: Routledge, 2008, p. 12; Ulrike Schaede, *Choose and Focus: Japanese Business Strategies for the 21<sup>st</sup> Century*, Ithaca and London: Cornell University, 2008, pp. 61-2.

<sup>402</sup> Alexander (2008), p. 123. Money supply policies -5.

<sup>403</sup> This coincided with the 1973-74 Stock Market Crash, which had the largest worldwide effect on economic systems since the Great Depression of the 1930s.

<sup>404</sup> Hayes (2009), pp. 163-64.

<sup>405</sup> John Campbell, 'What's New? General Patterns of Planned Macro-institutional Change' in Hage and Meeus, eds. (2006), pp. 505-24, esp. 509-10.

surveys, quality-control circles and teamwork building exercises. By referencing structural analysis models, companies were able to reduce bureaucracy and form effective federations of firms. Throughout these processes the 'human relations' approach was emphasised, an approach that focused on the employees' personal improvement and job satisfaction.<sup>406</sup> These changes to management style, along with a human-centred approach to product design, resulted in Japanese firms becoming highly competitive in the international market.

### **Design Boom, Recession, and Globalisation**

Up until the 1980s Japan was catching up with other countries in terms of technology manufacture and had little technology to license abroad.<sup>407</sup> However, during the 1980s economic growth was led by domestic demand.

Telecommunications and information based technology products became increasingly important and led to a design boom in those products. From 1987 to 1990, there was a rapid increase in the importation of manufactured goods, while the average rate of economic growth at 4.5% was notably high. The 1980s also saw Tokyo become an important financial centre with a steady stream of foreign reserves from exports. This meant there was a great deal of money available for speculation in the stock and real estate market, both of which became over-valued. By the late 1980s there were additional concerns about deflation and non-performing loans. In addition, consumption fell and Japanese products became less innovative and less competitive abroad, with the growth rate falling to 1.7% in 1992.<sup>408</sup> Hence, having seen a relative miracle in high-technology exports in the 1980s, the 1990s saw Japan's technology productivity decline<sup>409</sup> which led to prolonged economic contraction and stagnation.<sup>410</sup>

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<sup>406</sup> From 1976 until the present, strikes in Japan are rare in part because of improved communication between management and labour. Nevertheless the life-time employment model practiced by big-sized companies in Japan ended in the 1990s. See Kume Ikuo, *Disparaged Success: Labor Politics in Postwar Japan*, Ithaca and London: Cornell University Press, 1998, pp. 15 and 215-23.

<sup>407</sup> Lincoln (2001), pp. 92-95.

<sup>408</sup> Alexander (2008), p. 9; Lincoln (2001), p. 62.

These events were part of what is sometimes called 'the lost decade', a debated time period which scholars variously place somewhere between the late 1980s and late 2000s. See Yves Tiberghien, *Entrepreneurial States: Reforming Corporate Governance in France, Japan, and Korea*, Ithaca and London: Cornell University Press, 2007, pp. 107-08.

<sup>409</sup> Watanabe Chihiro, *Managing Innovation in Japan: The Role Institutions Play in Helping or Hindering how Companies Develop Technology*, Berlin: Springer, 2009, p. 161.

<sup>410</sup> Hayes (2009), p. 180.

In 1999, Japan passed the Industrial Revitalisation Law, and two years later over 100 large corporations had requested government support under the law for their restructuring plans. These corporations included Toyota, Nissan and Suzuki. Furthermore, the 1990s saw a raft of mergers and acquisitions; 600 occurred between 1993 and 1996, rising to 1800 in 2000.<sup>411</sup> In the early 2000s there was a turn towards a more aggressive corporate climate, driven in part by Prime Minister Ryutaro Hashimoto's economic reforms (1996-1998),<sup>412</sup> which were continued by Koizumi Junichiro between 2001 and 2006.<sup>413</sup> These reforms ushered in a 'leave it to the market philosophy',<sup>414</sup> and the culture at large embraced a new form of 'neo-liberalism'.<sup>415</sup> Shinzo Abe, Japan's current prime minister, has been instrumental in opening up the Japanese economy to globalisation.<sup>416</sup>

In the early 2000s METI decided to concentrate on the 'strategic utilisation of design and brand' in order to strengthen Japan's industrial competitiveness.<sup>417</sup> In 2007, the 'Japan Industrial Design Promotion Organisation' (JIDPO) announced the 'sensibility (Kansei)' strategy to create economic value through design. Kansei involves what is known as SENSE marketing, a strategy focused on the contents of customer experience.<sup>418</sup> Today, Japanese design represents a complex amalgamation of deeply entrenched tradition, fashionable innovation, individualism and groupism. Japan has conjoined its traditional and lasting respect for visuality

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GNP per person aged 20 to 69 grew at an average of 4.6% per year during the years 1960 to 1990 however during the 1990s the rate declined to 0.7%. See Diego Comin, 'An Exploration of the Japanese Slowdown during the 1990s' in Hamada, et al., eds. (2011), pp. 375-98, esp. 377-79.

<sup>411</sup> Tiberghien (2007), p. 110. Before 2000 there were a lot of bankruptcies. Growth was very weak and the period from 1995 to late 2005 has been labeled an 'extended recession'. During this recession, Japanese firms invested heavily in Asia while protecting their technological innovations.

<sup>412</sup> Tanigaki Kunio, 'Reforming the Japanese Civil Service: Evaluation of the Hashimoto Reform, 1996-1997' *Japan and the World Economy: International Journal of Theory and Policy*, vol. 13, no.1, 2001, pp. 83-93, esp. 83-90.

<sup>413</sup> Nakajima Takanobu, 'Japanese Society under Marketization and Globalisation' in Masao Nakamura (ed.) *Changing Japanese Business, Economy and Society*, New York: Palgrave Macmillan, 2004, pp. 203-19, esp. 214-16.

<sup>414</sup> Schaede (2008), pp. 1-2 and 21.

<sup>415</sup> This was quite a shock to the more conservative minded in society who had never encountered liberalism. See David Slater, 'Social Class and Social Identity in Postwar Japan' in Bestor, et al., eds. (2011), pp. 103-15, esp. 111.

<sup>416</sup> For example, he introduced free trade, signing Japan up to the Trans-Pacific Partnership (TPP) in August 2013. The TPP consists of 12 countries, including the United States, and together they make up 40% of global GDP and a third of world trade. See Keiko Hirata and Mark Warschauer, *Japan: The Paradox of Harmony*, New Haven and London: Yale University Press, 2014, p. 57.

<sup>417</sup> Following the economic depression, the competitiveness of electronics gradually weakened. Japan's prized innovation in design, which had been so successful during the industrial age, was no longer able to keep up with consumers' needs in the information age.

<sup>418</sup> Lee Seung-hee (et al.), 'Design Based on Kansei,' in Green and Jordan, eds. (2002), pp. 219-29, esp. 220-22. Kansei is all about *communicating* the value of a company's technological capability and craftsmanship to the customer.

with ecological concerns and cutting edge technology, in an attempt to recapture its design preeminence of the 1980s. However, since 2000, Mingei aesthetics, and designs resulting from the Kansei strategy, have not been enough to make Japanese technological products successful. The principal reason for this is that Japanese electronic products have sometimes failed to correctly identify, and keep pace with, consumer taste.

## 2.2 Russia

### 2.2.1 Socio-Cultural Values and Identity

#### Communism and Its Influence

From 1917, the Bolsheviks under Vladimir Lenin attempted to merge aspects of the capitalist system with communism, such as increased speed of production and low production costs, and fuse them under a system of state control. Taylorism, the US production system, was adopted as a way of advancing the Russian economy. The Soviet Union was officially established in 1922, and the combination of communism and Taylorism was referred to as standardisation in the USSR. Standardisation in this form meant implementing a central system of control. The new economic policy (NEP), which was launched by Russia in 1921, and the Five- Year Economic Plan devised in 1928, laid the foundations for the subsequent development of industry. The economy continued to be state-controlled under Stalin but economic liberalisation was encouraged, which enabled private enterprise to flourish and with Gross Domestic Product (GDP) growth often outperformed most Western countries between the 1930s and 1950s.<sup>419</sup> However, the emphasis on quantity was at the expense of quality.<sup>420</sup> The quality of mass-produced goods deteriorated during the

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<sup>419</sup> Michael Poulton, 'Russian Business: The Warp and Weave of Its History' in Russell Bova (ed.), *Russia and Western Civilization: Cultural and Historical Encounters*, London and New York: M.E. Sharpe, 2003, pp. 277-318, esp. 297-98; Vladimir Mau and Tatiana Drobyshevskaya, 'Modernisation and the Russian Economy: Three Hundred Years of Catching Up' in Michael Alexeev and Shlomo Weber (eds.), *The Oxford Handbook of the Russian Economy*, Oxford University Press, 2013, pp. 29-50, esp. 31.

<sup>420</sup> Raymond Hutchings, *Soviet Science, Technology, Design: Interaction and Convergence*, Oxford University Press, 1976, p. 177.

first Five- Year Economic Plan (1928-1932), although more attention was paid to quality during the Second (1933-1937).<sup>421</sup>

Initially, some progressive artists saw in Lenin's communism a utopian ideal of a collective and classless society, but they were soon to discover that the reality was somewhat different, leading to conflict between the free-thinking art world and the official communist party line. Nonetheless, after Stalin, the Party did begin to loosen some control over cultural politics, partly helping Soviet industrial design reach international standards. The role of design within communism was largely ideological; it served as a way of teaching class consciousness and of showcasing Soviet superiority over foreign styles.<sup>422</sup> For the most part, design remained more of an idea than a physical reality. There were an abundance of designs but, for reasons of finance or market restrictions, most of these were never made into real products.

During the Stalinist period (1928-53), the design of buildings tended towards ornamentation.<sup>423</sup> In the 1940s and 50s, some of the key buildings owed much to the American skyscraper,<sup>424</sup> although their facades utilised different materials.<sup>425</sup> Stalin was keen to show that the Soviet skyscrapers were his idea, and to this end posters were produced with tall buildings in the background and Stalin in the foreground.<sup>426</sup> Such posters were intended to be a symbol of Stalin's power. Although great significance was attached to the construction of the Moscow

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<sup>421</sup> Alec Nove, *An Economic History of the USSR: 1917-1991*, 3<sup>rd</sup> ed. (first published 1969), London: Penguin Book, 1992, pp. 159-75; Hutchings (1976), pp. 177-78.

<sup>422</sup> Iurii Gerchuk, 'The Aesthetics of Everyday Life in the Khrushchev Thaw in the USSR (1954-64)' in Reid and Crowley, eds. (2000), pp. 81-99.

<sup>423</sup> For example, the 'Palace of Soviets' whose design influenced other public buildings including the Central Red Army Theatre. An air of optimism was built into these buildings and this, along with the adoption of classical forms, became synonymous with Soviet Neoclassicism. See Dmitry Shvidkovsky, *Russian Architecture and the West* (Photos: Yekaterina Shorban, Trans: Antony Wood), New Haven, Conn.; London: Yale University Press, 2007; p. 370.

<sup>424</sup> Sona S. Hoisington, 'Soviet Schizophrenia and the American Skyscraper' in Rosalind P. Blakesley and Susan E. Reid (eds.), *Russian Art and the West: A Century of Dialogue in Painting, Architecture, and the Decorative Arts*, Northern Illinois University Press, 2007, pp. 156-71, esp. 166.

<sup>425</sup> Several theorists and architects were keen to point out the fundamental dissimilarities between the tall buildings of America and the Soviet Union. The Polish architect Edmund Goldzamt wrote that American 'disorderly' skyscrapers reflected 'the chaos and internal contradictions of the capitalist economy,' whereas Soviet tall buildings reflected social and economic unity. See Edmund Goldzamt, *Heritage Issues faced by Architecture Teams in Inner Cities (Architektura Zespołów Śródmiejskich I Problemy Dziedzictwa)*, Warsaw: Panstwowe Scientific Publishing (Panstwowe Wydawnictwo Naukowe), 1956, pp. 329-30.

<sup>426</sup> Sona S. Hoisington (2007), pp. 166-67. For example, the Kotelnicheskaya Embankment Building designed by Dmitry Chechulin was featured in the 1952 poster titled 'Glory to Stalin, the great Communism creator'. This poster was designed by N. Petrov and K. Ivanov, and had the words 'Glory to the Great Stalin-Architect of Communism!' written across it.

Metro<sup>427</sup> it was surprisingly not conceived as a propaganda project, and did not bear Stalin's name. However, during the second stages of construction which began in 1936, the subway became a political statement, and thus enjoyed better funding. The stations built in 1944 constituted the first permanent Patriotic War memorial.<sup>428</sup>

### **Soviet Ideology, Religion and Identity**

After the Second World War, and during the Cold War, the Soviet Union established international client-patron relationships under the pretext of communist enlightenment and political liberation from old European empires. The result, as critics Chulos and Remy assert, was a Soviet empire that could not last.<sup>429</sup> Soviet philosophy floundered somewhat when Stalin came to power, but it was reinvigorated in the 1960s, especially by the work of Leontev and Ilyenkov.<sup>430</sup> One of Ilyenkov's key beliefs was that human beings are created through culture. Culture is a collective human activity which is a real existing phenomenon that cannot be reduced to simply the mental states of individuals or their physical embodiment.<sup>431</sup> Soviet propaganda was therefore used to maximise the power of Russia's rulers at home and abroad, and was also a way to reduce the costs of

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<sup>427</sup> The construction of the Metro began in 1931, and was influenced by the modernist, anti-historical avant-garde, having attracted new young architects in its initial stages. Nikolai Dzhemsovich Kolli (1894-1966), a constructivist architect, played an extensive role, along with Nikolai Ladovskii and Vladimir Krinski. This was the beginning of socialist realism within architecture and design in the Soviet Union. See Catherine Cooke with Susan E. Reid, 'Modernity and Realism: Architectural Relations in the Cold War' in Blakesley and Reid, eds. (2007). pp. 172-94, esp. 173-74.

<sup>428</sup> Robert Auty and Dimitri Obolensky (eds.), *An Introduction to Russian Art and Architecture*, Cambridge University Press, 1980 (originally published in 1976), p. 169; Kenneth Frampton and Yuri Gnedovsky (eds.), *World Architecture 1900-2000: A critical mosaic, vol. 7, Russia-USSR-CIS*, Springer, Wien; New York: China Architecture & Buildings Press, 1999-2000, pp. 114-15.

<sup>429</sup> Chris J. Chulos and Johannes Remy, 'Introduction: Russian imperial history,' in Chris J. Chulos and Johannes Remy (eds.), *Imperial and National Identities in Pre-Revolutionary, Soviet, and Post-Soviet Russia*, Helsinki: Finnish Literature Society (Suomalaisen Kirjallisuuden Seura), 2002, pp. 9-15, esp. 12.

<sup>430</sup> Two important works by these philosophers are: Aleksei Nikolaevich Leontev, *Activity, Consciousness, and Personality* (trans. Marie J. Hall, translation of: '*Deiatel'nost, Soznanie, Lichnost*'), Moscow: Politizdat, 1975), Englewood Cliffs; New Jersey: Prentice Hall, 1978, pp. 75-111; E.V. Ilyenkov, 'The Concept of The Ideal' in P.N. Fedoseyev (ed.), *Philosophy in The USSR: Problems of Dialectical Materialism* (trans. Robert Daglish), Moscow: Progress Publishers, 1977, pp. 71-99.

<sup>431</sup> David Bakhurst, *Consciousness and Revolution in Soviet Philosophy: From the Bolsheviks to Evald Ilyenkov*, Cambridge University Press, 1991, pp. 21-2. In the post Glasnost era philosophers and philosophy students have been encouraged to re-examine old Soviet philosophers, many of whom had previously been dismissed as idealists.

expanding their borders and consolidating power.<sup>432</sup> For example in 1962 Yuri A. Gagarin's feat of becoming the first man in space was used as propaganda to demonstrate Soviet technological superiority over the West. Gagarin's image was also used on anti-religious posters since Soviet ideology was primarily atheist. Another propaganda opportunity occurred in 1964 when Valentina Tereshkova became the first woman in space. Posters using her image to promote atheism soon began to appear and her image was also used to promote gender equality.<sup>433</sup>

The concept of Russian nationalism continued to exist throughout the post-war period and into the 1970s. The 'Russian idea' put forward by Nikolai A. Berdayev promoted the moral and spiritual superiority of Russia over the West and the wider world in general. This sentiment was also expressed by Igor R. Shafarevich, and he and Berdayev felt that Russia's purpose was to save the world from its Western-influenced self-indulgence.<sup>434</sup> From the 1980s onwards, demographic changes led to a merging of traditional religion and urban ideologies, practices and beliefs. This was due to people from remote villages seeking work in cities and then returning to their communities, bringing with them their new urban influences. Due to a large number of Russian Orthodox parishes needing to be re-established, many urban priests were sent to the countryside. These priests tended to accommodate the new urban beliefs and practices.<sup>435</sup> Furthermore, in the post-Soviet era, other forms of religious identification and practice were revitalised. This is particularly evident amongst Muslims whose numbers rose to 16% of the religious population in Russia, with the number of Mosques increasing fifty-fold from 1991 to 2006.<sup>436</sup>

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<sup>432</sup> Harold D. Laswell, 'The Strategy of Soviet Propaganda' in Paul R. Baines and Nicholas J. O'Shaughnessy (eds.), *Propaganda: SAGE Library of Military and Strategic Studies, vol. 1*, Los Angeles: SAGE Publications Ltd., 2013, pp. 247-56, esp. 247-48.

<sup>433</sup> Irina Paert, 'Demystifying the Heavens: Women, Religion and Khrushchev's Anti-religious Campaign, 1954-64' in Melanie Ilič, et al. (eds.), *Women in the Khrushchev Era*, Basingstoke: Palgrave Macmillan, 2004, pp. 203-21, esp. 203.

<sup>434</sup> Shlapentokh, et al., eds. (2008), p. 69; Alastair McAuley, 'Social Policy' in Archie Brown and Michael Kaser (eds.), *Soviet Policy for the 1980s* (St Antony's/ Macmillan Series), London: Macmillan Press Ltd., 1982, pp. 146-69, esp. 161-64. In the late 1970's Igor Shafarevich began to support the nationalist movement, and during this period he spelt out his conception of Russian nationalism in his *samizdat* publications. Nikolai A. Berdayev's (1874-1948) focus on freedom and creativity has led to him being described a Christian existentialist. He felt that a 'collectivised and mechanised society' was a barrier to creativity, and thus opposed such a society.

<sup>435</sup> Alexander Panchenko, "'Popular Orthodoxy' and identity in Soviet and post-Soviet Russia: ideology, consumption and competition," in Mark Bassin and Catriona Kelly (eds.), *Soviet and Post-Soviet Identity*, Cambridge University Press, 2012, pp. 321-40, esp. 334-36.

<sup>436</sup> Gregory Freeze (ed.), *Russia: A History*, Oxford University Press, 2009, pp. 513-15. In 1991 there were 150 mosques but by 2006, this figure had grown dramatically to 6000.



During the 1990s many Russians struggled with their sense of national identity. After the collapse of the Soviet Union, Russian identity was difficult to define as it was inextricably entwined with Communism. As such when the people were again allowed to express their varying cultures and religions, the concept of a coherent Russian identity became unclear. Did this identity now refer only to ethnic Russians, or did it encompass anyone who embraced the Russian way of life?<sup>437</sup> And are communist and Russian ways of life separate or unified? Modern day Russians struggle with these and other questions, although the government appears to take a nationalist view of Russian identity, emphasising the power of the state over the individual. However, since the early 2000s Russia has been affected by globalisation. This has begun to have an influence on Russian national identity, namely in the form of transnationalism, particularly among the younger generation of internet users.<sup>438</sup> The younger generation of Russians (sometimes described as 'Generation T') identifies with these concepts, exhibiting a patriotism which is not solely attached to their country of birth and residence.<sup>439</sup> Rather their identity is also linked to other countries where they may spend time travelling or working, and to experiences they have on the worldwide web. The result of all of the above is that, even today, many Russians still ask themselves what constitutes a Russian identity, and how to define Russian nationalism.<sup>440</sup>

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<sup>437</sup> Marlène Laruelle, 'Rethinking Russian nationalism: Historical Continuity, Political Diversity, and Doctrinal Fragmentation' in Marlène Laruelle (ed.), *Russian Nationalism and the National Reassertion of Russia*, London and New York: Routledge, 2009, pp. 13-48, esp. pp. 41-4. Laruelle maintains that Russian nationalism can broadly be divided into two camps: Those who give priority to the state, and those who prioritise the ethnicity of the Russian people. To understand this it is important to note that Russia has never existed as a state without an empire. As far back as the 12<sup>th</sup> century, the Russian principality of Novgorod already extended as far the Urals. The embracing of Communism in the early 20<sup>th</sup> century further extended Russia's national identity with the growth of the USSR which annexed many countries, and tried to impose a Russian identity upon them under the guise of Communism.

<sup>438</sup> Transnationalism describes the view that the common good should be seen in the context of the wider world rather than just in the national interests of a single nation state.

<sup>439</sup> Sergey Akopov, 'Russian Identity after the fall of the USSR: From Generation "П" to Generation "Т" ("transnational")?' in Andrey Makarychev and André Mommen (ed.), *Russia's Changing Economic and Political Regimes: The Putin Years and Afterwards*, London: Routledge, 2013, pp. 66-76, esp. 67-8.

<sup>440</sup> Alexander Lukin, *The Political Culture of the Russian 'Democrats'*, Oxford University Press, 2000, pp. 35-65.

Some similar studies to Duncan's have discussed the tension between the attraction of the West and nostalgia for the Russian past. See Peter J. S. Duncan, 'Contemporary Russian Identity Between East and West' in *The Historical Journal*, vol. 48, no.1, Cambridge University Press, 2005, pp. 277-94.

## 2.2.2 Modernisation

### Economies in Transition and Consumerism

By 1917, despite radical reforms, the most popular visions of a 'new Russia' were still based on a central authority and hegemonic ideology, both of which suited the needs of early Bolshevik and later Soviet rulers.<sup>441</sup> 'The collective response to the image of Vladimir Lenin was driven in part by the need for identity, the need for a protector, and the longing for integration. It was not only the general population that felt optimistic about the country's future, but also academics and other thinkers. The journal 'Soviet philosophy', founded soon after the Revolution, reflected in its early years a spirit of optimism, with many of its contributors (such as Lenin and Trotsky) urging other Soviet philosophers to further develop Marx's materialism.<sup>442</sup> S.K. Minin argued that Marxism could become akin to a science which could be successful only under communism, for as bourgeois ideology is stripped away, the reality of this science will become apparent to all. Science in this sense, argues Minin, is a kind of emancipatory movement that will free the people from the clutches of capitalism.<sup>443</sup> The ideology of Marxism-Leninism involved the claim that it would advance European science by stripping it of its bourgeois distortions and self-interest. This would then allow communism to transform mankind for the better. However during the 1930s the role of science in the Soviet Union became more pragmatic as it was focused on the goal of rapidly industrializing the country.<sup>444</sup>

In 1921, Lenin oversaw the introduction of the NEP which was designed to lay the foundations for the subsequent development of industry. Following Lenin's death, Stalin came to power in 1924. His economic strategy involved implementing

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<sup>441</sup> Chulos and Remy (2002), p. 11.

Following the meeting of All-Russian Congress of Soviets on 25<sup>th</sup> January 1918 the state was renamed the Soviet Russian Republic, and the communist party, communist ideology, and communist direction characterised the newly formed state. See Nicholas V. Riasanovsky, *A History of Russia*, 6<sup>th</sup> ed. (first published 1963), Oxford University Press, 2000, p. 465.

<sup>442</sup> Roger Bartlett, *A History of Russia*, New York: Palgrave Macmillan, 2005, pp. 194-205; Bakhurst (1991), p. 27.

<sup>443</sup> Bakhurst (1991), pp. 28-31. Minin argued that philosophy had merely perpetuated myths to serve the ruling oppressive classes and as such philosophy should simply be replaced by science; this view is often referred to as Liquidationist.

Minin coined the slogan 'Science to the bridge, philosophy overboard!' See Edward Craig (ed.), *Routledge Encyclopedia of Philosophy: Index*, vol. 6, London: Routledge, 1998, p. 154.

<sup>444</sup> Michael Froggatt, 'Renouncing Dogma, Teaching Utopia: Science in Schools under Khrushchev' in Polly Jones (ed.), *The Dilemmas of De-Stalinization: Negotiating Cultural and Social Change in the Khrushchev Era*, London and New York: Routledge, 2006, pp. 250-66, esp. 250.

a series of Five-Year Plans<sup>445</sup> starting in 1928, which were designed to ensure rapid industrialisation. A full-scale Cultural Revolution followed which alienated individuals and many creative artists.<sup>446</sup> Artists and designers could no longer express individual ideas, but had to work for the state, creating only products sanctioned by government.<sup>447</sup> Furthermore, he accelerated industrialisation by ensuring key resources were under state control. Producers could no longer establish prices themselves since they were controlled by the state. As a result of central control the needs of the customer were often ignored.<sup>448</sup> The Soviet Union became a highly centralised command economy, as it was claimed that socialism was a more efficient way of achieving industrialisation.<sup>449</sup> During the late 1930s, much of state funding went into military research and production projects such as shipbuilding and the design of military aircraft. As a result, the design of everyday products was considered secondary. Under Stalin, Soviet science advanced and achieved great successes, yet these successes were not reflected in the design of everyday products. Compared to the West, the technology gap was wider than the science gap.

After Stalin's death in 1953, Party officials opted for joint rule, but by the mid-fifties, Nikita Khrushchev had assumed leadership, and in 1956 he denounced the repressive policies and practices of Stalin; this political process was known as 'de-Stalinisation'.<sup>450</sup> In 1957, Khrushchev implemented a radical reorganisation of

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<sup>445</sup> Riasonovsky (2000), pp. 489-91. The first Five-Year Plan began in 1928 and sought to create rapid industrialisation by focusing principally on heavy industry. The last Five-Year Plan implemented in 1991, although it was not completed because of the fall of the USSR in the same year.

<sup>446</sup> During the Cultural Revolution (from 1928 until 1931) Soviet museums came under heavy state scrutiny. Instead of concentrating on preserving items of high aesthetic value and displaying them in public collections, the museums became a propaganda vehicle for the state. See Konstantin Akinsha and Adam Jolles, 'On the Third Front: The and Its Public during the Cultural Revolution' in Anne Odom and Wendy R. Salmond (eds.), *Treasures into Tractors: The Selling of Russia's Cultural Heritages, 1918-1938*, Seattle, Wash: University of Washington Press, 2009, pp. 167-81, esp. 169.

<sup>447</sup> Anne Odom and Wendy R. Salmond, 'Introduction: From Preservation to the Export of Russia's Cultural Patrimony' in Odom and Salmond, eds. (2009), pp. 3-31, esp. 16.

<sup>448</sup> Vasily Kolesov, 'Economic Reform in the USSR: New Perspectives' in Jeong Kap-young (ed.), *Cooperation Between Korea and Russia*, The Institute of East and West Studies, Seoul: Yonsei University, 1993, pp. 23-32, esp. 23-5.

<sup>449</sup> Panibratov (2012), pp. 7-8. Between 1932 and 1937, the construction industry saw a doubling of productivity. However, economic growth slowed at the end of the 1930s mainly because industry focused on supplying the military.

<sup>450</sup> This process of de-Stalinisation led in part to Kim Il-sung re-examining North Korea's economic policies in 1959-60 and changing irrevocably the relations between North Korea and Soviet Union. In the early 1960s Kim managed to remove nearly all of Moscow's political control of the North. See

Soviet industrial systems.<sup>451</sup> Although much progress was made in the 'space race', his reforms in agriculture and administration were largely unproductive, and he was forced to retire in 1964.<sup>452</sup> However, it should be noted that during the 1950s and 1960s the Soviets expanded heavy industrial production and achieved many notable technological feats.<sup>453</sup> Another period of collective rule followed Khrushchev's departure until Leonid Brezhnev (1964-1982) assumed full power in the mid-seventies. He became president in 1964, but it was over a decade later that he was able to assume a more traditional Soviet all-powerful Presidency. The perceived faults of the Khrushchev regime, such as high food prices and low living standards, led to a re-Stalinisation process under Brezhnev. The reversal of his predecessor's policies focused on issues of consumption and living standards. Khrushchev's aesthetic principles also received criticism and were linked to his policies of de-Stalinisation.<sup>454</sup>

Re-Stalinisation introduced greater inequalities in workers' wages as a way of raising productivity levels, although the social tensions caused by this policy were offset to some extent by the greater availability of consumer goods in shops.<sup>455</sup>

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Balázs Szalontai, *Kim Il Sung in the Khrushchev Era: Soviet-DPRK Relations and the Roots of North Korean Despotism, 1953-1964*, Chicago: Stanford University Press, 2005, p. 208.

<sup>451</sup> He abolished the 'All-Union' industries such as the motor, machine-making, tractor and agricultural industries. In addition he ensured that these industries were controlled and organised by regional 'economic councils' based in 'economic administrative areas'. See 'N.S. Khrushchev on the Further Improvement of Management in Industry and Construction in the USSR: Report, and reply to discussion at the Seventh Session of the Supreme Soviet 7<sup>th</sup>-10<sup>th</sup> May 1957 with the text of the new law,' *Soviet News Booklet*, no. 10, London, 1957, pp. 70-6; Oleg Hoeffding, 'The Soviet Industrial Reorganisation of 1957,' *The American Economic Review*, vol. 49, May 1959, pp. 65-77, esp. 65.

<sup>452</sup> However, Khrushchev did increase pensions, sickness and maternity benefits, and introduced a minimum wage to collective farm workers. As a result the average income of collective farm workers rose by 311% in real terms between 1953 and 1967. See Gertrude E. Schroeder, 'Rural Living Standards in the Soviet Union' in Robert C. Stuart (ed.), *The Soviet Rural Economy*, Totowa, and T.J.: Rowman and Allanheld, 1983, pp. 241-57, esp. 243-47.

<sup>453</sup> Richard Grabowski (et al.), *Economic Development: A Regional, Institutional, and Historical Approach*. New York: M.E. Sharpe, Inc., 2007, pp. 251-56; Mau and Drobyshevskaya (2013), p. 31. From 1953 to 1972 the Soviet Union experienced a period of stable economic growth, and a number of economies in the developing world sought to imitate this success by introducing economic planning and nationalisation.

<sup>454</sup> Natalya Chernyshova, *Soviet Consumer Culture in the Brezhnev Era*, London and New York: Routledge, 2013, pp. 6-7. The inherent defects of the 'command economy' had become more apparent after World War II, as the global technological revolution exposed the system's inefficiency and lack of creativity. Economic reform was attempted in the mid-1960s, but failed due to inconsistency amongst the reformers. Thus, the system remained essentially the same until the early 1980s. See Andrei Vernikov, *Reforming Process and Consolidation in the Soviet Economy* (Working Papers vol. 53), UNU-WIDER (World Institute for Development Economics Research of the United Nations University), 1989, p. 3.

<sup>455</sup> From 1965 to 1976 wages in the Soviet Union increased more rapidly than from 1956 to 1965. This can probably be attributed to the large increase in living costs under the Brezhnev regime

However, industry failed to meet the demand from consumers for increased quantity and quality of goods. In response to this, the Soviet Union increased imports of consumer goods from abroad. The government was fortunate in being able to pay for these imports through the discovery of new oil wells and vast reserves of natural gas.<sup>456</sup> However, a more efficient system would have involved increasing the quality of Soviet design and production processes. The blame for such a strategy not being implemented lay at the feet of Soviet politicians who were more interested in exploiting natural resources rather than increasing the quality of design in Soviet Union.<sup>457</sup>

During most of the post-war period, the Soviet Union could not afford to export anything except raw materials, principally oil, and this restriction produced further economic instability.<sup>458</sup> Produce such as grain was imported, and investment in consumer goods was low. The financial health of USSR citizens was below that of their US and British counterparts. These factors had a significant impact on the country's design practice, which was as I have explained, heavily controlled by the state. I shall explore the implications of this in Chapters 3 and 4.

### 2.2.3 Art and Design Movements

Following the emancipation of the serfs in 1861 the arts in Russia, after an initial period of critical realism, began to show the influence of a growing Russian nationalism.<sup>459</sup> This created a new 'Russian' architectural style which borrowed themes from Russian heritage, combining them with new aspects of national

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when compared to the Khrushchev era. See Alastair McAuley, *Wage Differentials in the USSR: Policy and Performance*, University of Essex Department of Economics Discussion Paper no. 158, 1980, pp. 15-6.

<sup>456</sup> Chernyshova (2013), p. 31. Between 1970 and 1980, Soviet imports of consumer goods doubled. For example the amount spent on the import of clothing and footwear increased by USD 65 million between 1968 and 1973 and continued to increase until in 1981 and 1982 spending on these items was more than USD 1 billion a year.

<sup>457</sup> H. Boronov, 'Do we have design?' ('A bul li dizayn?'), *Ruskaya Kolekchiya, Gazieta Moscbki Hudoznik*, Russian no. 19-20, December, 1996, p. 8.

<sup>458</sup> From 1960 to 1983, the Soviet economy actually declined, with growth rate and productivity falling dramatically. By the late 1980s economic failure was a major fact of life throughout the socialist world and paved the way for the political transitions that followed. See Grabowski, et al. (2007), pp. 257-59.

<sup>459</sup> Russian artists first began exhibiting their work regularly in European and North American expositions at the 1851 Great Exhibition. See Karen Kettering, 'Decoration and Disconnection: The Russkii stil' and Russian Decorative Arts at Nineteenth-Century American World's Fairs' in Blakesley and Reid, eds. (2007), pp. 61-85, esp. 61.

culture. The result of this approach to innovation was eclecticism.<sup>460</sup> The last 25 years of imperial Tsarist rule were a golden age of artistic *fin-de-siècle* experimentation, characterised by individualism, aestheticism and mystical imagination.<sup>461</sup> Nevertheless, it could be argued that in artistic fields, Russian sources and influences remained almost medieval until the 20th century.<sup>462</sup> Knowing this, avant-garde artists tried desperately to break free from institutionalised 'old Russian' ways. European modernism entered the Russian artistic milieu (due largely to the Revolution and its effects of 'opening' Russia to outside influence) where it developed its own distinct flavour, thriving from 1910 until the early 1930s.<sup>463</sup> Classed under the umbrella term 'avant-garde', Russian movements of neo-primitivism, suprematism, constructivism<sup>464</sup> and futurism flourished.

The early communist state created the foundation from which Russian modernism sprang.<sup>465</sup> Certain progressive artists answered Vladimir Lenin's call for a collective and classless society, but their visions of a utopia were different from those envisioned by the future political leadership of the Soviet Union. This difference would lead to severe tension between the free-thinking art world and the official leadership of the country.

In terms of design, the first real movements displaying a new Russian character grew out of the 'Higher State Technical Artistic Studio' (VKhUTEMAS) which was founded in 1919 and formalised in November 1920.<sup>466</sup> The Vkhutemas was Lenin's idea. He wanted art and industry to work together to bring about

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<sup>460</sup> Mikhail Anikst and Elena Chervnevich, *Russian Graphic Design: 1880-1917*, New York: Abbeville Press, 1990, pp. 17-8.

<sup>461</sup> Bartlett (2005), pp. 180-81.

<sup>462</sup> Robert C. Williams, *Russia Art and American Money, 1900-1940*, Harvard University Press, 1980, pp. 42-3.

<sup>463</sup> Szymon Bojko, *New Graphic Design in Revolutionary Russia* (Translated from the Polish by Robert Strybel and Lech Zembrzuski), London: Lund Humphries, 1972, pp. 16-38. Modernist avant-garde artists sought to conjoin a political, anti-capitalist drive with art in a process that was quite removed from the modernist experiments of Europe which were still funded largely by the bourgeoisie.

<sup>464</sup> Helen Armstrong (ed.), *Graphic Design Theory: Readings from the Field*, New York: Princeton Architectural Press, 2009, p. 22 and 145. In 1921 a group of twenty-one Russian artists founded the Constructivist group. They declared that the artist should produce only utilitarian art: The artist therefore became the worker and the constructor. The movement's popularity faded in the USSR in the early 1930s after spreading across much of Europe.

<sup>465</sup> Christine Lodder, 'Searching For Utopia' in Christopher Wilk (ed.), *Modernism 1914-1939: Designing a New World*, Christopher Wilk (ed.), London: V&A Publications, 2006, pp. 23-69, esp. 34.

<sup>466</sup> Shvidkovsky (2007), p. 367; Victor Margolin, *The Struggle for Utopia: Rodchenko, Lissitzky, Moholy-Nagy, 1917-1946*, Chicago; London: University of Chicago Press, 1997, pp. 42-3.

change in society, and further the aims of the revolution.<sup>467</sup> The curriculum consisted of: architecture, painting, sculpture, graphics, fabrics, chinaware, woodprint and metal craft, and it operated in multiple venues under an integrated system in which there was no distinction between fine and applied arts.<sup>468</sup> There are several points of resemblance between Vkhutemas and the Bauhaus.<sup>469</sup> They were founded at roughly the same time, and both attempted to combine traditional craft with modern technology based on aesthetic principles. In addition both movements focused on social improvement and collectivity. Furthermore both were also opposed to their respective prevailing national ideologies, and were closed down because of pressure from the increasingly totalitarian Stalinist and Nazi regimes respectively.<sup>470</sup>

The Vkhutemas became the stronghold of avant-garde art throughout the 1920s.<sup>471</sup> Wassily Kandinsky began operating workshops in painting and sculpture, and constructivists such as Nadezhda Udaltsova and Alexander Rodchenko, created a new formal analytical course.<sup>472</sup> The constructivist painter and architect Vladimir Yevgrafovich Tatlin (1885-1953), whose best known work was the design for the Third International, was an important directorial influence at Vkhutemas.<sup>473</sup> Tatlin, shared William Morris' dream of uniting art and craft with everyday life for the betterment of society, but unlike Morris, he had the opportunity to put the

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<sup>467</sup> Margolin (1997), p. 48.

<sup>468</sup> A. Abramova, 'The heritage of The Higher Art and Technical Studios' ('Nas Nasladnie Vkhutemasa'), *Decorative Art of the USSR (Dekorativnoe Iskusstvo SSSR)*, vol. 77, no. 4, Moscow: Soviet Artist (Sovetskii Khudozhnik), 1964, pp. 8-12.

After the Revolution the art schools organised by Narkompros were the most powerful artistic centres, and in 1918 the Moscow Institute of Painting, Sculpture and Architecture and the Straganov Art School were integrated to form Svomas, which later became Vkhutemas. See Auty and Obolensky, eds. (1980), p. 146.

<sup>469</sup> There were, however, some important differences between the socialist oriented Vkhutemas and capitalist influenced Bauhaus. See Victor Margolin, 'Lessons Learned? (A Look Back) (Bauhaus and Vkhutemas Schools of Design and Art),' *Redefining Design Magazine Print*, vol. 65, no. 2, 2011, pp. 46-8.

<sup>470</sup> Hutchings (1976), p. 142; Shvidkovsky (2007), pp. 368-69; Margolin (1997), pp. 215-19.

<sup>471</sup> Selim O. Khan-Mahomedov, 'The Project-graphic Archive of The Higher Art and Technical Studios' ('Proektno-graficheskiy Arkhiv Vhutemasa'), *Decorative Art of the USSR*, vol. 297, no. 8, Moscow: Soviet Artist, 1982, pp. 36-40. In 1927, the school's name was modified to Vkhutein, meaning 'institute'. However Stalin's 1932 'Proclamation of Arts Amalgamation', rapidly incorporated Soviet artistic institutions into a single association.

<sup>472</sup> Around the same time the design group 'Mir Iskusstva' was also demonstrating a style of design that refused to distinguish between fine art and applied art. See Anna Winestein, 'Quiet Revolutionaries: The "Mir Iskusstva" Movement and Russian Design,' *Journal of Design History*, vol. 21, no. 4, 2008, pp. 315-27; Hutchings (1976), p. 142.

<sup>473</sup> Jonathan M. Woodham, *A Dictionary of Modern Design*, Oxford University Press, 2004, p. 446.

dream into practice following the 1917 Revolution.<sup>474</sup> Tatlin argued that, prior to the Revolution, artists primarily designed for self-gain rather than the public good. For example, he alluded to artists who decorated private dwellings for profit while public spaces were neglected, a phenomenon he attributed to individualism, and he condemned objects which represented markers of social class.<sup>475</sup> With regard to the creation of everyday objects, Tatlin advocated a 'different point of departure' from the west, and argued that the creative process should begin with the organic form. In creating everyday objects, he urged artists to consider the properties of the materials and their relation to the human being, for whom the object is created.<sup>476</sup> For example, in 1923 Tatlin came up with the slogans 'Not the old, not the new, but the necessary.' 'Not to the left, not to the right, but to the necessary.' He acted on the ethos of these slogans in his designs for everyday objects, designing stoves and heating equipment, constructing new types of beds and models of clothes and dishes.<sup>477</sup>

The Russian Constructivist movement was formed as a means of bridging the gap between object, building and culture, defining the artist in terms of their relationship with the industrialised world.<sup>478</sup> The Constructivist group, formed in 1921, held their first exhibition under the auspices of the Society of Young Artists (of which Rodchenko was a member). They displayed a number of abstract glasses, metal and wood structures that involved contemporary engineering methods and forms. The designs were less art and more experiments in practical design solutions – an emphasis on technology that demonstrated the official ethos

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<sup>474</sup> Tatlin taught art programmes at Vkhutemas (SVOMAS) between 1918 and 1924, and then taught at various institutions until 1930, including Vkhutein (the new name given to Vkhutemas in 1927). See Larissa A. Zhadova (ed.), *Tatlin*, London: Thames and Hudson, 1988, pp. 338-40.

<sup>475</sup> Vladimir Tatlin, "Slogans", "The Work Ahead of Us" and "The Problem of the Relationship between Man and Object" in Glenn Adamson (ed.), *The Craft Reader*, Oxford; New York: BERG, 2010, pp. 164-66. In 1917, Tatlin stated. 'To accept or not accept the October Revolution, that wasn't a question for me. In an organic fashion I joined active, creative, social and pedagogical life.' See 'Curriculum Vitae of Honoured Art Worker Tatlin' (fragmentary handwritten autobiography of the artist from 1953), quoted in Zhadova, ed. (1988), p. 320.

<sup>476</sup> Vladimir Tatlin (2010), pp. 164-66.

To that end he suggested that the 'art industry worker' must be a part of the production process as a precondition to the production of high quality objects.

<sup>477</sup> Larissa A. Zhadova, 'Tatlin, The Organiser of Material Into Objects' in Zhadova, ed. (1988), pp. 134-54, esp. 139. Tatlin's definitive principles for the development of material culture were laid out in his two later articles: 'The Artist as an Organiser of Everyday Life' which appeared in 1929, and 'The Problem of the Relationship between Man and the Object' in 1930. The latter was subtitled 'Let Us Declare War on Chests of Drawers and Sideboards'.

<sup>478</sup> Penny Sparke, *Design in Context: History, Application and Development of Design*, London: Bloomsbury Publishing, 1987a, p. 95.



of the era: machinery was associated with the working class, and valued for its potential to consolidate the revolution.<sup>479</sup> The Constructivists developed a design methodology at Vkhutemas, producing posters, book layouts, and designing and constructing prototypes for everyday objects, furniture and workwear.<sup>480</sup> Tatlin saw the opportunity to unite artistic forms with the aims of the revolution, and was not alone in his ideas.<sup>481</sup> Several Russian designers of the time, Rodchenko included, found their work particularly suitable for supporting the revolution. Agitation posters, boiler suits for workers, factories for them to work in and communal housing complexes for them to live in were all drawn up by designers in the Constructivist movement.<sup>482</sup>

Having outlawed independent artistic associations in 1932, Stalin commissioned a number of projects by inviting state-approved architects to enter design competitions.<sup>483</sup> In that year, several international architects, including Walter Gropius, Erich Mendelsohn and Le Corbusier, entered a competition to design the Palace of the Soviets, a project rivaling the grandeur of the Empire State Building. The winning entry by Boris Iofan (1891-1976), a Russian architect, heralded the start of the eclectic historicism of Stalinist Architecture, a style which bears similarities to Post-Modernism in that it constituted a reaction against modernist architecture's cosmopolitanism and perceived inhumanity.<sup>484</sup> The Palace

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<sup>479</sup> In literature also, the stress on iron as an appropriate communist materials was endorsed as early as 1863 by utopian novels such as Nikolai Chernyshevsky's *What Is to Be Done?* Chernyshevsky has based his vision of an enormous protecting dome over Moscow on London's Crystal Palace, built for the Great Exhibition of 1851.

<sup>480</sup> Margolin (1997), pp. 94-6; John Milner, *Alexander Rodchenko: Design*, Woodbridge: Antique Collectors' Club, 2009, pp. 33 and 76. Rodchenko's Workers Club, built for the Paris Exhibition of 1925 was one such complete environment, in which each item was rethought in terms of constructivist principles of production and tectonics. Made from the economical material wood, the furniture was composed of geometric shapes and painted grey, red or black.

<sup>481</sup> Propaganda art work had close associations with architecture. Perhaps the most famous piece of propaganda art was the prototype of the Memorial to the Third International, designed by Tatlin in 1919. Its spiralling form symbolised social progress, whilst its open steelwork had clear links to proletariat constructions. See Selim O. Khan-Mahomedov, 'Soviet Architecture and Town Planning of the Twenties' in Arts Council of Great Britain, *Art in Revolution: Soviet Art and Design since 1917* (Hayward Gallery London 26 February to 18 April 1971), London: Arts Council, 1971, pp. 30-46, esp. 33-6.

<sup>482</sup> C.O. Xan-Tagotedov, 'A. Rodchenko: Production of the artist in the art' ('A. Rodchenko: Put khudozhnika v proizvodstvennoye iskusstvo'), *Technical Aesthetics (Tekhnicheskaya Estetika)*, vol. 174, no. 6, Moscow: VNIITE, 1978, pp. 13-9.

<sup>483</sup> The Mokhovaya Street Building by Zholtovsky, for example, was an Italian Renaissance fantasy. Its size, however, was in line with nearby 19th-century buildings. See Alexei Tarkhanov (et al.), *Architecture of the Stalin Era*, New York: Rizzoli, 1992, pp. 13-8.

<sup>484</sup> Eclectic Historicism is a style of architecture that employs elements from various historical eras, combining them to create a new, totally different design. Iofan's entry employed a mixture of historical styles, partially achieved with new technology. See *Ibid*, pp. 19-33.

of the Soviets was meant to have a statue of Lenin on top which would have made it taller than the Empire state building, but this never materialised due to the scale of the project. Still, it was a prime example of Stalinist insistence on socialist realism providing the basis for all art and design.<sup>485</sup> In July, 1935 the State initiated the Moscow Master Plan<sup>486</sup> which projected a clear message of Stalin's urban development ideas. Among them were the concepts of ensemble architecture, and grand projects such as the Moscow Canal, avenues, and underground.<sup>487</sup>

During the 1940s, a new architecture, the *vysotnyezdaniia* (tall building) emerged in the Soviet Union. The scale of the buildings was intended to represent the triumphal attitude of the late Stalinist period. In 1947, a set of eight buildings, intended to form a crown for Moscow, were commissioned by the Council of Ministers. Seven were built, and erected in the city centre.<sup>488</sup> As scholar David Crowley notes, the situation of the buildings formed a type of grid that would 'distribute ideological "electricity;"<sup>489</sup> this was seen as representing the modernisation and development of the Soviet Union.<sup>490</sup> The monumentality and position of these buildings helped to glorify Moscow but, more importantly, Stalin.

Socialist Realism in the Soviet Union reached its most influential point during the 1930s and 40s.<sup>491</sup> Socialist Realism is a doctrine of Soviet origin that prescribes and describes the artistic form of Communist ideology and politics in the arts. On 19<sup>th</sup> October 1932, Stalin met with Soviet writers and defined this doctrine. He stated that artists should depict life truthfully, and if they did so, they must

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<sup>485</sup> Jonathan M. Woodham, *Twentieth-Century Ornament*, London: Studio Vista, 1990, p. 171.

<sup>486</sup> In 1923 a master plan was also initiated for Moscow development due to the city becoming the new capital of Russia in 1918. See Yuri Gnedovsky, 'Introductory essay' in Frampton and Gnedovsky, eds. (1999-2000), p. xx.

<sup>487</sup> The latter project was developed primarily during the post-war period, in which Stalinist architecture was fragmented into at least four vectors of development: Major infrastructure projects (e.g. the Metro in Leningrad and Moscow); luxury residential and office construction of complete regions such as the Moskovsky Prospekt in Leningrad and the Leninsky Prospekt in Moscow; rebuilding war damage; and building new cities, especially in Siberia. See Alexandra Staub, 'St. Petersburg's Double Life: The Planners' versus the People's City', *Journal of Urban History*, March 2005, vol. 31, no. 3, pp. 334-54, esp. 338.

<sup>488</sup> David Crowley, 'Europe Reconstructed, Europe Divided' in David Crowley and Jane Pavitt (eds.), *Cold War Modern: Design 1945-1970*, London: V&A Publishing (2008a), pp. 43-65, esp. 48-9. The 'Palace of Science' was built in the south-west of the city, highly visible on the so-called Lenin Hills. Moscow University was connected to the centre-point of these buildings by a line of sight that connected it to the Kremlin towers, the Soviet Union's seat of power.

<sup>489</sup> Ibid.

<sup>490</sup> Hutchings (1976), p. 194.

<sup>491</sup> Elena Duzs, 'Russian Art in Search of Identity' in Russell Bova, ed., 2003, pp. 177-209, esp. 200-01. Russian artist Pavel Filonov (1883-1941) created well known masterpiece of socialist realist art when he painted Stalin in 1936. The portrait was painted from a photograph of Stalin and was intended to create an intense and hypnotic atmosphere.

necessarily reveal the facts that lead the people to socialism.<sup>492</sup> Social Realism has remained an influence on much of Soviet art until the late 1980s, although its actual form changed according to the party direction of the time; for example, its emphasis shifted at one point from 'proletarian internationalism' to 'Soviet patriotism'.<sup>493</sup>

## 2.2.4 Social Reform and Its Influence

In the Khrushchev era (1953-64), a stripped-down modernist aesthetic opposed Stalinist ideals which were seen as tasteless and a return to bourgeois values.<sup>494</sup>

Under Khrushchev, there was a 'Thaw' (1953-1964) in the Cold War relations between the Soviet Union and the West which allowed for greater contact with Western countries. The arts became more high profile and began to influence every aspect of life. Decorative and applied art became more important, along with architecture and city planning, as it was deemed necessary to organise daily life in new ways that corresponded to contemporary taste. The mission of the arts became to enhance the life of all citizens; a mission against 'philistinism' or 'petit-bourgeois' ideology.<sup>495</sup>

Furniture design during this period emphasised lightness in contrast to the heavy solid forms of the previous era, a lightness highlighted by the use of pale rather than dark veneers. New design trends were also found in textile design, where colour was used more freely and designs became lighter and more open in

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<sup>492</sup> Tatiana Gabroussenko, *Soldiers on the Cultural Front: Developments in the Early History of North Korean Literature and Literary Policy*, Honolulu: University of Hawai'i Press, 2010, pp. 5-6; Woodham (1990), pp. 169-71. In August 1934, the First All-Union Congress of Soviet Writers decided on Socialist realism (formulated by Andrei Zhdanov and Maxim Gorky) as the main method of Soviet literature and criticism. This demanded a truthful, historically concrete depiction of reality, and would be achieved through ideological reformation of working people.

<sup>493</sup> Auty and Obolensky, eds. (1980), pp. 158-59.

Modern Soviet patriotism often draws on nostalgia (such as Yuri Gagarine, the Moscow Olympics and 1930s architecture), futurism and fashion. See Maria Engström, 'Forbidden Dandyism: Imperial Aesthetics in Contemporary Russia' in Peter McNeil and Louise Wallenberg (eds.), *Nordic Fashion Studies*, Stockholm: Axl Books, 2012, pp. 179-99, esp. 180-81.

<sup>494</sup> The Thaw period saw superfluous ornamentation that was not part of structure rejected in favour of modern functional forms. See Reid and Crowley eds. (2000), p. 12.

<sup>495</sup> Gerchuk (2000), pp. 89-90. Petit-bourgeois taste was seen as an enemy of new contemporary style and became the target of a campaign against tastelessness in the media. In the 1940s and 50s the word Philistinism (*meschanstvo*) was commonly described what was seen as tasteless. However, the term 'Philistine' sometimes also referred to the ideologically acceptable. See Julia Gradszkova, 'Femininity and Beauty Practices in Soviet Russia in the 1950-1960s' in Peter McNeil and Louise Wallenberg, eds. (2012), pp. 3-16, esp. 5.

accordance with the spirit of the time. In ceramics, the new stylistic tendencies found expression in the fashion for expressive studio ceramics. These were based on folk traditions and emphasised naturalness and the genuine qualities of the materials.<sup>496</sup> In fact, it could be argued that the most significant technology to affect the Cold War was the telecommunications satellite, because it allowed many countries to join into a process of globalisation that undermined isolated communist regimes, leading to the eventual demise of the Soviet Union and the end of the cold war. The communist bloc was isolated from the West up until the 1980s, but due to the growth of satellite telecommunication technology, their populations began to see that they were losing economically and culturally to the West.<sup>497</sup> They could see the apparent luxury of American culture in particular and were attracted to it, despite or perhaps because of, its emphasis on consumerism.<sup>498</sup> And indeed throughout the 1970s and 80s, there was an increasing demand for consumer products which were based on Western lifestyles. One example is the popular Lada car, modelled on the Italian Fiat, which became a middle-class status symbol.<sup>499</sup> Soviet consumers began to be aware of Western trends and influences through the medium of foreign radio broadcasts although these were officially banned.<sup>500</sup>

When Mikhail Gorbachev came to power in March 1985, relations between the US and the Soviet Union began to improve, and both countries adopted an increasingly cooperative stance towards each other which included the de-escalation of military tensions.<sup>501</sup> Between 1985 and 1991, Soviet foreign policy

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<sup>496</sup> Auty and Obolensky, eds. (1980), pp. 171-72; Gerchuk (2000), pp. 93-7.

<sup>497</sup> Waqar Zaidi, 'An historian's perspective on technology and the Cold War' in Michael R. Fitzgerald with Allen Packwood (eds.), *Out of the Cold: The Cold War and Its Legacy*, London: Bloomsbury Academic, 2013, pp. 78-80, esp. 79-80.

By the mid-1980s the USSR had fallen behind the US due to its focus on improving military technology and, unlike the West, refusing to share technological progress with consumer goods producers. See Michael Ellman, *The USSR in the 1990s: Struggling Out of Stagnation*, Special Report no.1152, London: The Economist Intelligence Unit, 1989, p. 31.

<sup>498</sup> This shows the importance of advances in computer technology and electronics, as such development greatly advantaged the West, leaving the Soviet Union struggling to catch up. See Ibid.

<sup>499</sup> Jukka Gronov and Sergei Zhuravlev, 'Soviet Luxuries from Champagne to Private Cars' in David Crowley and Susan Reid (eds.), *Pleasures in Socialism: Leisure and Luxury in the Eastern Bloc*, Northwestern University Press, 2010a, pp. 121-46, esp. 137.

<sup>500</sup> Vladimir Shlapentokh and Dmitry Shlapentokh, *Soviet Ideologies in the Period of Glasnost: Responses to Brezhnev's Stagnation*, New York: Praeger, 1988, p. 29. Certain elite sections of society, for example powerful people in the government, had access to both Western consumer goods and Western culture.

<sup>501</sup> Especially in the period between 1987 and 1988. See Akan Malici, *When Leaders Learn and When They Don't: Mikhail Gorbachev and Kim Il Sung at the End of the Cold War*, New York: State University of New York Press, 2008, pp. 47-50.

changed from conflict between capitalism and socialism to one of cooperation between countries to solve global problems. He was thus able to rationalize and convince the people to adopt policies which were in fact necessary due to a declining economy and failing political system.<sup>502</sup> Following the collapse of communism, Stalinist Socialist Realism continued to exercise a unifying ideal on the Russian imagination.<sup>503</sup> During the 1990s, Russian artists and designers attempted to define post-Soviet culture, although some would claim that this attempt was merely the result of efforts to sell projects to the West, and that contemporary Russian identity remains very much as it was in the Soviet era.

### **Economic Growth and Design**

During the Putin years (2000-2008), Russia's GDP rose from 22<sup>nd</sup> to 11<sup>th</sup> in the world, and industry and agricultural production grew dramatically. After the 2008-9 economic crises, the Russian economy began to grow, especially in the area of exports. In 2010, growth continued and the government used this to help the image of Russian companies internationally.<sup>504</sup> In addition the Russian Design Union has taken this economic growth as a signal to establish 'modernisation of production and introduction of advanced technologies.' Publishing a list of objectives for the beginning of the 21<sup>st</sup> century, the Union listed among its aims the desire to develop and improve professional design training in all areas of design in the Russian Federation.<sup>505</sup>

Russia, however, still faces challenges in raising the profile of design, as demonstrated by the fact that only 1,000 visitors attended the 2005 'St. Petersburg - Capital of Russian Design' event. One of the reasons for the lack of priority given to design can be traced back to 1996 when Boronov's request for more funding at VNIITE was rebuffed.<sup>506</sup> In addition a further blow to Russian design occurred in

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<sup>502</sup> Deborah W. Larson and Alexei Shevchenko, 'Redrawing the Soviet power line: Gorbachev and the end of the Cold War' in Ernest R. May, et al. (eds.), *History and Neorealism*, Cambridge: Cambridge University Press, 2010, pp. 267-306, esp. 267-68.

<sup>503</sup> Russian design forms often reflect various aspects of Soviet ideology, for example Secularism, Orthodoxy, Doctrinal Propaganda, Institutionalism, and Grandeur.

<sup>504</sup> However the 2008-2009 economic crises led to a reduction in this investment, as well as problems with economic growth and competitiveness. See Panibratov (2012), pp. 12-3 and 18-9; Margaret Coker, 'Russia: Clawing Its Way Back to Life (int'l edition)'. See *Business Week*, [http://www.businessweek.com/1999/99\\_48/b3657252.htm](http://www.businessweek.com/1999/99_48/b3657252.htm). (last accessed 07.11.2014).

<sup>505</sup> <http://www.sdrussia.ru/site/> (last accessed 20.02.2013).

<sup>506</sup> H. Boronov (1996), p. 8.

2013 when VNIITE was closed down. It seems to me therefore that Russian design today requires a new body that will engage in promotional campaigns and strengthen its links with the Russian media in order to raise awareness of the importance of design to Russia's economy.

## 2.3 Korea

### 2.3.1 Socio-Cultural Values and Identity

The Korean language, called Hangeul, which was officially designated in 1443 during the Joseon Dynasty, helped Koreans form a collective identity.<sup>507</sup> Korean identity has also developed out of the strength of blood ties and a shared culture throughout the nation's history.<sup>508</sup> Korean religions became the basis of Korean morality, emphasising spiritual values and 'Jeong', a type of love or affection that links people together in wider society beyond simple family relationships. The Korean spirit developed the characteristics of 'Jeong' and 'Haan' in part to overcome any sadness linked with Korea's history (i.e. wars and occupation). Indeed critics maintain that the people have 'not lingered in sadness,' and the overcoming of sadness is a major characteristic of their art.<sup>509</sup> 'Haan' has a

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When I was in Russia in the mid-1990s, I attended the '1996 Russian Design Exhibition' where I came across an article in the newspaper *Ruskaya Kolekchiya, Gazieta Moscbki Hudoznik*, in which Boronov requested that VNIITE receive more funding in order to develop design in Russia, but this money was not forthcoming. Although Russia was still emerging from the collapse of the USSR there is precedent for increasing funding for design during fiscal or national difficulties. For example, The UK government, for example even made a commitment to invest in the design industry during World War II.

<sup>507</sup> Hangeul was created by King Sejong. He worked with scholars to develop a simple system of verbal and written language that could be learned by anyone. The Hangeul system is a phonemic alphabet. It has 10 vowels and 14 consonants that are organised into syllabic blocks. See Editorial Board of Diamond Sutra Recitation Group, *King Sejong the Great: The Everlasting Light of Korea* (Korean Spirit and Culture Series II), Pohang: Diamond Sutra Recitation Group, 2007, pp. 98-9.

<sup>508</sup> Lee Cheong-soo, 'Legitimacy in the History of the Korean People' in Kim Young-soo (et al.), *The Identity of the Korean People: A History of Legitimacy on the Korean Peninsula* (trans. Chung Chung), Seoul: Research Centre for Peace and Unification, 1983, pp. 11-52, esp. 12.

<sup>509</sup> Jang Deok-soon, *Koreans and Humor* (Hangukin-gwa Haehak), Seoul: Siinsa, 1986; MinsokhakHoe, *Emotion and aesthetics of folk art* (Minsok yesul-eui jeongseo-wa mihak), Seoul: Wolln, 2000; p. 437; Cho Geung-ho, *Cultural Variations in Emotions* (Moonhwa Yuhyeong-gwa Jeongseo-eui chal), Seoul National University Department of Psychology, *Psychological Science* vol. 6, no. 2, 1997, pp. 1-43; Yun Yeol-su, *Folk painting story* (Minhwa lyagi), Seoul: Designhouse, 2003.

meaning similar to Freud's grief (trauma, mourning), but for Koreans Haan can be understood as expressing grief in order to overcome adversity. The overcoming of sadness and adversity also led to the Korean spirit developing the characteristics of 'Hung' and 'Haehak'. 'Hung' is an expression of inner metaphysical joy; a joy that comes from contemplating nature, for example by looking at a flower. 'Haehak' can be described as wit.<sup>510</sup> The ideals of Jeong', 'Haan' 'Haehak' and 'Hung' are distinctive cultural features that can be found in many Korean religions, customs, arts, songs, dances, poems, novels and paintings.<sup>511</sup>

One of the Korean religions 'Hanism', or 'Korean Daoism', predated the introduction of Daoism in China.<sup>512</sup> Chinese Daoism is primarily concerned with appreciating and being in harmony with nature, dismissing earthly life as unimportant whereas Hanism is concerned with social relations and sees no boundaries between the spiritual and everyday life. Hanism embraces both naturalism and secularism, whereas Chinese Daoism is only concerned with naturalism.<sup>513</sup> Korean indigenous culture is rooted in Hanism,<sup>514</sup> which is also concerned with political and economic, emphasising public welfare over individual benefit.<sup>515</sup> Throughout its history Korean society has been built on groupism. Elements of Buddhism, Confucianism, Daoism and the indigenous religion of Hanism all emphasise groupism, and have influenced each other, thus helping to create the unique and formative characteristics of Korean culture.<sup>516</sup>

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<sup>510</sup> Perhaps due to centuries of overcoming adversity, Korean people are sometimes described as being imbued with a ready wit, humour and spontaneity. See Chung Yang-mo, *Inclusivity and Wit* (Noguroum kwa Haehak), Seoul: Hakkojae, 1998, pp. 274-84.

<sup>511</sup> Indeed, according to the Kim Won-yong, a scholar on Korean art aesthetics, the naturalism within Korean art came directly from the joy, contentedness and friendliness of the Korean people. See Kim Won-yong, *The Beauty of Korean Aesthetics (Hangukmi-ui tamgu)*, 2<sup>nd</sup> ed. (first published 1978), Seoul: Youl hwa dang, 1996, pp. 32-3.

<sup>512</sup> Buddhism and Confucianism were introduced to Korea in the 4<sup>th</sup> century, but Chinese Daoism did not arrive until the 6<sup>th</sup> century.

<sup>513</sup> Yu Chai-shin and Yu Sa-ra, *Korean Thought and Culture: A New Introduction*, Bloomington, Ind: Trafford Publishing, 2010, p. 25.

<sup>514</sup> Hanism conveys the idea that the worlds of heaven, earth and humanity are harmonious. It binds this ideology of harmony among Chun (Heaven), Ji (Earth), and In (Humans) with 'Hongikingan', the encouragement to live a life that broadly benefits other humans and the world. Hanism sees no boundaries between individuals, and does not distinguish between my and our, singular and plural. Work, play and life are inseparable, with enlightenment achieved through spiritual integration. See Son Chang-hee, *Haan (恨, 恨) of Minjung Theology and Han (恨, 韓) of Han Philosophy: In the Paradigm of Process Philosophy and Metaphysics of Relatedness*, Lanham, MD: University Press of America, 2000, pp. 77-8.

<sup>515</sup> Yu Chai-shin and Yu Sa-ra (2010), pp. 25-7.

<sup>516</sup> Choi Joon-sik, *The Development of 'Three-Religions-Are-One' Principle from China to Korea: With an Emphasis on Gang Jeungsan's Teachings*, Seoul: Jimoon-dang, 2009, pp. 83-91; Korean

From the end of the 19<sup>th</sup> century Christian missionaries started to arrive in Korea.<sup>517</sup> Despite this, in the years leading up to WWII imperial Japan ensured that Korean Buddhism became the state religion of Korea. In doing so Japan exerted a large degree of control over traditional Korean Buddhism. However, the influence of the American occupation of South Korea at the end of WWII, coupled with the work of South Korea's first president (Rhee Syng-man [1948-1960]) led to Christianity becoming increasingly popular in Korea. The Rhee Syng-man regime implemented policies encouraging conversions to Christianity, while at the same time carrying out a concerted Buddhism purification campaign which resulted in Buddhism being viewed as synonymous with Japanese imperialism. These allowed Christianity to take root and today more than 50 percent of Korea's religious population is now Christian.<sup>518</sup> Nevertheless Buddhist, Confucian and Daoist values and attitudes are still prevalent in Korean society and culture.

Although democracy eventually replaced a Confucian authoritarian regime in Korea, Confucianism continued to influence the government in that the structure of the ruling party was authoritarian and elitist, a state of affairs that is underpinned by the prevalent Neo-Confucian culture.<sup>519</sup> However, Korean culture has also been

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Ministry of Education (ed.), 'Transfiguration of Importation Western Educational Ideology Korean Education' in *Extensive Social Field Research Report*, Seoul: Korean Ministry of Education Press, 1996, p. 6; Yoon Hong-Key, 'Confucianism and the Practice of Geomancy' in Robert E. Buswell Jr. (ed.), *Religions of Korea in Practice*, Princeton and Oxford: Princeton University Press, 2007, pp. 205-22, esp. pp. 205-07.

In the 20<sup>th</sup> century the principle of 'Three-Religions-Are-One' emerged. This principle claims that Confucianism, Buddhism, and Daoism have blended together in Korea to create a common philosophy and ethical point of view. However a version of this thesis existed much earlier when Later Silla (668–935) scholar Choi Chi-won (858-951) maintained that the ideals and practices of Buddhism, Confucianism, Daoism and indigenous religions all fused together in some way to produce the specific Korean character. See Yao (2000), p. 116; Bae (1982), p. 37.

Later Silla or Unified Silla emerged when the Silla kingdom conquered Baekje and Goguryeo in 660 and 668 respectively, thereby bringing an end to the Three Kingdoms period (57 BC–668 AD).

<sup>517</sup> Christianity and Catholicism were introduced to Korea through Jesuit missionaries and Catholic missionaries in China. In 1784, Seung-hoon Lee was baptised in Beijing and came back to establish Roman Catholic church, Sorae church, first Christian church was established in 1884. In the late 19th century, Protestant missionaries arrived and established many hospitals and schools. Koreans have embraced Christianity. See You Dong-sik, *The Origins of Korean Christian Theology (Hanguk Shinhak-eui Gwangmaek)*, Seoul: Dasan Gulbang, 2003, pp. 39-42; Donald Baker, 'Tradition Modernised: Globalisation and Korea's New Religions,' in Chang Yun-shik, et al. (eds.), *Korea Confronts Globalisation*, London and New York: Routledge, 2009, pp. 206-24, esp. 207-09.

<sup>518</sup> Kim Young-tae (2014), pp. 219-21.

According to a 2005 census, 53.1% of the Korean population claim to follow a religion, with 55.1% of this identifying as Christian (34.5% Protestant, and 20.6% Catholic), closely followed by Buddhists, with 43%. See *2005 South Korea Census religion statistics*; Korean Culture and Information Service, *Religion*, <http://www.korea.net/AboutKorea/Korean-Life/Religion> (last accessed 27.01.2015).

<sup>519</sup> Kim Kyong-ju, *The Development of Modern South Korea: State Formation, Capitalist Development and National Identity*, London and New York: Routledge, 2006, pp. 113-15.



heavily influenced by the ideals of democracy, and values relating to things such as freedom and equality have merged with traditional Confucian values (these values include strong bonds of kinship and hierarchical social relationships). Korea's current national identity has also developed through its struggles against imperialism and communism in the early and mid 20<sup>th</sup> century. Whereas Koreans traditionally based their identity on a shared ethnicity, the younger generation have a more civic sense of national identity. Many young Koreans consider things like language, nationality, shared traditions, and adherence to national laws, as being just as important as ethnicity in determining what it means to be Korean.<sup>520</sup>

### **Characteristics of Design Aesthetics**

Korea has been heavily influenced by Confucianism, Buddhism, Daoism and the native religion 'Hanism', all of which have combined together into a concept of oneness between Heaven, humans and nature. This concept recognises the harmony (Oullim) between these elements, a harmony that is reflected in Korean ethics and aesthetics. For example Korean art often represents ordinary life through its simplicity and unburdened irregularity (both of which are an allusion to harmony). Korean art and artistic design does not traditionally involve a conscious effort to pursue true beauty. Korean craftsmen and artists instead often rely completely on a spontaneous response to nature (this approach is the result of artists and craftsmen holding that there should be complete harmony between humans and everything in the natural world).<sup>521</sup>

Korean traditional arts and crafts are generally seen as refined and simple. There is a tendency to avoid outward decoration in favour of 'inner beauty', an idea

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Confucianism is an ideology which regulates social relations and attempts to encourage what it sees as good behaviour and punish wrongdoing. The Korean form of Christianity has during the 20<sup>th</sup> century considered Confucianism to be just ethical teaching. See Oh Jung-sun, *A Korean Theology of Human Nature: With Special Attention to the Works of Robert Cummings Neville and Tu Weiming*, Lanham; Boulder; New York; Toronto; Oxford: University Press of America, Inc., 2005, pp. 112-13 and 173-76.

<sup>520</sup> Kim Ji-yoon, 'National Identity Under Transformation: New Challenge to South Korea', *The Asian Forum*, Special Forum, January 25<sup>th</sup>, 2014; Brad Glosserman and Scott A. Snyder, *The Japan-South Korea Identity Clash: East Asian Security and the United States*, New York: Columbia University Press, 2015, pp. 62-4.

<sup>521</sup> For example the Korean folk art aesthetic, from its early history in the Three Kingdoms period (57 BC-668 AD) through the Koryo (928-1392) and Joseon dynasty (1392-1897), has been characterised by naturalism, thereby avoiding artificiality, adornment or excessive decoration. The principle of naturalism can also be found in both 7<sup>th</sup> Century Silla pottery and ceramics from the Joseon dynasty. See Kim Won-yong (1996), pp. 16-32; Son Chang-hee (2000), p. 78.

that is characterised by a naturalistic and harmonious style.<sup>522</sup> Inner beauty in this sense originates from Buddhism, Confucianism, Hanism and Daoism.<sup>523</sup> The principles contained within Hanism have also influenced the colour of clothing, with the five colours of blue, red, yellow, white and black (which are associated with the five cardinal elements within Daoism, namely wood, fire, earth, metal and water respectively). These five colours, or 'Ohbangaek', were featured as stripes on the sleeves of royal court dress and wedding garments during the Koryo (918-1392) and Joseon (1392-1897) dynasties. The elements associated with the colours had a powerful influence on the everyday lives of Koreans, particularly in their art and customs.

Koreans art and craft objects have not been merely the subject of artistic appreciation but have frequently included a spiritual dimension, as well as representing aspects of nature. The ideals contained in Korea's religions are intergrated into everyday life, and indeed into arts and crafts.<sup>524</sup> The influence of Buddhism in particular is reflected in the way in which Korean artists and craftsmen go about their work. The spirit of nothingness<sup>525</sup> and emptiness, two notions which are key concepts within Buddhist ideology, have had a powerful effect on the aesthetic of the crafts.<sup>526</sup> These concepts, combined with elements of Daoism and Confucianism, have had a profound effect on the evolution of Korean design and aesthetic innovation. An example of this influence can be found in the development of *Koryo Chungja* (jade-like colour ceramics) and *Joseon Baekja* (white) porcelain.<sup>527</sup> Koryo Chungja ceramics were produced during the Koryo dynasty,

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<sup>522</sup> Lee Jin-kyung, 'Sovereign Aesthetics, Disciplining Emotion, and Radical Rehabilitation in Colonial Korea, 1910-1922', *Acta Koreana*, vol. 8, no. 1, 2005, pp. 77-107, esp. 85-6. This inner beauty is also related to *Jung*, which also involves the harmonious relationship between humans and nature.

<sup>523</sup> Opposites such as truth, falsity, emptiness and fullness are evident in both religion and design, suggesting a fusion of spiritual and philosophical values, derived in part from Confucianism, Buddhism and Daoism, but as well from traditional agricultural society.

<sup>524</sup> Go Yu-seop, *Studies in Korean Art History and Aesthetics (Hanguk Misul sa kup Mihak Nongo)*, Seoul: Tongmun-gwan, 1979, 3<sup>rd</sup> ed. (first published 1963), pp. 6-13.

<sup>525</sup> Nothingness has essentially the same meaning as Emptiness. The two words were initially interchangeable, but emptiness became more widely used due to people confusing the Daoist concept of Nothingness with Western Nihilism.

<sup>526</sup> Kim Halla, 'Nothingness in Korean Buddhism: The struggle against Nihilism' in Liu Jeeloo and Douglas L. Berger, *Nothingness in Asian Philosophy*, New York and London: Routledge, 2014, pp. 230-45, esp. 242; Liu Jeeloo, 'Was There Something in Nothingness? The Debate on the Primordial State between Daoism and Neo-Confucianism' in Liu and Berger (2014), pp. 181-96, esp. 181-2.

<sup>527</sup> James Hoare and Susan Pares, *Korea: An Introduction*, London: Kegan Paul International, 1988, p. 143; Ryu Min, 'Lee Yong-hee: Reviving the Essence of Goryeo Celadon' in *Masters of Traditional Korean Handicrafts*, 2009, Seoul: Korea Foundation, pp. 84-9.

and subsequently became famous throughout the world<sup>528</sup> (they were considered to be a symbol of a luxurious lifestyle). Joseon Baekja was produced during the Joseon dynasty (1392-1897), and was thought to represent more ethical values (i.e. a humble lifestyle that included frugality and pragmatism) than Koryo Chungja. Joseon Baekja porcelain also went on to become extremely popular throughout the world.

### 2.3.2 Transformation into a Modern Society

Western ideas were initially studied in Korean intellectual circles at the beginning of the 17<sup>th</sup> century.<sup>529</sup> However, the West's influences didn't begin to permeate Korea until the mid-nineteenth century. From roughly 1880 onwards 'Dongdo seogi' (Eastern ways, Western technology) ideology became popular.<sup>530</sup> This involved adopting some aspects of Western technology and society while still preserving traditional culture.<sup>531</sup> The first Korean newspaper to be published was 'Han sung soon bo' in 1883 in a government controlled publishing house called Bak mun guk.<sup>532</sup> Newspapers and magazines often carried advertisements with photographs which illustrated the products for sale. According to the art historian Hong Sun-pyo, such images made Korean people aware of modern culture.<sup>533</sup>

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<sup>528</sup> Koryo Chungja ceramics were made with special engraving techniques which utilised a variety of different soils that produced contrasting colours.

<sup>529</sup> Western religion, ethics, geography, astronomy, history and science were all taught by Christian Missionaries. See Ministry of Education. ed. (1996), p. 6.

<sup>530</sup> In the mid-19<sup>th</sup> century a similar ideology to 'Dongdoseogi' was adopted by both Japan ('Wakon-yosai' which roughly translates to 'Japanese spirit, Western technology') and China ('jungcheseoyong' which roughly translates to 'Chinese studies at the base, Western studies for practical use'). See Choi Gwang-man, 'The Historical Context of Modern Korean Education' in Lee Chong-jae, et al. (eds.), *Sixty Years of Korean Education*, Seoul: SNU Press, 2010, pp. 16-52, esp. 21.

<sup>531</sup> Yi Tae-jin (2007), pp. 357-58; National Institute of Korean History (Guksa Pyunchan Wiwonhoe), ed., *Meet Western Culture (Seogu Munhwa-wau Mannam)*, History of Korean Culture (Hanguk munwha-sa) series no. 31, Seoul: Kyungin munwha-sa, 2010, pp. 29-34.

<sup>532</sup> The first privatised publishing company, Gwang-in-sa, was established in 1884, and the newest printing equipment (including a litho printer) was introduced from the West, via Japan, enabling the development of edited publication designs. Korean newspapers contained no advertisements until 1886. See Newspaper *Hansung Joobo*, 22<sup>nd</sup> February 1886.

<sup>533</sup> Hong Sun-pyo (eds.), *The First Experience of Modernisation: Daily Life Culture in the Flowering Stage Mainly (Geundae-ui Cheot-gyeongheomm, Gaehwagi Ilsang Munhwa-reul Joongsim-euro)*, Seoul: Ewha Womans University Press, 2007, p. 20.

Such advertising marked a significant historical moment in the Korean economy and trade. See Jung Jin-suk, *Social History of Advertisement*, Study of Advertisement, Issue 7, 1990, pp. 210-36; Sin In-seop, *The History of Korean Advertising (Hanguk Gwanggo-sa)*, Seoul: Nanam Publication, 1986, p. 52.

In the period of the 'Gapsin Coup' in 1884, considerable social reform took place, in line with a more 'Westernised' modern society.<sup>534</sup> While socialism was gaining ground amongst artists and intellectuals, ordinary Koreans were becoming aware of the West through increasingly available photographs and prints which showed elements of western design and lifestyles.<sup>535</sup> Korea became even more receptive to the influence of the outside world with the signing of the 'Ganghwa Treaty' with Japan in 1876.<sup>536</sup> Korea then signed a series of treaties with European, American and Japanese imperialist powers that opened up Korea's ports.

Sociologist Sin Yong-ha argues that Korea was faced with a clash of two distinct cultures at the end of 19<sup>th</sup> century, namely the 'modern' and 'pre-modern', as the modern industrial system (factory production) challenged the pre-modern cottage industry.<sup>537</sup> From the 1890s onwards several things contributed to the development of science and technology,<sup>538</sup> including: a change in government policy; the establishment of educational institutions;<sup>539</sup> an increasingly educated populace; and industrial technology. For example, in an effort to cement western ties Korea participated in the Chicago Exposition in 1893, displaying traditional houses and handicrafts. Subsequently, Korea embraced Western technology in order to increase national economic power.

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<sup>534</sup> The Gapsin Coup (or Kapsin Coup in Korean) refers to the coup d'état launched on Seoul with Japanese support in December 1884.

<sup>535</sup> These began to proliferate in China and Japan through the aid of European Christian Missionaries.

<sup>536</sup> James B. Palais, *View on Korean Social History*, Seoul: Institute for Modern Korean Studies, Yonsei University, 1998, p. 1; Byun Tae-suep, *Outline of Korean History (Hanguk-sa Tongron)*, 4<sup>th</sup> ed. (first published 1996), Seoul: Samyoung-sa, 2007; National Institute of Korean History (Guksa Pyunchan Wiwonhoe), ed., *The Later Culture of Joseon Dynasty (Joseon Hugi-ei Munhwa)*, Book no. 35 of Korean History series. Seoul: Tamgu-dang, 2003; National Institute of Korean History (Guksa Pyunchan Wiwonhoe), ed., *Seose dongjeom and opening of culture (Seose dongjeom-gwa Munho Gaebang)*, Book no. 37 of Korean History series. Seoul: Tamgu-dang, 2003; Park Sung-Soon, *The contact of Confucianism of Joseon Dynasty, and Western Science (Joseon yukak-gwa Seoyang Gwahak-ui Mannam)*, Seoul: God's win, 2005.

<sup>537</sup> Sin Yong-ha, *Modern Korean History and Nationalism* (trans. N.M. Pankaj), Seoul: Jimoon-dang, 2000, p. 14; Palais (1998), p. 3.

Similarly, Lee Yoon-mi argued that Korea's modern national identity is distinguishable from traditional national identity, and pointed out that there is considerable debate as to whether the late nineteenth century Korean modernisers could really be described as nationalist considering their openness to western ideas. See Lee Yoon-mi, *Modern Education, Textbooks and the Image of the Nation: Politics of Modernization and Nationalism in Korean Education, 1880-1910*, New York & London: Garland Publishing, Inc., 2000, pp. 9-10; Lee Kwang-rin, 'The Rise of Nationalism in Korea,' *Korean Studies*, vol. 10, 1986, pp. 1-12, esp. 8. Lee Yoon-mi (2000) cited in Lee Kwang-rin (1986).

<sup>538</sup> Lee Yoon-mi (2000), pp. 78-9.

<sup>539</sup> Kim Young-sik and Kim Kun-bae, *Modern Science in Korean Society (Geun-hyeondae Hanguk Sahoe-ui Gwahak)*, Seoul: Changbi Publishers, 1998, pp. 167-202.

During the 1880s Korea began breaking up the traditional education framework in order to try and form a modern education system.<sup>540</sup> The Gabo Reforms were instituted in 1894-6, and introduced a modern education programme to Korea.<sup>541</sup> After the Gabo Reforms, the Western concept of art was adopted by Korea, and areas such as 'craft' and 'architecture' were considered as subcategories of art. For example, in 1906 a painting department was instituted at Han-seong Teacher's School, and art instruction began in private studios.<sup>542</sup> At the same time however Japan was in the process of colonising Korea and any attempts by Koreans to set up schools were severely inhibited by the interim pro-Japanese government. In fact this interim government, which did not want Korea to develop its own national identity, refused to authorise most applications for Korean schools unless they conformed to strict criteria.<sup>543</sup>

Japan fully colonized Korea in 1910, and in 1915, partly as a means to consolidate and demonstrate the new order the Joseon Government-general organized 'The Korean Industrial Exposition in Commemoration of the Fifth Anniversary of Colonialism' (Sijong onyon Kinyom Joseon Mulsan Kongjinhoe). This exposition aimed to disseminate ideas about the superiority of a colonized Korean identity. Although the exposition was not very effective at promoting the Japanese ideas of material progress and acceptance of Japanese rule,<sup>544</sup> it did work as a public space in which Koreans of different classes, religions, sexes and generations could come together and try to make sense of changing interpretations of their culture.<sup>545</sup> In 1929 however, the emphasis had shifted and 'The Korean

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<sup>540</sup> Choi Gwang-man (2010), p. 26.

<sup>541</sup> Hong Sun-pyo, *Studying for Illustration in the Flowering Stage of Modern Civilisation* (Hanguk Gaehwagi-ui Saphwa Yeon-gu), *Misulsa nondan*, vol. 15, Seoul: Sigongsa, 2002, pp. 257-92. Additionally, from the first of January 1896, they changed from the lunar calendar to the solar calendar and started to use the system of the 24 hour day based on world standard time, as opposed to the old system of a 12 hour day based on 12 animal symbols.

<sup>542</sup> Moon Dong-soo, 'The Reception of a New Culture and Establishment of a New Visual System in Korea's Modern Era' in Woo Hyun-soo, ed. (2014), pp. 69-78, esp. 75-7.

<sup>543</sup> Lee Yoon-mi (2000), p. 84.

Only 42 of 1,217 applications from Korean schools were successful. In contrast, all 778 foreign missionary schools were granted authorization. See Patricia Tsurumi, *Japanese Colonial Education in Taiwan, 1895-1945*, Cambridge: Harvard University Press, 1977, p. 164.

<sup>544</sup> In fact, it actually threatened the legitimacy of the Joseon dynasty by presenting the Korean people as dutiful subjects of the Japanese empire. Japan refuted claims that they were attempting to erase Korean identity by pointing out the similarities between the Japanese and the Koreans, insisting that they only wanted to bring progress to Korea under Japanese guidance. See Kal (2011), p. 30.

<sup>545</sup> Todd A. Henry, *Assimilating Seoul: Japanese Rule and the Politics of Public Space in Colonial Korea, 1910-1945*, University of California Press, 2014, p. 112.

Exposition' ('Joseon Pangnamhoe') of that year focused on the idea of traditional Korean crafts as a basis for developing modern design. The exposition heavily promoted ideas of harmony and assimilation between the colonizer and the colonized.<sup>546</sup> The inner pavilions of the exhibition were built in an Art Deco style, at the time the most modern, dynamic and popular style in the West.<sup>547</sup> This was a deliberate strategy on the part of the Japanese since Art Deco is abstract, energetic, generally colourful and light, thereby embodying new ideas, excitement and progress. The choice of Art deco therefore represented a modern era in which any differences between Koreans and Japanese could be dissolved in favour of a shared goal of mutual progress and enlightenment.<sup>548</sup> However, most of the new and innovative products were Japanese, whereas the vast majority of Korean exhibits were traditional arts and crafts. Japan's aim here was to convince the Korean people that they were better off under a modern colonial rule.

The course of Korea's industrialisation and modernisation has been significantly affected by its turbulent history. The postwar division of Korea and the forming of two separate states in 1948 initially harmed South Korea's development, but competition between the two Koreas would later become the catalyst for the country's modernisation. The move towards industrialisation was seen as a way of establishing a Korean identity within the modern world, and there was an attempt to reach this goal quickly. This emphasis on speed came from the 'Bali-Bali' (literally, 'quick-quick') culture that underpins much of the recent developments in South Korea, especially during the period of industrialisation from the 1960s to 1980s under the military government.<sup>549</sup> Korea's 'Bali-Bali' culture is also likely to have contributed to the prevalence of imitating western designs during this period, because such a practice gets quicker results than designing products from scratch.

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<sup>546</sup> Kal (2011), pp. 13-20.

There were thirteen sections at the exposition displaying over forty thousand objects, from agricultural and industrial products to traditional arts and crafts. Significantly, 13,717 of displayed products were by Koreans, with only 3,917 by Japanese settlers.

<sup>547</sup> These Art Deco pavilions were in stark contrast to the distinctly Korean style of the Shinseikan, where locally made goods were displayed. By incorporating the Shinseikan, Japan wanted to cement their carefully crafted image of a respected traditional Korean culture being modernised and economically improved after twenty years of Japanese rule. See Henry (2014), p. 119.

<sup>548</sup> Kal (2011), p. 39.

<sup>549</sup> GNP per capita in Korea rose at an average annual rate of 6.7% between 1965 and 1983. See Grabowski, et al. (2007), pp. 109-10.

However, in the 1970s and 1980s successive military governments continued to limit freedom of expression. For example, song lyrics were often censored if they contained references to Japan or North Korea.

These designs lacked identity and originality, a situation further exacerbated by the 'me-too' culture which involved elements of society merely copying successful ideas in their desire to keep up with their contemporaries. However, the rise of globalisation in the 1990s led to individualism becoming more prevalent in Korean society,<sup>550</sup> which in turn encouraged the leading Korean companies to design and produce their own products, as well as to carry out their own Research and Development (R&D).<sup>551</sup>

### **2.3.3 Korean Design Characteristics**

The almost relentless emphasis on moving forward has encouraged a somewhat confrontational outlook amongst Koreans. At times, this outlook positions the past as something redundant and not worthy of further consideration; traditional Korean design is arguably a victim of this modernist and capitalist outlook. The following explores how Korean design policy and practice have been influenced by various historical factors, including: imperialism, the Cold War, rapid industrialisation, an improving economy, the advancement of technology, and globalisation.

## **A. The Impact of Japanese Imperialism**

### **Aesthetics**

Yanagi was introduced to Joseon Dynasty Korean ceramics in 1916.<sup>552</sup> As a result he realized the need to explore the background to Korean and Chinese craft aesthetics in order to develop the Japanese aesthetic. Having come to regard Korea as an independent culture with its own art and beauty, Yanagi was opposed to the Japanese colonial policy which sought to assimilate Korean culture into

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<sup>550</sup> The military censorship of the 1970s and 80s was relaxed from the mid-1990s onwards. This was in part due to the sheer volume of popular entertainment now available because of the growth of the internet. As such it became harder to enforce censorship.

<sup>551</sup> Mike Hobday and Fernando Perini, 'Late Comer Entrepreneurship: A Policy Perspective' in Cimoli, et al., eds. (2009), pp. 470-505, esp. pp. 489-91. During the 1990s the government started supporting SMEs by making finance available. This in turn encouraged greater creative activity amongst SMEs.

<sup>552</sup> This led to a decade long involvement with Korean crafts, during which time he established the Korean Art Museum (Chosen minzoku bijutsukan) in 1924 in Seoul. See Aso (2009), p. 140.

Japan's.<sup>553</sup> In his 1922 book 'Joseon and Her Art' ('Chosun to sono geijutsu'), Yanagi defined the Korean art and craft aesthetic as involving lines and shapes that demonstrate the 'beauty of sorrow'. This view has been disputed by some scholars, particularly Koreans, who consider it a colonial perspective since it implied that Korea had a 'sad' history. Yanagi's mistake here was to encourage a view that affirmed the Japanese insistence that Korea was a weak, under-developed society, which colonial Japan had a responsibility to look after and assimilate into its own.<sup>554</sup> Yanagi's view was too simplistic in its interpretation of the 'sad' character of Koreans. In fact part of the Korean aesthetic includes the optimism and wit exhibited by the Korean people in their endurance and ultimate triumph in the face of adverse conditions.

Yanagi was heavily influenced by Buddhism in his interpretation and understanding of aesthetics. During the Koryo Dynasty a huge number of Korean craftsmen were able to produce Chungja ceramic work of real value and quality, a phenomenon Yanagi attributed to the teachings of Buddhism.<sup>555</sup> Yanagi's belief that *Tariki*<sup>556</sup> played the most important role in recognising the beauty of arts and crafts in everyday life is demonstrated in his comparison of Korean and Japanese Tea bowls. He describes the Japanese tea bowl in terms of something 'made', and the Korean bowl in terms of something 'born'. The Japanese Raku tea-bowls are made with deliberate artistic effort, while the Korean Ido tea-bowls are effortlessly produced for daily use and are not even made exclusively for tea.<sup>557</sup> One would expect the Japanese bowls to be better both in design and in usage, but in fact the Korean bowls are consistently of superior quality. The absence of conceptualisation allows the Ido bowls to emerge naturally, almost like something

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<sup>553</sup> Karatani (2000), p. 150.

<sup>554</sup> Brandt (2007), pp. 9-10.

Despite the fact that Yanagi loved Korea and its people, and had sympathy for their national destiny, his perspective, according to Japanese philosopher Karatani, confined Korean culture to the characteristics of its art, rather than the power of its people (this power was evident in their struggle against the Japanese colonial authorities). See Karatani (2000), pp. 150-51.

<sup>555</sup> Yanagi (1989), pp. 125-26. Buddhism describes two ways of becoming a Buddha, namely the Way of Self Power (self-reliance or hardship) and the Way of Other Power (grace). The first is used by artists who believe they are great, and seek to test themselves and rely on individual strength. The Way of Other Power relies on grace in everyday life as well as artistic tasks.

<sup>556</sup> *Tariki* describes the concept of encouragement and salvation by another power separate from one's own, and the individual's reliance on this grace.

<sup>557</sup> Korean craftsmen produced Ido Bowls in the 16<sup>th</sup> Century, and many of these were exported to Japan. After the Imjin Wars (1592-1598) Japan took many Korean craftsmen hostage in order to learn their craft and produce ceramic Ido type tea bowls themselves. Chung Yang-mo (1998), pp. 185-86.



'born'. Yanagi suggested that Japanese artists needed to reverse their thinking in order to achieve a similar harmony with nature.<sup>558</sup>

Yanagi described the aesthetic of Korean art and crafts as coming from a natural, inner spontaneous intuition, as opposed to intellectual understanding.<sup>559</sup> Yanagi explored pottery from the Joseon Dynasty, including the principles which gave it such a natural simplicity and irregularity. He felt that Joseon crafts were produced from a mindset which had no concept of beauty or ugliness, and the craft object was therefore free from both.<sup>560</sup> While Japanese crafts were produced in a self-assertive process of pursuing beauty through measurement, precision and symmetry, he maintained that Korean craftsmen did not consciously reflect on the true nature of beauty.<sup>561</sup> Yanagi saw the resulting irregularity in Korean craft as the highest form of beauty, created out of the craftsmen's spontaneous life, and true, unburdened vigour.<sup>562</sup>

Further influence of Korean folk art (particularly art from the Joseon Dynasty) on the Japanese Mingei movement has been consistently ignored. It has, however, been argued that Yanagi's enthusiasm and love for Korean arts and crafts was what led him to develop Mingei, effectively rooting the origins of the Mingei movement in Korea. Even today the Joseon-period Korean objects that Yanagi so admired still help define the Mingei aesthetic, and the 'Japan Folk-craft Museum' in Tokyo has a permanent display of objects from this period.<sup>563</sup> Despite this, Yanagi's controversial views on the Korean aesthetic maintained their influence in

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<sup>558</sup> Yanagi (1989), pp. 125-26. They should abandon their reliance on *Jiriki*, salvation through one's own efforts, and embrace *Tariki*, relying on grace or 'inner guidance' as the Korean craftsmen obviously did to produce beautifully simple, irregular objects that nonetheless had an inherent, natural, perhaps universal, pattern within them.

<sup>559</sup> It can also be argued that this art and craft aesthetic is influenced by the spirit of nothingness and emptiness within the artists and craftsmen.

<sup>560</sup> Yanagi (1989), pp. 142-3. The uses for which they were made gave them a wholesome and natural beauty often absent from objects that are overly decorated or complicated in form, since they lack usefulness and practicality. An object intended for natural use lacks the self-assertion of its maker, which is perhaps why useful goods are beautiful.

<sup>561</sup> *Ibid*, pp. 172-76. They merely made their products, abandoning any attempts at self-reliance in the pursuit of perfection. Instead they allowed their crafts to exhibit an irregularity unbounded by the self-imposed regulations which made Japanese crafts seem artificial.

<sup>562</sup> This beauty reflected the work of nature, without the craftsman making deliberate efforts to achieve this effect. Completing the craft in a manner that was liberated from both regularity and indeed irregularity allowed the craftsmen's work to capture the essential and unadorned rhythms of human life. See *ibid*; Kwon yong-phil, *The Aesthetic Imagination and History (Michok Sangsangnyok-kwa Misul Sahak)*, Seoul: Munye Chulpansa, 2000, pp. 169-70.

<sup>563</sup> Brandt (2007), pp. 8-9.

Korea until the early 1970s.<sup>564</sup> Since 1974 a number of aestheticians (including Bak Ki-su) have attempted to develop a more detailed definition of Korean aesthetics.

### Doan Design Education

From 1874 onwards, the Meiji government in Japan established a domestic craft industry in order to increase exports. As part of this drive to increase exports, Doan design (drawing) books were introduced to Japanese education in the 1880s.<sup>565</sup> Doan was to have a profound effect on Korea's craft and design identity. Japan's influence on the region increased dramatically after the Sino-Russian war in 1905. The might of Japan enabled them to force the 'Eulsa Treaty' on Korea effectively placing Korea under Japanese governance.<sup>566</sup> After Japan's subjugation of Korea, Japan's cultural assimilation policy made it difficult for native Koreans to maintain their own cultural identity, and incredibly even the Korean language was banned in schools.<sup>567</sup> Japan introduced Doan design education in Korea in 1907 with the Industrial Training School (Gonggeop Jeonseup-so, 1907-1922).<sup>568</sup> The school was Korea's first modern technical institution, and it offered a 2-year course in industrial

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<sup>564</sup> Yanagi's book 'Joseon and Her Art' was republished in Korea in 1974 with poet Choe Ha-rim's review at the end. In this review, titled 'Explanation/ Yanagi Muneyoshi's perspective on Korean Art', he claimed that Yanagi's definition of Korean art was still accepted by Koreans. Citing the 1940s aesthetic philosopher Go Yu-seop as advocating a similar view, Choe argued that Yanagi's ideas drove the Korean people into defeatism, and policy which defined Korean history as dependent and subservient. See Choe Ha-rim, 'Explanation/ Yanagi Muneyoshi's perspective on Korean Art' (Haesul/ Yu Jongyul-ui Hanguk Misulkwon-ei daehayu) in Yanagi Muneyoshi (trans. Yi Dae-won), *Korea and Its Art (Hanguk-kwa Ku Yesul)*, Seoul: Chisik Sanopsa, 1974, pp. 245-61, esp. 260 (first published in 1922, updated in the 1950s, and republished in 1974).

<sup>565</sup> See chapter 3 Japan section.

<sup>566</sup> As a result of the 1905 Treaty of Portsmouth, the Korean Empire (Daehan Jeguk: 1897-1910) from 1906 to 1910 became a protectorate of Japan. From 1906 to 1910 the Japanese Resident-general controlled Korea, but from 1910 until 1945 the Resident-general was replaced by that of Governor-general. See Kim Hye-jung (et al.), and 'History of Korean Independence Movement Compilation' committee (eds.), *Installation of the Residency-General and Colonialisation of Korea (Tonggambu Sulchi-wa Hanguk Sikmingihwa)*, Series of History of Korean Independence Movement (vol. 3), Cheonan: The Independence Hall of the Korean Independence Movement Laboratory, 2009, pp. 37-42; Bronfenbrenner (1961), p. 165.

<sup>567</sup> After the disastrous annexation of Korea in 1910, which led to the country's 'national obliteration and absorption into the Japanese empire'. See Palais (1998), p. 1.

Patricia Tsurumi compared Japanese colonial education in Taiwan and Korea and posited that it did not result in as much conformity in the latter and that Koreans preferred their own modern schools. See Tsurumi (1977), pp. 161 and 172-76.

<sup>568</sup> The *Gonggeop Jeonseup-so* school's first graduation ceremony was in 1909 when 46 students graduated. See 'Graduation day (Gonggeop-so Jolup sik)', *Hangsung* (Seoul): Newspaper *Hwangsung Shinmun*, 21<sup>st</sup> April 1909. 8 from the textiles, 9 from ceramics, 7 from metal crafts, 7 from wood crafts, 3 from applied chemistry and 12 from civil construction. Also see Choi Gong-ho, *At the Crossroad between Industry and Art: Korean Modern Craft History (Saneup-gwa Yesul-ui Giro-eseo: Hanguk Geundae Gongyesa-ron)*, Seoul: Misulmunhwa, 2008, p. 252.

techniques relating to crafts, construction, and engineering. The curriculum contained the teaching of some Japanese skills, although these were not taught to a high level because Japan did not want to run the risk of turning Korea into one of its industrial competitors.<sup>569</sup> For example, students at the school learnt technical and pattern drawing from textbooks, such as 'Dohwa imbon' (1907), a book teaching basic drawing (Doan) techniques.<sup>570</sup> In addition, students at this school, and others who read the textbook, may also have learnt the 'intermediate container drawing technique' (Chungdung youngki hwabup, 1908), which taught craft-related geometric pattern design.<sup>571</sup> Both these books were influenced by Japanese drawing books, such as the 'Onji' drawing book.<sup>572</sup> The Doan concept arguably stifled the creative process, and it would continue to have an influence on Korean craft and design until the 1970s. After 1973, however, the arts education syllabus in Korea changed to reflect a more creative and interpretive approach, especially in drawing. This meant that where previously the lines between the various genres were blurred, now painting, sculpture, design and craft were studied separately with more emphasis on specialisation.<sup>573</sup> As such a more esoteric knowledge of design became possible.

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<sup>569</sup> Kim Kun-bae, 'Establishment and Operation of Public Industrial Training School during the Korean Empire Period and the Early Japanese Occupancy' ('Daehan Jeguk-gi Ilje-cho Kwanlip gongup Junsupso-ui Sullip-gwa Unyoung'), *Korean Culture (Hanguk Munhwa)*, no. 18, Seoul: Seoul National University Kyujanggak Institute for Korean Studies, 1996, pp. 423-65, esp. 452-53; Kim Hye-jung, et al. eds. (2009), p. 102.

The Industrial Training School was set up for Japanese citizens and Japanese residents of Korea, although a few Korean students were admitted. The Keijo Imperial University was established in 1924 in Seoul by the Japanese government for a similar purpose. See Bronfenbrenner (1961), pp. 170-71.

<sup>570</sup> 'Dohwa Imbon' volume 1 and 2 were Korea's first art textbooks, published in 1907 with volumes 3 and 4 published in 1908. These books were published with reference to the Japanese textbook, 'Mopilwha Subon' (1904), and taught drawing by imitation of straight lines, curves and patterns through the use of a brush. The Japanese textbook 'Shin Jung' drawing book (1910-1913) was for the teaching of drawing figures, animals, plants, and objects. It influenced the Korean 'elementary school drawing book' (1921). See Park Hyi-rak, *History of Art Education of Korea (Hankook Misul Kyoyuk-sa)*, Seoul: Yekyung book, 1998, pp. 308-09.

<sup>571</sup> Choi Gong-ho, *The Structure of Modern Craft in Korea*, Seoul: Korean Association of Art History Education, no. 8, 1994, pp. 80-8.

<sup>572</sup> The Meiji government decided that for the export of Japanese crafts and effective handicrafts production, a drawing (Doan) book was required, so they published the 'Onji drawing book' (1870s-1880s). This Doan book influenced the teaching of drawing as practiced in the school set up in 1907. From then until 1970s the concept of 'Doan' was considered to be the equivalent of 'Design'.

<sup>573</sup> Lee gung-hee, *An in Depth Study of Korean Modern Art History (Hankook Gundaе Misul-sa Simchung Yungu)*, Seoul: Yekyung book, 2008, p. 54.

## Craft Production

At the end of the 19th century, mass production began to overtake production of traditional crafts. Furthermore, mass-produced items gradually incorporated complex design techniques and trends i.e. patterns. Craftsmen at this time were forced to make a choice between making either machine-made industrial products or handmade items.<sup>574</sup> Due to machine production, the traditional handicraft industrial system was collapsing, which led to a decline in the quality of handicrafts. To counter this, the Korean government established the Hansung Art Craft Production Center (Hanseong Misulpum Jejak so, 1908-1910)<sup>575</sup> in 1908 to preserve and develop the traditional handicrafts of the Joseon dynasty. This center produced articles for the Korean royal family and faithfully maintained the tradition of highly skilled crafts. After Japan's annexation of Korea in 1910 however, the autonomy of the Korean government was severely restricted and the Governor-General of Korea was established.<sup>576</sup> From 1911-37 the Japanese managed the Art Craft Production Centre, and insisted on using Japanese decoration skills and patterns instead of Korean patterns, transforming everyday products into 'design objects' such as tourist souvenirs.<sup>577</sup> This Governor-General of Korea's policy distorted the development of Korean crafts and sought to undermine Korean nationalism.

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<sup>574</sup> Choi Gong-ho (2008), pp. 31 and 243-52.

<sup>575</sup> Between 1908 and 1910, the Production was named the Hanseong Art Craft Production (Hanseong Misulpum Jejak so), at this time, the artisan masters had control over their own work. There were three principal rooms to the Studio: a drawing room, a design office, and a manufacturing room. See, Choi Gong-ho, *Understanding of the History of Modern Korea Craft (Hanguk Hyeondae Gongyesa-ui Ihae)*, Seoul: Jaewon, 1996, pp. 12-5.

<sup>576</sup> Lee Yoon-sang, 'The Status of "Royal-Family of Joseon" and the role of "Office of Yi Royal-Family" during the Japanese Occupation' ('Ilje-ha "Joseon wangsil"-ui Jiwi-wa "Yiwangjik"-ui gineung'), *Korean Culture (Kyujianggak Institute for Korean Studies)*, vol. 40, 2007, pp. 315-42, esp. 314-20.

As a result, from 31<sup>st</sup> of January, 1911, the Office of the Yi Dynasty (Yiwangjik) became responsible for providing products to, and managing the affairs of, the House of Yi of Korea. Accordingly, the Hansung Art Craft Production Centre was replaced with the Yiwangjik Art Craft Production Centre in 1911 (Yiwangjik Misulpum Jejak so, 1911-1922).

<sup>577</sup> Generally referred to as Yiwangjik Art Craft Production (Yiwangjik Misulpum Jejak so), the company went through three distinct stages before its eventual closure in 1937. Between 1908 and 1910, it was called Hanseong Art Craft Production (Hanseong Misulpum Jejak so). Between 1911 and 1922, Yiwangjik Art Craft Production (Yiwangjik Misulpum Jejak so) saw increasing Japanese management, and the autonomy of designers was significantly reduced. From 1922 to 1937 Japanese management was all-encompassing, the quality of products was drastically reduced, and economic gain became the prime aim of the studio, which was renamed Joseon Art Craft Production (Joseon Misulpum Jejak so) accordingly. In fact, the company opened a shop in Seoul selling cheap souvenirs of the city. The closure of the company is testament to the fact that no-one in Korea really wanted to buy products of that sort. See Choi Gong-ho (1996), pp. 12-5.

## Exhibitions

Exhibitions enabled design studios to influence design trends. The Japanese Governor-General of Joseon organised the Joseon Art Exhibition (held in Korea between 1922- 44) as part of a cultural policy that aimed to pacify the Korean nation-wide independence movement of 1919 (the March 1<sup>st</sup> Movement of 1919). It was intended to persuade the Korean people to assimilate the Japanese imperial culture, and also provide a space for Japanese artists living in Korea to display their work.<sup>578</sup> The exhibition took the form of an annual contest which was modelled on the Japanese 'Ministry of Education Exhibition' which had begun in 1907.<sup>579</sup> Fine artists in the Joseon Art Exhibition often imitated the old academic style of Japan when painting in a Western style,<sup>580</sup> since authentic Western painting styles only started to become influential in Korea from the 1930s onwards.<sup>581</sup>

In 1927 Japanese craftsmen were invited to exhibit in Tokyo at the *Exhibition of the Imperial Academy of Fine Arts* in an effort to compete with the popular European art nouveau style. This promotion of crafts was part of a national initiative to aid the export market and thereby raise income for the Japanese military and imperialist expansion.<sup>582</sup> Following this initiative, in 1932 the Korean Joseon Art Exhibition invited a number of Korean craftsmen to compete in the exhibition. This had the result of splitting craft-making into two distinct branches: the

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<sup>578</sup> Lee gung-hee (2008), pp. 70-84.

At the first Joseon Art Exhibition in 1922, 291 artists applied, with 171 artists chosen to exhibit 215 pieces. Although significantly fewer Korean than Japanese artists applied, most Koreans who did apply got selected for the exhibition. See newspaper *Dong-A IlBo*, Seoul, 31<sup>st</sup> May 1922.

<sup>579</sup> The 1907 official annual exhibition was named the Ministry of Education Exhibition (Monbusho Bijutsu Tenrankai) and concentrated on promoting art. From 1919 onwards it was renamed the Exhibition of the Imperial Academy of Fine Arts (Teikoku Bijutsuin Tenrankai). See Omuka Toshiharu, 'The Formation of the Audiences for Modern Art in Japan,' in Tipton and Clark, eds. (2000), pp. 50-60, esp. 50-5.

<sup>580</sup> In the 1910s the first really new stylistic movement that opposed the older Japanese academic style started in Japan. This new movement was influenced by European fauvism and post-impressionism which were introduced to Japan from Europe via illustrations in books and periodicals. Some Korean painters who studied in Japan however, still painted in the old Japanese academic style.

<sup>581</sup> Oh Kwang-soo, 'Academism art and Academism art of Korea', *Quarterly Art Critics*, summer 1990, p. 15; same author, *Korea Notes Modern Art History (Hanguk Gundae Misul Sasang Note)*, Seoul: Ilji-sa, 1987, pp. 208-09.

Today, Korean abstract Expressionism is regarded as Korea's most progressive and contemporary art form. It combines Western art forms with traditional artistic concepts of Scholarly Painting (*muninhwa*). See Shin Ji-young, 'The construction of national identity in South Korea and the tradition of masculinity in Korean Abstract Painting,' *Inter-Asia Cultural Studies*, vol. 8, no. 3, 2007, pp. 367-89, esp. 367.

<sup>582</sup> Chiaki (2012), pp. 408-10; Lee gung-hee (2008), p. 98.

majority of craftsmen - influenced by the demand for artistic crafts at the exhibition which offered more prestigious status than everyday craft products - became art-craftsmen,<sup>583</sup> while a few remained as traditional craftsmen. The exhibition's annual competition therefore had a profound influence on the future direction of Korean art and crafts, not least because artists and craftsmen tended to produce work that was favoured by the predominantly Japanese judges<sup>584</sup> who preferred a Japanese style of contrived highly decorative patterns that emphasised aesthetics over function.<sup>585</sup>

Japanese influence on Korean art and craft continued even after the empire's destruction in 1945 and up to the 1970s, perhaps because the artists who came to prominence under the Japanese judges now became judges themselves and continued to impose the same standards of taste on succeeding generations of art and craftsmen. Furthermore the distortion of art and crafts led to the diminution of the role of the craftsmen in everyday life as the art-craftsmen aspired to the fine art notion of craft.<sup>586</sup> The new artistic handcraft sector which was initiated by the 1932 Joseon Art Exhibition came to establish itself as the leading craft form, and became recognised as a distinct art form in itself.

One of the legacies of the Joseon exhibition is that traditional crafts have been somewhat conservative in their approach, while the artistic crafts have tended to follow western modernist trends.<sup>587</sup> This splitting up of the crafts has undoubtedly had a negative effect on the ability of craftsmen to convey distinctive Korean aesthetic values. It has also had a negative effect on the identity of Korean design. According to Lee Kyung-sung (1919-2009), a prominent art and crafts historian and critic who studied at Waseda University in Japan in the 1930s, Korean crafts lost some of their identity during the Japanese colonial period. He also argued that after World War II, Korean crafts and design began to be influenced by western

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<sup>583</sup> The effect of the 1932 exhibition was to make traditional craftsmen aspire to the production of fine art objects. This was partly due to the social prestige attached to the role of artist.

<sup>584</sup> Lee gung-hee (2008), pp. 215-16

<sup>585</sup> Ibid, pp. 98-9.

According to Yanagi, Japanese craft education in Korea was also highly focused on producing modern Japanese style rather than traditional Korean pattern or designs. Having witnessed this persuasive educational propaganda, Yanagi described its negative effect on the perception of traditional Korean styles. Such education was helpful to neither Korean nor Japanese craft and design. See Yanagi (1974), pp. 136-38. (This idea was originally written in a much earlier Yanagi article entitled 'Joseonin-ul sanggak handa' published on Aug.13. 1919)

<sup>586</sup> Ahn hyun-jung, *A View of Modern: Joseon Art Exhibition (Kunde-ui Sisun: Joseon Misul Junram hei)*, 2012, Seoul: Ehaksa, pp. 293-310.

<sup>587</sup> Choi Gong-ho (2008), p. 253; Ahn hyun-jung (2012), pp. 214-43.

trends and that the problem of industrial design, namely identity, continues to this day.<sup>588</sup>

Since the 1960s, the influence of art-craftsmen on society has remained somewhat limited, and they have failed to provide aesthetic inspiration to Korean designers. Consequently, from the 1970s onwards, designers tended to focus on industrial design.<sup>589</sup> In the 1980s there was a national discussion about rediscovering traditional Korean heritage. Nevertheless, designers today are generally no longer influenced by traditional Korean craft aesthetics. Some Korean historians suggest that the Joseon Art Exhibition had some positive effect on Korean art and crafts as it gave many artists and artisans the opportunity to exhibit their work publicly.<sup>590</sup> This exhibition is an example of authoritarian influence on art and crafts.

After 1945, Korea focused on recovering their cultural identity which was severely damaged under Japanese rule. Successive governments implemented a closed door policy towards Japan, banning any performances or exhibitions of Japanese art and culture. This remained in place until 1998 when President Kim Dae-Jung's government took a softer approach. He allowed cultural exchange with Japan, stating that the continued development and globalisation of Korean culture was dependent on exchanging cultures with other nations.<sup>591</sup>

## **B. The Impact of the Cold War**

In the late 19<sup>th</sup> century Russian literature was popular amongst educated Koreans. Russia's influence on Korea did not stop there, and shortly after the Bolshevik Revolution in Russia, the Korean Socialist Party was founded in 1918, with the

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<sup>588</sup> Lee Kyung-sung, *A Theory of Craft (Gongei Tongron)*, Seoul: suhak-sa, 1990, p. 167.

<sup>589</sup> The primary focus of the government during the 1960s was on light industry and the promotion of products for export such as clothes, shoes etc. See Joseph Stern (et al.), *Industrialization and the State: The Korean Heavy and Chemical Industry Drive*, Harvard University Press, 1995, p. 184.

<sup>590</sup> Korean newspaper coverage of art and design ensured a wide public awareness of these activities, aided significantly by the increased number of exhibitions that took place in Korea during this time, this began to help define the modern Korean cultural character. Korean craftsmen were either taken to Japan, or largely denied autonomy in their work, and this contributed to the desire to regain a traditional Korean identity from 1910 onwards. See Kim Young-na, *Modern and Contemporary Art in Korea: Tradition, Modernity, and Identity*, New Jersey; Seoul: Hollym, 2005, pp. 18-9.

<sup>591</sup> Yim Hak-soon, 'Cultural Identity and Cultural Policy in South Korea', *The International Journal of Cultural Policy*, vol. 8, no. 1, 2002, pp. 37-48, esp. 41-2.

Communist Party of Korea being established in 1925.<sup>592</sup> Socialist ideas were increasingly widely discussed during this time, with many socialist intellectuals believing that a complete rethink of the country's ideological values was needed in order to strengthen the nation. Their belief in citizenship, individualism and the equality of all Koreans permeated the arts and influenced the culture in general. Socialist intellectuals aimed to modernize the country, freeing it from Confucian traditions, and liberating it from Japanese rule. These socialists differed from other reformists (whom they perceived as elitist) in that they advocated empowerment of the common people (minjung). The influence these ideas had on the common people can be seen in the many rebellions that took place, including the Donghak peasant revolution in 1894.<sup>593</sup> One of the ways socialists could disseminate their ideas without fear of official reprisals was through literature and the arts, and they were able to use fiction to explore controversial ideas, thereby politicizing the arts. Because the socialists realized that only writers and artists still had some measure of freedom in colonial times, the arts became a space in which people expressed resistance, aspirations and beliefs.<sup>594</sup>

The Marxist concept of class elicited more reactionary responses amongst the population, leading to the formation of 'minjokchuui-pa (ethnonationalist faction), an anti-Marxist group that called for socio-economic and cultural heterogeneity.<sup>595</sup> However many Korean intellectuals became suspicious of the West's declared intention to grant independence to colonized nations, and as such embraced Marxism. In addition socialist ideas permeated the mainstream causing ordinary people to reject imperialist Japanese rule and embrace what they perceived as Communist ideas of freedom and liberation of all nations. However the Communist Party was later disbanded with factions moving to various countries, and it was not

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<sup>592</sup> Gabroussenko (2010), pp. 13-4; Lee Jin-kyung (2005), p. 81.

<sup>593</sup> Park Sun-young, *The Proletarian Wave: Literature and Leftist Culture in Colonial Korea, 1910-1945*, Cambridge (Massachusetts) and London: Harvard University Asia Centre, 2015, pp. 23-4. Alongside the growth of Catholicism, with its supposed egalitarian ideals, a grassroots peasant movement called 'Donghak' (Eastern Learning) emerged which promoted universal humanism and opposed Catholicism. The movement's growth culminated in the peasant uprisings, in which peasant armies demanded the expulsion of Japanese merchants, the abolition of hereditary status, and the punishment of corrupt officials. The aggressive quashing of these uprisings led to many members of the movement forming underground militia in 'righteous armies' which demanded independence and more equal wealth distribution. Many small protests took place in the early 1900s, eventually culminating in another mass uprising during the March First Movement in 1919.

<sup>594</sup> Park Sun-young (2015), pp. 120-22.

<sup>595</sup> Lee Jin-kyung (2005), p. 103.



until after 1945 that communism took hold in North Korea.<sup>596</sup> In the late 1940s and early 1950s there was dramatic increase in the number of Korean translations of Soviet books disseminated in North Korea. These helped the North Korean Communist regime utilize much of the theory and practice of Socialist realism, both politically and aesthetically.<sup>597</sup>

After liberation from Japanese colonisation in 1945 the southern half of the Korean peninsula was occupied by the United States, while the northern half was occupied by the Soviet military until 1948.<sup>598</sup> As a result South Korea and Japan were influenced by US design and culture,<sup>599</sup> while art and design in the North was heavily impacted by Soviet movements including Soviet Neoclassicism and socialist realism.<sup>600</sup> In North Korea as well as in other countries of the communist bloc, socialist realism (socialist in content and nationalist in form) was officially declared as the only method of creative activity in the arts.<sup>601</sup> Furthermore North Korea was influenced by Soviet propaganda and designed very similar propaganda posters that were intended to glorify communism and Kim Il-sung. In addition Kim Il-sung implemented a Stalinist inspired political and economic command system. However, after Stalin's death, Khrushchev denounced Stalinism, which angered North Korea,<sup>602</sup> and inspired them to adapt Soviet ideology to an increasingly nationalist policy, resulting in Kim Il-sung addressing the North Korean Workers'

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<sup>596</sup> Song Ji-young, 'How communist is North Korea? From the birth to the death of Marxist ideas of human rights', *Cambridge Review of International Affairs*, vol. 23, no. 4, 2010, pp. 561-87, esp. 562. Initially, the Communist Party of Korea was founded in Shanghai in 1921. At the time, the Korean government was in exile in China due to Japanese imperial rule over Korea. The Korean Communist Party in Seoul was established independently in 1925 by Kim Yong-Bom and Park Hon-yong.

<sup>597</sup> Gabroussenko (2010), pp. 18- 24.

<sup>598</sup> Park Sun-young (2015), pp. 269-71. The newly established South Korean state promptly banned all socialist activities, including all publications by socialist writers. North Korea's Socialist beginnings soon deteriorated into a dynastic regime, where only the most superficial of socialist ideas remained.

<sup>599</sup> Steven Hugh Lee, 'Military Occupation and Empire Building in Cold War Asia: The United States and Korea, 1945-1955' in Hasegawa Tsuyoshi (ed.), *The Cold War in East Asia 1945-1991*, Chicago: Stanford University Press, 2011, pp. 98-121, esp. 101-17.

<sup>600</sup> The buildings of the North in turn influenced the South who desired to match and exceed their neighbours and thereby had symbols to show that their society and ideology was superior to the North's (this 'tit for tat' competition in architecture between the two nations continued throughout the 1970s and 80s).

<sup>601</sup> Gabroussenko (2010), p. 5.

<sup>602</sup> Christoph Bluth, *Korea*, Cambridge: Polity Press, 2008, pp. 23-5.

Soviet influence was more noticeable in certain areas of life, for example the entrance exam for the Kim Il-sung University was changed in 1949 and conducted in Russian instead of English. See Charles K. Amstron, *The North Korean Revolution, 1945-1950*, Ithaca and London: Cornell University Press, 2003, p. 72; Szalontal (2005), p. 23.

Party in 1955 to introduce the concept of *Juche* (self-reliance).<sup>603</sup> *Juche* was a system of values guiding the nation's political ideology and economic system. It held that the army was the most important organisation in the country – even more so than the proletariat.<sup>604</sup> It took over a decade to establish the ideology of *Juche*, but by 1967 it was fully implemented. From then onwards, art and design in North Korea was guided by the concept of *Juche* Realism.<sup>605</sup>

From the 1960s onwards both countries were involved in a competition to outdo each other when expressing 'real Korean-ness'.<sup>606</sup> For example talented architects in both countries looked to their own culture in order to rediscover an identity removed from colonial influence. North Korea sought to prove their economic and political superiority over the South through the construction of large, impressive buildings, and indeed from the end of Korean War (1950-1953) up until the early 1960s the North's economy was stronger than the South's.<sup>607</sup> This spurred South Korea on to build similar structures in order to disprove the North's claims regarding superiority. Both countries drew inspiration from traditional Korean architecture, redefining a cultural expression that still continues to affect design concepts in both North and South Korea. This traditional Korean

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<sup>603</sup> The term *Juche* was introduced by Kim Il-sung in 1955 and represented the expression of Korean autonomy and national self-reliance and was at this time directed against the political influence of the Soviet Union and China. Theologian Shin Eun-hee identified three aspects of *Juche* thought; anti-imperialist ideology (1950-60s); Korean Humanism (1970s-80s); and North Korea's State Religion (1990-2000s). See Shin Eun-hee, 'The Socio-political Organism: The Religious Dimensions of Juche Philosophy' in Robert Buswell Jr., ed. (2007), pp. 517-33, esp. 518-19.

<sup>604</sup> Nicholas Evan Sarantakes, 'History still matters: Contemporary South Korean Strategy and Diplomacy' in Amit Gupta (ed.), *Strategic Stability in Asia*, Hampshire and Burlington: Ashgate publishing, 2008, pp. 87-104, esp. pp. 89; Han S. Park, 'The Nature and Evolution of *Juche* Ideology' in Han S. Park (ed.), *North Korea: Ideology, Politics, Economy*, New Jersey: Prentice Hall, 1996, pp. 9-18, esp. 10-2; David Welch, *Propaganda: Power and Persuasion*, London: British Library, 2013, p. 74.

<sup>605</sup> The Mansudae Creation Centre is one of the centres which is responsible for the public art and design work, and produces about 4,000 works a year. There are 3,700 employees which include 1,000 'creators' and technical support staff and administrators. See Jane Portal, 'Some reflections on Art in North Korea' in Jane Portal and Beth McKillop (eds.), *North Korean Culture and Society: Papers from the British Museum/ British Association for Korean Studies (BAKS) Study day 2001 and BAKS Study day 2002*, London: British Museum Press, 2004, pp. 13-22, esp. 13-5.

<sup>606</sup> Audra J. Wolfe, *Competing with the Soviets: Science, Technology, and the State in Cold War America*, Baltimore: Johns Hopkins University Press, 2013, p. 55; Sarantakes (2008), pp. 88-9; Yim Hak-soon (2002), p. 42.

<sup>607</sup> Barry Eichengreen (et al.), *The Korean Economy: From a Miraculous Past to a Sustainable Future*, Harvard University Press, 2015, pp. 259-60. In 1960 North Korea's exports amounted to USD 146.9 million, four times more than South Korea's which stood at USD 32.8 million. In addition the North's per capita income was twice that of the South's.

architecture was used politically in an effort to define each as the 'real' Korea.<sup>608</sup> During the 1970s Kim Jong-il kept control of the Division of Culture and Arts and emphasised the revolutionary tradition (a nationalist *Juche* tradition).<sup>609</sup> This tradition is evident in 1970s and early 1980s architecture, for example the People's Culture Palace (1974) and The Juche tower (1982).<sup>610</sup> A number of other monumental structures were constructed in order to exhibit the North's economic might to South Korea,<sup>611</sup> and demonstrate the effectiveness of *Juche* ideas. In addition the tit-for-tat architectural contest between the two Koreas (in which each attempted to outdo the other by constructing modern buildings in a traditional Korean style) peaked in the 1970s and persisted until the 1980s.<sup>612</sup>

The spirit of confrontation with the North that helped shape 'South Korean-style democracy' (a limited democracy) involved ideological and nationalist propaganda highlighting the need for anticommunism<sup>613</sup> and economic growth to take priority over other concerns.<sup>614</sup> This idea was captured by the 1960s slogan 'Development First, Unification Later', and led to a strong 'us and them' way of

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<sup>608</sup> Jung In-ha, *Architecture and Urbanism in Modern Korea*, Honolulu: University of Hawai'i Press, 2013, pp. 81-2. For example South Korea considered their National Museum (1966, now the National Folk Museum) and the Buyeo-Museum (1967) to represent the best in traditional Korean architecture. While North Korea insisted that their Pyongyang Grand Theatre (1960) was the perfect example.

<sup>609</sup> Takashi Sakai, 'The power base of Kim Jong Il: focusing on its formation process' in Han S. Park, ed. (1996), pp. 105-22, esp. 110-12.

<sup>610</sup> The *Juche* tower (1982) in Pyongyang seems to be influenced by the design of Red Square in Moscow with its symbolic star. The Grand People's Study House (National Library, Inmin Dae Haksup-dang) was also built in 1982. See Sergiusz Michalski, *Public Monuments: Art in Political Bondage 1870-1997*, London: Reaktion Books, 1998, p. 194.

<sup>611</sup> Since 1953, North Korea on the other hand, has experienced a transformation according to socialist principles, and the process of economic development can be traced to the First Five-year Plan through to the Second Seven-year Plan. See Shenying Shen, 'Politics and strategies for economic development' in Han S. Park, ed. (1996), pp. 123-40, esp. 125-35.

<sup>612</sup> During the 1970s and 80s the South-Korean government combined modernist design trends with traditional Korean architecture in the building of iconic places such as the National Theater (1973), Sejong Cultural Center (1978), Seoul Art Center (1985), and the Independent Hall (1987), all of which were seen as being in competition with North Korean buildings such as the People's Culture Palace (1974), Kumsusan Palace of the Sun (1976), and the Grand People's Study House (1982). An influential Korean architect from the 1960s until the 1980s was Kim Chung-up (1922-1988) who worked at the office of Le Corbusier. Chung-up combined the modern architectural ideas of Le Corbusier with traditional Korean architecture. Another important architect in this period was Kim Swoo-geun (1931-1986) who similarly combined modern architecture with traditional concepts. See Jung In-ha (2013), pp. 82, and 146-47.

<sup>613</sup> For example primary and secondary school pupils regularly drew anticommunism posters, and the colour red (associated with communism) was generally avoided where possible.

<sup>614</sup> During the 1970s the South Korean economy overtook North Korea's, mainly because its capitalist system adapted better to the changing economic situation. South Korea continued to be part of the global economy whereas the North's adoption of *Juche* meant that they became more isolated from the world's economy. See Gregg Brazinsky, 'Korea's Great Divergence: North and South Korea between 1972 and 1987' in Hasegawa, ed. (2011), pp. 241-64, esp. 241-43.

thinking.<sup>615</sup> The anticommunism drive included classes where children were warned about the dangers of communism and poster campaigns in which denounced communist ideas. This encouraged a climate a fear during which many (including left wing activists and trade unionists) were labelled 'bbal geng e (commies)' and as such risked arrest under national security laws. In this suffocating atmosphere, where political rights were heavily restricted, creativity was often stifled since there were certain themes that designers and artists could not explore. However, in the 1970s and 1980s the limited South Korean-style 'democracy' system was challenged by a full democracy movement seeking wider freedoms.<sup>616</sup> In 1987 South Korea achieved full democracy after new substantial democratic freedoms were granted. Around this time economic relations between the Soviet Union and South Korea also began to improve despite the remaining ideological differences between the two countries (in 1990 the two countries officially established full political relations).<sup>617</sup>

### C. The Impact of Industrialisation

The government of South Korea, which was established in 1948, adopted a broadly free market economic policy, and set out to rebuild the nation. Initial progress was delayed by the Korean War but subsequently rapid growth was achieved through a total of 7 Five-year Economic Development Plans between 1962 and 1996.<sup>618</sup> Lacking natural resources the country had to depend on trade to

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<sup>615</sup> Kim Suk-kwang and Kim Joon-kyung, 'Korean Economic Development: An Overview' in Cha Dong-se, et al. (eds.), *The Korean Economy 1945-1995: Performance and Vision for the 21<sup>st</sup> Century*, Seoul: Korea Development Institute, 1997, pp. 3-56, esp. 51. This 'us and them' feeling continues to some extent in the present.

<sup>616</sup> Also, during the 1970s and 1980s *Minjung*-orientated nationalism developed in response to the prevailing conservative nationalism. The current system of government in Korea is a presidential system, and power is shared by three branches: the executive, legislature and judiciary. The present is elected by popular vote for a single five-year term. See Lee Nam-hee, *Making Minjung Subjectivity: Crisis of Subjectivity and Rewriting History, 1960-1988*, Ph.D. diss., The University of Chicago, 2001, pp. 15-6.

<sup>617</sup> Jeong Kap-young, 'Economic Cooperation between South Korea and the Soviet Union: Overview and Prospects' in Jeong Kap-young, ed. (1993), pp. 3-5. In fact between 1990 and 1991 the countries arranged three summits. Korea attempted to persuade the Soviet Union to use its influence to secure peace on the Korean peninsula, and in exchange Korea offered economic help to the Soviets. In 1991, North and South Korea signed a Joint Agreement on Reconciliation, Non-Aggression, Exchange and Cooperation, and were both welcomed into the UN.

<sup>618</sup> Irma Adelman, FRSA, 'Social Development in Korea, 1953-1993' in Cha Dong-se, et al., eds. (1997), pp. 509-40, esp. 513-26. Adelman defined four economic periods, namely: the infrastructure and import substitution period (1962-66); the labour-intensive export-oriented industrialisation period (1967-71); the HCl period (1973-81); and the stabilisation, adjustment, liberalisation and

drive its economic growth. Aided by the success of the major conglomerates or 'Chaebols', Korea, which adopted the slogan 'Exports Build the Country', had by the 1970s achieved a fair measure of economic development and industrial expansion.<sup>619</sup> This transformation was helped by the prevalence of groupism in the Korean Confucian capitalist system.<sup>620</sup>

In the 1960s and 1970s the government's policy regarding design involved the development of craft-based products and packaging technology in order to ensure that design aided the export market. The 'Bali-bali' culture of the 1970s and 1980s influenced Korean industrialisation and product design in that the demand for quick economic success led to a preponderance of OEM and imitative products; this situation only began to change towards the end of the 1980s. The making of OEM products enabled Korean firms to teach themselves about both high-level design and production, although this high level design was derivative and not invented by Korean industry. The OEM buyers took care of marketing, while Korean firms were left to concentrate on improving their manufacturing capabilities.<sup>621</sup> However, by the 1990s most Korean firms were producing their own designs and marketing their own goods.

### 2.3.4 Social Reform and Its Influence

#### The Economic 'Growth-First' and Awareness of Design

Since the 1960s, South Korean society and culture has, like most other industrialised countries, experienced problems with respect to urbanisation, labour, management, and environmental issues. Between the 1960s and 1980s, the

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globalisation period (1982-93). Also see Charles K. Armstrong, *The Koreas*, New York; London: Routledge, 2007; O Won-chul, *The Korea Story*, Seoul: Wisdomtree, 2009, p. 726.

<sup>619</sup> This growth was aided by 'Confucian Capitalism', an ideology that promotes and values the concept of groupism. South Korea's system of Chaebols (a collection of interconnected firms usually under the control of a single head and their family) reflects this groupism. See Chang Kyung-sup, *South Korea under Compressed Modernity: Familial Political Economy in Transition*, London and New York: Routledge, 2010, pp. 101-04 and 121.

<sup>620</sup> Confucian capitalism has attracted a lot of attention in the West because of the economic success of East Asian countries. China in particular has shown impressive growth rates, with Vietnam following closely behind. See Lew Seok-choon, 'Confucian Capitalism of Park Chung Hee: Possibility and Limits' in Lew Seok-choon (ed.), *The Korean Economic Developmental Path: Confucian Tradition, Effective Network*, New York: Palgrave Macmillan, 2013, pp. 95-117, esp. 113.

<sup>621</sup> Kim Lin-su, 'Korea's National Innovation System in Transition' in Kim Lin-su and Richard R. Nelson (eds.), *Technology, Learning, and Innovation: Experiences of Newly Industrialising Economies*, Cambridge University Press, 2000, pp. 335-60, esp. 340.

economic 'growth-first' strategy existed alongside the pro-democracy movement.<sup>622</sup> During this time, Korean society experienced several conflicts, including those stemming from economic realities (the rich-poor gap), and others resulting from ideological battles (i.e. between communism and democracy). Furthermore, Korea suffered problems relating to elitism, regionalism, and religious bigotry.<sup>623</sup> However, despite the fact that these conflicts are ongoing to some extent, the Korean population as a whole has generally achieved a relatively high level of material wealth. Nevertheless, this materialism has led to concerns about the eroding of certain moral values in Korean society.

From the 1980s onwards, industrial development was led by the private sector as opposed to the public sector. In order to promote this development, the government concentrated on certain industries, for example they launched a number of plans including Distribution Industry Modernisation Plans, Agricultural Machinery Import-substitution Plans, Small and Medium-sized Enterprises (SMEs) Promotion Plans,<sup>624</sup> and Electronics Industry Promotion Plans.<sup>625</sup> In the late 1980's, there was increasing international pressure (mainly from the US and western Europe) on the Korean government to open its domestic market, caused in part by its protectionist trade policies, which made it difficult for US and European companies to enter the Korean market. At the same time Korea was running a significant trade deficit with Japan. This adverse balance of trade with Japan was partly explained by Japan's own protectionist trade policies, but more fundamentally, it was the result of Korea's dependence on Japanese raw material and parts, which were crucial for its exports to the US and Europe.<sup>626</sup> Simultaneously, Korea fell into a technology trap, since it possessed no core technologies. Instead, it relied on technical assistance from Japan. Therefore it

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<sup>622</sup> Mo Jong-Ryn and Barry R. Weingast, *Korean Political and Economic Development: Crisis, Security, and Institutional Rebalancing*, Harvard University Asia Center Published, 2013, pp. 110-11.

<sup>623</sup> Charles K. Armstrong, *The Koreas: Second Edition*, New York; London: Routledge, 2014.

<sup>624</sup> OECD, *Innovation in Small and Medium Firms*, Paris: Organisation for Economic Co-operation and Development: A Report by the Committee for Scientific and Technological Policy, 1982, p. 12.

<sup>625</sup> O Won-chol (2009), pp. 172-73. The Park Jung-hee government identified the HCI as a way of achieving their desire to reach the USD 10 billion in exports mark in the 1980s. During this period the emphasis shifted away from growth to the consolidation of growth, which lasted until the economic crisis of 1997. See Koh Young-sun, 'The Growth of Korean Economy and the Role of Government ' in SaKong Il and Koh Young-sun (eds.), *The Korean Economy: Six Decades of Growth and Development*, Seoul: Korea Development Institute, 2010, pp. 7-82, esp. 39.

<sup>626</sup> The adverse balance of trade with Japan was also caused by the buying dispositions of Japanese customers; the difficulty of market development in Japan; the importing of main facility goods and raw materials from Japan, and Korean consumers' preference for Japanese products.

was crucial that Korea began thinking of ways to overcome these problems in order to become an advanced economic country.

In the 1980s the Korean government and private industry had begun to look more closely than before at the role design could play in improving the country's image and increasing the competitiveness of Korean goods. By the late 1980s the Korean people had also become more acutely aware of the importance of design, both culturally and economically, and had begun to demand more sophisticated branding and packaging. In response the government took concrete steps to aid the design sector, stimulated in part by the 1988 Olympics.<sup>627</sup>

In 1990, the Roh Tae-woo government (1988-1993) established a 'ten-year master plan for cultural development', which emphasised the importance of national culture and traditions. The plan's aims included: Establishing Korean cultural identity; promoting regional culture; and encouraging the international exchange of arts and culture.<sup>628</sup> This led to the implantation of a joint Japanese-Korean design research project entitled 'The Study of Characteristics of Korean and Japanese Design'. The project, which ran from 1991-93, was the first time Korea and Japan had cooperated on such a research exercise.

By the early 1990s, the Korean economy was experiencing problems such as the weakening of its export sector. As a result, in 1993 President Kim Young-sam launched the 'New Five-year Economic Plan' (1993-1997). This plan aimed to ensure that Korea was able to compete in an increasingly globalised world. To this end the Globalisation Promotion Committee (Segyehwa Chujin Wiwonhoe) was established in 1994.<sup>629</sup> The committee controlled several areas, including: deregulation of the financial sector, and various other reforms in the education,

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<sup>627</sup> Son Day-hyun, *Attraction of Korean Culture and Understanding of Tourism*, Seoul: Baek-san Publishing Company, 2008, p. 8.

The organising of the Olympics created a greater awareness and understanding of design in ordinary people as well as opportunities for designers. From January 1989 the government allowed ordinary citizens to travel freely overseas for the first time which allowed consumers to experience foreign products first-hand. In the early 1990s, the government poured a lot of resources into improving the country's design capabilities. Not only did industry require improved design in order to compete in the global marketplace, but Korea's savvy consumers also demanded well-designed and technically advanced products.

<sup>628</sup> Yim Hak-soon (2002), p. 41.

<sup>629</sup> Judith Cherry, *Foreign Direct Investment in Post-crisis Korea: European investors and 'mismatched globalisation'*, London and New York: Routledge, 2007, p. 44; Samuel S. Kim, 'Korea's Segyehwa Drive: promise versus performance' in Samuel S. Kim (ed.), *Korea's Globalisation*, Cambridge: Cambridge University Press, 2000, pp. 242-81, esp. 242; Yim Hak-soon (2002), p. 41.

science, technology, and economic sectors.<sup>630</sup> One of the central goals of the Five-year Plan was to ensure that Korea was able to join the 'International Organisation for Economic Co-operation and Development' (OECD), which the nation did in 1995. This meant that the country's markets were opened up to the world. OECD membership outlawed the violation of intellectual property rights, and this together with increased labour costs, meant that Korean companies were no longer able to compete in the OEM market.<sup>631</sup> As a result Korean companies, in order to survive, began to produce their own innovative branding and designs.<sup>632</sup>

### **Segyehwa (Globalisation) and the Design Boom**

Having both achieved democracy and hosted the Olympic Games by the end of the 1980s, Korea became a more confident nation. The country's society embraced a new spirit of freedom, and industry sought to be more proactive in its work. This led to the amending of the Industrial Design & Package Promotion Law in 1991, which ensured that the KIDP was able to expand its design promotion activities with support from MOTIE. Following the change in this law, MOTIE and the KIDP made plans to embark on their first five-year comprehensive programme for Industrial Design Promotion (1993-1997).<sup>633</sup> The programme involved designating 1993 as a national 'Design Year'. This increased public awareness of the importance of design, as did the organizing of a 'Design Week' (1<sup>st</sup>-7<sup>th</sup> September) which was filled with activities that complemented and promoted the ongoing Taejon International Exposition (7<sup>th</sup> August-7<sup>th</sup> November 1993). This event was the first

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<sup>630</sup> Barry K. Gills and Donsook S. Gills, 'Globalisation and Strategic Choice in South Korea: Economic Reform and Labor' in Samuel S. Kim, ed. (2000), pp. 29-53, esp. 38; Samuel S. Kim (2000), pp. 257-58. This drive to embrace globalisation was state-implemented, and Korean-style globalisation was referred to in world markets as *Segyehwa*.

<sup>631</sup> Moon Chung-in and Rhyu Sang-young, 'Rethinking alliance and the economy: American hegemony, path dependence, and the South Korean political economy,' *International Relations of the Asia-Pacific*, vol. 10, issue 3, Oxford University Press, 2010, pp. 441-64, esp. 448. The government adopted a *Segyehwa* strategy as 'the shortcut which will lead us to building a first-class country in the 21<sup>st</sup> century'. See newspaper *The Korea Times*, 7<sup>th</sup> January 1995.

<sup>632</sup> The Chaebols began to develop their own technology and design capabilities in the mid-1980s. The Chaebols have spearheaded South Korea's outward foreign direct investment (OFDI). Globalisation of the Chaebol includes inwards foreign direct investment (IFDI), technology transfer from multinational corporations to the Chaebol, global competitiveness, and global management practices. By the mid-1990s many SMEs had also followed this strategy. See Kim Eun-mee, 'Globalisation of the South Korean Chaebol' in Samuel S. Kim, ed. (2000), pp. 102-25, esp. 103.

<sup>633</sup> Korean design promotion began in 1970 as the Korea Design & Packaging Center (KDPC), and was reorganized and renamed the Korea Institute of Industrial Design & Packaging (KIDP) in 1991, when design promotion began to focus on industrial design in earnest. The KIDP was renamed the Korea Institute of Industrial Design Promotion (KIDP) in 1997.



international exposition held in Korea, and marked the centenary of the 1893 Chicago Exposition, which was the first Expo that Korea attended.<sup>634</sup>

Korean design has developed significantly since 1993, due to the implementation of astute design policy and practice in both the public and private sectors. Before 1993, the government supported technological development with financial aid and tax breaks, but the design industry was largely ignored. In 1993 the government began to increase the KIDP's budget for design promotion, leading to reinvigorated design policy and practice. Furthermore companies were now able to claim financial support and tax breaks for design development. A number of OEM companies became ODM and engaged in their OBM. These companies became more creative with their own designs, and began to carry out their own R&D. Under Yu Ho-min's direction,<sup>635</sup> the KIPD implemented the Design Support Project for SMEs' (Jungso kiup design gido saup).<sup>636</sup> The project aimed to encourage SMEs to utilize their own designs rather than imitate. To this end KIDP embarked on an aggressive design promotion drive, in which influential media figures were urged to print articles (on a daily basis) themed on design and to extend coverage of design in the media, in particular newspapers. The aim of this strategy was to encourage companies to take on designers; to try to ensure that the public supported the government design budget, and to increase awareness of the importance of design.<sup>637</sup> The efforts of the KIPD over this period were

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<sup>634</sup> The main subject of the Expo was the challenge of finding new roads to development. Other subjects addressed included 'traditional and modern science and technology for the developing world', and 'towards improved recycling of resources'.

<sup>635</sup> 1993 can be seen as a turning point in the history of Korean design and design policy. Coinciding with the election of Korea's first civilian government, and against the backdrop of increased globalisation, Yu Ho-min (1943-2010) was instated as head of the KIPD. Yu was a veteran of the Park government and had played a pivotal role in the formulation of economic and industrial policy before falling out of favour in the Chun administration. Subsequently, Yu moved to the private sector and worked in a managerial role for the Daewoo Group. Yu, with public and private sector experience, was a highly driven visionary who understood the relationship between design and the economy.

<sup>636</sup> From 1994 until 2008, the KIDP organised and led the projects and during this time the projects' consulting programme supported 10,371 SMEs in their efforts to create innovatively designed products. Each SME invested on average USD 40,300 (KRW 43 million) in designing and producing new products, for which they recouped on average USD 1.9 million (KRW 2,030 million) in sales (a 4,710 percent profit on their original KRW 43 million investment). In addition each SME invested on average USD 31,900 (KRW 34 million) in redesigning old products, for which they recouped on average USD 0.8 million (KRW 900 million) in sales (a 2,680 percent profit on their original KRW 34 million investment). These projects were successful, and thereby helped Korea achieve international recognition in the design field. In 2009, the 'Korea Evaluation Institute of Industrial Technology' took over the running of the project from the KIDP. See KIDP (2010), pp. 136-37.

<sup>637</sup> KIPD officials also gave presentations at the National Assembly which expounded the importance of design to the national economy and regional development.

considerable and aimed to end the preponderance of imitative design in Korea, a task in which they were successful.<sup>638</sup>

While Yu Ho-min led government design policy, various influential individuals (such as Samsung's CEO Lee Keun-hee) from large private sector companies also made significant contributions to the success of Korean design. The innovation in design and technology demonstrated by these companies has propelled them to the position of global leaders in their fields. For example, in August 1992, Samsung acquired a new management policy which emphasised quality over quantity and adopted the slogan 'Let's Change!', and a series of subsequent product developments led to Samsung becoming a world market leader.<sup>639</sup> In 1995 Lucky Goldstar became LG, reorganizing to strengthen management systems and launching the tagline 'Life's Good'.

Although increased government support for the private sector, coupled with new management systems in many Korean companies, meant that the private sector was more competitive than ever in the 1990s, the 1997 Asian financial crisis did cause an economic downturn.<sup>640</sup> However Korea recovered quickly, and the situation in fact provided new opportunities as manufacturers turned to export markets rather than focusing on the domestic market.<sup>641</sup> Furthermore in response to the financial crisis the Chaebols<sup>642</sup> underwent major restructuring (in line with the

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<sup>638</sup> Subsequent presidents of the KIDP continued Yu's policy of innovation throughout the 2000s. Of those successors, two were to play an instrumental role in further promoting the importance of design to the Korean economy. Jung Kyong-won, who came from an academic background, presided over the 2001 ICSID Congress in Seoul, which was considered a success, while Kim Cheol-ho, who was the director of LG's design centre, established the Design Korea exhibition and seminar, an annual event which has achieved international recognition.

<sup>639</sup> Park Young-won and Hong Paul, *Building Network Capabilities in Turbulent Competitive Environments: Practices of Global Firms from Korea and Japan*, Boca Raton; London; New York: CRC Press, 2012, p. 77.

Lee Keun-hee wanted to leave his imprint on Samsung, and he embarked on major internal reforms. At the time, the company was losing its competitiveness, so Lee took senior Samsung officials to major electronic goods stores and rhetorically asked them if they were happy that the company's goods occupied such a lowly position on the shelves. This was the famous 'Frankfurt declaration' in which he was also quoted as saying that all company members should change everything about their lives except their wives and children. In addition he employed foreign employees in order to internationalise Samsung's way of doing business. Lee's reforms marked a turning point in the fortunes of Samsung.

<sup>640</sup> The 1997 economic crisis meant that Korea needed to look to outside resources - in the form of loans from international financial institutions such as the IMF and the rescheduling of foreign debts - in order to overcome the economic difficulties.

<sup>641</sup> Kim Do-hoon and Koh young-sun, 'Korea's industrial development' in SaKong and Koh, eds. (2010), pp. 83-122, esp. 111-15.

<sup>642</sup> The Korean Chaebol is a form of business conglomerate which, beginning in the 1960s, comprised several dozen large family owned corporations. They are mostly global multinationals for example, Samsung and Hyundai and have great economic and political power within the country.

government policy of '*choice and concentration*') in order to increase their competitiveness on the world stage. They remain a major economic force and some of their names (i.e. Samsung, LG, and Hyundai etc.) are recognised around the world. Furthermore, the drive to increase technology-based and service-based industries continues apace and is largely driven by Korea's recovery from the aforementioned financial crisis.<sup>643</sup>

Within three years of the 1997 crisis Korea had repaid the International Monetary Fund (IMF) loans in full under the leadership of President Kim Dae-jung (1998-2003), who had implemented a number of radical reforms to the business and finance sectors.<sup>644</sup> His strategy was Parallel Development of Democracy and Market Economy.<sup>645</sup> He used the popular slogan 'Buying Korean' to encourage foreign investment, and allowed the importation of previously banned Japanese pop culture. This encouraged cultural exchanges that spread Korean culture around the world. He also ensured that the government invested heavily in both the IT industry and creative venture companies.<sup>646</sup> In 2000 Korea saw economic growth of 8.5 percent, and has continued to record among the most impressive GDP growth rates in the OECD since that time.<sup>647</sup> Against the backdrop of this impressive economic performance, the government's promotion of design can be seen as successful, and the Korean design sector has firmly established itself as one of the dominant forces in the world. The success of the economy in 2000 allowed 'The Korean International Cooperation Agency' to sponsor the KIDP's 'Design Training Programme' (this program is still running today) which aims to share Korea's design expertise with various developing countries.

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They can be seen as descendants of the Japanese Zaibatsu, which were large and powerful cartels before WWII. See Park and Yuhn (2012), pp. 261-62.

<sup>643</sup> Armstrong (2007), p. 32.

<sup>644</sup> OECD, *Industry and Technology Policies in Korea*, Paris: OECD Publishing, 2014, p. 34.

<sup>645</sup> Tiberghien (2007), pp. 172-73.

This combined accelerating market liberalisation which involved stimulating competition and opening markets to export, deepening structural reforms including privatising the banks, downsizing and restructuring the Chaebols, and extended democratisation.

<sup>646</sup> The IT industry grew at an average annual rate of 18.9%, from USD 40 billion (KRW 33.7 trillion) in 1996 to USD 60 billion (KRW 67.2 trillion) in 2000. Such a high growth rate led to the IT industry share within the GDP going from a mere 8.1% in 1996 to 13% in 2000, the highest growth among OECD countries. See Lee Soon-bok (et al.), *Korea's Electronic Industry: 2004 edition*, College Park, Md.: CALCE EPSC Press, University of Maryland, 2004, p. 121.

<sup>647</sup> Gills and Gills (2000), p. 44 and 51.

In 2004 the Roh Moo-hyun governments (2003-08) launched the Five-year Balanced National Development Plan (2004-2008).<sup>648</sup> This plan, among other things, tried to support an innovation drive (including digital TVs and displays). Roh Moo-hyun also attempted to increase cooperation between SMEs and large companies, a strategy the government termed 'win-win'.<sup>649</sup>

The 2008 global financial crisis presented Korea with certain dilemmas. However, a currency swap with the United States enabled the government of Lee Myung-bak to overcome its foreign exchange crisis in that year.<sup>650</sup> In 2010, in response to the Crisis, the government established a 'mutual development committee (Shared Growth for Large and Small Companies)' in an attempt to introduce greater strength and fairness to Korea's economic structure.<sup>651</sup> The committee discussed profit sharing plans between large businesses and SMEs in the areas of construction, distribution and service (including the motor, electronic and IT sections of industry).<sup>652</sup> The strength of SMEs helps to maintain economic stability since it reduces over-reliance on a limited number of big companies. The committee's work is therefore important in ensuring that SMEs receive fair and adequate compensation for their products, brands and innovative designs. In this way the government can hope to establish a more collaborative free market democracy.

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<sup>648</sup> Since 1962 Korea has launched 7 'Five-year Economic Development Plans'. However the 2004, 2009 and 2014 plans, as well as concentrating on national economic development, also focused on regional development. This regional emphasis included effort to improve general living standards and the quality of life in various regions of Korea (for example 56 regions had, among other things, their infrastructure, water and neighborhood parks improved). The 2014 plan attempted to give local governments and residents the tools to initiate local development themselves.

<sup>649</sup> OECD (2014), p. 34.

<sup>650</sup> Moon and Rhyu (2010), p. 442.

The government however, continues to support the American-led international monetary regime, while public opinion in Korea favors a more balanced global financial system with an emphasis on Asian financial regionalism, which could challenge American economic hegemony.

<sup>651</sup> Barry Eichengreen, et al. (2015), pp. 52-5.

Lee's government claimed that Korea could no longer blindly follow the Western capitalist model and proposed 'ecosystemic development' that 'creates jobs, reduces income gaps and preserves the environment'. The proposal was for a more ethical style of management and a more responsible use of capital. The new government Park Geun-hye pledged to redouble efforts to address concerns about economic disparity and social insecurity.

<sup>652</sup> Ju Hyun (et al.), *Policy Tasks for the Shared Growth between Big Corporations & SMEs*, Research Report 2011-590, Seoul: KIET, 2011, pp. 43-53.

## **2.4 Summary**

This chapter has shown how the socio-cultural values, religious identity, and various political features of the three countries under consideration have shaped their respective design identities. Japan minimalism had its origins in niche market exports to the USA (such as Honda's 'Super Cub' motorcycle, and Sony's 'Micro TV'). These products displayed the attribute of 'simplicity', a concept which was derived mainly from Shintoism and Buddhism. In Soviet Russia the main influence on design was the control exerted by the state on all aspects of industry. The emphasis was on product quantity not quality, and the input of designers was limited. Furthermore design was seen as a tool for public propaganda. In the 20<sup>th</sup> century Korea was influenced by design ideas, including those arising from Japanese imperialism, the Cold War and industrialism. This chapter also illustrated how Korean design was extremely successful from the 1990s onwards, and how Korea's search for a distinctive design identity is still ongoing.

## CHAPTER 3: Design Policies

### 3.0 Introduction

In this chapter, I will examine the impact of design policy on the economic performance of Japan, Russia and Korea in the context of post-industrialisation. (This examination will be carried out partly in relation to British and American design policies). In all three countries modern design policies were established during the post-WWII industrialisation period after it became apparent that design had the capacity to improve economic competitiveness by, for example, improving export figures alongside levels of domestic production.

Each country's industrial design strategy will be studied in part via an analysis of their respective automobile and electronic industries. This analysis will mainly concern the period from the 1960s onwards, since this time corresponds with increased globalisation.<sup>653</sup> In addition each country's design marketing strategy will be studied by reference to the development of technologies and their influence on consumer trends and demands. The impact of marketing strategies on over-production will also be discussed. In addition I trace the history of design education in the three countries.

I will examine the impact of both digital technology and environmental concerns on current design policy in the three countries under review. In the mid-1990s the global electronics industry began to expand significantly, and by the beginning of the 2000s the use of IT in industry had changed society and design policy irrevocably.<sup>654</sup> Today digital technology affects not only design processes but also strategies relating to design patenting, dissemination, and promotion. Over the last decade, design policy has focused increasingly on the life-cycle of products,

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<sup>653</sup> Luciano Ciravegna, 'Introduction' in Luciano Ciravegna (ed.), *Sustaining Industrial Competitiveness after the Crisis: Lessons from the Automotive Industry*, Hampshire; New York, NY: Palgrave Macmillan, 2012, pp. 1-17, esp. 1.

The automobile industry has been a key part of the globalisation of industry since the 1950s and the total output of cars has risen continually, reaching 70 million in the year 2008. By 2011 Korea had become the largest car producer after China, Japan, the USA and Germany. Ibid, pp. 2-3.

<sup>654</sup> In the mid-1960s many communication products contained Stored Program Control (SPC) switching systems to control their functions. By the mid-1970s SPC, which was powered almost entirely by switching systems, began to be replaced by Digital Wire line Communications, which involved not only switching systems but also signaling, and transmission. In the early 1990s Global System for Mobile Communication (GSM) and Code Division Multiple Access (CDMA) 2000 were introduced and wireless systems began to be used more frequently. As a result of these developments the design and product policies of many companies changed, as did various aspects of society. See G. Keith Cambron, *Global Networks: Engineering, Operations and Design*, West Sussex: John Wiley and Sons Ltd., 2013, pp. 343-47.

and this trend has affected policy making and business practice. i.e. eco-innovation and Integrated Product Policy. These policies and practices share one goal: to reduce the impact of products and services on the environment.<sup>655</sup>

In the final parts of chapter I discuss how design has become increasingly important to industry. In Japan and Korea in-house design was influenced by the culture of the chaebols, which in turn was based on elements of Confucianism. I also discuss government-initiated and privately-initiated design strategy in each of countries. Lastly I argue that Korea does not have a distinctive design brand or image. As such I maintain that Korean companies would benefit from less management interference in the design process.

### **3.1 Japan**

#### **3.1.1 Brief History of Japanese Design Policy**

Almost all product design is closely related to industry, and Japanese product design is no exception. Modernisation of Japanese industry began in 1868, when various western scientific and technological advances were adopted. In the early 20<sup>th</sup> century, there was a widespread desire in Japan to learn more about western technology. This resulted in an expansion of available technology courses at educational institutions. Since more students were now studying technology a generation of factory workers and engineers emerged who were extremely competent in adopting western technology, and further were comfortable dealing with new emerging technologies. Although Japan experienced a nationalist backlash against Western ideas, a lot of Japanese military technology was sourced from the US and the UK, and this produced an uneasy combination of extreme nationalism and Western influence, which was aggravated by the political instability and famine of the 1930s.<sup>656</sup> After WWII Japanese scientists and engineers (many of them ex-military employees) focused on advancing Japan's technological capability which helped to modernize the country and increase the strength of

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<sup>655</sup> Integrated Product Policy and eco-innovation are very similar – the latter is the response from academia and industry to the problem of sustainable product development; the former is the principal governmental response.

<sup>656</sup> Nakayama Wataru (et al.), *The Japanese Electronics Industry*, Boca Raton, FL.: Chapman & Hall/CRC Press, 1999, p. 27.

Japan's industry. In the 1950s Japan gained a reputation for producing superior quality goods which in turn boosted international export figures. Japan's post-war design policy, with its focus on technological innovation and new production techniques, helped rebuild the post-war Japanese economy.<sup>657</sup>

### **Ministry of International Trade and Industry (MITI)**

The Japanese government saw the need to produce and export commodities to western markets as essential. The phrase 'export or die' was coined to reflect this belief, and various strategies were implemented to reduce the country's dependence on imports, including the modernisation of production facilities,<sup>658</sup> and the establishing of MITI.<sup>659</sup> It was central to the growth of the economy and the restructuring of industry, and politicians and the private sector played a key role in forming the industrial, energy and restructuring policies. To a greater degree than anywhere else in the industrialised world, Japanese investment overseas was financed by the state. The multinationalism of Japanese companies was promoted by public financial institutions, influencing their FDI strategies in many areas of manufacturing.<sup>660</sup>

In 1955 MITI launched the 'National Car Plan' which aimed to invigorate the automobile industry by designing a standard car like the German Volkswagen. However, MITI only wanted to use one car manufacturing firm, an idea which was vigorously opposed by car firms who feared they would lose out, and hence the plan was discarded. It can be argued however that this proposed strategy initiated car standardisation in Japan.<sup>661</sup> In 1961 MITI formulated a new strategy, namely the 'Grouping Plan'. This plan aimed to restructure the car industry into three

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<sup>657</sup> The US gave USD 2 billion of aid to Japan during the occupation period (1945 to 1951) to assist with the rebuilding of Japan's industrial base. Because of Japan's poor trading performance, the United States granted generous quotas and provided guaranteed markets for Japanese goods. The United States also supplied new technologies and machinery. See Siân Evans, *Contemporary Japanese Design*, London: Collins & Brown Limited, 1991, p. 37.

<sup>658</sup> Evans (1991), p. 37.

<sup>659</sup> Established in 1949 with overall control of allocating government money to preferred industries.

<sup>660</sup> Mireya Solís, *Banking on Multinationals: Public Credit and Export of Japanese Sunset Industries*, Stanford University Press, 2004, pp. 3-5 and 40; Brown (1998), p. 180 and 201; Sumiya Mikio (ed.), *A History of Japanese Trade and Industry Policy*, Oxford University Press, 2000, pp. 599-600. After WWII outward FDI was not permitted until 1951, and even then it took a considerable time for the government to approve any investment. As a result of this policy inward investment from both foreign countries and Japan increased, which in turn improved the economy to the extent that in 1964 Japan was able to join the OECD. After this, restrictions on outward FDI led to its increase from the 1960s to the 1990s.

<sup>661</sup> Abé (1997), p. 30.



groups (the mass-produced type, the special type, and the very small type). However despite Toyota and Nissan being in favour of the plan, other companies objected and as such the plan was never implemented. We can see then that MITI's policies in the 1950s and 60s did little to help the car industry, and therefore the international success that Japanese automobile firms achieved can be largely attributed to the fierce domestic competition that existed between them<sup>662</sup> during the 1950s and 60s. This helped create a steady domestic demand, which in turn provided a platform for industry expansion in the 1970s, and increased overseas production in the early 1980s.<sup>663</sup>

MITI was also active in the field of electronics. As early as 1957, the government had a policy to promote the electronics industry, with MITI (together with the Ministry of Postal Services) creating a research committee dedicated to researching colour TVs in the same year.<sup>664</sup> In addition MITI helped manufacturing companies purchase the technology and machinery that was necessary for them to make their goods even smaller. Sony built a small portable TV in 1959 as the government continued to encourage industry to embrace the phrase 'small but powerful'.<sup>665</sup> In 1957 the major Japanese electronics firms were persuaded by MITI to form a joint R&D computer project, which would receive government subsidies.<sup>666</sup> In 1962 the Technical Research Association for Computers was promoted by MITI. The association, which included the firms Fujitsu, Oki, and Nippon Electric Company (NEC), was formed to counter the IBM 7000 series and produced a computer called FONTAC that became the starting point for later Japanese mainframes.<sup>667</sup>

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<sup>662</sup> Ibid, pp. 30-1.

<sup>663</sup> Russell Lansbury (et al.), *The Global Korean Motor Industry: The Hyundai Motor Company's Global Strategy*, London and New York: Routledge, 2007, p. 37.

<sup>664</sup> Michael E. Porter, *Case in Competitive Strategy*, New York: The Free Press, 1983, p. 514.

Whereas in the UK, France and West Germany such a policy was not in place until the late 1960s.

<sup>665</sup> In 1960 Sony launched its highly successful 8-inch portable TV. This product provided the impetus for other Japanese companies to enter the US television market, a market Japan would come to dominate. Sony understood the importance of brand from its inception, demonstrating the global mind-set of its founders. See Porter (1983), p. 460.

<sup>666</sup> A 'Five Years Plan for the Promotion of the Electronics Industry' was decided on by MITI, which emphasised industrial electronics as being important for the nation as opposed to consumer electronic products such as TV, radio, etc. Toshiba, Oki, Nippon Denki (NEC), Fujitsu, Hitachi, Hokushin, and Sony participated in the project. See Abé (1997), pp. 32-3.

<sup>667</sup> After the announcement of 'System 360' by IBM in 1964, which proved to be a revolutionary innovation, the Very High Performance Computer Development Project was initiated as a response by MITI in 1967. See Ibid, p. 33. The FONTAC (Fujitsu-Oki-Nippondenki-Triple-Allied-Computer) was a large computer developed in November 1964 after 3 years of joint research by the 3 companies.

## MITI and Japan Export Trade Research Organisation (JETRO)

As design was regarded as one of the most important areas for improvement, JETRO carried out a system of 'design envoys' from 1955 to 1966, through which design professionals from corporations and public research bodies across the country were sent overseas. The scheme was modestly funded by the state: only about five or six students a year studied abroad.<sup>668</sup> About half went to the U.S.A. and half to Europe, where they studied in design schools and laboratories. This project was replaced by a more limited three-month overseas design research project, beginning in 1967. Participants studied design and market trends by visiting design-related businesses, fairs, and public facilities, mainly in Europe. This system was closed 10 years later, but the participants made a significant contribution to Japanese industry and education.<sup>669</sup>

The 1950s arguably represent the first stage of Japanese design policy. For some time after Japan's defeat in the WWII, design in Japan's industrial sector was barren. In order to restore the national economy, the Japanese needed to expand foreign trade. Since Japan was not a country rich in natural resources, traditional art and crafts items, such as porcelain and textiles, were favoured as export products. With the outbreak of the Korean War in 1950, production in many industries was increased, including the heavy chemical industry. This led to rapid progress in technological innovations and industrial development, and thus began the economy's first growth period.<sup>670</sup> Design received priority during this time, with the Municipal Government of Nagoya promoting it in order to revitalise the area's traditional industries.<sup>671</sup>

The roots of Japanese design lie in its strong tradition of craftsmanship. However, in 1952, the British Ceramic Association criticised Japanese ceramics manufacturers for imitating British ceramics and claimed that this kind of manufacturing should be limited, which in turn led to problems in the Japanese

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<sup>668</sup> For a good historical survey, Fujita (1999), p. 48; Woodham (1997), pp. 173-75; Johnson (1982), p. 231; Chiu Lei-Mei Julia, 'Cultivating the Design Mind: How Japan Transformed Itself into One of the World Centres for Design,' Present and Future of the World Design Policies, in *Design Policy and Global Network*, Seongnam: KIDP, ICSID, 2002, pp.130-40, esp. 133.

<sup>669</sup> Woodham (1997), p. 173; Kathryn B. Hiesinger and Felice Fischer, *Japanese Design: A Survey Since 1950*, Philadelphia: Philadelphia Museum of Art in Association with H.N. Abrams, New York, 1995, p. 14; One example of this was when Du Pont purchased the rights to manufacture textiles, and in doing so completely revolutionised the Japanese textile industry.

<sup>670</sup> For example, the Korean War caused a mini economic boom. This increased US demand for Japanese goods and services. See Evans (1991), p. 38.

<sup>671</sup> Chiu (2002), p. 132.

export market.<sup>672</sup> This continued until 1958, when the MITI and JETRO took the initiative and established design policies emphasising intellectual property rights.<sup>673</sup> In 1959 Japan's laws on industrial property rights, which included the patent system, was revised. As a result, in 1960, a new Design Law, Utility Model Law, Patent Law and Trademark Law came into being.<sup>674</sup> Subsequently, the government began to inspect products for quality before export and those approved received the 'Japanese Industrial Standards (JIS)-mark'.<sup>675</sup> This was part of an attempt to raise the standard of 'made in Japan' products, which had a reputation for poor quality. Furthermore, a 'Good Design' label (or G-Mark) was awarded by the Committee of Design Promotion for selected export products.<sup>676</sup>

### **G-Mark System**

As in other developed nations, the Japanese government and industrialists began to realise the importance of design, and this led to the founding of the 'Good Design Movement'. A scheme that helped continue the influence of the crafts on product design was the G-Mark system introduced in 1957.<sup>677</sup> In order to possess a G-Mark a product's form and function should work together in a unique way, and the design should ensure that the material interacts with humans in the same way

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<sup>672</sup> IARI (ed.), *IAN (Kogei Nyusu)*, Tokyo: Maruzen Publishing Co., Ltd., July, 1952.

In the 1950s a 'made in Japan' label was generally associated with sub-standard quality. In order to rectify this state of affairs the Japanese government set up the 'Japan Machinery and Metal Institute' (JMMI) in 1957. JMMI established quality standards that all exported products needed to adhere to in order to receive a JMMI stamp of approval; without this stamp a product could not be exported. See Porter (1983), p. 517.

<sup>673</sup> In the fifties various design promotion facilities were established: the Japan Textile Design Centre in 1955, the Japan Pottery Design Centre in 1956, and the Japan Machinery Design Centre and the Japan General Merchandise Promotion Centre in 1959. These centres helped to abolish imitation, further promoting and safeguarding Japanese design. See Evans (1991), p. 70.

<sup>674</sup> Sumiya, ed. (2000), p. 483.

<sup>675</sup> Baba Yasunori (et al.), 'Diffusion of the Systemic Approach in Japan: Gauge and Industrial Standards' in Goto Akira and Odagiri Hiroyuki (eds.), *Innovation in Japan*, Oxford University Press, 1997, pp. 39-56, esp. 50. In 1949 the passing of Industrial Standardisation Law was the basis for the current JIS and the legislation provided for the setting up of the JIS mark. As of 1<sup>st</sup> October 2005, the old JIS mark certification system was changed to a new JIS mark certification system.

<sup>676</sup> Ursula McHugh, 'Made in Japan: a changing culture and a national emergency demand new forms and new ways of shaping them', *Industrial Design*, vol. 6, no. 7, New York: Whitney Publications, Inc., July, 1959, pp. 54-69, esp. 61.

<sup>677</sup> Good Design Mark, 3 items selected, Duster, 35mm Camera Canon L-1, 16mm Movie Camera 8-T. See IARI (ed.), *IAN (Kogei Nyusu)*, Tokyo: Maruzen Publishing Co., Ltd., Dec. 1957; Chiu (2002), p. 134; Izuhara (1996), pp. 165-71.

as craft objects do.<sup>678</sup> They also established a Design Division within MITI to promote design policy.<sup>679</sup>

In 1960 JETRO set up the 'Japan Design House'<sup>680</sup> as a permanent information centre for well-designed Japanese products.<sup>681</sup> Since the 1960s, design has been recognised in Japan as enhancing product credibility and corporate image, which has helped Japanese design achieve global recognition.<sup>682</sup> Consequently, design policy emphasised the importance of exporting products relating to life and culture.<sup>683</sup> In 1963, MITI introduced a plan entitled, 'Long-term Vision Concerning Industrial Structure'. This plan attempted to ensure that Heavy and Chemical Industries (HCIs) made up a larger proportion of the economy, leading to the success of Japan's automobile, electronics, and parts industries, all of which displayed cutting edge product design. However the country as a whole was undergoing significant economic growth, and Japanese design, was now able to address issues relating to the improvement of Japanese culture and life. From the early 1960s until the late 1990s Japan enjoyed economic success partly driven by outstanding design innovation.<sup>684</sup> The introduction of the G-Mark helped define a distinct Japanese identity that distinguished it from Western competitors. As a result, Japan was able to enjoy a commanding position in many global markets.<sup>685</sup>

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<sup>678</sup> Yanagi felt that the particular beauty in crafts is one that is identified with use. As such items that ignore utility will not possess this kind of particular beauty. This view has continued to influence product design in Japan. See Yanagi (1989), pp. 197-98; Gelfer-Jørgensen (2013), pp. 248-49.

<sup>679</sup> Hiesinger and Fischer (1995), pp. 14-9; Kashiwagi (1990), pp. 39-41 and 183-84.

<sup>680</sup> JETRO established two Design Houses; one opened in Tokyo in 1960, the other in Osaka in 1961. This establishment offers a permanent source of information about Japanese products. In 1969, the Japan Design House in Tokyo became JIDPO. In 1971, the Osaka Design House became the Osaka Design Centre. See *Design Link Osaka* magazine, vol. 45 (Osaka Design Center: Oct. 2009), p. 16, and same magazine vol. 46 (Osaka Design Center: Jan. 2010), p. 16.

<sup>681</sup> Woodham (1997), p. 173; Izuhara (1996), pp. 163-64.

<sup>682</sup> Although there are now several other nations with similar systems, few have had promotion policies in place as long as Japan.

<sup>683</sup> Izuhara (1996), pp. 219-21; Chiu (2002), p. 134; Evans (1991), p. 40.

Following the success of the Tokyo Olympics, living standards began to rise significantly, and the importance of design to the economy was reflected in the fact that several design journals, magazines, exhibitions and competitions were established around this time.

<sup>684</sup> By the late 1960s the Japanese economy had grown exponentially, helped by the fact that Japan had become an OECD member of the international economic community in 1964. See Sumiya, ed. (2000), p. 81.

<sup>685</sup> A year after its introduction a design department was established within the MITI which enforced measures to prevent the export of imitations and to promote the G-Mark.

## Japan Industrial Designer's Association (JIDA) and JIDPO

In 1952 The JIDA was established and it went on to play leading role in advancing the industrial sector of the post-war Japanese economy. For example JIDA has been involved in organising major events such as the ICSID International Design Conferences in Kyoto (1973) and Nagoya (1989).<sup>686</sup> In 1969, MITI proposed raising the quality of life of Japanese citizens by shifting the emphasis from quantity to quality. In the same year, JIDPO was established and remains 'the only organisation in Japan involved in the comprehensive promotion of design activities.'<sup>687</sup> It is dedicated to promoting design and fosters cooperation between government agencies, industrial bodies, and individual designers. It sponsors the 'Good Design Awards' (the G-Mark), and publishes the quarterly magazine *Design News*.<sup>688</sup>

Although industrialisation brought considerable benefits to Japan, it also had a damaging effect on the environment. Transport systems in built-up cities were overcrowded; factories were polluting the air, and education institutions began to instill a fear of the future in their students. The backlash against the economic boom erupted all over the globe, not least in Japan, where several student demonstrations led to riots.<sup>689</sup> The country's design policies, however, failed to reflect this situation, in contrast to American and Western Europe.

As the 1970s progressed, Japan confirmed its status as one of the leading design nations. Japan designated 1973 as their first official 'Design Year' (the ICSID Congress was also due to be held in Tokyo in 1973) and celebrations marking this occasion reflected the country's healthy manufacturing sector and strong GDP growth. However, some British designers complained that Japanese precision products masked 'a mass of locally consumed trash, just like Italy in its heyday'.<sup>690</sup> Nevertheless the idea of spiritual welfare was creeping back into Japanese design, and the theme at the ICSID congress in Kyoto was officially

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<sup>686</sup> The Nagoya conference subject was 'The emerging Landscape: Order and Aesthetics in the Information Age.'

<sup>687</sup> <http://www.jidpo.or.jp/en/?date=20060110&bc=press> (last accessed 27.05.2009).

<sup>688</sup> Eiichi (1996), pp. 168-69.

<sup>689</sup> Takehara, et al., eds. (2003), p. 104; Imura Hideo and Miranda A. Schreurs (eds.), *Environmental Policy in Japan*, Cheltenham: Edward Elgar and Co-published by the World Bank, 2005, pp. 19-48.

<sup>690</sup> Anonymous, 'Japan: Soul Survivor', Magazine *Design*, no. 302, Glasgow; London: Design Council, 1974, pp. 37-9, esp. 37.

denoted as the 'Soul and Material Things.'<sup>691</sup> The Japanese saw the soul not as a metaphysical concept separate from the material, but rather as an intrinsic part of human interaction with the world. The congress' organisers highlighted this concept by giving an example of a man boarding a plane and having contradictory feelings about it; marveling at the human ingenuity that built such an amazing thing, fear of flying, excitement. With this in mind, the congress members presented the audience with a model of the world that consisted of four components: nature, individuals, community and culture. This categorisation was based on Za, a concept that means 'to sit', but can also mean the individual or the group, earth or nature, and the meditation pose. Za therefore symbolizes the whole person.<sup>692</sup>

Conference members asserted that the modern world had seen people lose common goals of striving forwards together. Designs, which could connect with a person's whole being, could help to address this problem. The conclusions provided at this conference provided the basis for the emergence of a distinctive Japanese design identity that drew on Japan's past and present.

In 1975, JIDPO decided to promote SMEs, launching a design development project that focused on regional design and local districts.<sup>693</sup> The initiative had three main benefits: Design promotion was successfully restructured, there were several solutions offered to the question of 'how to design', and the advantages of good design were more widely understood. All this also raised the profile and

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<sup>691</sup> It focused on the relevance of Japanese design in a rapidly changing world. The organisers stated that it was the human soul that determined the creation of the material world, mediating between man and his world. Mankind needs more awareness of the unity and continuity of all beings in this world, in order to create more balanced, person-centred designs. This was the beginning of a distinctive Japanese design identity. See *Soul and Material Things; The Report of ICSID Congress '73 Kyoto*, 1973, p. 41.

<sup>692</sup> Members of conference went on to explain in greater depth the relationship between the four components. Nature comes first. Man as an Individual thinker follows. Individuals together make up a Community which is considered mans' collective adaptation to nature. A variety of individuals make a variety of communities, which in turn create a variety of Cultures who all utilize and respond to nature in unique ways. Thus a cycle emerges in which every action affects the other. The Community executes the plan and Individuals receive, use and enjoy products produced by the community. These products interact with Nature creating either ecological equilibrium or disequilibrium. See *ICSID '73 Kyoto*, Congress handout, pp.1-3 (Stored in the Design Archive, Brighton University).

<sup>693</sup> Regional design policy was carried out from 1975 onwards. Resulting policy, such as the 'nationwide design guidance for design improvement of handicrafts' was supplemented with the support of JETRO in the 1960s. This project involved the sourcing of fine products along with guided design improvement in 5 metropolitan and 42 regional governments. As a result, design was differentiated by regional design specialisation and a policy was carried out of supporting SME's exports. See Tanaka Yoshinobu, 'The changing role of Japanese design promotion,' *Design interactive workshop-5, Chiba University*, 20<sup>th</sup> January 2009, pp. 61-2. Also see [http://www.design.ti.chiba-u.jp/gadsp/results/pdf/h20\\_2j-w05.pdf](http://www.design.ti.chiba-u.jp/gadsp/results/pdf/h20_2j-w05.pdf) (last accessed 21.02.2010)

status of designers.<sup>694</sup> JIDPO worked with international associations, including JETRO.<sup>695</sup> Its policy reinforced the belief that design is not simply a tool for ensuring economic success, but ‘an explicit methodology for proposing and realising new visions. In other words, design is part of the very vitality that propels society as a whole forward.’ JIDPO continues to strive for the realisation of an ideal: ‘the creation of a creative and fulfilled society’ through the practice and sharing of design.<sup>696</sup>

### **JIDPO and Japan Design Foundation (JDF)**

Japanese industry has been stimulated by a number of independent design consultancies, and since the 1980s many of these have employed western designers.<sup>697</sup> During the 1980s, design consultancy ethos changed from products as objects to products as ideas. The JDF was established in 1981 (funded by national and local government as well as commerce and industry) in order to promote exchange through design.<sup>698</sup> Previous to this, JIDPO worked mainly with JETRO. The general public has also been increasingly involved in Japanese design since the 1980s, and forums, symposiums, workshops and exhibitions have proliferated.

The Japanese government designated 1989 as a ‘Design Year’ in a further effort to raise the profile of, and encourage interest in, design. In the same year, in order to celebrate this title, the city of Nagoya held the ICSID Nagoya Congress,<sup>699</sup>

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<sup>694</sup> Chui (2002), p. 135.

<sup>695</sup> Ibid, p. 137.

JETRO's core focus in the 21st century has shifted towards promoting foreign direct investment into Japan and helping Japanese SMEs maximise their global export potential. JETRO and JIDPO have been working together to formulate foundation work, management direction, screening criteria, and detailed support such as inviting Japanese judges to competitions and proposing a new packaging design category. See [http://www.jetro.go.jp/thailand/e\\_pree/pdf/gmark\\_eng.pdf](http://www.jetro.go.jp/thailand/e_pree/pdf/gmark_eng.pdf) (last accessed 27.05.2009).

<sup>696</sup> METI, *Kansei Initiative*, METI, Japan, May 2007, p. 1; Lee Seung-hee, et al. (2002), pp. 220-21.

<sup>697</sup> Some of the designers included British consultants such as Paul Priesman and Andy Davey. Japanese designers are highly aware of the work of their western counterparts. Nissan actually sent a team of designers to America in order to embrace US road Culture. This then helped them to produce the Nissan 300ZX, a car specifically aimed at the US sports car market. See Evans (1991), p. 80.

<sup>698</sup> Woodham (2004), p. 224.

Under the directorship of Kazuo Kimura, its objective was to promote Japanese design internationally, and provide design support to other Asian nations.

<sup>699</sup> Ekuan Kenji, ‘Design Based Company-development of Japanese Style Design Activities During the Ten years to Come’, *Industrial Design*, no. 148, Tokyo: JIDA, 1989, pp. 17-21, esp. 17-8; Koyama Taro, ‘Path toward Design Nagoya ’89 A Reflection by an Organizer’, *Industrial Design*, no. 149+150, Tokyo: JIDA, 1990, pp. 23-4, esp. 23.

as well as the first World Design Exposition.<sup>700</sup> Nagoya also hosted the ICSID and IFI world congresses in 1995.<sup>701</sup> From the mid-1980s until the early 1990s, the Japanese economy experienced what is known as ‘the bubble years’. During this period, Japan saw a dramatic increase in economic productivity and private investment, which was driven in part by record low interest rates.<sup>702</sup> However, by the beginning of the 1990s the bubble had begun to burst.<sup>703</sup> Expenditure on R&D fell, which played a significant role in the slowdown of Japanese productivity.<sup>704</sup>

In the early 2000s many thought that the IT industry might help revive the Japanese economy. Japan’s IT Strategy Headquarters formulated an e-Japan Strategy in January 2001 that aimed to create a ‘knowledge-emergent society’ that would help give Japan’s economy an advantage over its competitors. However, global competition eroded the international technological advantage of Japanese firms during the 1990s, and by the mid-2000s the IT industry (dot-com) bubble had burst.<sup>705</sup> Nevertheless, the advantage that Japan had, and continues to have, over its global economic rivals is that it out-performs them in terms of productivity.<sup>706</sup> JDF was heavily involved in the global promotion of design, including IT design. However, it was closed down in 2010. Before 2010, Japanese design policy was carried out by JIDPO and JDF under the jurisdiction of the Design Policy Office of

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<sup>700</sup> These events included conferences, exhibitions, award ceremonies, and seminars (one of which was a seminar organised jointly by Korea’s KIDP and Japan’s DAS in Nagoya Castle).

<sup>701</sup> Opened in 1996, The International Design Center Nagoya Inc. was the largest global design and R&D centre in Japan, where educators, industries and the government came together to exchange ideas. The Centre continues to be a quasi-governmental corporation with funding from national, regional, and local government, as well as the business sector..

<sup>702</sup> Toya Tetsuro and Jennifer Amyx, *The Political Economy of the Japanese Financial Big Bang: Institutional Change in Finance and Public Policymaking*, Oxford University Press, 2006, p. 110.

<sup>703</sup> Ibid, p. 111; Comin (2011), p. 375.

The cause of the economic problems in the early 1990s was principally due to an asset price bubble as opposed to fundamental flaws in Japanese industrial policy. See Michael Kitson and Jonathan Michie, ‘The De-industrial Revolution: The Rise and Fall of UK Manufacturing, 1870-2010’ in Roderick Floud (et al.), *The Cambridge Economic History of Modern Britain: Volume II. 1870 to the Present*, Cambridge: Cambridge University Press, 2014, pp. 302-29, esp. 325.

<sup>704</sup> Comin (2011), p. 376.

<sup>705</sup> Minetaki Kazunori and Nishimura Kiyohiko, *Information Technology Innovation and the Japanese Economy*, Stanford: Stanford University; Tokyo: University of Tokyo; Singapore: NUS Press, 2010, pp. 1-12.

The dot-com crash of 2001-03 and the financial crisis of 2008-09, which led to Japan’s lost decade, highlighted the need for rapid refinancing in the Japanese banking system. However, some Western economies have similarly weak monetary transmission mechanisms, raising the possibility of ‘lost decades’ in these countries too. See John Muellbauer and Murata Keiko, ‘Consumption, Land Prices, and Monetary Transmission Mechanism in Japan’ in Hamada, et al., eds. (2011), pp. 175-216, esp. 175-76.

<sup>706</sup> Alexander (2008), pp. 190-91.

Results typically show Japan’s economic productivity at two thirds greater than the US figure.



the METI. JIDPO changed its name to JDP in 2011 and continues to promote Japanese design.<sup>707</sup>

### **Japanesque Modern and Kansei Initiative**

In 2005, on the back of a rejuvenated Japanese culture, METI launched an initiative called 'Japanesque Modern', which aimed to promote an image of a 'new' Japan that combined traditional culture with modern lifestyles. The initiative, largely aimed at stimulating the Japanese economy, was a three year action plan.<sup>708</sup>

*Japanesque Modern*, inspired in part by New Labour's 'Cool Britannia' idea in Great Britain<sup>709</sup> which, arguably, had been influenced by similar initiatives in South Korea,<sup>710</sup> focused on various areas including art, performance and craftsmanship. Shortly after, in 2007, METI published the 'Kansei Initiative', an attempt to locate traditional style Japanese products within the global marketplace.<sup>711</sup> There were three main reasons for the Kansei Initiative: Firstly, as Japanese industries continued to experience structural changes, the following question was asked: 'What is a good product or service?' It was felt that this approach would help to identify what was required for differentiation and innovation, both of which would improve the competitiveness of Japanese industrial design.<sup>712</sup> Secondly, the idea of 'good product or service' was associated with something 'which arouses the emotions and empathy of ordinary citizens by visualising and communicating its story or message.' Finally, it was thought that 'a special type of economic value' would be derived from the Kansei of a product; for no matter what the true value of

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<sup>707</sup> The first chairman of JDP is Nagai Kazumasa, one of the most influential designers in Japan.

<sup>708</sup> Hirano Totsuyuki, 'Design and Culture: Developing a Nation's Brand with Design Management', *Design Management Review*, vol. 17, no. 1, 2006, pp. 15-20, esp. 17.

The three year action plan to promote the campaign consisted of, amongst other things, the creation of specific products and media contents, brand management and six overseas promotional campaigns. A total of 116 items were chosen for the Japanesque Modern Collection. Until 2009 Japanesque Modern offered at least 100 Awards in order to promote Japanese industry and technological advancement.

<sup>709</sup> In fact the term 'Cool Britannia' was first used by Tory culture secretary Virginia Bottomley in 1996.

<sup>710</sup> Joy Hendry (et al.), *Understanding Japanese Society*, 4<sup>th</sup> ed. (first published 1987), London and New York: Routledge, 2013, pp. 182-83.

<sup>711</sup> METI (2007), p. 1; Nagasawa Shinya, 'Customer Experience Management: Influencing on Human Kansei to Management of Technology,' *The TQM Journal*, vol. 20, no. 4, Emerald Group Publishing Ltd., 2008, pp. 312-23, esp. 314-16.

<sup>712</sup> The Kansei initiative involved several exhibitions, including the Tokyo exhibition in March 2008 with the theme 'Beauty, Skill, Kansei', and the Kansei-Japan Design Exhibition at the Musée des arts Décoratifs in Paris in December. These exhibitions were aimed at expanding the foreign market of Japanese business and products. See Tanaka Kazuo, *ICSID Regional Report: Japan- October 2008*, ICSID, p.1.

a product in terms of monetary value, technological advancement and design, none of this will bear fruit to the manufacturer unless it can be conveyed to the customer.<sup>713</sup>

### 3.1.2 Analysis of Design Policy

#### A. Industrial Strategy

Japan is similar to the UK in terms of its design sector and its manufacturing history. However, the data available (which is utilised by the International Design Scoreboard) suggests a comparatively smaller design services sector, perhaps due mostly to a cultural preference for group development and control of in-house capabilities. After WWII, America supported Japan both economically and militarily. Moreover, design policy changed significantly. In 1949 during the MacArthur administration, MITI was formed to oversee all industrial and economic policy. Between 1949 and 1983, Japan implemented twelve economic plans with a number of objectives including increasing participation amongst stakeholders, and encouraging private sector investment. The first stages of economic and social rebuilding had largely been completed by the mid-fifties. The rapid growth of Japan's economy from the 1950s until 1973 was based upon a successful industrial policy that involved: focusing on key industries such as electronics and automotive sectors; providing finance for long-term investment; and adopting protectionist policies.<sup>714</sup>

Until the 1950's the majority of innovative technology used in industry was introduced from foreign countries. During this period, Japan increasingly adopted an American design approach, suggesting that they were competing against Britain for a stake in American and Asian markets. In the 1960s, the changes in design policy that had occurred a decade earlier were most evident in industrial design (particularly in the optical and electrical industries), and there were several

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<sup>713</sup> Kosaka Yuji and Shiizuka Hisao, 'A Method for Creating Buying Behavior of Customers by Kansei Information Design,' *Journal of Modelling in Management*, vol. 4, no. 1, Emerald Group Publishing Ltd, 2009, pp. 19-27, esp. 20; Tanaka (2008), p. 2; Shiizuka Hisao and Hashizume Ayako, 'The Role of Kansei/ Affective Engineering and Its Expected in Aging Society' in Watada Junzo, et al. (eds.), *Intelligent Decision Technologies: Proceedings of the 3<sup>rd</sup> International Conference on Intelligent Decision Technologies (IDT'2011)*, Berlin; New York: Springer, 2011, pp. 329-39.

<sup>714</sup> Kitson and Michie (2014), p. 325.

attempts by industrial designers to achieve harmony between modern technological industries and Japanese craft industries.<sup>715</sup> From the 1950s to the 1970s, Japan aggressively pursued a surplus in the trade of electronic goods.<sup>716</sup> During this period, more attention was also being paid to the role of design in public places, which was explained by the success of the 1964 Tokyo Olympic Games which revived design.<sup>717</sup> After this event, both the general public and designers became more aware of what design was and its impact on everyday life.<sup>718</sup> The Olympics was also a spontaneous, democratic expression of the aspirations of peacetime Japan. It embraced the desire of the Japanese people to be reinstated into the international community which they had effectively been excluded from since the war.<sup>719</sup>

By the 1980s Japanese industry was highly competitive internationally. This success was based on the industry's technological superiority in the production process, which helped drive innovative product development. Japanese business leaders attributed their success at the time not only to the prevalence of more and often larger companies in Japan, but also to their ability to maximise output while minimizing expenditure. After the Plaza Accord in 1985 Japanese industry had an opportunity to change direction, but had too much confidence in the system they were using. This confidence led to Japan losing ground to its competitors in the

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<sup>715</sup> Tsukamoto Suketaro, 'International Review: Japan,' Magazine *Design*, no. 205, Glasgow; London: Design Council, January 1966, pp. 522-23, esp. 522.

<sup>716</sup> David Mowery and David Teece, 'Japan's Growing Capabilities in Industrial Technology: Implications for U.S. Managers and Policymakers,' *California Management Review*, vol. 35, no. 2, 1993, pp. 9-34, esp. 10; John Choy, 'Research and Development in Japan: 1991 Update,' *Japan Economic Institute (JEI) Report*, no. 36A, Washington, D.C. Japan Economic Institute of America, Inc., 27<sup>th</sup> September 1991; Masu Uekusa, 'Industrial Organization: The 1970s to the Present' in Yamamura Kozo and Yasuba Yasukichi (eds.) *The Domestic Transformation*, vol. 1 of *The Political Economy of Japan*, Stanford, CA: Stanford University press, 1987, pp. 469-515, esp. 490.

<sup>717</sup> Kamekura designed the Olympic logo and posters; one famous design is the simple but dynamic 'Hinomaru', a bright circle symbolising the sun. Working with the Japanese government, Kamekura also helped to redesign the entire system of pictographic street signs in Tokyo in preparation for the Games. See Christian Tagsold, 'Modernity, Space and National Representation at the Tokyo Olympics 1964' *Urban History*, vol. 37, issue 2, Cambridge University Press, 2010, pp. 289-300; Uchida (2011), pp. 97-101.

<sup>718</sup> In 1965, two large design conferences were held in Japan. In Tokyo there was the JIDA, where more than 1,000 delegates took part. Its theme was 'The Industrial Designer Today', which highlighted the public responsibilities of the designer in Japan. In Osaka, under the auspices of Osaka Design House, a conference took place entitled 'Design and the Human Environment.'

<sup>719</sup> Masaru Katsumie, 'Introduction' in Japan Graphic Designers Association (ed.), *Graphic Design in Japan*, vol. 1, Tokyo, New York & San Francisco: Kodansha International Ltd., 1982, p. 2 of chapter 'Introduction' (no page numbers given).

1990s.<sup>720</sup> In order to try and arrest this slide Japan transformed its design policy. For example the Export Inspection Law was repealed, the G-Mark system was privatised, and the Design Promotion Council was dissolved in 1996.<sup>721</sup>

### **Postwar Dispersion of Military Engineers into Civilian Industry**

After WWII military technology became taboo, and thousands of military engineers found themselves out of work and out of favour with the public. Many took their advanced technological skills into industry, especially the car manufacturing, shipbuilding and electronics industries.<sup>722</sup> An important figure in the car manufacturing industry was Hasegawa Tasuo, a former senior aeronautical engineer at Tachikawa Aircraft Company who was employed by the Toyota Motor Company in 1946. He initially found the level of engineering design being employed at Toyota to be primitive in comparison to the work he had done in the army. Among other things the Toyota engineers were not able to calculate the strength of the components used in car building or how much load the completed car would be able to take in the design stage. He introduced a new way of designing that allowed the load to be evenly dispersed through the sides, roof and floor. This was first applied to trucks,<sup>723</sup> but later extended to the first generation of successful cars like the Corolla, Publica and Carina.

From 1945 onwards Honda took advantage of the availability of aero-engine developers in order to help build their infrastructure for research and development. Among the engineers they employed was Kudo Yoshito who had helped create the turbo-jet engine for military aircraft and later became Honda's head of research and development. In this role he oversaw the development of several highly advanced engines for cars, motorbikes and planes. Nissan also employed many former military engineers, who then passed their skills down to the next generation.

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<sup>720</sup> Morikawa Hidemasa, 'The Top Management of Large-scale Enterprises in Post-war Japan' in Abé and Gourvish, eds. (1997), pp. 63-76, esp. 70.

<sup>721</sup> IP's significance is also shown by the establishment of the Industrial Competitiveness Strategy Council and the Strategic Council on Intellectual Property.

<sup>722</sup> Nishiyama (2014), pp. 85-9.

After WWII Japan poured all of her resources into the development of civilian technology. The government kept a strong hold over this development, and that combined with business competition and grass roots demand for new technology, created an ideal situation for the rapid growth of innovative commercial technology. See Nakayama, et al. (1999), pp. 28-30.

<sup>723</sup> Under the supervision of the General Headquarters (GHQ) during the MacArthur administration, the Japanese auto industry started producing trucks soon after the end of WWII, later transferring the technology to car manufacture. See Fujimoto Takahiro, *The Evolution of A Manufacturing System at Toyota*, Oxford University Press, 1999, pp. 36-8.

This retention of knowledge helped Nissan develop a number of technologically advanced products including the highly successful passenger car, the 'Skyline'.<sup>724</sup>

Japan's current electronics industry was arguably started by Wada Hiroshi,<sup>725</sup> an ex-military electronics engineer specialising in semiconductor and computer technologies. He masterminded Japan's early computer R&D in the 1950s and 1960s. Wada coined the terminology 'denshi gijutsu' as a translation of 'electronics' in order to make it more understandable to government bureaucrats. The production of Sony's commercially successful transistor radio (TR-55) in 1955 highlighted the economic potential of electronics. As such the government began to support Wada's ideas, and therefore the Electronics industry more directly.<sup>726</sup>

A number of electronics companies such as Sony and Canon also benefited from the availability of ex-military engineers after WWII; these engineers helped propel the industry to success.

### **The Introduction of Quality Control (QC)**

During the late 1940s and 1950s the concept of QC entered the Japanese workplace, especially on the factory floor.<sup>727</sup> And in fact it was the US Army that played a role in the introduction of Statistical Quality Control (SQC) to Japan.<sup>728</sup>

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<sup>724</sup> Nishiyama (2014), pp. 92-3.

The Japanese National railways also benefited from having skilled engineers, as did the Shinkansen (high speed trains) project in the 1950s and 60s. See Nishiyama (2014), p. 119.

<sup>725</sup> Wada Hiroshi (1914-2007) was an electrical engineer who became an important leader in the semiconductor and computer technology areas in post-WWII Japan.

<sup>726</sup> Choi Hyung-sub and Kita Chigusa, 'Hiroshi Wada: Pioneering Electronics and Computer Technologies in Postwar Japan,' *Annals of the History of Computing, IEEE*, vol. 30, issue. 3, 2008, pp. 84-9, esp. 84-5.

Akio Morita and Masaru Ibuka began working together after the war, initially manufacturing and selling tape recorders, and then inventing Sony's first transistor radio. By 1952, transistor licences had become available in the US and, a year later, Morita signed a licensing agreement with Western Electric (Manufacturing section of AT&T) in the US. Morita and Ibuka succeeded in adapting their technology for radio when they produced their transistor radio in 1955. They followed this up in 1957 with the production of a pocket radio, at the same time changing the company name to Sony. See Nakayama, et al. (1999), pp. 31-2.

<sup>727</sup> MITI had already set up the JIS in 1949 to improve the standard of Japanese industrial products, and in the same year it invited two QC experts Deming and Juran to give some seminars on QC with the aim of making workers and management more interested in it. It also expanded QC training for the public through NHK (Nihon Hoso Kyokai - Japan's public broadcasting organisation) in 1957. See Laura B. Forker, 'Quality: American, Japanese, and Soviet perspectives,' *The Academy of Management Perspectives*, vol. 5, no. 4, 1991, pp. 63-74, esp. 64-6; Ishikawa Kaoru, 'Quality Control in Japan' in Sasaki Naoto and David Hutchings (eds.), *The Japanese Approach to Product Quality: Its Applicability to the West*, Oxford: Pergamon Press, 1984, pp. 1-5.

<sup>728</sup> Nonaka Izumi, 'The Development of Company-wide Quality Control and Quality Circles at Toyota Motor Corporation and Nissan Motor Co. Ltd.' in Shiomi Haruhito and Wada Kazuo (eds.), *Fordism Transformed: The Development of Production Methods in the Automobile Industry*, Oxford University Press, 1995, pp. 139-59, esp. 154-55. For example, having learnt about SQC from

SQC was phased in to Japanese industry between 1946 and 1950, during which time a number of Japanese companies formed their own QC research groups.<sup>729</sup> Edward Deming also developed SQC specifically for the Japanese car industry in an attempt to improve design quality. Deming's system consisted of designing vehicles that customers desired, analysing the relationship between customer satisfaction and vehicle appearance, and applying the results to design planning.<sup>730</sup> Such American influence became integral to Japanese production, design and society, informing a part of the educational programme at the 'Japanese Union of Scientists and Engineers', and paving the way for TQC in Japan.<sup>731</sup> This development was swiftly followed by the implementation, between 1955-1960, of the Company Wide Quality Control (CWQC) movement.<sup>732</sup>

Beginning in 1958, Japan began to develop Armand Vallin Fiegenbaum's American-style manufacturing production theory TQC, which was to become the foundation of Japanese design and economic development.<sup>733</sup> In the 1960s, Japan changed its national motto to 'Catch up with the west', an aim which they subsequently met. This forced Western companies to keep their cards closer to their chest when it came to technological developments, and previously publicly available details of patents became 'top secret'. Japan responded to these developments by emphasising the ideals of QC across society, for example in government offices, universities and private research laboratories. Japan's development of QC theory meant that its companies were in a better position to recover from the oil shocks of the 1970s.<sup>734</sup>

## **The Promotion of SMEs**

The 1963 SMEs Modernisation Law, revised in 1969, aimed to affect a series of structural improvements in SMEs. This law helped SMEs increase productivity

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Deming's lectures, Nissan and Toyota introduced SQC into their manufacturing processes in 1949 and both companies followed this system until the mid-1950s.

<sup>729</sup> John Heitmann, *The Automobile and American Life*, Jefferson NC: McFarland & Co Inc., 2009, pp. 180-84.

<sup>730</sup> Amasaka (2004), p. 169-70.

<sup>731</sup> The core of QC promotion is made up by private organisations such as Japanese Union of Scientists and Engineers (JUSE) and Japanese Standards Association (JSA), rather than governmental QC promotion bodies. See Nonaka (1995), pp. 139-43; Johnson (1982), pp. 216-17.

<sup>732</sup> Nonaka (1995), p. 11; Ishikawa (1984), p. 1. CWQC is the study of statistical methods by all the employees of a company including top management.

<sup>733</sup> Where the firm formulates a business strategy of cost reduction, in certain circumstances it may adopt TQC activities in order to reduce costs. See Shimizu (1989), pp. 19-21.

<sup>734</sup> Nonaka (1995), pp. 154-55.

during the 1970s (i.e. value-added productivity increased 287%).<sup>735</sup> Nevertheless, in the 1970s Japanese SMEs were dealt a number of blows including the collapse of the fixed exchange rate system in 1971 (caused by Nixon removing the dollar from convertibility with gold) which led to appreciation of the yen and thus problems for Japanese SMEs that relied on their exports. In addition, the MITI's decision to grant preferential tariffs to developing countries meant that some SMEs faced the dilemma of either moving their operations to developing countries or concentrating on producing different products. Further, the oil crises of 1973 and 1979 raised the prices of imported materials, increasing the financial demand on SMEs, a situation exacerbated by MITI's decision to remove existing rules protecting Japanese companies from foreign competition. The problems faced by SMEs during the 1970s led to design in Japan evolving into an integrated process of technological research, manufacture, and marketing.<sup>736</sup> Many companies that had previously depended on imported foreign design models, or who had simply refused to believe that design could boost trading, were impelled during the 1980s to review their own design policies.<sup>737</sup>

### **Promoting the Electronics Industry**

Up until the late 1950s interest in computing in Japan was largely confined to the scientific community. However in the 1960s several developments, including the ticketing and reservation systems used for the Shinkansen bullet trains (systems that were introduced in preparation for the 1964 Tokyo Olympics) led to MITI and other leading Japanese companies coming to realise the strategic importance of computers. In fact Japan's utilisation of American computer systems (e.g. the IBM system 360) to help organize the 1964 Olympics made Japanese industry aware that they needed to close the technological gap between themselves and America.<sup>738</sup> This desire to catch up with American manufacturers led to MITI

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<sup>735</sup> Sumiya, ed. (2000), pp. 573-78.

<sup>736</sup> Takehara, et al., eds. (2003), p. 108. In 1970, a national census revealed that 70,630 Japanese citizens listed their occupation as 'designer.'

<sup>737</sup> Alexander (2008), pp. 127-28.

<sup>738</sup> Nakayama, et al. (1999), pp. 43-4. In the early 1960s the leading Japanese companies struck technological agreements with American companies in order to learn from them, i.e. Hitachi with RCA, Mitsubishi Electric with TRW, NEC with Honeywell, Oki with Sperry Rand, and Toshiba with General Electric. Fujitsu was ahead of the other companies in terms of technological development, having started its own development effort in the 1950s after procuring some funding from MITI.

establishing a high speed computer system project that supported six companies: this project ran from 1966 to 1972.<sup>739</sup>

In the 1970s MITI focused on developing technology for popular domestic products i.e. home computers. As a result of the 1971 'Law on Temporary Measures for Promotion of Specified Electronic Industries and Specified Machinery Industries' MITI provided USD 1.72 million (JPY 620 million) for experimental research on various pieces of machinery, and the development bank made available USD 4.03 million (JPY 1.45 billion) of finance to help companies produce and promote the machinery which included semiconductor elements, digital computers, and electronic desktop calculators.<sup>740</sup> Over the next few years the growth of the Japanese electronics industry was phenomenal,<sup>741</sup> and by the end of the 1970s, personal computer games became universally popular due to the innovation of Nintendo.<sup>742</sup>

In 1973 the Japanese government discovered that IBM was planning to produce a mega chip, the 'Future System', which was to be the start of a new era in computing. To counter this, MITI encouraged five firms (Fujitsu, Hitachi, NEC, Toshiba, and Mitsubishi) to initiate a research programme called Very-Large Scale Integration (VLSI) which ran from 1976 to 1980.<sup>743</sup> These five companies that initially worked with the VLSI project became market leaders: by 1990 there were 44 companies manufacturing and selling semiconductors. This was the legacy of the VLSI project since it inspired the development of new technologies that ultimately benefitted other manufactures and the country at large.<sup>744</sup>

The VLSI initiative coincided with Japan's rapid advances and ultimate conquest of the world market for DRAMs, the memory chips used in the PC and

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<sup>739</sup> The six companies were Hitachi, Fujitsu, NEC, Toshiba, Mitsubishi Electric, and Oki. MITI's Electrical Research Laboratory helped coordinate the 6 company's technological development. See *ibid.*

<sup>740</sup> Sumiya, ed. (2000), pp. 612-13.

<sup>741</sup> The proportion of foreign manufactured computers in Japan dropped from 93% in 1958 to 43% in 1969. IBM's share of the Japanese market which was as high as 80% in the 1950s, had shrunk to less than 30% by the late 1970s. By 1979 Fujitsu had surpassed IBM in sales of all electronic information products in Japan, and in 1968 Japanese production of integrated circuits had surpassed that of USA. See Abé (1997), pp. 34-5; Nakayama, et al. (1999), p. 45.

<sup>742</sup> Uchida (2011), pp. 226-27.

<sup>743</sup> Komiya Ryutaro and Yokobori Keiichi, *Japan's Industrial Policies in the 1980s* (trans. MITI/RI, Tsusho Sangyo Chosakai), Tokyo: MITI/RI (Research Institute of International Trade and Industry), 1991, p. 43; Abé (1997), pp. 34-5. This resulted in the formation of the Very Large Scale Integrated Circuit Research Association in 1976. The government (USD 120 million, JPY 29 billion) and the private sector (USD 171 million, JPY 41 billion) spent a combined USD 291 million (JPY 70 billion) on the VLSI project between 1976 and 1980.

<sup>744</sup> Komiya and Yokobori (1991), pp. 43-5.



workstation market.<sup>745</sup> The success of joint R&D in VLSI, along with Japan's new Fifth Generation of computer technology,<sup>746</sup> spawned a host of imitators worldwide, such as: the US Department of Defense's 'Very High Speed Integrated Circuit' semiconductor initiative; the US Microelectronics and Computer Consortium and Sematech; and the Alvey and Esprit programs in Europe.<sup>747</sup> MITI's Fifth Generation project, along with the VLSI initiative, was designed to end the Japanese computer industry's reliance on IBM, and also enable Japan to catch up with and surpass US semiconductor technology.<sup>748</sup> Therefore the MITI's vision for the 1980s followed the format of their 1970s policy but with the new goal of achieving a 'creative, knowledge-intensive industrial structure'. As such MITI initiated a programme that aimed to develop a Japanese semiconductor industry that could produce good quality microchips for popular domestic products.<sup>749</sup>

The Fifth Generation Consortium ran from 1982-1992 and aimed to produce computers that were one step closer to human beings in their ability to reason and make inferences from large knowledge databases.<sup>750</sup> Another computer project that originated in the 1980s is the Tron (The Real-time Operating Nucleus) Consortium (1984- present), which is an open computer architecture programme started by Dr Ken Sakamura of the University of Tokyo. It provides an interface that enables several computers to work together in real time.<sup>751</sup> Both Tron and the Fifth Generation programme were heavily supported by the Japanese government up until the early 1990s, after which their R&D funding was significantly reduced.<sup>752</sup>

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<sup>745</sup> The development of electronic calculators helped Japan develop its computer technology. Much of the early 1970s became known as the 'calculator wars' due to fierce competition between manufacturers in their designs. In 1971, there were about 50 companies competing to produce the best designed calculators. Initially, most calculators were 'desktop' size, but as competition raged, technology advanced and smaller pocket-sized versions became available. Only Casio and Sharp were really successful at providing innovative and affordable calculators for both businesses and individuals. See Nakayama, et al. (1999), p. 33.

<sup>746</sup> The first generation of computers were built with vacuum tubes; the second with transistors, the third with integrated circuits; and the fourth with VLSI-based integrated circuits

<sup>747</sup> Scott Callon, *Divided Sun: MITI and the Breakdown of Japanese High-Tech Industrial Policy, 1975-1993*, Stanford: Stanford University Press, 1995, pp. 15-6.

<sup>748</sup> Nakayama, et al. (1999), p. 45. MITI's concern with companies over-relying on the domestic market shaped Japanese strategy in the computer industry. Although Japanese mainframes were competitive domestically, the Japanese export market in the 1970s was not large enough to cause concern to the US and European markets. However, the development of the memory chip (which was a result of the VLSI programme) increased Japanese electronics exports in the 1980s.

<sup>749</sup> Komiya and Yokobori (1991), p.16.

<sup>750</sup> Callon (1995), pp. 23-4.

<sup>751</sup> Ibid, pp. 27-30.

<sup>752</sup> During the bubble period strong domestic consumer demand for electronics products, together with the availability of cheap capital, allowed Japanese electronics companies to invest heavily in

This reduction resulted in both programmes failing to reach their expected government (MITI) targets. Although Japan had highly advanced manufacturing technology, due to fundamental structural differences between manufacturing technology and IT, manufacturing suffered in the 1990s because of its increasing reliance on IT systems such as Tron and Fifth Generation. This in turn discouraged R&D investment in Japan's electrical machinery leading to a general drop in R&D investments across all industries throughout the 1990s.<sup>753</sup> Most Japanese electronics firms experienced a downturn as a result, and further Japan's industries generally became less competitive in this decade.<sup>754</sup> Hence, Japanese products lost their leading position in design innovation and were overtaken by brands such as Apple and Samsung.

### **Globalisation, Foreign Direct Investment (FDI) and Design**

During the 1970s and early 1980s, Japanese overseas investment increased,<sup>755</sup> with Japanese electronics firms circumventing trade barriers and investing in overseas factories including the US and Europe. In fact, Sony became the first Japanese company to open factories in the UK and US (namely the TV manufacturing plants opened in 1974 in Bridgend, and San Diego in 1972).<sup>756</sup> Japanese management techniques were then introduced to revitalise British productivity in a number of industries, including the motor industry.<sup>757</sup> By 1986,

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state-of-the art plants, equipment and R&D, thereby improving their design capability and boosting their international competitiveness. See Ralph Paprzycki, *Interfirm Networks in the Japanese Electronics Industry*, London and New York: RoutledgeCurzon, 2005, p. 62.

<sup>753</sup> Watanabe Chihiro and Nagamatsu Akira, 'Sources of Structural Stagnation in R&D Intensity in Japan's Electrical Machinery Industry – An Analysis of Mismatching with IT Functionality Development', *Technovation: an international journal of technical innovation and entrepreneurship*, vol. 23, no. 7, 2003, pp. 571-91, esp. 571-72.

During the 1990s the government also became concerned that Japan's technological industry was losing its competitive edge over the US, and so political and business leaders started to implement policy changes. However, the government had reduced R&D funding to private companies which affected Japan's design capabilities and thereby its competitiveness in the electronics industry.

<sup>754</sup> For example the 'Big Five' industrial-electronics firms saw their combined net income reduce from a profit of JPY 230.7 billion in 1992 to a combined loss of JPY 560.3 billion in 1999.

<sup>755</sup> Solís (2004), pp. 40-2.

For the period between 1966 and 1970 FDI stood at a mere 2.6 billion, but in 1971 alone the figure was USD 858 million, rising to USD 2.338 billion in 1972, and USD 3.497 billion in 1973.

<sup>756</sup> Mitsubishi, Toshiba, Sharp and Hitachi set up factories in the US, while an existing US-owned TV plant was bought Matsushita and Sanyo in 1976. In Britain Matsushita followed Sony by establishing a plant in 1976. See Peter Dicken, *Global Shift: The Internationalisation of Economic activity* (2<sup>nd</sup> ed.), London: Paul Chapman Publishing Ltd., 1992, p. 340.

<sup>757</sup> A 1987 survey suggested that most British firms preferred to train their own senior staff like the Japanese. British firms also adopted Japanese production techniques, as reviewed by a 1988 analysis which showed that 90% were using or planning to use group working, while 95% planned

Japan had the largest amount of assets worldwide, overtaking Britain.<sup>758</sup> However, the US imposition of import tariffs and Japanese fears over protectionism caused many TV manufacturers to set up facilities in the States.<sup>759</sup> FDI in the Automobile industry also increased from USD 1.7 billion in 1980 to USD 4.1 billion in 1981, in part stimulated by a US decision to impose export quotas.<sup>760</sup> In 1982, Honda was the first Japanese auto-maker to manufacture in the US, and between 1981 and 1984 Nissan and Toyota also opened facilities there, followed a few years later by all the other Japanese car makers.<sup>761</sup>

During the 1980s and 1990s Japanese outward FDI began to focus on Asia as well as North America and Europe.<sup>762</sup> Between 1986 and 1993, approximately 30 percent of Japanese investment went to Asia, in particular to the Association of Southeast Asian Nations (ASEAN) countries. The amount of Japanese FDI in Asia has strengthened the economic interdependence of countries in the region.<sup>763</sup> The electronic sector pioneered overseas manufacturing and was responsible for 30 percent of Japanese manufacturing FDI during the 1990s.<sup>764</sup> During the 1980s, Japan became the world's leading producer of active electronic components, including semiconductors, integrated circuits and microprocessors. However, from the mid-1980s onwards the consumer electronics industry was in decline, greatly

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to use TQC. The same research claimed that JIT was used in 34% of British companies, while another 30% planned to use it in the future. See Brown (1998), pp. 202-03.

<sup>758</sup> By 1991 there were 200 Japanese owned companies in Britain, employing 1% of the manufacturing workforce. Between 1951 and 1994 Britain received 40% of all Japanese FDI in the EC countries. In the same period British investment in Japan amounted to less than 5% of the total foreign investment in Japan. See Brown (1998), p. 201.

<sup>759</sup> Solís (2004), p. 42.

For example Mitsubishi (1977), Toshiba (1978), Sharp and Hitachi (1979), and Japan Victor (1982).

<sup>760</sup> In fact by the end of 1970s the US car industry was incurring heavy losses and in 1980 and 1984 Chrysler, Ford, and General Motors made losses in the billions of dollars. By 1980 Japan had overtaken the US in terms of car production. See Carroll M. Gantz, *The Industrialization of Design: A History from the Steam Age to Today*, Jefferson, N.C. and London: McFarland & Company, Inc., 2011, p. 249.

<sup>761</sup> Ibid; Jeffrey Rothfeder, *Driving Honda: Inside the world's most innovative car company*, London: Portfolio Penguin, 2014, p. 12.

<sup>762</sup> Dan Coffey, *The Myth of Japanese Efficiency: The World Car Industry in a Globalizing Age*, Cheltenham: Edward Elgar, 2006, pp. 135-36.

<sup>763</sup> Solís (2004), pp. 44-9. Firms in the electronic and automobile industries in these countries remain heavily dependent on Japan for the supply of technology and parts.

<sup>764</sup> Ibid, pp. 42-3 and 180-84.

The value of Japanese overseas investment almost doubled from USD 12.2 billion in 1985 to USD 22.3 billion in 1986 and reached a peak in 1989 at USD 67.5 billion. The pace of outward investment slowed due to the collapse of the economic bubble during the 1990s but recovered by 1999 to USD 67 billion. One of the reasons for the slowdown in outward investment was the signing of the Plaza Agreement on exchange rates in 1985, following which the value of the yen increased.

accelerated by the Plaza Accord in 1985.<sup>765</sup> The accord led to a prolonged period of low interest rates which in turn created a large domestic asset bubble. This phenomenon was economically unjustified and in part caused the Asian economic crisis that began in 1987.<sup>766</sup> Nevertheless in 1989, 42 percent of the world's active electronic components were still produced by Japan, while the US accounted for 26 percent, and Europe only 12 percent (the UK made up 16 percent of the European total).<sup>767</sup> This high Japanese figure was partly due to their superior design standards.

Both the US and Japan provide state subsidies for high-tech research and development. They differ slightly in that US high-tech R&D is military orientated. If anything comes out of this military research that appears to be commercially viable then it is handed over to the private sector. In Japan however, MITI handles the distribution of subsidies, which go straight into the commercial market. This system is more economically efficient than the US version, and helps explain why Japan's high-tech sector competes well with its US counterpart.<sup>768</sup>

### **In-House Design and Product Strategy**

By the beginning of the 1980s, Japan had begun to build a reputation for well-designed and well-built technical products.<sup>769</sup> The Toyota Company had a design department of 430 by the early 1980's, and the company defined design as, '...the means of harmonising human needs and mechanical requirements.'<sup>770</sup> In a similar vein, Sharp's design strategy was aimed at 'ease of use'. Sharp's 200 in-house designers worked to make products that were not only easy to use, but also looked easy to use so as to increase their appeal. Sharp's Chief Executive Kiyoshi Sakashita believed that forward planning which focused on consumer lifestyles

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<sup>765</sup> Solís (2004), p. 176; Coffey (2006), pp. 135-36.

In the mid-1980s, the value of the US dollar declined against the Yen falling from JPY 260 in 1985 to JPY 140 in 1987. With regards to Japanese SMEs, in 1977 they made up 40% of new FDI rising to 80% in 1988, and during the 1990s SMEs accounted for between 45 and 57% of total FDI. See Brown (1998), p. 201.

<sup>766</sup> Andrew Sheng, *From Asian to Global Financial Crisis: An Asian Regulator's View of Unfettered Finance in the 1990s and 2000s*, Cambridge University Press, 2009, pp. 54-5.

<sup>767</sup> Dicken (1992), p. 311.

<sup>768</sup> Peter Mitchell and John Schoeffel (eds.), *Understanding Power: The Indispensable Chomsky*, London: Vintage, 2003, pp. 240-41.

<sup>769</sup> Nevertheless, Japanese economic development during the 1980s and 1990s was affected by the increasing costs of overheads.

<sup>770</sup> Penny Sparke, *Modern Japanese Design*, New York: E.P. Dutton, 1987b, p. 47.

was the key to success.<sup>771</sup> Yamaha had a small design lab, with designers of all ages working in-house, although nearly a third of the work was done by outside consultants.<sup>772</sup>

In 1990, the national census revealed the number of people listing their occupation as 'designer' was 156,855, a significant rise from the figure recorded in 1970.<sup>773</sup> As Japanese design moved into the 1990s, products became more and more eclectic. In a special report for *Design*, Emma Platt noted how the industrialisation of Japan had occurred independently of traditional Japanese culture, and its youth were products of a society without roots. Hype and manipulation in industrial design functioned in the same way as in the pop industry – Japanese firms demanded 'hit' products. However, it seemed that if product design and production must function like fashion, then huge corporations needed to restructure, not least because fashion is essentially an information management process. Japanese corporations therefore dispatched a vanguard to central Tokyo with the brief to 'capture' the market.<sup>774</sup> Lifestyle research centres were also built in order to develop strategy for future product design. Companies were labelling consumers by what they bought, and then making sure they got more of the same.

Japan established Regional Design Centers (RDCs) in various regions in the 1990s and achieved regionalisation of design promotion. This led to 47 local government design departments being set up, and the establishment of design centres in 20 regions. Nonetheless METI continued to promote design and it was included as one of 7 strategic areas which would help lead Japanese future growth through the government's 'Strategy for new industry creation 2005'.

In 2008, JIDPO organised the 'Good Design Expo 2008,' which was one of the largest design fairs in Asia. The products focused on the objects of everyday life. By changing its event title from 'Good Design Presentation' to 'Design Expo,' the organisers emphasised 'design for the future.'<sup>775</sup> In addition a symposium, co-

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<sup>771</sup> Specifically 232 in-house designers, spread over the Corporate Design Centre and five product divisions, were responsible for designing television, audio-visual equipment, information systems, appliance systems, electronic components, and calculators. The output of new designs per year was 15-20 products. See Evans (1991), p. 82.

<sup>772</sup> Roxanne Guilhamet, 'In-House Rules,' Magazine *Design*, no. 489, London: Design Council, September 1989, pp. 42-5, esp. 42-3.

<sup>773</sup> Takehara, et al., eds. (2003), p. 108.

<sup>774</sup> Special report: Japan by Emma Platt 'Form Follows Fashion,' Magazine *Design*, no. 511, London: Design Council, July 1991, pp. 11-8.

<sup>775</sup> Tanaka (2008), p. 3.

organised by the JIDA and JIDPO, entitled 'The Value of Japanese Design in International Society' was held to commemorate 'World Industrial Design Day'. Also in 2008, an International Design Competition was held on the subject of 'Earth Life', with sub themes around ecological issues: 'Clean water, clean air, clean energy.' All of the above initiatives indicate that by a system of diverse practical and promotional strategies, the Japanese design industry is set to recapture its high reputation.

## **B. Educational Strategy**

### **Western Influence**

In 1928 the Design Educational Research Center (Kogei Shidosho) was established by the Japanese Ministry of Commerce and Industry (MCI).<sup>776</sup> Ministry officials Kishi Nobusuke and Yoshino Shinji created the centre, and their project involved the Japanese efficiency movement known as industrial rationalisation, which was influenced by Western movements such as Fordism. Industrial rationalisation was used in the 1930s to help increase Japan's war capability.<sup>777</sup> The Japanese design industry saw a major expansion during the inter-war years, due to its tradition of providing good science and technology education.<sup>778</sup> In the 1930s and early 1940s the number of design training programmes in higher education was increased by the Education Ministry. The MCI also sponsored a programme that saw western designers visiting and advising government departments and professional bodies such as the Design Educational Research Center (which was involved in the promotion of Japanese products).<sup>779</sup>

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JIDPO has been working on several programmes in the last few years in order to support the programmes of the Bureau of Industrial and Labour Affairs of Tokyo City. In an effort to utilise design by raising the competitiveness of SMEs, it has been developing career development sessions and enlarging the Tokyo design market.

<sup>776</sup> MCI was established in 1925 and reorganised as MITI in 1949. MITI was reorganised as the Ministry of Economy, Trade and Industry (METI) in 2001.

<sup>777</sup> Kashiwagi (2000), pp. 70-1.

<sup>778</sup> The MCI founded the Japanese Association of Design and Industries, a body that sought to ensure that products were designed to a high standard for western companies. See Brown (1998), p. 78.

<sup>779</sup> Izuhara (1996), p. 96; Evans (1991), p. 68; Kikuchi (2004), pp. 95-109.

The Design Educational Research Center (Kogei Shidosho) was advised by Bruno Taut. In 1933-4, Taut instructed the institute in the making of household goods using new materials such as aluminum, stainless steel and plastic. His teaching was based on his professional experience in a German Werkbund. In addition, in 1940 Charlotte Perriand spent two years advising the center on how products could appeal to Western markets. However, Taut was ultimately a more influential

During the US occupation, the Japanese university system continued to be influenced by the US. There were three International Cooperation Administration (ICA) programmes, financed by the US government, between Japanese and American universities.<sup>780</sup> The United States Operations Mission (USOM) was the ICA agency attached to the US embassy. It provided assistance to Japanese agriculture and industry, and aided the application of Japanese research to business and agriculture. In addition, it engaged in the promotion of American teaching methods, especially business administration.<sup>781</sup>

Modern design education began in the 1950s with design education programmes introduced at universities such as the Tokyo National University of Fine Arts & Music and Tama Art University.<sup>782</sup> Izuhara Eiichi contends that the creation of design education programmes was directly linked to the fact that drawing (Doan), crafts and Bauhaus design were a compulsory part of elementary and secondary school curricula during this period.<sup>783</sup> In 1951, Raymond Loewy was invited to Japan, where he designed products and packages and presented his ideas to Japanese businessmen.<sup>784</sup> Also in the early 1950s, about seventy young Japanese designers were sent to study in the United States and Europe.<sup>785</sup> Throughout the 1960s these 'design envoys' did much to progress and 'Westernise' Japanese design, as well as promote Japanese design concepts abroad. During

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figure in Japanese design because some young designers thought Perriand was biased against non-European cultures and thought they were primitive.

<sup>780</sup> Bronfenbrenner (1961), p. 38.

Examples of cooperation between US and Japanese universities were: the Michigan-Waseda Programme in Industrial Productivity; the Harvard-Keio Programme in Business Administration, and the Stanford-Tokyo Programme in American studies. See *Ibid*, pp. 209-10.

<sup>781</sup> *Ibid*, pp. 40-1 and 101.

During the period 1954-1961, the ICA was aided by the Fulbright Committee.

<sup>782</sup> Penny Sparke, *Japanese Design in the Twentieth Century: Tradition Encounters the Modern World*, New York: Museum of Modern Art, 2009, p. 21. Including the Kuwasawa Design School (1954), Musashino Art University (1962), Nagoya University of Arts (design programme in 1983). All these institutions offered four-year courses. The Tokyo National University of Fine Arts & Music in 2008 changed its English name to 'Tokyo University of the Arts'.

<sup>783</sup> Izuhara (1996), pp. 206-07.

<sup>784</sup> Additionally, in 1956, members of the faculty of the Art Center School of Los Angeles were invited by the JETRO. E. A. Adams, the founder, and John Coleman, the head of product design, met with management in 86 factories in order to evaluate their product designs and marketing practices. Goerge Jergensen also conducted a course for designers and engineers at the Industrial Arts Institute in Tokyo on 'how modern design methods can be applied to Japanese products for the betterment of that country's export business'. See Arthur J. Pulos, *The American Design Adventure: 1940-1975*, Cambridge Massachusetts; London, England: MIT Press, 1988, pp. 191-93; 'Design Reaches Across Pacific,' *Industrial Design*, vol. 4, no. 1, New York: Whitney Publications, Inc., January 1957, p. 12.

<sup>785</sup> *Ibid*; Gantz (2011), pp. 213-14.

this period, Bauhaus design became increasingly popular, boosted by a visit to Japan from one of its founders, Walter Gropius, in 1954.

Doan and Bauhaus design education provided a foundation for the 1960s design boom, as well as the phenomenon of manga animation. The rise of manga, and its general acceptance by Japanese society and culture, can be traced back to compulsory art and design education.

## Industry and Higher Education

In 1960, the Hayato Ikeda government (1960-1964) introduced the National Income Doubling Plan, which made education part of economic policy, thereby giving it a crucial impetus. The Long-term Education Plan that accompanied the Income Doubling Plan aimed to increase labour force potential and promote scientific technology.<sup>786</sup> This was to be achieved through the expansion of upper secondary schools and technical education. The importance of an integrated education system that encompassed the journey from higher education to doctoral level was emphasised in two reports issued by the Central Council for Education (CCE) in 1963 and 1971.<sup>787</sup> The recommendations given in these two reports profoundly influenced many current educational institutions.<sup>788</sup>

The growth of the economy in the 1960s meant that more companies were employing designers, which in turn led to more young people wanting to become designers. To meet this demand, several design schools were established around the country. New universities soon followed and, by the end of the decade, the increase in design education had created a ripple effect throughout society and the need for design was recognised.<sup>789</sup> In 1965, Japan saw more than 1,000 students

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<sup>786</sup> Nishizawa Tamotsu, 'Education Change and In-Firm Training in Post-War Japan' in Abé and Gourvish, eds. (1997), pp. 101-20, esp. 108-10.

It also focused on human resource training and management education. From the early 1960s, industry and universities were encouraged to cooperate to devise systemic management training, and in 1964 The Labour Productivity Academy was established. See *Ibid.* p. 113.

<sup>787</sup> Yokoyama Keiko, *Government, Policy, and Ideology: Higher Education's Changing Boundaries in Two Island Kingdoms-Japan and England*, Plymouth: University Press of America, Inc., 2010, pp. 8-9. The 1971 report particularly emphasised the need for the self-regulation of universities to be respected.

<sup>788</sup> Hada Yumiko, 'Current Changes within the Japanese Higher Education System: Past and Future' in Rein T. Segers (ed.), *A New Japan for the Twenty-first Century: An Inside Overview of Current Fundamental Changes and Problems*, London and New York: Routledge, 2008, pp. 157-75, esp. 157.

<sup>789</sup> Hagiwara Shu, *Origins: The Creative Spark Behind Japan's Best Product Designs* (photos. Kuma Masashi, trans. Philip Price), Tokyo; London: Kodansha International, 2006, p. 7.



complete a university course in design, with a further 500 graduating from technical colleges. Furthermore, around 30 high schools offered design training in their curricula.<sup>790</sup> The value of design education increased significantly in the 1970s and 1980s. The National Council on Educational Reform produced three reports from 1985 to 1987, the second of which emphasised that graduate schools specialising in creative education and research were vital for Japan's future,<sup>791</sup> and that institutional autonomy was compatible with accountability.<sup>792</sup> Additionally, design education curricula were expanded to include not only conventional disciplines such as fine art and engineering but also life, culture and ergonomics.<sup>793</sup> In the 1990s courses on management resources, design strategy and design management were established.<sup>794</sup> This increase in design and management education filtered down to industry, which recognised the benefits of comprehensive education and by 1993 most large companies offered intensive training courses to employees, and also provided them with dormitory-style accommodation.<sup>795</sup>

By the end of the 1990s Japan had to acknowledge its need for knowledge-intensive employment and effective global branding strategies. As providers of knowledge and technology, universities played an active role in collaborating with public administration and business. Universities initially worked with private companies, using technology transfers and commissioned research.<sup>796</sup> In addition,

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The growth in public awareness about the importance of design was also enhanced by the publicity surrounding Japanese designers attending the World Design Conference in 1967. However, although this awareness encouraged men to study design, it impacted less on women with only 6% of female art and design students enrolled in 1968. By the 1980s though, about 50% of students on four year courses were women, with 80% on two year programmes. See Thornton (1991), pp. 202-09.

<sup>790</sup> Tsukamoto (1966), p. 52.

<sup>791</sup> In 2008, Japan had around 28,000 design graduates. See Hada (2008), pp. 157-58.

<sup>792</sup> And as such the report focused on small government. See Yokoyama (2010), pp. 11-6.

<sup>793</sup> Chiu (2002), pp. 131-38. By the 1980s design education had become more specialised, and courses were divided into either ergonomics or formative engineering.

<sup>794</sup> *Ibid.* This indicated Japan's feeling that designers needed practical training in order to compete in the global market.

<sup>795</sup> Nishizawa (1997), p. 118.

55% of Japanese companies which offered training had their own training facilities, with 76% having facilities exclusively dedicated to education and training.

<sup>796</sup> Philippe Debroux, 'Innovation in Japan: What Role for University Spin-offs?' *Asia Pacific Business Review*, vol. 14, no. 3, 2008, pp. 443-60, esp. 443-47.

From the early 2000s, university spin-offs became increasingly successful in attracting venture capital and promoting innovation. 1,503 university spin-offs were established by March 2006, of which 845 were a direct result of successful university research. Approximately 45% of these spin-offs were in manufacturing, 37.5% in bioscience and 30% in information technology.

from the early 2000s the government put more funding into the IT education sector partly in order to help develop the intellectual property industry.<sup>797</sup>

### **Creative industry and Cool Japan**

Following the 1964 Tokyo Olympics there was increased worldwide interest in Japanese culture and products. This in turn fuelled interest in other Japanese cultural forms, including anime and manga, both of which first became popular worldwide in the 1990s. In November 2000 the Japanese Ministry of Education, Culture, Sports, Science and Technology (MEXT) decided to classify manga and anime as belonging to Japanese 'traditional' culture.<sup>798</sup> Following this, in 2001 METI produced a report that highlighted its support for the anime industry.<sup>799</sup> Today a global audience attend the numerous exhibitions showcasing manga and anime. In addition, since the mid-2000s there has been an increase in the number of government sponsored scholars who study manga and anime, and also an increase in the number of global students who study Japanese culture.<sup>800</sup>

By 2001, the creative industries made up 2.7% of the country's GDP generating GBP 200 billion (JPY 36.30 trillion). At this time, the creative industries were generally divided into the media contents industry (under METI),<sup>801</sup> and arts and culture (under the Agency for Cultural Affairs, ACA).<sup>802</sup> In 2002, METI initiated, 'Cool Japan', which was aimed at enhancing the export sector by exploiting Japan's emergence as a 'cultural superpower'. As a result, many Japanese

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<sup>797</sup> Intellectual Property Strategic Program 2014.

<sup>798</sup> Although manga and anime had been highly successful in western markets during the 1980s and 1990s, it was not until 2000 that MEXT finally accepted these art forms as valid 'arts'.

<sup>799</sup> Choo Kuk-hee, 'Nationalizing "cool": Japan's Global Promotion of the Content Industry' in Nissim Otmazgin and Eyal Ben-Ari (eds.), *Popular Culture and the State in East and Southeast Asia*, London and New York: Routledge, 2012, pp. 85-105, esp. 86.

<sup>800</sup> Ibid, pp. 95-6. 80% of the 430 animation companies in Japan are based in Tokyo, making the content industry (software development, design, film and video production) practically a local Tokyo business.

<sup>801</sup> However METI did not pay any attention to the media and contents industry until the early 21<sup>st</sup> century when they actively began promoting broadcasting, newspapers, publishing, film, music and digital entertainment, generating a turnover of GBP 58 billion (JPY 10,600 billion) in 2000.

<sup>802</sup> Desmond Hui, 'The Creative Industries and Entrepreneurship in East and Southeast Asia' in Colette Henry (ed.), *Entrepreneurship in the Creative Industries: An International Perspective*. Cheltenham, UK; Northampton, MA, USA: Edward Elgar, 2007, pp. 9-29, esp. 10-2. The ACA was established in 1968 with the primary purpose of preserving and promoting traditional arts. In 1996, they launched the Arts Plan 21 to support arts and cultural activities, increasing its budget to GBP 0.1 billion (JPY 20 billion) in 2003. They currently promote the creation and presentation of music, drama, film, visual arts etc., by granting international and domestic fellowships to artistes.

universities developed programmes to train university students to a professional level in the cultural industries.<sup>803</sup>

In 2002 Prime Minister Koizumi, designated Japan as an 'intellectual property nation'. This was followed in 2003 by the Cabinet Office establishing both the Intellectual Property Strategy Headquarters (IPSH), and the Intellectual Property Basic Law. This law's stated aim was to make Japan an 'IP Rich Country', and to this end university collaborations were used to ensure that the results obtained from any research were communicated successfully to industry.<sup>804</sup> The IPSH today oversees the operations of the various ministries involved with the content industry.<sup>805</sup>

In 2002 MEXT began implementing a knowledge cluster initiative to boost regional economies. The initiative promotes joint research by industry, government, and academia into new technologies. However in the early 2000s there were still concerns regarding the strength of design practice, as well as the connections between academic design institutions. As a result, the 'International Design Liaison Centre' was set up in 2007 to try and address these issues.<sup>806</sup> Furthermore in 2010 METI established the Creative Industries Promotion Office, under the banner of 'Cool Japan', in order to promote the cultural and creative industries, and coordinate various government functions in this area.<sup>807</sup>

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<sup>803</sup> Iwabuchi Koichi, 'Cultural Flows: Japan and East Asia' in Bestor, et al., eds. (2011), pp. 263-72, esp. 270.

<sup>804</sup> Arai Hisamitsu, 'Japan's Intellectual Property Strategy,' *World Patent Information*, vol. 28, no.4, 2006, pp. 323-26, esp. 323-24.

<sup>805</sup> Choo (2012), pp. 89-90. In 2008 the IPSH's spent JPY 122.8 billion, which included, among other things: JPY 66.9 billion was used on patent inspection, JPY 2.7 billion for acquiring global rights and anti-counterfeiting measures, JPY 3.16 billion to support regional SME's, and JPY 14.2 billion on intellectual creativity promotion. However, since the Democratic Party came to power in 2009, the IPSH's budget has been drastically reduced.

<sup>806</sup> The center aims to provide connections between foreign academic institutions and the industries and designers of Japan. Additionally, the Design Staff Development Center was set up within JIDPO to promote careers in design. It focuses on 'New Design Policy in Response to Changes in the Times', with a view to eradicating the gap between supply and demand that currently affects the design sector. See <http://www.jidpo.or.jp/en/library.html> (last accessed 12.06.2010).

<sup>807</sup> Takagi Mika, 'Opinion', *AXIS*, vol. 150, Tokyo: axis Inc., April 2011, pp. 61-65, esp. 64. Among the areas that the Cool Japan office is seeking to promote are; industrial design, interior design, anime, films, fashion and textile industry, and traditional handicrafts. As the global market for cultural industry grows, the Cool Japan office expects that Japan will take about 1% of the world market share, equivalent to GBP 44 billion to GBP 72 billion (JPY 8 to 13 trillion) by 2020.

## C. Marketing Strategy

### Total Quality Control (TQC)

Edward Deming, using Walter A. Shewhart's ideas and theories, first introduced QC into Japan in the 1940s and 50s. Deming mapped out design strategies for the Japanese car industry in an attempt to improve design quality by applying statistical methodology to QC. This method was known as SQC and consisted of; designing vehicles that customers desired, analysing the relationship between customer satisfaction and vehicle appearance, and understanding the relevance of the above, and applying the results to design planning.<sup>808</sup> Deming and Shewhart's system was then developed further in America by Joseph M. Juran, who suggested a system of Total Quality Management (TQM). This was an expansion of Japanese TQC, which began developing in the late 1950s and was in its turn based on Fiegenbaum's American TQC manufacturing theory.<sup>809</sup> Japanese companies first adopted the American-style TQC system in the 1960s,<sup>810</sup> and this system covered all areas of manufacturing, from the boardroom to the factory floor.<sup>811</sup> The TQC system's main features were; Just-In-Time (JIT); Employee Involvement (EI); and Continuous Improvement (CI).<sup>812</sup> The key concept of JIT is 'stockless' production, achieved by ordering only the required number of parts needed at any one time.<sup>813</sup> JIT originated at 'Toyota Automobile Industries',<sup>814</sup> and enabled Japan to quickly meet the demands of a changing market. These methods

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<sup>808</sup> Amasaka (2004), p. 169-70.

<sup>809</sup> Amasaka (2004), p. 86. The TQM system gained worldwide attention in the 1980s when it was developed by the Japanese car manufacturer Toyota.

<sup>810</sup> Shimokawa Koichi, *Japan and the Global Automotive Industry*, Cambridge University Press, 2010, pp. 87-9.

<sup>811</sup> By 1968, Ishikawa Kaoru, a founder of TQC in Japan, had delineated the essential elements of TQC management to include: 'quality comes first, not short-term profits; the customer comes first, not the producer; decisions are based on facts and data; management is participatory and respectful of all employees; and, management is driven by cross-functional committees covering product planning, product design, production planning, purchasing, manufacturing, sales, and distribution.' See Ishikawa Kaoru, *What Is Total Quality Control? : The Japanese Way* (trans. David J. Lu.), Englewood Cliffs; London: Prentice-Hall, 1985; Jeffrey Funk, *The Teamwork Advantage: An Inside Look at Japanese Product and Technology Development*, Cambridge, Massachusetts: Productivity Press, 1992, pp. 37-8.

<sup>812</sup> They allowed a different means of production to the American system, which had typically designed first and considered the costs at a later date. These concepts changed and developed over time and have come to influence marketing and production strategies worldwide. See Margaret Gagne, 'New Product Costing, Japanese Style,' *The CPA Journal*, vol. 63, no. 5, New York: New York State Society of Certified Public Accountants, 1993, pp. 68-71, esp. 68.

<sup>813</sup> Shimokawa (2010), p. 88.

<sup>814</sup> Shimizu (1989), p. 52; Sasaki Naoto, 'Cases of QC Circle' in Sasaki and Hutchings, eds. (1984), pp. 15-25, esp. 20-1.

have led to today's highly competitive practice of 'Zero Defect competition',<sup>815</sup> another form of quality control. The QC system also had an impact on design and in part, these changes arose from the close working relationship between designers and engineers. Technological innovations, such as Computer Aided Design (CAD) and Artificial Intelligence (AI), enhanced and speeded up the design process. However, the main focus of these changes was to create a system in which designers, engineers and management could better respond and incorporate the users' needs.<sup>816</sup> These innovations in the production process enabled manufacturers to make products to a very high standard.<sup>817</sup>

In the 1950s 'quality control' in Japan was not restricted to the workplace; rather the government attempted to extend the concept to other areas of society, for example in the area education (in the late 1950s quality control skills were often taught to the public via radio and TV by the national broadcaster NHK). This drive for quality control led to the New Life Movement in the 1960s.<sup>818</sup> This movement was influenced by the government's push for 'double income', which led to an aspirational culture of pursuing an attractive, modern, American lifestyle in an urban environment.<sup>819</sup>

## Technology and Uniqueness

During the 1970's, many Japanese companies focused on innovation in order to adhere to their common business strategy of competing more on technology and uniqueness rather than price. The reason for this strategy is highlighted by the fact that by 1978 Japan had the most saturated colour TV market in the world. As such

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<sup>815</sup> Victoria and Albert Museum, *Sony: Sony Design: an Exhibition in the Boilerhouse at the Victoria & Albert Museum* (text by Stephen Bayley, Conran Foundation), London: V & A, 1982, pp. 64-6.

<sup>816</sup> Uchimaru Kiyoshi (et al.), *TQM for Technical Groups: Total Quality Principles for Product Development*, Portland, OR: Productivity Press, 1993 (trans. Scott Decker, Originally published as Gijutsu shudan no TQC, in 1990), pp. 7-19.

<sup>817</sup> Pulos (1988), p. 227.

<sup>818</sup> Patricia Maclachlan, 'The Struggle for An Independent Consumer Society: Consumer Activism and the State's Response in Postwar Japan' in Schwartz and Pharr, eds. (2003), pp. 214-32, esp. 222.

In the late 1950s Japan's expanding new middle class increasingly moved into new apartment blocks in the suburbs of cities such as Tokyo and Osaka. Many of these new residents were part of nuclear families. See Gordon (2014), p. 254.

New apartment blocks were continually built from the late 1950s through to the 1980s, still mainly housing the growing middle class. From the late 1960s through to the 1990s, Korea followed Japan's lead by also building new apartment blocks which mainly housed middle class residents.

<sup>819</sup> Sumiya, ed. (2000), p. 433; Gao (1998), p. 242.

The increasingly affluent society led to 90% of the population describing themselves as 'middle class' by the 1960s. See Ivy (1993), pp. 241.

Japanese manufacturers needed to find new ways to stimulate demand, and did so by designing add-ons such as the remote control.<sup>820</sup> Another example of this ‘uniqueness’ strategy came in the late 1970s with the introduction of the Sony Walkman.<sup>821</sup> As exports flourished, living standards in Japan grew and domestic markets developed around demand for consumables. At this time companies became increasingly aware of the importance of design. However, owing to the worldwide increase in oil prices, Japan went through an economic crisis, and by 1974, rocketing oil prices forced the Japanese to change their way of life. Companies found that they had stockpiles of goods they were unable to sell. Industry therefore had to ask itself what customers really needed and what they would buy.<sup>822</sup>

By 1978, the economy was growing and the design market was picking up. Japan was now exporting a variety of goods to the US, including motorbikes, golf-carts and snowmobiles.<sup>823</sup> Although previously unthinkable, ‘international business marriages’ were now underway between Japan and the US.<sup>824</sup> The superiority of Japan’s quality control helped increase its worldwide exports. In the early 1980s, Japanese quality control exceeded even the best American firms.<sup>825</sup> However, the ensuing bubble period was soon to put pressure on Japanese exports. This period was characterised by an emphasis on money, success, achievement and upward mobility, all of which helped encourage the consumption of status products.<sup>826</sup> Consumers demanded newer and more expensive products, even if purchasing

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<sup>820</sup> Porter (1983), p. 516.

<sup>821</sup> Shimizu (1989), pp. 55-6; Schaefer (2008), pp. 58.

<sup>822</sup> ‘Japanese Economic Crisis,’ Magazine *Design*, no. 325, Glasgow; London: Design Council, 1976, p. 43.

In order to ensure that they did not have stockpiles of goods that they could not sell, Sony marketing strategies went to great lengths to explain the concepts of their new products to consumers. For example, in 1975 Sony marketed the Betamax VCR by means of the idea of a ‘time shift’ to make consumers realise that they could record TV programmes they had missed and then watch them later. See Chang Sea-jin, *Sony vs. Samsung: The Inside Story of the Electronics Giants’ Battle for Global Supremacy*, Singapore: John Wiley & Sons (Asia) Pte. Ltd., 2008, p. 68.

<sup>823</sup> In the late 1970s Matsushita was Japan’s biggest company in terms of manufacturing consumer electronic products and household durables. In 1978, 34% of Matsushita sales were exports, with 18% of these going to North America. See Porter (1983), pp. 518-19.

<sup>824</sup> Nishimoto Yoshio, ‘Japanese Designers Move to LA,’ Magazine *Design*, no. 357, Glasgow; London: Design Council, September 1978, p. 71.

<sup>825</sup> For example, by the mid-1980s the defect rate for American auto parts manufacturers was 1.8%, while that for Japanese firms was 0.01%. See Edward Lincoln, *Japan’s New Global Role*, Washington D C: The Brookings Institution Press, 1993, p. 47.

<sup>826</sup> Joseph P. Helgert, *Comparing and Contrasting Marketing Assumptions and Advertising Strategies in Japan and the United States: Case Studies*, Lewiston, N.Y.; Lampeter: Edwin Mellen Press, 2005, p. 126.

these products meant spending beyond their means. The government encouraged this over consumption in order to boost the domestic market.<sup>827</sup> Japan relied heavily on their domestic market because the strength of the yen caused high import duties thereby negatively affecting the country's ability to exports products.

In 1989 (Japan's Year of Design) Japan hosted the ICSID World Design Expo. Such initiatives indicate the high level of governmental support given to design in Japan at this time. Additionally, the G-Mark design award is now one of the leading international design award schemes.<sup>828</sup> Japan also has a high number of international trademark registrations, which suggests that it has many internationally recognised brands, for example Nikon F90 camera and the Sony's PlayStation.<sup>829</sup> But although Sony has long been acknowledged as the world's best electronic manufacturer, in 2002, their market capitalisation fell below that of Samsung.<sup>830</sup> This was surprising since prior to the mid-1990s Samsung had been an obscure memory chip production company.<sup>831</sup>

Electrical machinery played a leading role in Japan's economic development in the 1970s and 1980s when Japan developed advanced manufacturing technology. However, manufacturing suffered in the 1990s due to fundamental structural differences between manufacturing technology and IT, and this technology's increasing reliance on IT systems. This in turn discouraged R&D investment in Japan's electrical machinery leading to a general drop in R&D investments across

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<sup>827</sup> Uchida (2011), pp. 227-34.

After the economy collapsed, consumer emphasis shifted to quality of life, family, health, nature and global concerns as people re-evaluated consumerism. A sense of responsibility, self-improvement, and networking through communication technologies replaced the emphasis on excess that had pervaded the bubble period. See Joseph P. Helgert (2005), p. 126.

<sup>828</sup> James Moultrie and Finbarr Livesey, *International Design Scoreboard: Initial Indicators of International Design Capabilities*, University of Cambridge, Institute for Manufacturing, 2009, p. 46.

<sup>829</sup> The PlayStation's (1994) success was largely due to its design, which was a combination of circles and squares with horn shaped controllers instead of the traditional flat shape. It was designed by Goto Teiyu, who later designed VAIO. As a result, Sony achieved great success in the PC business. See Chang (2008), pp. 69-70.

<sup>830</sup> In the 2005 Interbrand top 100 Best Global Brands Samsung was placed in 20<sup>th</sup> whereas Sony was ranked at 28<sup>th</sup>. However in the 2014 table Samsung had risen to 7<sup>th</sup> whereas Sony has fallen to 52<sup>nd</sup>.

<sup>831</sup> Chang (2008), pp. 1-2.

Sony's troubles actually began after it acquired Columbia Pictures in 1989. By 1994 it had to write off accumulated losses of USD 3.5 billion. Sony recovered profitability in the late 1990s mainly due to the success of the PlayStation, but started to decline again by the early 2000s when sales began to stagnate. Samsung on the other hand, had highly volatile sales and profitability in the late 1990s, but its revenue almost doubled between 2000 and 2006, with its profitability much higher than Sony's during the same period. See Ibid, pp. 2-4.

all industries throughout the decade.<sup>832</sup> As a result Japan's industries generally became less competitive. In the early 2000s, as their IT industry grew and developed, many in Japan thought that the IT industry might help spark a revival of the economy. However by the mid-2000s it was already in decline following the 'dot-com' crash.<sup>833</sup> There is no doubt that the economic slump in Japan has had a major impact on the relative successes and failures of the manufacturing industry. Nonetheless, there is much that remains positive in the Japanese economy, and the success of many of Japan's manufacturing concepts have seen them become commonplace around the world.<sup>834</sup>

## D. Design Practice Strategy

### Western Models

German influence on design remained strong in Japan during the 1920s. Two Japanese designers, Mizutani Dakehiko and Yamawakaki Michiko, funded by the Japanese government to study at the Bauhaus, returned to Tokyo to establish the New Architecture and Industrial Art Technology Institute in 1932, where Bauhaus principles were taught.<sup>835</sup> The graphic designer Natori Yonosuke graduated from the Munich University of Art and Engineering, where he studied arts and crafts, and returned to Japan in 1933 to establish the first graphic design company, Nippon Kobo (Japan Studio: 1933-45), in Tokyo.<sup>836</sup> Initial members of the company included Yamana Ayao, the founder of the Shiseido enterprise, Domo Gen, arguably the father of modern Japanese photography, and the now iconic graphic designer, Kamekura Yusaku. The three collaborated, with Natori at the helm, to create the magazine *NIPPON* in 1934,<sup>837</sup> a publication that widely encapsulated

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<sup>832</sup> Watanabe and Nagamatsu (2003), pp. 571-72.

<sup>833</sup> Minetaki and Nishimura (2010), pp. 201-17.

<sup>834</sup> For example the 'Lean' concept has been adopted by many overseas companies. The concept aims at reducing waste in the production system and thereby making it more efficient. In this way the system does more with less.

<sup>835</sup> Ruick (2005), pp. 361-64.

<sup>836</sup> Shirayama Mari and Hori Yoshio (eds.), *Natori Yonosuke and Japan Studio: 1931-45 (Natori Yonosuke to Nihon kobo 1931-1945)*, Tokyo: Iwanami shoten, 2006.

<sup>837</sup> The composition employing photography in Nippon magazine was created by Hiromu Hara, a graphic designer heavily influenced by Russian Constructivism. See Kenji (1988), p. 21.



Japanese modern life and culture.<sup>838</sup> In the late 1920s American designers like Henry Dreyfuss (1904-1972) influenced Japanese product design. In 1940s a small number of designers, including Kosugi Jiro and Akioka Yoshio, formed a group from which the Japanese design renaissance stemmed.<sup>839</sup> In 1949, the first contract was recorded between a design consultant and a manufacturer: Kosugi was appointed by Toyo Kogyo Company (now Mazda), to design the front of a small tricycle truck.<sup>840</sup> The 1950s saw a number of Japanese consulting groups establish themselves in Japan.<sup>841</sup>

From the mid-1950s to the early 1960s, the US government supported the growth of Japanese industry partly as a measure against encroaching communism.<sup>842</sup> The American designer Russel Wright was sponsored by the ICA to research and implement Japanese design projects for export to the US.<sup>843</sup> Wright's research included a proposal which he presented to the Japanese government in 1957, persuading leading American stores to stock Japanese handicrafts, and also send their in-house experts to Japan to purchase Japanese products and set up sales exhibitions in individual stores.<sup>844</sup> In addition, the ICA budgeted USD 36,000 for American designers to visit Japan in 1958, and in 1959 the Japanese government budgeted USD 3,200 (JPY 1,150,000) which allowed

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<sup>838</sup> The Editorial Committee for Century of Graphic design, *Century of Graphic Design (Gurafikku no Seiki)*, Tokyo: Kentaro Oshita, 2008, p. 41; Shirayama and Hori eds. (2006), pp. vi-xv; Takehara, et al., eds. (2003), pp. 57-9; Fujita (1999), pp. 136-38.

The magazine was designed to promote Japanese culture to the West, as well as demonstrating that Japan embraced modern western ideals. It was translated into English, French, German and Spanish, and distributed to these countries widely until 1944.

<sup>839</sup> Fujita (1999), pp. 144-45. Following this, many industrial design offices were established. For example Kosugi Design, Yanagi Design, Toriton Design and the Okimura Company were established in 1946, while the KAK design group, Minakawa design, Miyajima design, Siroisi design, GK design, and Yuuryo were all established in 1953.

<sup>840</sup> Fujita (1999), p. 48; Evans (1991), p. 69. During the late 1940s and the early 50s Japanese standards of living improved as did standards of design. A number of design groups sprang up during this period, for example Group Koike who went on to win the Mainichi Newspaper group industrial design prize in 1955 (this competition was first held in 1952). The money Koike won from this competition enable them to establish one of biggest design consultancies in the world, namely GK Industrial Design Association.

<sup>841</sup> Gantz (2014), p. 151.

<sup>842</sup> Kikuchi Yuko, 'Russel Wright's Asian Project and Japanese Post-War Design' in *International Committee of Design History and Studies (ICDHS) 5<sup>th</sup> Conference*, University of Art and Design Helsinki-Estonian Academy of Arts, 2006, pp. 5-6.

<sup>843</sup> *Ibid*; Gantz (2014), p. 151.

He formulated the 'Promotion of Japanese Handicrafts' which he gave to the Japanese government via JETRO and which they officially adopted, bar a few minor points.

<sup>844</sup> It also suggested using American stylists to advise on improving Japanese design for the US market. This was in order to reach the general public and persuade them to buy Japanese products, as the post-war view of Japan amongst ordinary Americans was still largely negative. See Kikuchi (2006), p. 3.

them to invite American merchandisers to Japan for consultation purposes. All this activity culminated in the two 1961 exhibitions at the Japan Trade Centres in New York and San Francisco.<sup>845</sup> Promoting Japanese products for the global market was also an increasing priority throughout the 1950s, and when JETRO became a fully-fledged government body in 1958, they opened inter-governmental talks with the Soviet Union with a view to developing a closer economic relationship and expanding trade volumes from both countries.<sup>846</sup>

## Design Developments

In 1952, the JIDA was founded in order to encourage cooperation between designers and small industry. It claimed that Japanese design should not follow the US pattern, as it was not suited to Japanese production systems.<sup>847</sup> In 1953, the design consultancy GK was set up by Buddhist monk and design authority Ekuan Kenji (one of the few examples of an independent designer) and it remains one of the biggest design groups in Japan today.<sup>848</sup> Ekuan helped to develop Yamaha motorcycles and the Akita bullet train, seeking to link traditional Japanese aesthetics and contemporary design.<sup>849</sup>

In 1951, the first in-house design department was established by Kounosuke Matsushita who was the head of Matsushita Electric. Matsushita demonstrated the effectiveness of in-house design to other companies. Sharp employed in-house industrial designers for the first time in 1954 to design radios in the engineering section. In addition, since the 1950s the Japanese government has provided significant resources in support of design. For example, JETRO liaised with foreign consultancies to make it easier for Japanese companies to export their products.

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<sup>845</sup> Kikuchi (2006), p. 4. There were 1,788 items on display and both exhibitions were a great success. The exhibitions were successfully held again in 1962, focusing more on items specifically redesigned for the US market. Promoting Japanese products for the global market was also an increasing priority throughout the 1950s, and when JETRO became a fully-fledged government body in 1958, they opened inter-governmental talks with the Soviet Union with a view to developing a closer economic relationship and expanding trade volumes from both countries.

<sup>846</sup> Sakurai (2007), p. 8. JETRO held three Japanese Industrial Trade Fairs in Moscow in 1960, 1965 and 1970, and the USSR held a Soviet Union Trade and Industry Fair in Tokyo in 1961, and another in Osaka in 1966.

<sup>847</sup> McHugh (1959), p. 63.

<sup>848</sup> Sparke (2009), p. 22.

<sup>849</sup> During the 1960s, it had a strong emphasis on graphics, as seen in its successful packaging of soy sauce (Kikkoman), which was also notable for the shape of the bottle – an Eastern parallel to tomato ketchup in the US. The 1970s saw GK organising several exhibitions and producing signage systems, whereas the 1980s saw a general diversification of projects, and an increase in competition. See *Ibid.*

Furthermore, JETRO conducted surveys in foreign countries in order to ascertain which products stood a good chance of being successful foreign markets. Moreover, in 1963 JETRO held an exhibition showcasing Japanese design; this exhibition was to be repeated several times over the coming years. The exhibitions were part of Japan's ongoing export promotion plans.<sup>850</sup> While Japan during the 1970s also focused on exports, there was additionally a move towards the production of high end goods and away from cheap mass-production. This move was aided by the direct involvement of company presidents in design, and highlights the importance of in-house design to competitiveness.

### **The Development of Characteristic Style**

In the 1980s, corporations recognised design as an important aspect of product development strategy. Japan sought to promote its own unique design by designing for what was known as the 'human touch'. This term was coined by the head of the design department at Sharp in the early 1980s.<sup>851</sup> From the mid-1980s until the early 1990s consumption greatly increased, and many design projects were advanced to meet consumer demand.<sup>852</sup>

Social and class identity changed during the 1990s and the motto of both industry and government became 'self-responsibility.' To some this shift represented freedom and liberation from the 'controlled society' of much of postwar Japan, a chance to maximise one's own potential in a more open market, to work for oneself rather than sacrifice yourself for a corporation. The bursting of the economic bubble in the early 1990s brought recession and a change of mood. People and industry had to tighten their belts and the appeal of imported goods wore off, creating demand for products better suited to the Japanese indigenous lifestyle. During this period a number of in-house designers lost their jobs and many subsequently became freelance.<sup>853</sup> These designers often entered design

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<sup>850</sup> Industrial Arts Institute (ed.), 'A Reminder of 1964: History of the Design World' ('1964 Dezain-kai no Ayumi'), *IAN (Kogei Nyusu)*, vol. 33, no. 1, 1965, pp. 3-13, esp. 3-5.

<sup>851</sup> The idea refers to the interface between human beings on the one hand, and science and technology on the other. 'The Tsukuba Science and Technology Fair', held in 1985, furthered this idea and Japanese design was held in high regard throughout the world. See 'Tsukuba Expo '85,' *New York Times*, 16<sup>th</sup> September 1984, p. JN56.

<sup>852</sup> Uchida (2011), pp. 229-31. The Nakasone government fostered this overconsumption by reducing taxes for companies, encouraging them to sell to the domestic market, and promoting home made goods to the population as a way to show patriotism. This was due to Japan being unable to sell their products abroad because the strong Yen following the 1985 Plaza Agreement.

<sup>853</sup> Naomi Pollock, *Made in Japan: 100 New Products*, London; New York: Merrell, 2012, p. 19.

competitions in an attempt to get recognised by manufacturers and design consultancies. However design consultancies also experienced financial difficulties at this time and were forced to look for new clients in other parts of Asia such as Korea and Taiwan.<sup>854</sup> Many industries were forced to restructure and move manufacturing abroad, including Sharp which established several factories in China.<sup>855</sup> During this period the economic recession led design culture away from gadgets. A new individualised design culture turned designers into popular figures revered by some almost as fine artists.<sup>856</sup> A new generation of Japanese designers emerged and more of them worked outside the country as globalisation accelerated. This, in turn, led many western designers to come and work in Japan.<sup>857</sup>

Japan has not developed a large indigenous design consultancy sector, as firms generally prefer to retain skills in-house. One of the reasons for this is the Confucian based 'groupist' society in which, as opposed to western individualism, designers see their role as working for the company rather than themselves. Moreover, a holistic approach to business prevails in Japan, where several firms are family owned, and companies generally are vertically integrated, enabling close control. Thus, the in-house design team is favored in Japanese and Korean culture. Sony and Samsung for example, employ several hundred in-house designers.<sup>858</sup> The total number of designers employed by Japanese firms, may therefore be around ten times greater than the number of consultants.<sup>859</sup> Thus, there are

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Many young designers had become frustrated in in-house design departments because since they would often have to toe the company line and ignore their own design interests and goals.

<sup>854</sup> Private communication - I interviewed the director of the 'Shiri Design Lab' on the 10<sup>th</sup> December 1992 at his company office in Osaka. He informed me that at that time between 30-50% of his company's income came from other parts of Asia.

<sup>855</sup> Lincoln (2001), pp. 95-6.

<sup>856</sup> Uchida (2011), pp. 311-13.

<sup>857</sup> Among these western designers were: Norman Foster and Ron Arad from Great Britain, Ettore Sottsass and Aldo Rossi from Italy, and Philippe Starck from France. Japanese designer Michio Hanyu went to Korea for design consultation in the 1980s and 1990s. See Sparke (2009), pp. 33-4. Additionally, as Yuichi Yamada points out, a rise in freelance designers (*Dokuritsu-kei*), many of whom had experience in the West or had worked in large Japanese corporations, began creating individualistic designs that were on the margins of mainstream Japanese design. See Andrew Davey, *Detail: Exceptional Japanese Product Design*, London: Laurence King Publication, 2003, p. 118.

<sup>858</sup> Trade Partners UK (2002), Design in Japan fact-finding mission, accessed on 02/02/09 from <http://www.britishdesigninnovation.org/der/Opportunities%20in%20Japan%20Report.pdf> (last accessed 12.06.2010).

<sup>859</sup> According to the International Design Scoreboard, of these consultancies, graphic design accounts for around 65%, with interior design at 17% and industrial design at 14% of the total. See Moultrie and Livesey (2009), p. 46.

relatively few design consultancies in Japan in comparison to other nations. Moreover, according to METI research, few of the design firms which were established during the '70s and '80s were left by the 2000s.<sup>860</sup>

## 3.2 Russia

### 3.2.1 Brief History of Design Policy

#### Special-Purpose Design Bureaus (SKBs) and VNIITE

Between the dissolution of Vkhutemas in 1930, and the establishment of the VNIITE there was a 30 year gap. During this gap the continuity of design practice was provided by designers working in Special-Purpose Design Bureau (SKB or SHKB: Spetsialnoe Konstruktorskoe Byuro), particularly in relation to the military field,<sup>861</sup> for example the shipbuilding and aircraft manufacturing.<sup>862</sup> The government opened a number of SKB's across the Soviet Union, mainly between the end of the 1920s and the late 1990s.<sup>863</sup> Among these SKB's were a number of Experimental Design

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<sup>860</sup> In 2006 there were 164,741 designers working, and 149 design institutes with 31,444 students, producing 8,688 trained designers every year. In 2009 there were 7,747 design firms which had a turnover of GBP (JPY 387 billion). They were found to have an average of 5 employees per company and annual sales were GBP (JPY 4,996,000). See [http://www.meti.go.jp/policy/mono\\_info\\_service/mono/humandesign/downloadfiles/jigyokankyou\\_wg/2-02.pdf](http://www.meti.go.jp/policy/mono_info_service/mono/humandesign/downloadfiles/jigyokankyou_wg/2-02.pdf); [http://www.meti.go.jp/policy/mono\\_info\\_service/mono/human-design/toukei.html](http://www.meti.go.jp/policy/mono_info_service/mono/human-design/toukei.html) (last accessed 11.05.2012).

<sup>861</sup> According to Zaleski's OECD study '*Science Policy in the USSR*', the number of people employed in design organisations grew considerably between 1953-1959, many of whom were probably former military designers. In 1953 there were 35,000 specialists employed in design organisations, which increased to 118,000 by 1959. This is partly due to the establishment of *sovnarkhozy* (regional economic councils) in 1957, which in turn set up 153 design organisations. See Hutchings (1976), p. 162.

<sup>862</sup> A group of industrial design training school graduates had begun to form within the industry and design groups started to appear in shipbuilding research institutes. See Woodham (2004), p. 446; It has been suggested that the principle link between Soviet design in the early 1930s and the early 1960s was formed through the armed forces; for example, Soviet warships and military aircrafts fully combined science, technology, and design. See Hutchings (1976), pp. 148-49, and 246.

<sup>863</sup> A. Antonov, 'The Latest in the Industrial Products' Design' ('Novoe v Proektirovanii Promishlennih Izdeliy'), *Technical Aesthetics*, no. 3, Moscow: VNIITE, 1964, pp. 1-2; Yuri Soloviev, 'The Results of Work in the Area of Artistic Design and the Ways of Improving It' ('Rezultati Raboti v Oblasti Hudozhestvennogo Dizayna i Sposobi Uluchsheniya Etoi Raboti'), *Technical Aesthetics*, no. 8, Moscow: VNIITE, 1965, pp. 1-7, esp. 3-7.

Leningrad was home to the majority of the SKBs, with its first opening in 1932. They focused on a variety of products including heavy machinery, tools, household goods, industrial interiors, and packaging. The SKBs were predominantly concerned with developing designs within the Soviet military industry. Other products made by the Leningrad SKB's included an optical machine, the semi-automatic 'Almaz 70-P', an x-ray and coffee machines. See Miron Rezun, *Science, Technology, and Ecopolitics in the USSR*, Westport, Conn: Praeger, 1996, p. 61.

Bureaux (*Opytnoe Konstruktorskoe Byuro: OKB*)<sup>864</sup> which designed and made prototypes of technologically advanced items that were usually used for military purposes. For example, the MiG OKB and Sukhoi OKB were both established in 1939 and were responsible for the design of military aircraft including the MiG and Sukhoi jet fighters.<sup>865</sup> During this period original technologically-advanced products such as radios, cars, and tractors (all of which were primarily created for the military and specialised scientific research organisations) emerged for the first time.<sup>866</sup> In order to compete with capitalism, the Soviets wanted their products to be of the highest quality. The SKB's aimed to produce goods that were comfortable, aesthetically pleasing, reliable and affordable. They believed that designers should be involved in the manufacturing process. The SKB's had a clear vision of what a designer should be, namely a creative engineer and inventor. The SKB's also believed that designers were best placed to find out what their international competitors were doing, and that such knowledge could then be used to invent products that were superior to the competition.

## Design Bureaux R&D

Anatol Fedoseyev was a prominent Soviet rocket scientist and technological designer who, in 1936, started working at the Vacuum Laboratory in Leningrad's Svetlana plant.<sup>867</sup> The laboratory specialized in classified research related to the design of new armaments systems, and in 1943, Fedoseyev became chief designer (*razrabotchik*) at the laboratory, and was in charge of designing the powerful electronic tubes used in Soviet radar transmitters.<sup>868</sup> His work benefitted from the Soviet Union's generous military R&D policy. He headed the development of an

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<sup>864</sup> Vladimir Antonov (et al.), *OKB Sukhoi: A History of the Design Bureau and Its Aircraft*, Leicester: Midland Publishing Ltd., 1996, pp. 4-5. Bureaus such as this (which concentrated on military areas i.e. rockets, vehicles, aircraft etc.) were state-run organisations that had the resources to build prototypes.

<sup>865</sup> Yefim Gordon and Dmitriy Komissarov, *OKB Mikoyan: A History of the Design Bureau and Its Aircraft*, Hinckley: Midland Publishing, 2009, pp. 5-10; Antonov (1996), pp. 12-15.

<sup>866</sup> Hutchings (1976), p. 149 and 286.

As well as improving product aesthetics, the SKBs were involved in R&D, creating prototypes, and utilising foreign and domestic materials. However, a lack of proper training meant that many designers worked on instinct rather than scientific facts. Between 1964 and 1965, the SKBs enhanced production in the chemical, pulp, and heavy machinery industries. They also increased production of household appliances, bringing in hundreds of new consumer product designs including white goods. See A. Antonov (1964), pp. 1-2.

<sup>867</sup> Anatol Fedoseyev, *Design in Soviet Military R&D: The Case of Radar Research in Vacuum Electronics*, Cambridge Mass: Russian Research Center Libraries, Harvard University, 1983, pp. 1-5. The Vacuum Laboratory was part of the 'Institute of Scientific and Technical Information' (VINITI).

<sup>868</sup> Fedoseyev was in charge of around 200 employees at the laboratory. See Ibid, pp. 1-3.

R&D project community in the Bureau, which was subdivided into two stages: scientific research (NIR-Nauchno Issledovatel-skaia Razrabotka) and design development (OKR-Opytno Konstruktor-skaia Zazrabotka). The scientific research stage was implemented first and lasted around two to three years, with approximately 70 percent of the projects researched on this stage going on to be worked on during the second stage (which involved design development). The majority of second stage projects were recommended for mass production.<sup>869</sup>

### **USSR Research Institute of Industrial Design (VNIITE)**

On the 28<sup>th</sup> of April 1962, the 'State Committee of Science and Engineering of the Council of Ministers of the USSR' passed the first stage of a resolution, setting up VNIITE and charging it with improving the quality of mechanical engineering and household goods by introducing the methods of artistic design.<sup>870</sup> Yuri Borisovich Soloviev (1920-2013) was its first director, and saw his task as responding to widespread criticism of the poor design of USSR's consumer goods, and catching up with the West.<sup>871</sup> VNIITE initially set up 15 local branches<sup>872</sup> across different Soviet republics, which were often connected to local industrial specialisms (i.e. in Latvia, the branch focused on electronics).<sup>873</sup> However, even after the establishment of VNIITE military items were still prioritised over consumer goods.<sup>874</sup> However, from the early 1960s onwards designers attached to major industries were part of a wider Soviet governmental campaign to improve the design standards of consumer goods,

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<sup>869</sup> In actuality, a project to develop new Western technology would take up to 12 years to complete. 2-3 years for the government to accept the need for this new technology, 1-2 years to then decide to find a suitable and willing organization to take on the project, 5-6 years for product development, and another year or two for finished product to be accepted as part of armaments. However, if a designer works on his own original project, this time is cut in half, making a case for innovative military R&D decisions. See *Ibid*, pp. 12-3.

<sup>870</sup> The first stage of the development was completed in 1967 after design services were created all over the country and in 1968 the second stage started with the objective of improving the technical aesthetics' achievements for the national economy. See Hutchings (1976), pp. 147-48.

<sup>871</sup> Gantz (2011), p. 225. VNIITE's rapidly influenced design in the Soviet Union and in 1965 it had 8 design consultancies within different VNIITE departments

<sup>872</sup> Including Belorussia, Lithuania, Ukraine, Armenia, Azerbaijan, Georgia, and Leningrad

<sup>873</sup> VNIITE held a conference in Tbilisi in 1964 to discuss design issues, mass-produced goods, and design education among other things. See Anonymous, 'Artistic Design Conference' ('Soveschanie po Voprosam Hudozhestvennogo Konstruirovaniya'), *Technical Aesthetics*, no. 5, Moscow: VNIITE, 1964, p. 1; Soloviev (1965), pp. 1-3.

<sup>874</sup> Between 1960 and 1980, the Soviet government allocated 50-54% of the country's total budget to light (mainly design products) and heavy (machinery etc.) industry. However, until the mid-1970s light industry only received 10% of the allocated budget - rising to 15% in the early 1980s - a figure too low to meet public demand for basic products. See Raymond Hutchings, *The Soviet Budget*, London: The Macmillan Press Ltd., 1983, pp. 100-07.

reinforced by the decree that Soviet manufacturers were to use trademarks on all their products.

VNIITE was given freedom to operate outside the central plan, which allowed its designers to work with a large degree of experimentation.<sup>875</sup> VNIITE's primary function was to supply nationalised industries with new prototypes to manufacture. The Institute also researched the history of design and the impact of various usable methodological models, as well as developing legal norms and standards for designers. Its designers were charged with the task of developing new forms of socialist modernity. In many ways, it functioned as a bridge between Western and Soviet design practices.<sup>876</sup> VNIITE and the West communicated with each other via Soviet and Western designers and educators, rather than through manufacturers. This led to a sharing of ideas and ideals among Soviet designers.

VNIITE took part in preparations for the 1968 Soviet Exhibition in Warsaw which had a highly modern aesthetic. They were keen to demonstrate technological feats with examples from transportation and heavy-duty industry. The late sixties were however, characterised by an uncertainty surrounding questions of taste and style.<sup>877</sup> For instance, a discussion that took place in the 'House of the Architect' in Moscow in 1968 under the title 'What is Disturbing Furniture Manufacturers?' focused on these issues. This perhaps, revealed a desire to return to a functional and simple modernity. Designers were coming to understand that, by striving to create greater quantities in a race against Western Europe, they were neglecting quality. The production of heavy and/or old-fashioned designs increased at this time, not least because designers and industries were constrained by

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<sup>875</sup> As the designer Dimitry Azrikan remembers, the goal of VNIITE was 'to the create a system of industrial design through the research of design theory, the setting up of the design principles and methodology, and developing the design concepts for the most important products.' Department three (of nine) was dedicated to design promotion, and aimed to create and implement industrial design standards as required by the Soviet system. However, attempting to standardise design can inhibit innovation, and one result of this was that state industrial companies were reluctant to use most of the VNIITE projects. Budget constraints also contributed to this reluctance as, although some designs were recognised to be of superior quality, it was often cheaper to produce an inferior product in larger quantities. See Azrikan (1999), pp. 50-3 and 68-9; Corin Hughes-Stanton, *Transport Design*, London: Studio Vista Limited, 1960, pp. 70-1; Alexander Lavrentiev and Yuri Nasarov, *Russian Design: Traditions and Experiment, 1920-1990*, London: Academy editions, 1995, pp. 93-5.

<sup>876</sup> Raymond Hutchings, 'The Weakening of Ideological Influences upon Soviet Design', *Slavic Review*, vol. 27, no. 1, March, 1968, pp. 71-84, esp. 81.

<sup>877</sup> Lavrentiev and Nasarov (1995), p. 81.



centralised controls and dictates, which left them with little influence or autonomy.<sup>878</sup>

In the 1960s, colleges devoted to industrial design were set up, providing the main training ground for designers, and using the same teaching methods as Vkhutemas-Vchutein. Curricula established in 1966 divided the discipline of design into three areas: artistic design, practical construction, and theory. Most graduates from the Faculty of Architectural Design, established at the Architectural Institute in 1969, went on to work in car factories or similarly economically important state companies.<sup>879</sup>

By the mid-1970s, the USSR was planning closer integration with the economies of Eastern Europe, and attention was focused on design in East Germany and Czechoslovakia, countries where VNIITE's research and development policies were particularly influential. However perhaps the most important mark of progress in terms of external relations took place in 1969 when VNIITE became an institutional member of ICSID (this event was possibly aided by the period of 'détente' [1969-79] between the Soviet Union and the US). In an effort to bridge the Cold War divide, ICSID had decided to extend its links with communist bloc countries. In 1971 ICSID sponsored the first ICSID *Interdesign* a workshop in order to develop urban design concepts that could be implemented in Minsk.<sup>880</sup> A second *Interdesign* was held in Kharkov in 1977; participants were required to design five products for use by elderly or disabled people.<sup>881</sup>

Moscow also hosted an ICSID Design Congress (organised by VNIITE) in 1975. This congress was important because it was not controlled by ministerial bureaucrats and as such offered excellent international networking opportunities and the chance for exchanges of opinion.<sup>882</sup> The five main subjects discussed at the congress were: Design and State policy, Design and Science, Design and

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<sup>878</sup> Ibid, pp. 85-6; <http://balticworlds.com/wp-content/uploads/2011/05/BW-10.2.pdf> (last accessed 02.07.2011). Quick solutions to this problem could not be expected from VNIITE, whose main remit was to look into which methods of 'artistic construction' were acceptable to the state, as well as putting them into practice.

<sup>879</sup> Lavrentiev and Nasarov (1995), p. 102.

<sup>880</sup> Gantz (2011), p. 236.

<sup>881</sup> ICSID, 'Over 35 Years of *Interdesign*', *ICSID Interdesign Planning Guide*, ICSID and IDA, pp. 2-3. See [http://icsid.org/uploads/files/projects/interdesign/Interdesign\\_Guide.pdf](http://icsid.org/uploads/files/projects/interdesign/Interdesign_Guide.pdf) (last accessed 17.07.2011).

<sup>882</sup> R. Antonov and L. Pereverzev, 'Design for Man and Society' - IX ICSID Congress in Moscow ('Dizayn dlya Cheloveka i Obschestva' - IX Kongres IKSID v Moskve), *Decorative Art of the USSR*, vol. 220, no. 3, Moscow: Soviet Artist, 1976, pp. 12-9, esp. 12-5. The Congress urged the designers to participate more actively in solving important social problems faced by humanity today.

Work, Design and Recreation, Design and Children. In discussing the relationship between 'Design and Science,' Soviet speaker Vladimir Munipov noted that there were fundamental differences in approach to design under Socialism and Capitalism. He claimed that in Socialist countries designers aim to organically blend good design with solid Socialist economic management which would naturally lead to superior designs; these superior designs would then impact the future direction of design. Soviet design at the time was based on a systematic use of scientific knowledge. Munipov stated that Soviet designers were using specific scientific data that provided the socially required properties of a finished product and whether it was possible to manufacture the product. In addition Munipov recommended increased collaboration between designers and scientists (which included engineers, ergonomists and other specialists). This would then allow designers to evolve the most rational way of integrating all the required elements of the designed product into a precisely structured, harmonious object. Munipov would require the designer to have such a result, in addition to his creativity, broad scientific knowledge and an interest in or taste for science.<sup>883</sup>

### **The Design Programme 'ElektroMera'**

VNIITE's 'Design Programme' was especially effective at influencing design, and embodied a drive towards 'total design'. Large factories were designed that emphasised uniformity in all their aspects. Everything in the design process was to be uniform, including work stations, workers' uniforms, graphic symbols and gadgets.<sup>884</sup> To this end, the Union Electrical Measuring Instrument Factory was chosen as the location for a Design Project entitled 'ElektroMera' which focused on the electrical and electronics industry. 'ElektroMera' took place between 1973 and 1979<sup>885</sup> but created controversy, with several critics of the scheme believing that the demands of the programme would reduce the quality of design. The project was

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<sup>883</sup> This information was taken from Vladimir Munipov's ICSID Design Congress paper in 1975.

<sup>884</sup> Lavrentiev and Nasarov (1995), pp. 98-100 and 107.

The design programme developed by VNIITE to create a company style or corporate uniform identity widened the scope of the designer. The theorist Sergei Serov wrote that graphic design transformed visual information into signals that could be clearly interpreted. However it was a good while before the term 'graphic design' was employed with any amount of confidence applying its exact meaning.

<sup>885</sup> The factory association chosen for Elektrmera involved the restructuring of 32 factories each of which employed around 20,000 workers. See Margareta Tillberg, 'Collaborative Design: The Electric Industry in Soviet Russia 1973-79', *Focused*, 4<sup>th</sup> Swiss Design Network Symposium, 30<sup>th</sup>-31<sup>st</sup> May 2008, pp. 233-53, esp. 237.

initiated by VNIITE and led by designers. As the first large-scale design project in the Soviet Union, it was seen as a response to the shock of the US Kitchen exhibition and attempted to address consumer concerns.<sup>886</sup> One of the central aims of Elektromera was to create 'ergonomic equivalence' and 'visual harmony',<sup>887</sup> and from the start, a network of experts was established, where designers, ergonomists and engineers from places such as Kiev and Leningrad would exchange ideas.

In an effort to catch up with western technological advancements the Soviet Union adopted the concept of 'Scientific Technical Revolution' (STR) which involved the Soviets adopting western technological strategies. STR integrated things such as science, technology and production, as well as utilising computers, automation, rocket technology and cybernetics more effectively.<sup>888</sup> In the 1960s and 70s, cybernetics, an interdisciplinary movement involved with restructuring systems, became popular and influenced ElektroMera.<sup>889</sup> Cybernetics viewed systems as a whole rather than as a collection of individual parts in isolation; this gelled with the centralised planning strategy of the state.<sup>890</sup> Moreover, cybernetics enabled different disciplines to communicate more effectively with each other. For example cybernetics helped visual design to embrace engineering principles.<sup>891</sup> In order to ensure that ElektroMera ran smoothly, a clustering principle was used to unify procedures that were then to become standardised. The idea behind this was to reduce the overall number of functions used in the project.<sup>892</sup> The ElektraMera

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<sup>886</sup> Margareta Tillberg, 'Made in the USSR,' *Journal and Magazine Baltic Worlds, CBEES (The East European Studies)*, vol. III-2, June 2010, pp. 36-7.

The programme eventually failed, although it did provide an unusually direct influence on concepts of uniform, decoration of cultural centres, museums and cafes and restaurants. See Lavrentiev and Nasarov (1995), p. 99-100.

<sup>887</sup> Tillberg (2008), p. 234.

<sup>888</sup> Sari Autio-Sarasmo, 'Khrushchev and the Challenge of Technological Progress' in Jeremy Smith and Melanie Ilič, eds., *Khrushchev in the Kremlin: Policy and Government in the Soviet Union, 1953-1964*, London and New York: Routledge, 2011, pp. 133-49, esp. 133-36

<sup>889</sup> Other organisations and movements formed prior to Elektromera had an influence on it. For example the Fordist inspired Scientific Organisation of Labour which was reformed in the 1960s, and the Hochschule für Gestaltung in Ulm (HfG), which took a rational and scientific outlook as exemplified by its module furniture. See Tillberg (2008), p. 237.

<sup>890</sup> From the late 1960s onwards a number of influential papers were written by Eastern Block cybernetic researchers, who often worked with their western counterparts. Conferences that embraced worldwide audience frequently debuted important papers, for example: *Design III: Research, Education, Practice (Projektowanie III: Badania, Kształcenie, Praktyka)*, published by Prace Naukowe Instytutu Cybernetyki Technicznej Politechniki Wrocławskiej (Scientific Papers of the Institute of Technical Cybernetics of Wrocław Technical University), Wrocław, Poland, 1978.

<sup>891</sup> Tillberg (2008), p. 238.

<sup>892</sup> In addition the rapid technological innovation that can cause parts of an artefact to become obsolete was reduced so that only parts that really needed to be replaced were made obsolete.

project was not only about the visual appearance of products, but also about the production system behind the project, which would often involve cooperation between different companies. Elektromera's legacy included design programmes available for public consumption, as well as the various unifying processes used on the Moscow subway system.<sup>893</sup>

VNIITE eventually became so inflated that it imploded, a process that was perhaps inevitable given that VNIITE was directly controlled by the governmental agency, 'The Science and Technology Committee', who used it principally as a bureaucratic tool. VNIITE experienced heavy state control as it continued to grow, and this was exacerbated by the move towards unitary state designs, which were developed through a series of government decrees.<sup>894</sup> Consequently, the non-creative departments of VNIITE became considerably larger, whilst the creative teams were given less resources.<sup>895</sup>

In the late 1980s, VNIITE was put under pressure by new independent studios that were beginning to emerge thanks to a relaxation of policy regarding private company law due to Perestroika. These companies had fewer indirect costs, and several designers left to start their own companies in an attempt to find creative freedom. However, at the time of the collapse of the Soviet Union, neither the studios nor VNIITE had many clients. Some designers found refuge in the new field of graphic design, as industrial design jobs were in short supply. Azrikan, one of the first independent designers, recalls that not one of the VNIITE branches managed to survive in the independent states.<sup>896</sup>

### **Consumption and Design in the Pre and Post-Soviet Era**

The Soviet Union consistently struggled with the problem of how to distribute scarce goods fairly, especially in the 1960s and 70s when living standards rose. There was an increased demand for cars, and in response, Soviet planners produced the Lada, which became a status symbol, partly because of its rarity.

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These measures led to a reduction in some of the chaos initially associated with ElektroMera. Ibid, p. 240.

<sup>893</sup> Tillberg (2008), pp. 241-43.

<sup>894</sup> In 1968, a decree entitled 'On the Improvement of the Use of Industrial Design in Industry' stressed the need for quality evaluation and control.

<sup>895</sup> In 1978, the State Industrial Design Council was established. At the same time, various activities were spread throughout the socialist countries, and VNIITE became an international supervisor. See Ibid.

See Ibid.

<sup>896</sup> Azrikan (1999), p. 67.

However, Soviet citizens were forced to wait for years until they were eligible to buy one, and therefore many paid high prices to purchase one on the second-hand black market.<sup>897</sup> By the late 1970s, high quality design education existed in some schools.<sup>898</sup> Around the same time many listeners had worked out how to receive foreign transmissions even though Western radio broadcasts were banned. This was one of the means by which Western trends and influences infiltrated the consciousness of Soviet consumers, particularly the elite.<sup>899</sup> According to Soloviev, Russians 'would be foolish' if they didn't use Western products: 'There are plenty of things we can learn from the West – and vice versa.'<sup>900</sup>

In the post-Soviet period, the transition from a planned socialist economy to a capitalist system has meant that when people were given a choice, they generally chose foreign designs over Russian ones. Indeed, today Russian consumers' preference for foreign goods is evident in their choice of electronic goods, such as refrigerators, washing machines and TVs, which has allowed foreign brands to gain almost total domination of the electronic goods market. This enthusiasm for foreign design encouraged companies such as Volkswagen, Ford, Peugeot, Hyundai, Nissan, and Toyota to begin manufacturing in Russia in the 2000s.<sup>901</sup> As a result of this influx of foreign cars, there has been a steady erosion in sales of domestic brands which has affected all Russian brands, leaving Lada, the only internationally known Russian car brand, with 90 percent of the 'Russian made' car market. However, the rapid growth seen by the Russian car market has been fuelled by a spectacular increase in imported brands. The figures for imported cars

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<sup>897</sup> Gronov and SZhuravlev (2010a), p. 137.

<sup>898</sup> James Woudhuysen, 'Soviet Design: Quality Consumer Goods at Last?' Magazine *Design*, no. 349, Glasgow; London: Design Council, January 1978, p. 27. Regarding education Soloviev argued that creating one's own design, instead of a standard state design, makes one go on to think about the environment.

<sup>899</sup> Shlapentokh and Shlapentokh (1988), p. 28.

<sup>900</sup> Woudhuysen (1978), p. 27.

When during the 1980s, VCRs began to be smuggled into the USSR, citizens were exposed to the prohibited, and therefore even more desirable, fashions and Western prosperity. By 1987 a third of all teenagers surveyed admitted that 'imitation of the West' was one of their main values. See Vladimir Shlapentokh, *Public and Private Life of the Soviet People: Changing Values in Post-Stalin Russia*, Oxford University Press, 1989, p. 142.

In 1987, two sections of consumers had the power to influence producers - the military and the top 5% of society. See Shlapentokh and Shlapentokh (1988), pp. 27-8.

<sup>901</sup> Panibratov (2012), pp. 38-41. For example, in 2007, 2.8 million cars were sold and the market was worth USD 53 billion, with foreign brands accounting for 78% of the market. However, the economic crisis has had some impact on the new car market, which diminished by 45-47% in 2009.

rose from 150,000 in 2003 to more than 2 million in 2008.<sup>902</sup> Japanese and Korean brands continue to perform very well in Russia (they controlled almost 40 percent of the new car market in 2008).<sup>903</sup>

### 3.2.2 Analysis of Design Policy

#### A. Industrial Strategy

The Bolsheviks paid attention to the US production system, in particular Taylorism, which had low production costs and high productivity. They believed that they could advance the construction of the socialist state by combining Taylorism with the Bolshevik revolution. In practice, this meant implementing a central system of control that engineered and planned the work structure and new policies.<sup>904</sup> These included strict rules of employment, production standards, and the introduction of performance-based pay and bonuses.<sup>905</sup> The Soviet government's first document on standardisation was introduced in 1918 and the above policies were adopted in the same year.<sup>906</sup> Standardisation in the USSR was similar to other industrialised countries, and 'industrial standards', issued by the ministries, were intended to keep production costs down while also ensuring sufficiently high quality products.<sup>907</sup> A company that embraced standardisation was the Moscow

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<sup>902</sup> Susanne Royer (et al.), *A New Klondike? : Recent Developments in the Russian Car Market*, International Car Distribution Programme (ICDP) Management Briefing Series no. 74, Solihull: ICDP, 2009, pp. 2-3.

<sup>903</sup> Royer, et al. (2009), p. 4.

The 2008 financial crisis halted Russia's boom quite dramatically, and the automotive industry was heavily affected. Car production fell by 57% between 2008 and 2009, but the market began to recover in 2010, evidenced by new car sales volumes of approximately 1.6 million, a rise of 15% from 2009. Domestic production also rose from 550,000 units to around 1.2 million in 2010. See Uwe Stratmann (et al.), *Russian Towards a more Balanced Dealer Group Model?*, ICDP Management Briefing Series no. 81, Solihull: ICDP, 2011, p. 1.

<sup>904</sup> Thomas Hughes, 'Taylorism+Fordism=Amerikanismus' in *American Genesis*, Chicago: the University of Chicago, 2004 (On the Soviet Adoption of Taylorism and Fordism, Originally published by Viking Penguin Books USA Inc. in 1989), pp. 249-94.

<sup>905</sup> Steve Smith, 'Taylorism Rules OK?: Bolshevism, Taylorism and the Technical Intelligentsia in the Soviet Union, 1917-1941', *Radical Science Journal*, no. 13, 1983, pp. 3-27, esp. pp. 13-5.

<sup>906</sup> The decree of 14<sup>th</sup> September 1918, from the Soviet of Peoples' Commissars of the RSFSR on the Institution of the International Metric System of Weights and Measures, signaled the introduction of the international system of weights and measures.

<sup>907</sup> Macome R. Hill and Richard McKay, *Soviet Product Quality*, London: Macmillan Press, 1988, p. 60; The Chairman of the Supreme Economic Council, V.V. Kuibishev, claimed that the emphasis on quantity, price and costs have often blocked the attention to quality. See V.V. Kuibishev, 'Economic Conditions and the Industry Tasks' ('Hozyastbenya Konyunikura i Zadachi Promushilenosti'), *Commercial-Industrial Gazette (Torgovo-promyshlennaya Gazeta)*, Moscow, 4<sup>th</sup> February 1928, p. 1.

Automotive Society (AMO, Avtomobilnoe Moskovskoe Obshchestvo) that in 1924 produced Soviet Union's first automobile, a 1.5 tonne truck based on the Fiat F-15, which they planned to produce under licence.<sup>908</sup> In 1934 the company made its first passenger car and by the mid-1930s it was producing over 8,000 limousines and over 100,000 trucks.<sup>909</sup>

### **Socialist Consumerism**

In the second half of the 1930s, standardisation took a new turn when a campaign for *kul'turnost* (cultured-ness) was initiated by the state. Items that were formally considered bourgeois, such as frilly lamp shades and lace curtains, were put forward by the state as exemplars of this *kul'turnost*.<sup>910</sup> This campaign promoted the enjoyment of consumer goods through advertising images and linked it to culture and modernisation. People were encouraged to emulate the sophisticated tastes and lifestyle of the intelligentsia. The consumption habits of Soviet citizens were to be guided and educated by the state while at the same time staying within the boundaries of Marxism-Leninism.<sup>911</sup> As a result of this campaign, The Moscow House of Clothing Design was founded in 1934. The clothing designers who worked here were state employees participating in the industrial production of clothes. Similar institutions appeared in the capitals of the Soviet republics, although the Moscow branch remained the most important.<sup>912</sup> Under Stalin, the Soviets had viewed fashion with disdain, associating it with the capricious attitudes

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<sup>908</sup> D. Mallory, "Buses by the Sea" - From the Special Correspondent' ('Avtobusi u Moray' - ot Spets Korrespondenta), *Journal Za Rul'm*, no. 5, Moscow: Izd-vo DOSAAF, 1928, p. 23.

In 1921, the Soviet government attempted to introduce US mass production techniques to a number of Soviet industries. See Simon Pirani, *The Russian Revolution in Retreat, 1920-24: Soviet Workers and the New Communist Elite*, London: Routledge, 2008, pp. 96-108.

<sup>909</sup> Lewis H. Siegelbaum, "Little Tsars of the Road": Soviet Truck Drivers and Automobility, 1920-1980' in Lewis H. Siegelbaum (ed.), *The Socialist Car: Automobility in the Eastern Bloc*, Ithaca and London: Cornell University Press, 2011, pp. 170-85, esp. 172; 'Work and Play behind the Iron Curtain,' Exhibition catalogue, London: GRAD, Gallery for Russian Arts and Design, 2014.

AMO ZIL is the oldest Russian automobile plant, employing 200,000 people in its Moscow factory by the 1960s. By the mid-1970s, AMO ZIL had 17 branches around the country. By the 1980s however, ZIL's success began to wane due to the emergence of stiff competition in Central Asia. Following the collapse of the Soviet Union AMO-ZIL, as it was now called, lost its government support and suffered due to the public demand for Western goods. As a result, the company had to stop manufacturing household goods and close most of its branches. AMO-ZIL now specialises in high end limousines, trucks, vans and specialist vehicles.

<sup>910</sup> Greg Castillo, *Cold War on the Home Front: the Soft Power of Midcentury Design*, Minneapolis: University of Minnesota Press, 2010, p. 100.

<sup>911</sup> Chernyshova (2013), p. 45 and 106.

<sup>912</sup> Larissa Zakharova, 'Dior in Moscow: "A Taste for Luxury in Soviet Fashion under Khrushchev"' in Crowley and Reid, eds. (2010), pp. 95-119, esp. 98.

of capitalist societies, but during the Khrushchev Thaw, fashion was included in modernisation programmes. Soviet fashion designers were sent to Paris on several occasions in order to study the working methods of the French fashion houses.<sup>913</sup> However, fashion remained very conservative, as 'irrational' Western tastes were avoided. Moreover, standardisation infected fashion:<sup>914</sup> design expertise was being used to standardise the lives of ordinary people.<sup>915</sup>

The two main organisations dealing with fashion design in the late 1960s were the Ministry of Light Industry and the Ministry of Everyday Services. The four all-union houses of design, which operated under the Ministry of Light Industry, were responsible for designing clothes, tricot clothes, shoes and other leather items, as well as studying present and future trends to enable the economy to cope with seasonal stylistic changes of dress. The Ministry laid down recommendations to fashion designers regarding acceptable styles, colours and shapes of items; though, there are no recorded cases of a designer being punished for not following recommendations.<sup>916</sup> At the end of the 1960s, two more prominent fashion institutes were created under the auspices of the Ministry of Light Industry: the 'All-Union Institute of the Assortment of the Light Industry' and the 'Culture of Dress' (together called VIAlegprom), which became prominent in Russian fashion design in the 1970s. The aim of the VIAlegprom was to promote current fashions and cultivate the tastes of the Russian people. Officials from the institute travelled as far as construction sites in Siberia for this purpose.<sup>917</sup>

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<sup>913</sup> In 1957, 1960, and 1965 Soviet designers visited the Dior Company in France. See *Ibid*, p. 100.

<sup>914</sup> During the Thaw, fashion magazines such as *Zhurnal mod* and *Rabotnitsa (Working Women)* increased interest in fashion. These magazines often focused on 'good taste', the notion of dressing well with the correct (or standard) choice of fabric and colours. Good taste was associated with a good education, while bad taste was attributed to undesirable values. See Gradskova (2012), pp. 4-5.

<sup>915</sup> David Crowley, 'Thaw Modern: Design in Eastern Europe after 1956' in Crowley and Pavitt, eds. (2008b), pp. 129-53, esp. 145. Additionally, Soviet production machinery was not built to accommodate the short production cycles and changing lines of clothing that haute couture involves.

<sup>916</sup> Jukka Gronov and Sergei Zhuravlev, 'Soviet Investment in Flamboyance,' *Journal and Magazine Baltic Worlds, CBEES (The East European Studies)*, vol. III-2, 2010, pp. 27-33; also see <http://balticworlds.com/fashion-design-at-gum-the-state-department-store-at-moscow/> (last accessed 02.07.2011). An example of a clothing style deemed undesirable was jeans which, despite their apparent practicality, were considered a symbol of American imperialism until the 1980s.

<sup>917</sup> Chernyshova (2013), p. 143; Anne E. Gorsuch, *All This is Your World: Soviet Tourism at Home and Abroad after Stalin*, Oxford University Press, 2011, pp. 54-7. Soviet Russia's relation to westernisation as embodied by Estonia.



## Car Consumerism

Under Stalin, clothing was viewed as entirely utilitarian, and the motor vehicle industry developed in the same way. Vehicles were initially manufactured for military and agricultural purposes with trucks largely outnumbering cars.<sup>918</sup> Passenger cars were mainly owned by Soviet institutions.<sup>919</sup> The first specialised car factory for the mass assembly of passenger cars and motor trucks was the 'Moscow Compact Car Factory' (Moskovsky Zavod Malolitrazhnykh Avtomobiley) established in 1929.<sup>920</sup> It was well known for its high production values which eventually made its products globally popular. In 1945 it began to manufacture the Moskvich car model, and in 1946 produced the Moskvich-400. In the same year, new automobile production began at a car factory in Gorky that produced the Pobeda (Gaz-20). Both were Soviet designs based on the German Opel Kadett and Kapitän models respectively.<sup>921</sup> In 1949, the Pobeda sold for USD 3,000 (RUB 16,000) and the Moskvich for USD 2,000 (RUB 9,000), which were enormous sums for Soviet citizens; this, and the long waiting lists, effectively restricted car ownership to a privileged few.<sup>922</sup> However, under Khrushchev, car production expanded significantly, and between 1955 and 1964, an average of 61,000 vehicles per year were produced for purchase by private individuals.<sup>923</sup> During the 1950s, the increasing consumer demand for Western design influences meant that the automotive industry had to come up with something new. The Gaz-21 (generally known as the Volga), first produced in 1956 at Gorky, became highly

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<sup>918</sup> In line with its enthusiasm for utilitarian vehicles, the Soviet Union designed and manufactured the well-known GAZ-5, a 2.5 ton truck. This model was also manufactured under Soviet licenses in countries as diverse as Poland, China and North Korea (where it was known as the Sungri-58).

<sup>919</sup> Lewis H. Siegelbaum, 'Cars, Cars, and More Cars: The Faustian Bargain of the Brezhnev Era' in Lewis Siegelbaum (ed.), *Borders of Socialism: Private Spheres of Soviet Russia*, Basingstoke: Palgrave Macmillan, 2006, pp. 83-103, esp. 84. In 1935 the Commissariats of Heavy Industry and Agriculture owned 56,000 cars which were 40% of all cars in state ownership.

<sup>920</sup> In 1969, the factory changed name to AZLK (*Car Factory in the name of the Leninist Communist Youth Union*). In the same year AZLK created an architectural department which contributed immensely to the aesthetics of the working environment, therefore improving working conditions. See Y.S. Lapin and Y.A. Regentov, 'At the Automobile Factory Named after Lenin Komsonol' ('Na Avtomobilnom Zavode Imeni Leninskogo Komsomola'), *Technical Aesthetics*, vol. 157, no. 1, Moscow: VNIITE, 1977, pp. 8-13.

<sup>921</sup> The Pobeda was produced from 1946 until 1958, and the Moskvich-400 from 1946 until 1954, later being produced in Poland at the Zeran Automobile Factory under the name 'Warszawa'. See Ferebee (1958), p. 36.

<sup>922</sup> Siegelbaum (2006), p. 85.

These prices in USD are at the official Soviet exchange rate however estimating the buying power of the Ruble in 1949, the cost would be closer to USD 600 and USD 400 respectively.

<sup>923</sup> Ibid.

sought-after, and was considered by Soviet citizens to be a prestige car.<sup>924</sup> The Volga met European standards and incorporated elements of American styling. It was small by American standards, although large for a European car.<sup>925</sup> Khrushchev aimed to boost the national economy and overall production rates.<sup>926</sup> Nevertheless, the government retained an ideological preference for public transport systems and this suspicion of private ownership was shared by ordinary people. A massive step towards a consumer economy was taken by the eighth Five Year Plan (1966-1970) which quadrupled the number of passenger cars produced from 200,000 to 800,000 a year.<sup>927</sup>

### **Mark of Quality and Design**

In the Soviet Union, quality standards were set at three different levels: enterprise, ministerial, and national. Enterprise standards were used to ensure the quality of raw materials and other inputs. Industrial Ministries set out branch standards that factories under their jurisdiction would have to adhere to, and national standards, formed the basis of a legal action regarding quality enforcement. A flaw in the system was that Soviet companies only had to meet the minimum requirements of these standards, and the 'national standards' were unable to cover all of the additional characteristics of a product necessary to ensure that the final products performed adequately for the consumer.<sup>928</sup>

From the 1960s onwards the Soviets made a concerted effort to improve the quality of the manufacturing industry. They introduced a 'mark of quality' in an

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<sup>924</sup> Gronov and Zhuravlev (2010a), pp. 132-33; Lewis H. Siegelbaum, *Cars for Comrades: The Life of the Soviet Automobile*, Ithaca & London: Cornell University Press, 2008, pp. 66-7.

In 1931 the first Soviet car factory was constructed in Moscow, while the second was built in Gorky (Nizhnii Novgorod) in 1932. Although passenger cars were produced in the USSR in the 1930s, they were rarely used by citizens. During the WWII the Russians leased around 50,000 trucks from the United States which allowed Soviet soldiers to become familiar with passenger vehicles.

<sup>925</sup> Siegelbaum (2008), pp. 66-7.

Lipgart commented to a conference of automobile designers and engineers in the month before the appearance of the Volga, 'we need autos that are not American and not European but are our own, Soviet, type.' From Siegelbaum quoted in Y. Klemanov, 'The Nearest Perspectives' ('Blizhayshie Perspektivi'), *Journal Za rulem*, no. 6, 1956, Moscow: Izd-vo DOSAAF, pp. 14-5, esp. 15.

<sup>926</sup> In 1957 Khrushchev said, 'The new direct administration of radio enterprises by the regional councils will spark a tempestuous growth in new techniques, better production techniques, improved development of integrated mechanisation and automation, and better specialisation and cooperation in production.' See Raymond Hutchings (1982), pp. 128-40; also taken from the Russian Global Security Website, <http://www.globalsecurity.org/military/world/russia/mrp.htm> (last accessed 05.11.2010).

<sup>927</sup> Siegelbaum (2006), pp. 87-8.

<sup>928</sup> Forker (1991), pp. 63-74.

attempt to raise design standards and find an equivalent system to the TQC system used in some capitalist countries. Between 1967 and 1991, the 'mark of quality' was awarded and it has gone some way to help develop standards in production and design.<sup>929</sup> In 1975, Russia launched its five-year 'plan of quality',<sup>930</sup> a policy that aimed at ensuring the primary goal of production met the 'fullest possible satisfaction of the material and cultural needs of the people.'<sup>931</sup>

Moscow hosted the ICSID congress in 1975, and it attracted over 1500 professionals from 50 countries. It aimed to explore the role of design in creating a harmonious, ecologically balanced environment for mankind. To this end the congress addressed a number of issues including reducing waste, and using scientific and technological developments to improve the well-being of the people.<sup>932</sup> Parts of the congress were held at the Design Exhibition Centre (which had just been opened by VNIITE at the Izvestia publishing house building in Moscow's Pushkin Square). The centre was created in order to showcase quality in Soviet design. The products on display, however, were merely models and concept designs that were unavailable to the public.<sup>933</sup> With so many product designs in other areas failing to progress beyond the prototype stage, the Soviet tractor industry received enough funding and design detail to enable it to thrive.<sup>934</sup> In the 1960s and 70s elite VNIITE designers collaborated with four major agricultural machinery manufacturers in order to develop five new tractor models.<sup>935</sup>

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<sup>929</sup> Hill and McKay (1988), pp. 13, 37 and 69. After the fall of the USSR the Rostest Mark was introduced by the Russian government as a certification of quality.

<sup>930</sup> The five-year plan was part of a longer 20-year economic plan that was broken down into five-year periods. The five-year plan was considered the medium-term strategy for development and was also a way of measuring progress.

<sup>931</sup> Forker (1991), pp. 63-4; David A. Garvin, 'What Does "Product Quality" Really Mean?' *MIT Sloan Management Review*, vol.26, no.1, fall 1984, pp. 25-43, esp. 28-9. Garvin classified the different views on quality control into 5 categories: transcendent, product-based, user-based, manufacturing-based and value-based.

<sup>932</sup> This information was taken from the paper of the Forthcoming IX ICSID Congress.

<sup>933</sup> I.G. Kostenko, Center of VNIITE (*Ob otkpbitnn Centra Texhniskoi Estetiki*), *Technical Aesthetics*, vol. 171, no. 3, Moscow: VNIITE, 1978, pp. 16-7, esp. 16.

Designer Azrikan later commented that 'Design propaganda inevitably turned into a form of anti-propaganda directed against the Soviet system as a whole and its "national economy", which worked against the nation.'

<sup>934</sup> V.I. Puzanov, 'Artistic Designer of All-Russian Research Institute of Technical Aesthetics "Design at the Tashkent Tractor Factory"' ('Hudozhestvenniy Dizayner Vsesoyuznogo Issledovatel'skogo Instituta Tekhnicheskoy Estetiki "Dizayn na Taskentskom traktornom zavode"'), *Technical Aesthetics*, vol. 203, no. 11, Moscow: VNIITE, 1980, pp. 15-7.

<sup>935</sup> V.I. Puzanov, 'Visualising Product Planning: Recent Design Construction' ('O Visualno-yazikovih Sredstvakh v Rabote Hudozhnika-konstruktora'), *Technical Aesthetics*, vol. 159, no. 3, 1977, pp. 1-7. Translated by the author of this thesis. Kobrinski's first name is not given in the article; M.M. Kalinicheva (et al.), *The Folk School of Ergonomic Design VNIITE: Prerequisites, Sources and the*

In 1996-7, I undertook research at Stroganov University, under the supervision of Professor V.I. Puzanov. Puzanov, who was working as a theorist for VNIITE, had been writing for more than two decades about the design process and history under the Soviet Union. He criticised the design of Russian tractors by the Belarus branch of VNIITE, examples of which are the Kobrinski's 'Belarussia' tractor model MTE-82 (1975), and the MTE-80 (1969). Puzanov discovered that the tractors were designed firstly for function and technology, and secondly for efficiency of the engine and fuel consumption. The fact that the needs and demands of the consumer/user were not written into the design brief is characteristic of a Communist design system, whereby profit and aesthetics were not considered primary objectives. Aesthetics were also not included in design textbooks.

At the start of the 1980s, the Western press made much of the consumer goods shortage in the USSR.<sup>936</sup> The main reason for these shortages was that most labour and investment went into arms and heavy industry first, and industrial design-related sectors (electronics, light engineering, etc.) second.<sup>937</sup> At this time VNIITE still had a strong hold on consumer design. In several industries no manufacturer was allowed to begin work on a new consumer product without VNIITE vetting the design at the proposal stage, and then monitoring it throughout production.<sup>938</sup> By the 1980s the Soviets had come close to the US in terms of the quality and quantity of many goods produced. The USSR however, soon suffered due to its poor planning. For instance, 77 percent of manufactured goods were produced solely by one or two huge factories, unlike the US where manufacture was widely distributed. The lack of competition led to a reluctance to implement

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*Tendencies of Formation (Nauchnaya Shkola Ergodizayna VNIITE: Predposilki, Istoki, Tendentsii Stanovleniya)*, Moscow: VNIITE, 2009, p. 221.

<sup>936</sup> As the 1970s progressed, the long-standing maxim that 'the collective is always right in conflicts with the individual' began to be challenged due to pervasive corruption. This obvious disregard for Soviet state power caused Andropov, and subsequently Gorbachev, to begin to modify the system. See Shlapentokh (1989), p. 138.

<sup>937</sup> The Cold War political and economic barriers also delayed the advent of personal computing. By the end of the 1970s, the Soviet electronics industry was able to pick and choose home and personal computer from among the many proven Western designs. The Soviet Union thus had the opportunity to mass produce these designs, thereby moving Soviet society swiftly into the micro computing era. However, successive Soviet governments neglected to pursue this strategy, perhaps because they underestimated the future impact of computers. See Zbigniew Stachniak, 'Red Clones: The Soviet Computer Hobby Movement of the 1980s,' *Annals of the History of Computing, IEEE*, vol. 37, issue. 1, 2015, pp. 12-23, esp. 12-7.

<sup>938</sup> Jane Lott, 'Trying to Sort out the Soviet Union,' Magazine *Design*, no. 394, London: Design Council, October 1981, pp. 36-7, esp. 36. In 1979, 1000 product ideas were submitted to VNIITE for approval, but only 230 were accepted, with only 45 of these allowed to proceed without alterations.

expensive but necessary upgrades to production tools, and this further hindered industrial growth and productivity.<sup>939</sup> During the mid-1980s Soviet industry was experiencing serious difficulties, primarily due to its high intensity production coupled with low productivity and a lack of technological progress. These factors led to an inability to compete in the global marketplace. In 1987, the Soviet leadership attempted to address these shortcomings through reformed industrial policies,<sup>940</sup> and they also passed the Law on the State Enterprise, which was the most radical change of the Gorbachev era (1982-1991) in relation to state control of property.<sup>941</sup>

### **Industrial Planning, Reform and Liberalisation**

The Soviet Union's twelfth five-year industrial plan of 1986-1990 illustrates the optimism of Soviet leadership in this area. This plan aimed to double national income by 2000 (as such the plan mirrored Japan's 1960s attempt to double their income). Industrial production and productivity were both forecast to increase by 25%, while a 5% decrease in the costs of production was predicted.<sup>942</sup> There were also specific targets for the production of industrial goods such as robots, as well as for consumer goods such as footwear and colour televisions.<sup>943</sup> The Five-Year Plan also forecast that personal computers would be mass-produced by 1990, and Gorbachev firmly believed that the industrial production output of the Soviet Union

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<sup>939</sup> Smith (2000), p. 75; Lester C. Thurow, *The Future of Capitalism: How Today's Economic Forces Shape Tomorrow's World*, Penguin Books, 1996, p. 56.

<sup>940</sup> Ellman (1989), p. 17. Firstly, external state inspectors would check the quality of firms' output. Gorbachev encouraged enterprises to run continuous shifts in order to maximise productivity. Attempts were made to reorganise the administrative bureaucracy. A new business law introduced in 1987 gave companies more autonomy, and systems of taxes and controls were somewhat relaxed. Finally, a more flexible approach to the market was introduced in place of strict adherence to party policy and planning.

<sup>941</sup> Andrew Barnes, *Owing Russia: The Struggle Over Factories, Farms, and Power*, Ithaca and London: Cornell University Press, 2006, p. 46.

<sup>942</sup> Ellman (1989), p. 32.

<sup>943</sup> Ibid, pp. 32-3; Anonymous, 'About the Main Directions of Social and Economic Development in the USSR in 1986-1990 as well as in the Period of up to 2000' ('Ob Osnovnih Napravleniyah Ekonomicheskogo i Socialnogo Razvitiya SSSR na 1986-1990 godi i na Period do 2000 goda'), *Pravda*, Moscow: Newspaper, 09<sup>th</sup> March 1986, pp. 1-6; Report of the Chairman of the Council of Ministers USSR, deputy N.I. Rizhkov, 'About the State Economic and Social Development Plan of the USSR for 1986-1990' ('O Gos Darstvennom Plane Ekonomicheskogo i Sotsialnogo Razvitiya SSSR na 1986-1990 godi'), *Pravda*, Moscow: Newspaper, 19<sup>th</sup> June 1986, pp. 1-5. By 1990 the five year plan forecast production of 28,600 industrial robots, 900 million pairs of footwear and 6.4 million colour television sets. The logic of such quantitative targeting is questionable. For example during the 1980s the USSR produced over 70,000 industrial robots, the vast majority of which were not installed or used. This contrasts with the USA and Japan which at that time had around 20,000 and 64,000 industrial robots in use respectively.

would catch up with the United States by 2000.<sup>944</sup> But this highly ambitious goal was unlikely to be achieved due to the prohibitive cost of PCs. Under the Western capitalist model producers tend to compete with other producers on product quality, production costs and product price. However since the 1920s, the Soviet system relentlessly focused on quantity and targets, which led to high prices and a lack of focus on quality. This was the case until 1987, when Gorbachev's policies attempted to reverse these shortcomings.<sup>945</sup>

Many commentators felt Gorbachev's reforms came too late in the day to save the Soviet economy. Nevertheless Gorbachev's reforms did attempt to give people greater freedom to increase output and improve the performance of the system. But in practice many managers and politicians used these freedoms to benefit themselves rather than the economy as a whole. Nevertheless the 1987 Law on the State Enterprise and the 1988 Law on Cooperation allowed many new entrepreneurs to set up trading companies and banks.<sup>946</sup> As part of these reforms, the first association of designers in the USSR was founded in 1987. It consisted of branches in Soviet Republics and several local organisations in political and industrial centres such as Moscow and Leningrad. The Association of Designers of Russia (ADR, soon changing to ADRUS) was founded in 1991 on the initiative of VNIITE and other design organisations. The ADRUS now has more than 3,000 professional designers as its members, working in diverse areas of design. The association continues to see its main objective as promoting design 'as an innovative and intellectual creative activity' in the hope that this creative activity will help the development of the Russian economy and lifestyle.<sup>947</sup>

The culture of the Soviet Union during the mid-to-late eighties was infused with an increasing liberalism that led to the eventual cessation of censorship. As a result, a large number of exhibitions and design departments opened. Soviet avant-garde

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<sup>944</sup> Larson and Shevchenko (2010), p. 277.

<sup>945</sup> Ellman (1989), p. 33.

<sup>946</sup> Barnes (2006), pp. 53-6. Although there were few restrictions on what the cooperatives could do to make money, and many cooperatives, bought goods whose prices were regulated and resold them at market prices. There was a huge increase in the economic activity of the cooperatives between 1987 and 1990. By the end of 1990, when the 'cooperative boom' came to an end, there were 245,000 cooperatives, employing 6 million people, which accounted for 6.1% of GDP. More than 80% of cooperatives operated inside state enterprises.

<sup>947</sup> Yuri Nasarov, 'The Annual Message from the President' ('Ezhegodnoe Poslanie Prezidenta'), *Design Review*, issue 4, Moscow: Association of Designers of Russia, 2007, pp. 15-7. In 2005, the Union of Russian Designers increased their membership from 2,787 to 3,027. However between then and 2014, union membership had only increased to 3,500.

pieces that had previously been hidden from public view were returned to museums, and new legislation meant that designers could choose to work freelance or for the State. It was also now easy for designers to share printed material that had previously been banned from circulation.<sup>948</sup> In recent years, VNIITE has been investing time and money into designs related to science i.e. works such as those by Adolf G. Tolkachev.<sup>949</sup>

### **FDI and the Car and High-Tech Industries**

One of the main problems Russian goods faced after 1991 was the perception that they were of inferior quality and design, and over-priced. For example, the production of TVs fell from almost 4 million in 1993 to 324,000 by 1998<sup>950</sup> due in part to the availability of foreign imported sets. Even formerly strong industries such as the textile industry were severely impacted by the arrival of capitalism, partly because of rising energy costs and a shortage of materials, but also by a dramatic increase in imports. However, not all domestic manufacturers were negatively affected by the changes in the market; specialised quartzes, optical equipment and electronic component producers continued to be in high demand,<sup>951</sup> and the emergence of the free market helped the development of the domestic car industry.<sup>952</sup> As inward FDI increased, many Russian manufacturers were able to renovate their production plants in order to produce new designs, and collaboration was sought with foreign partners.<sup>953</sup>

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<sup>948</sup> Lavrentiev and Nasarov (1995), pp. 137-8.

By 1991, the government was promising five years of tax free production for 'invention within the USSR.' However, with the collapse of the Soviet Union in December collapse of the same year, design studios and freelancers never saw this subsidisation. See E.M. Veremkroyt, 'The Furniture to Grow Into' ('Mebel na Virost'), *Technical Aesthetics*, vol. 337, no. 1, Moscow: VNIITE, 1992, pp. 1- 2.

<sup>949</sup> Nasarov (2007), pp. 15-7.

Adolf G. Tolkachev (1927-86) was an electronics engineer and chief designer at Phazotron, the Soviet radar design house. Between 1979 and 1985 he provided key documents to the CIA. Of all the airborne radar systems Tolkachev created, the most advanced was the passive phased array radar used by the MIG-31 Foxhound fighter.

<sup>950</sup> Paul Fischer, *Foreign Direct Investment in Russia: A Strategy for Industrial Recovery*, London: Macmillan Press Ltd, 2000, pp. 296-97.

<sup>951</sup> One reason for the success of the optical equipment market was the expansion of the telecommunication sector, which saw FDI increase from USD 200 million to USD 600 million between 1993 and 1997. So far no Western partners have withdrawn their commitment, which is an indication of the potential strength of the sector, particularly in fiber optical cables, switches, digital systems and telephones. See Ibid, pp. 297-98.

<sup>952</sup> Fischer (2000), pp. 295-96; Panibratov (2012), pp. 38-9.

The four main players in the Russian automobile industry are AvtoVAZ, GAZ, UAZ and Sollers.

<sup>953</sup> For example, AvtoVAZ worked in cooperation with GM, which invested more than USD 350 million FDI in the production of Chevrolet-branded cars at a plant in Kaliningrad, set up in 2008.

The impact of inward FDI in Russia cannot be underestimated when considering the growth of the Russian economy. Russia's share of global FDI stocks increased from 0.19% in 1995 to 2.2% in 2010, with most of this investment going to the finance and mining industries.<sup>954</sup> However, very little of this was allocated to the car industry. After the collapse of communism, the Russian car industry, which had largely produced everything in-house, could no longer compete (especially as the domestic demand fell in response to increased foreign imports).<sup>955</sup> The percentage of cars produced by foreign companies in Russia increased from 27% in 2002 to 70% in 2010. The financial crises of 2008 only increased this dependence on foreign investment, with the car industry in particular giving free rein to inward FDI. For example, Renault-Nissan acquired a controlling stake in local company Avtovaz, and oligarch Oleg Deripaska bought the Gorky Automobile Plant in 2010. His buyout dramatically improved production values, with the percentage of vehicles leaving the plant without needing further remedial work increasing from 10% in 2010 to 64% in 2012.<sup>956</sup> Russia's automobile industry currently directly employs around half a million people, giving it the potential to transform the Russian economy from one heavily reliant on the oil and gas, to one focused more on design capabilities.

The introduction of FDI has brought market segmentation into Russia, diminishing old communist ideals of 'sharing' and replacing them with the concept of individualism.<sup>957</sup> This has created a multitude of market opportunities for companies and designers alike. Russia has also seen an increase in its outward FDI since the collapse of the Soviet Union. Several Russian companies are now recognised as major global foreign investors, including Gazprom and Lukoil.<sup>958</sup>

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However, it is arguably the foreign automobile companies that have benefited most from these collaborations.

AvtoVAZ had to sell a 25% share to Renault in order to rejuvenate the Lada brand. In the future, foreign auto makers such as GM, Ford, Toyota and Volkswagen will be confined to only using Russian assembly plants. See Panibratov (2012), pp. 39-41 and 180-82.

<sup>954</sup> Hans Van Zon, 'Modes of Integration in the World Economy: The Case of Russia under Putin' in Makarychev and Mommen, ed. (2013), pp. 91-108, esp. 103.

<sup>955</sup> For example, 225,000 new foreign cars were imported into Russia in the first half of 2005, compared with 280,000 in the whole of 2004. See Anonymous, 'Russia's car Industry: A New Motown', *The Economist*, vol. 376, issue. 8435, July 2005, p. 58.

<sup>956</sup> Zon (2013), p. 103.

<sup>957</sup> Ian Wilson and Maria Mukhina, 'Market Segmentation in Russian Subsidiaries of FMCG MNEs: Practitioner and Academic Perspectives', *Marketing Intelligence & Planning*, vol. 30, no. 1, 2012, pp. 53-68, esp. 62.

<sup>958</sup> Panibratov (2012), p. 32 and 175.



The development of the Russian high-tech industry has been extremely beneficial to the economy. Before 1991 the IT industry functioned almost entirely for the benefit of the military sector. The arrival of capitalism presented IT industry-workers with the opportunity to use their skills in the West, thereby increasing their earnings. The industry suffered from this 'brain drain' of software designers and engineers, and R&D funding was largely withdrawn.<sup>959</sup> Nonetheless, as FDI began to pour into the country, the Russian high-tech industry was able to evolve as Motorola and Samsung, amongst others, opened software development centres. In the 1990s the inflow of FDI into Russia was very low compared to Eastern European countries. However, around 2002-3 fuel prices rose, FDI flows into Russia increased tenfold, and by 2006 it had become one of the top countries in the world for inward FDI.<sup>960</sup> Important Russian IT companies such as Reksoft and Luxoft were also established at that time.<sup>961</sup> The industry has consequently been able to offer designers better opportunities, significantly reducing the outward flow of talent. Since the early 2000s, thanks to the growing importance of IT to the Russian economy, state support for IT programmes has also increased.<sup>962</sup>

In 2009 the Russian government identified priorities for the economy's modernisation with the goal of creating reliance not only on oil and gas but also on

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However, the majority of these companies are associated with natural resources, and much of the outward FDI is linked to energy; for example, the acquisition of overseas refineries. In addition, these Russian MNEs often acquire sales outlets which allow them to sell their products directly, e.g. petrol stations.

<sup>959</sup> Keith Crane and Artur Usanov, 'Role of High-technology Industries' in Anders Åslund, et al. (eds.), *Russia after the Global Economic Crisis*, Washington, D.C. : Peterson institute for international economics, 2010, pp. 95-123, esp. pp. 96-8; Panibratov (2012), p. 75; Valery Makarov and Alexander Varshavsky, 'Science, High-tech Industries, and Innovation' in Alexeev and Weber, eds. (2013), pp. 468-89, esp. 470-71.

<sup>960</sup> David G. Tarr and Natalya Bolchkova, 'Russian Trade and Foreign Direct Investment Policy at the Crossroads' in Alexeev and Weber, eds. (2013), pp. 593-614.

<sup>961</sup> Panibratov (2012), p. 76 and 81.

Reksoft, established in 1991, specialize in software development and system integration while Luxoft, established in 2000, focus on MNEs' need for consistency across multiple language and time zones through the development of a global network of delivery centres.

<sup>962</sup> Panibratov (2012), pp. 75-81; Crane and Usanov (2010), p. 122.

There has been several programmes worth over USD 600 billion. One example is the increase in the number of high-tech parks. Turnover from software exports was USD 0.4 billion in 2002 but had dramatically increased to USD 2.65 billion in 2008 and to USD 3 billion in 2009, and the high-tech sectors of the economy contributed 3% to Russian's GDP in 2008 and 10% of industrial output. Nevertheless, it was estimated to be only 0.3% of the global market at the end of the 2000s, whereas the US and Japan combined accounted for nearly 50%.

high-technologies.<sup>963</sup> Russia joined the WTO in 2012, an important tool for continued economic development.<sup>964</sup>

## B. Educational Strategy

### Educational Reforms

During the Stalinist period, there was massive public investment in higher education and scientific research, concentrating particularly on 'big science' and military research. The educational system, however, was highly bureaucratic and the curriculum was narrow, rigid, dominated by Stalinist ideology and isolated from international scholarship.<sup>965</sup> However, in 1953 a period of de-Stalinisation was initiated in Soviet education. Although science was still taught in a manner that emphasised Soviet achievements in this area, science was now taught from more of a 'worldview' perspective. However it could be argued that since this science 'worldview' included a rational, materialist and atheistic perspective it further consolidated the Marxist-Leninist ideology that imbued Soviet education.<sup>966</sup>

In 1958, Khrushchev noted that the Soviet education system needed to be drastically refigured (in some ways along capitalist lines) if it is to promote productivity. He argued that secondary school children were 'divorced from life' because they had 'absolutely no knowledge of production', a situation that was causing the USSR 'grave anxiety'.<sup>967</sup> Students should enter school 'with some experience of life and a record of practical work', for example those studying agriculture should have experience of working on a farm.<sup>968</sup> The government therefore attempted to introduce a period of compulsory industrial or agricultural work before students entered higher education or research careers. But by the

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<sup>963</sup> Up until 2008, about 65% of all Russian exports were based on oil and gas, with industrial production remaining at quite low levels, although the manufacturing industry grew by more than 7% after the financial crisis. See Royer, et al. (2009), p. 2.

<sup>964</sup> Makarov and Varshavsky (2013), p. 487; Zon (2013), p. 105.

<sup>965</sup> Mark S. Johnson and Andrey V. Kortunov, 'The State, the University, and Society in Soviet and Russian Higher Education: The Search for a New Public Mission' in Diana Rhoten and Craig Calhoun (eds.), *Knowledge Matters: The Public Mission of the Research University*, New York: Columbia University Press, 2011, pp. 130-58, esp. 138.

<sup>966</sup> Froggatt (2006), pp. 257-64.

<sup>967</sup> N. S. Khrushchev, *Proposals to Reform Soviet Education: Memorandum on Strengthening the ties of the School with Life and Further Developing the System of Public Education*, Soviet booklet no. 42, London: Soviet News, 1958, p. 5.

<sup>968</sup> *Ibid*, p. 11.

early 1960s these reforms had failed due to resistance not only from state enterprises (which had to bear the cost of training) but also from schools, parents and students.<sup>969</sup> Nevertheless, in terms of design promotion and education VIINTE was pushing forward reforms. In 1964, it began to provide extra training to qualified designers by organising postgraduate and 3-month courses for engineers.<sup>970</sup> In 1971, the Twenty-Fourth congress of the Communist Party of the Soviet Union (CPSU) recognised the need for education in the Soviet Union to improve, become more integrated, and to focus to a greater degree on science and technology. The Five year education (1971-75) plan that the congress proposed aimed to universalise secondary education, raise education standards and train highly qualified specialists and other workers.<sup>971</sup>

### **Educational Exchanges**

The Fulbright Programme was founded by United States Senator J. William Fulbright in 1946 and helped produce a corps of competent post-war leaders in the government, industry, business, and cultural sectors. The Fulbright Lecturer Programme came to the Soviet Union in 1973.<sup>972</sup> This programme arranged the exchange of lecturers between Soviet and American Universities. The Fulbright Programme has played a major role in the opening up of Soviet society thereby

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<sup>969</sup> Johnson and Kortunov (2011), pp. 142-3. However, Khrushchev's policy met with some success in the design of tractors. Of all the Russian fields of design and production, agricultural machinery was arguably the most successful in terms of design, engineering, and most importantly, the finished product.

<sup>970</sup> The institute also participated in the work of the 'Central Research Institute of Industrial Buildings for the USSR', recommending improvements for life and working conditions, cultural services and chemical industrial factories. See G. Minervin, 'The Development of Design and VNIITE Activity' ('Razvitie Dizayna i Deyatel'nost' VNIITE'), *Technical Aesthetics*, no. 6, Moscow: VNIITE, 1965, pp. 1-4.

By 1968, the Moscow Higher Arts and Crafts College offered two industrial design courses within the industrial Art faculty. The 1968 graduate show for these courses presented a variety of work including twenty projects that focused on furniture and public industrial interior. See R. Voroshilova, 'Winter Issue of the Moscow Higher Arts and Crafts College' ('Zimniy Vipusk MVHPU'), *Decorative Art of the USSR*, no. 5, Moscow: Soviet Artist, 1968, pp. 28-9.

<sup>971</sup> Vitalii A. Zhamin, 'Decisions of the Twenty-fourth Congress of the CPSU and Urgent Problems in the Economics of Higher Education,' *Russian Education & Society*, vol.18, no.1, Armonk, NY: M.E. Sharpe, November 1975, pp. 7-29, esp. 8-18. A high percentage (59%) of the country's scientists worked in higher education, although only less than 7% of Soviet scientists worked in design and planning organisations, management, and other enterprises.

<sup>972</sup> In 1968 'the American Council of Learned Societies' (ACLS) and 'Social Science Research Council' (SSRC) established 'The International Research and Exchanges Board' (IREX), in order to represent and promote US academic exchanges with the Soviet Union and Eastern Europe. This led to The Fulbright Programme.

contributing to the Soviet Union's eventual demise.<sup>973</sup> By the late 1970s, the practice of design had spread to Moscow schools with children aged 7 to 14 learning design skills, such as combining metal and woodwork with industrial design. In Soviet schools, the level of art education was good, and children's books and films were also produced to a high level. In 1977, the Edas Studio (headed by Vladislav Kirpitshev) opened in Moscow, where children between the ages of 6 and 15 were taught about design, modelling and architecture. The creative and imaginative elements of design were encouraged, with paper and cardboard designs being prevalent.<sup>974</sup> A creative approach to thinking called the Theory of Inventive Problem Solving (TRIZ) method<sup>975</sup> was widespread in Soviet schools, universities and research centres, and focused on problem solving, analytical thinking, creativity and inventive education.<sup>976</sup> Although the TRIZ method received recognition, even outside the USSR, the concept of intellectual property rights was largely alien to Soviet society, which stifled creativity among Soviet designers. Indeed, Russian design is still recovering from the hangover effects of that period, and enforcement of intellectual property rights remains lax by international standards.<sup>977</sup>

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<sup>973</sup> Yale Richmond, *Cultural Exchange and the Cold War: Raising the Iron Curtain*, Pennsylvania State University Press, 2003, pp. 21-2 and 44.

Limited Science & Technology exchanges occurred between 1959 and 1972, however from the mid to late 1970s more than a thousand Soviet scientists visited the US. See Ibid, p. 69.

<sup>974</sup> Veremkroyt (1992), p. 2.

<sup>975</sup> The focus on logic and data in the TRIZ method is believed to provide more reliable and repeatable solutions to problems. TRIZ was developed by GS Altshuller and his colleagues in the USSR between 1946 and 1985. See [http://cmapspublic.ihmc.us/rid=1206064509716\\_727387479\\_10719/TRIZ%20%20What%20Is%20TRIZ.pdf](http://cmapspublic.ihmc.us/rid=1206064509716_727387479_10719/TRIZ%20%20What%20Is%20TRIZ.pdf) (last accessed 05.11.2010).

<sup>976</sup> Igor N. Dubina (et al.), 'Creativity Economy and a Crisis of the Economy? Coevolution of Knowledge, Innovation, and Creativity, and of the Knowledge Economy and Knowledge Society', *Journal of the Knowledge Economy*, vol. 3, Issue 1, Issue 1, New York: Springer Science and Business Media, 2012, pp. 1-24, esp. 20-1.

Mathematics in particular, as a non-ideological subject, flourished and attracted the best students. See Anders Aslund, 'changes in Economic Education in the Former Soviet Union', in David Phillips and Michael Kaser (eds.), *Education and Economic Changes in Eastern Europe and the Former Soviet Union*, Oxford Studies Comparative Education, vol. 2, no. 1, Wallingford; Oxfordshire: Triangle Books, 1992, pp. 107-20, esp. 108-13.

<sup>977</sup> Alexander Kazarin, 'Design in Russia' in *Design Policy and Global Network* (2002), p. 130. VNIITE improved state patent law significantly by adding the Design Patent category. See Dmitry Azrikan, 'VNIITE, Dinosaur of Totalitarianism or Plato's Academy of Design?' *Design Issues*, vol. 15, no. 3, Chicago, Ill. : MIT Press, 1999, pp. 45-77, esp. 54.

## Transition Period

The 1978 textbook *The Methodology for Artistic Design*<sup>978</sup> became a core text in Soviet design education.<sup>979</sup> This VNIITE book was still being used in many schools in the 1990s.<sup>980</sup> The critic Alexander Kazarin has written that in the USSR 'the most consistent and successful development of design is demonstrated in the area of education.'<sup>981</sup> During the 1980s, VNIITE's design programmes gained tremendous popularity. They presented a way in which budding designers could apply design and design management methodology. Design-programmes were particularly useful when dealing with complex long-term projects and heavy spending.<sup>982</sup>

Before perestroika (1985-91), the Communist-controlled education system had been based on a traditional German model.<sup>983</sup> To give some idea of the scale, official figures state that there were 113,000 economics teachers in 1985, the majority of whom were teaching Marxism-Leninism.<sup>984</sup> They had no experience of the capitalist system, and therefore the reforms to economics education took time to take effect, and it was not until 1990 that changes became more apparent,<sup>985</sup> even though the first Western marketing textbook to be published in the Soviet Union was Kotler's *Marketing Management* in 1980.<sup>986</sup> In 1990 the magazine *Business Week*

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<sup>978</sup> This book was written by Yuri Soloviev, V.F. Sidorenko, L.A. Kuzmichov, et al, all of whom were members of the State Science and Technology Committee of the USSR.

<sup>979</sup> The State Science and Technology Committee of the USSR (Gosudarstvenniy Nauchniy i Tekhnicheskii Komitet SSSR), *The Methodology for Artistic Design (Metodi Hudozhestvennogo Dizayna)*, Moscow: VNIITE, 1978, p. 3.

<sup>980</sup> This work offered different ways and principles of considering project situations and design modelling, as opposed to proffering the standardised, ready-made answers and solutions.

<sup>981</sup> Kazarin (2002), p. 228.

<sup>982</sup> Every year, student competitions are held by the VNIITE, which, since 1988, has helped build awareness of the importance of design. See Nasarov (2007), pp. 15-7.

<sup>983</sup> Aslund (1992), p. 108; Michael Kaganovich, 'Higher Education Reform and Access to College in Russia' in Alexeev and Weber, eds. (2013), pp. 725-47, esp. 729.

<sup>984</sup> Aslund (1992), p. 110 and 113. In particular, management courses were in high demand.

<sup>985</sup> Nigel J. Holden, *Management Training in Russia: Issues in Course Design, Development and Evaluation: A Report with Special Reference to the Russian Construction Industry*, Manchester: Brooke Publications, 1992a, p. 8; Wilson and Mukhina (2012), p. 54.

During the perestroika education policy was characterised by five main reforms: educational exchange programmes were expanded; scholarly works began to emerge thanks to the removal of censorship barriers; higher education institutions and research institutes began to coordinate with each other; gradual economic liberalisation led to work-based training and more practical education; and finally, educational institutions started to function more autonomously. See Johnson and Kortunov (2011), p. 146.

<sup>986</sup> Karen F.A. Fox (et al.), 'Philip Kotler's influence in the Soviet Union and Russia', *European Business Review*, vol. 20, no. 2, Bingley, UK: Emerald Group Publishing Ltd., 2008, pp. 152-76, esp. 152-53. Kotler was an American scholar who first published this book in 1976. Although some of the content was censored by the KGB, 12,000 copies were printed. The book was supplied to universities and used to inform their lectures on marketing during the 1980s, with a full uncensored version appearing in 1988/89. In the early 1990s other Western marketing books became available for sale to Soviet institutions and the public. See *Ibid*, pp. 159-67.

estimated that the Soviet Union needed to retrain 14 million administrators (who included people who ran major industries and engineers)<sup>987</sup> Business Week also claimed that between 4,000 and 5,000 young Soviet managers were training abroad, principally in Germany, the UK and America.<sup>988</sup>

In 1989 a new scientific conference 'The Design of Architectural Space' took place at the 'Moscow Institute of Architecture' in cooperation with the 'All-Union Research Institute of Architecture and Construction', 'VNIITE' and the 'Moscow Higher Arts and Crafts College'. Specialists at the conference discussed the development of project practice and preparing students for the new specialty of architectural design. In fact since the beginning of the 1960s there has been a discussion in the Soviet Union about the necessity for specific designer education, as well as the creation of educational establishments that would combine scientific, engineering and artistic disciplines.<sup>989</sup> During the Communist era, Soviet industry was the main customer and consumer of university applied research. After 1991, the introduction of capitalism meant that Russia went through a marketisation process and by 2000 most of the contracts between industry and research departments no longer existed. However, after 2000, industry again began to re-establish relationships with universities in a variety of ways, from research to work based training to establishing corporate universities.<sup>990</sup>

## Post-Communist Design Education

In the nineties, the teaching programmes at Russian design schools were modernised to some extent.<sup>991</sup> Russian design education has progressed from a

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<sup>987</sup> Business Week also claimed that between 4,000 and 5,000 young Soviet managers were training abroad, principally in Germany, the UK and America.

<sup>988</sup> Holden (1992a), p. 3. Originally in *Business Week*, 'Crash Courses in Capitalism for Ivan the Globe-Trotter', 1990, 28 May, p. 42.

<sup>989</sup> G.B. Minervin and A.P. Ermolaev, 'New Speciality - Architect - Designer' ('Novaya Spetsialnost - Arhitektor - Dizayner'), *Technical Aesthetics*, no. 11, Moscow: VNIITE, 1989, pp. 20-2. Indeed, the need for designers and architects to work together was discussed at the 1973 All-Union Conference in Kazan organised by VNIITE and The USSR Union of Architects. The large gap between architecture and design was not abolished however, despite numerous attempts to introduce design elements into architectural education. This was all the more disturbing considering many educational establishments refused dialogue with modern scientific, technical and artistic culture. However, in 1988 a new course in architecture and design began at the Moscow Institute of Architecture, with a focus on considering the ecological and sociological impact of design.

<sup>990</sup> Tatiana Maximova-Mentzoni, *The Changing Russian University: From State to Market*, London and New York: Routledge, 2013, p. 44.

<sup>991</sup> Johnson and Kortunov (2011), p. 150.

The Stroganov Academy of Industrial and Applied Arts in Moscow (which specialises in industrial and graphic design), the V. I. Muchin School for Industrial Art in St. Petersburg, and the

few specialist schools to a developed network of educational establishments across the country, operating with common state standards.<sup>992</sup> The network keeps growing: a large number of new institutions, faculties and departments of design have recently been developed.<sup>993</sup> Although Russia's design education is currently the sector's strongest element, a number of problems continue to suppress its development. Firstly, Russian art schools still give preference to 'fine art' disciplines such as drawing and painting, and genuine design subjects do not receive the required level of training. Secondly, Russia's strong traditions in applied and decorative arts mean that designers tend to be trained exclusively in one particular design 'art.' Thirdly, several educational institutions with modern technical facilities still do not have sufficient equipment. Finally, and perhaps most importantly, young Russian designers are still relatively absent from international design fairs and exhibitions. A paucity of exchange and work placement programmes exacerbates this problem.<sup>994</sup> To partially counter this, the government allocated USD 2.5 billion (RUB 90 billion) to support universities' science and innovation programmes from 2009 to 2013. This was earmarked for various institutes of higher education in order to establish and develop business incubators, industrial parks, innovative technological and engineering centres, and innovation consulting centres.<sup>995</sup> One science and innovation programme that president Putin established was the 'Russian Federation President Grant for young scientists' in 2002. The programme had an annual budget of USD 2 million (RUB 60 million), and in 2009 the budget was increased to USD 20 million (RUB 600 million). The programme aims to provide more opportunities for small research groups of young

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Architectural Institute in Ekaterinburg, still lead the field today. The Moscow Architectural Institute has also made a name for itself in the last decade as a highly prestigious school.

<sup>992</sup> Putin's era at the end of the 20th century witnessed a return to the authority of the state over educational policy and institutions. See *Ibid.*

<sup>993</sup> Today, design education and training is available in art, architecture, technology, textiles, product design, furniture, interior design, communication design, environmental design, fashion and many more disciplines.

<sup>994</sup> Kazarin (2002), pp. 228-33.

The British Higher School of Art and Design offers the unique opportunity to study in Russia and obtain a British degree. See <http://deforum.ru/news/9-2010-ae-aeae-Ae-ae-on-line> (last accessed 29.10.2010).

After 1991, universities had to fund themselves, and this led to a decline in the number of foreign exchange students in Russia. Whereas 10.8% of exchange students worldwide studied in the USSR before 1991, by the end of the 2000s this figure had dropped to only 3.8. Today, the underdevelopment of educational infrastructure in Russia means that Russian students are much more likely to study in the USA, Europe or Japan, while foreign students are discouraged from studying in Russia. See Panibratov (2012), pp. 51-2.

<sup>995</sup> Makarov and Varshavsky (2013), p. 487.

scholars to implement their research ideas. Between 2009 and 2010, over 30, 000 scientists participated in it, creating a flow of young specialists into science, research and education. This in turn increases the demand for university research, attracting private capital and promoting research applicability.<sup>996</sup>

### **C. Marketing Strategy**

Consumer product design in the Soviet Union suffered from a lack of innovation which was partly due to a lack of incentives offered to designers and manufacturers. Furthermore the advancement of product design was also hampered by low productivity in Soviet manufacturing.<sup>997</sup> But in order to understand the history of Russian design in the 20<sup>th</sup> century it is necessary to understand the way the markets were set up in the early years of communism. In 1917 Lenin, in his treatise, *State and Revolution*, declared that under communism the state would be abolished.<sup>998</sup> According to historians, this demonstrates the discrepancy between Lenin's theory and the actual history of the USSR.<sup>999</sup> As Julie Hessler has noted, Lenin failed to foresee the complexities in what he termed 'directing the process of production' and 'class substitution' (class substitution led to the state becoming increasingly reliant on itself as a repressive force).

### **Markets under Stalin**

When Joseph Stalin took power at the end of the 1920s, he began to impose a massive command economy on the nation. One of his most important tools was central planning. Whereas the Bolsheviks had tried to eradicate the dictating of prices by promoting free trade, Stalin controlled all the financial levers. The Soviet production system, as it evolved under him, was unresponsive to consumer demand and consumption was of little importance to the communist regime.<sup>1000</sup> A

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<sup>996</sup> Maximova-Mentzoni (2013), pp. 166-67.

<sup>997</sup> Roger Skurski, *Soviet Marketing and Economic Development*, London: Macmillan, 1983, pp. 42-3.

<sup>998</sup> Hessler (2004), p. 329.

<sup>999</sup> For example, Lenin underestimated the problems associated with setting up an effective bureaucracy, and furthermore the state continued to use the police as a repressive force. See Ibid, pp. 329-30.

<sup>1000</sup> David E. Hoffman, *The Oligarchs: Wealth and Power in the New Russia*, Oxford: Public Affairs Ltd., 2002, p. 25. Karl Marx's ideology, based on the belief that capitalism would consume itself, was enthroned in 1917, when Vladimir Lenin and the Bolsheviks seized power in Russia. Yet, as Hoffman has noted, 'Lenin and his revolutionary cohorts did not seize a country with a ripe,



period of forced industrialisation began in 1929 and lasted through 1953. Stalin instituted strict centralisation of all aspects of economic life and redirected investment from agriculture to heavy industry.<sup>1001</sup> The popular demand for an egalitarian economy was spurned in the interests of economic growth. Central trade policy sought to tie together occupational training, responses to public demand, and methods of controlling and stimulating this demand in a concept entitled 'cultured trade.'<sup>1002</sup> The concept envisaged a wider range of goods being available in Soviet shops with an improved atmosphere. It was thwarted by Stalin's resurgent terror of the late 1930s, as well as by militarisation.<sup>1003</sup>

The late 1930s also saw shortages that pushed trade systems towards bureaucratized distribution. Nevertheless some luxury goods, for example champagne, were available to buy at a modest price fixed by the state. However, in the 1950s and 1960s many other luxury goods, such as cars and TV's, commanded a high price (which could be equal to the value of several months of a worker's salary), and as such were often only available to people of high position, or those who worked for influential organisations.<sup>1004</sup> The 1950s saw a gradual erosion of the conditions which had fostered high growth rates due to the government's expansion of the industrial base which increased production capacity at the expense of productivity. However in the mid-1960s the production of consumer goods was 160% higher than the level in 1958 (according to official

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developed capitalism of the kind that Marx had foreseen. Lenin's accomplishment was to organize a coup d'état while giving the appearance of a workers' and peasants' revolt.' 'The Stalin model of central planning, directed at heavy industry and militarisation, helped the Soviet Union through World War II and was later expanded to support a massive Cold War military machine. Virtually all other components of the economy were secondary, especially consumers.'

<sup>1001</sup> Nigel J. Holden, *The Painful Evolution of Consumer Orientation and Marketing Awareness in the USSR 1953-1991*, Marketing Working Paper, Manchester: Manchester School of Management, 1992b, p. 11.

Soviet industrialisation was largely based on import substitution, replacing imported goods for Soviet ones. As a result, its success was measured by the amount of industrial goods produced, as large volumes would allow a prolonged period of existence without the need to engage with Western markets. See Mau and Drobyshevskaya (2013), pp. 37-8.

<sup>1002</sup> Hessler (2004), pp. 316-17.

<sup>1003</sup> Until mid-1950s, the Soviet market was essentially a seller's market. Sellers held the upper hand and followed their own agendas without regard to the demands of buyers. By the mid-1960s the USSR had a lot of new domestic advertising institutions, but these had little to do with product design or the production end of marketing. See Holden (1992b), p. 12; Skurski (1983), pp. 14-6; Philip Hanson, *Advertising and Socialism: The Nature and Extent of Consumer Advertising in the Soviet Union, Poland, Hungary and Yugoslavia*, London: Macmillan, 1974, pp.11-2.

<sup>1004</sup> Gronov and Zhuravlev (2010a), pp. 121-26. In 1955 the private cars sold to citizens totaled 64,000. The same number was also sold in 1965. However in the TV market was a stark difference: 495,000 sets were sold to private citizen's in 1955, while 3,655,000 were sold in 1965.

Soviet statistics) which indicated that Soviet living standards had improved.<sup>1005</sup> This statistic however, remained just that and did not translate into everyday living. In reality, many of the old structures were simply adapted to new uses. For example, the production of consumer durables was assigned to factories that also produced heavy industry, allowing the government to attribute the increase of these goods to improved living standards.<sup>1006</sup>

## Retail and Consumption

The political system began to change even before Stalin's death. In the commercial sphere, 'government' gave way to 'administration', something Lenin wished for in his *State and Revolution*. Soviet policy-makers believed themselves to be emerging from an era of crisis when utopian dreams might at last be realised. The development of Soviet retailing actually had more in common with the Western model than at first might have been obvious. Although Soviet trade was markedly different in many ways (for example, the dominant role of the state in organising distribution, the severe restrictions on private trade, and bureaucratic pricing), it conformed to certain elements of the Western pattern. In particular, retail chains became more numerous, shops became larger and more cost-efficient, and tastes became increasingly homogenised across the class spectrum.

However, Americanised retailing techniques were not assimilated with any great speed. As far back as the 1930s, the Soviet government had sent delegates to the States and Western Europe to study retailing methods, but only in the late 1950s did any real changes take place in Soviet shops.<sup>1007</sup> Advertising in the press, radio, and television, as well as posters, had been used to a limited extent in the Soviet Union but with a much heavier emphasis on trade advertising than is normal

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<sup>1005</sup> Nove (1992), p. 363; Holden (1992b), pp. 13-4; Skurski (1983), pp. 134-35.

By the mid-1970s, the USSR was averaging 35 billion hours annually on shopping although 25% of this time was spent waiting in line. In fact, it has been suggested that queuing was a mechanism for rationing goods in demand.

<sup>1006</sup> Claudio Morrison, *A Russian Factory Enters the Market Economy*, London and New York: Routledge, 2008, p. 43.

<sup>1007</sup> Gronov and Zhuravlev (2010a), pp. 127-28. An example of a prominent store at this time was the department store GUM, the biggest store in the USSR in terms of turnover and employee numbers.

After the WWII, the number of fashion stores in Moscow grew. Despite GUM producing over 38,000 items per year, the ravenous demands of the metropolitan public could not be met. From 1950 to 1970 GUM sold 70-85% of all the available better quality goods (or high demand goods) produced in Moscow and it also became a main attraction for tourists. See Gronov and Zhuravlev (2010b), pp. 28-9.

in the West.<sup>1008</sup> The fact that consumer goods produced were unbranded meant that there was little incentive for their producers to innovate or improve quality.<sup>1009</sup> Therefore, consumers began to show distaste for Soviet-made goods which were deemed ugly and unsophisticated, creating a problem for industry.<sup>1010</sup> One reason for this was the opening up of the country in the 1950s and 1960s (the Thaw), which allowed for greater interaction with other countries. A number of foreign exhibitions took place, and Western firms were invited to show their products, thereby helping to improve the standard of Soviet production.<sup>1011</sup> These exhibitions had an effect on the tastes of the Soviet consumer, especially since the exhibitions were often accompanied by Western fashion shows. As the Soviet Union reached the pinnacle of its power in the 1960s and 70s, people had nonetheless developed a taste for consumption, not least due to the influences seeping in from the West.<sup>1012</sup>

## Market Transition

Brezhnev utilised elements of a market economy during his rule, and indeed in 1965 his then Prime Minister, Aleksei Kosygin, attempted to change the culture of not requiring profit from enterprises who had received money from investment funds.<sup>1013</sup> Kosygin produced a report that suggested that in order to continue to have access to

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<sup>1008</sup> Thomas V. Greer, *Marketing in the Soviet Union*, New York; London: Praeger Publishers, 1973, pp. 92-3; Hanson (1974), pp. 21-3. Prior to the 1950s most Soviet organisations only undertook a limited amount of advertising activity. The only advertising agency in the Soviet era to serve foreign clients that wanted to promote their own goods in the USSR was Vneshtorgreklama (All-Union Foreign Trade Advertising Agency) which was established in 1964. It was assisted by the All-Union Commercial Advertising Association, which was set up the following year in Moscow by the USSR Ministry of Trade. In terms of domestic advertising the Inter-Departmental Council on Advertising (IDCA) was the principle organisation that helped domestic companies advertise their goods both domestically and internationally.

<sup>1009</sup> Philip Hanson, *The Consumer in the Soviet Economy*, London: Macmillan, 1968, pp. 204-06. In the 1970s however, consumer durables were almost always branded, although it was not uncommon for food to be sold without packaging. Furthermore, textiles and small household goods often had no branding. As such brand names generally appeared in durable goods advertisements. Soviet advertising aimed to raise consumption levels (despite this being in opposition to communist ideology) but whereas in the West market mechanisms guided production levels, in the Soviet Union they were controlled by central planners. See Hanson (1974), pp. 56-7 and 71.

<sup>1010</sup> Shlapentok and Shlapentokh (1988), p. 29.

For example, textiles were thought to have obsolete patterns, and even technically excellent tools went unsold because they were 'unpleasant to look at.' Between 1940 and 1985 unsold stock increased steadily from 9% to 25% of retail trade.

<sup>1011</sup> 'Russian State Archive of the Economy (RGAE), f.635 (USSR Chamber of Commerce), op. 1, d.566, l. 22-23, 26-31, 33-36' in Zakharova (2010), pp. 109-10.

<sup>1012</sup> Hoffman (2002), p. 25. Networks working in secret obtained goods that the State could not or did not provide, and, a shadow system existed alongside the official world of Five-Year Plans. It thrived in industry, in retail trade and in black markets.

<sup>1013</sup> Brezhnev and Kosygin had introduced reforms that attempted to decentralize the Soviet economy.

these funds, companies should be required to make a profit, thereby reducing waste and improving products.<sup>1014</sup> In order to facilitate this profit-making, Brezhnev and Kosygin encouraged the use of Western marketing and production concepts (including increased turnover), and by the 1970s these had begun to filter into the Soviet economy.<sup>1015</sup>

Due to the official unavailability of many basic and Western goods between 1960 and 1988, the Soviet shadow economy grew quickly: there were RUB 5 billion of unrecorded sales in 1960, while in 1988 this figure had risen to 90 billion.<sup>1016</sup> Corruption and inept government officials were blamed for this increase. In addition the Soviet Union suffered from a lack of advanced telecommunication technology during the 1980s, a period that saw this technology develop rapidly in the west. Part of the reason for this deficiency was perhaps the intellectual isolation that was prevalent among Soviet leaders and leading academics.<sup>1017</sup> Gorbachev recognised these issues and initiated Perestroika and Glasnost, reforms intended to open up the Soviet Union to Western co-operation. During the late 1980s 'Perestroika' and 'Glasnost' were beginning to have an effect, and a series of economic reforms were implemented. These were intended to create a more efficient market driven economy while maintaining the communist structure.<sup>1018</sup> Between 1985 and 1987 Gorbachev passed a number of consumer related reforms, including: establishing a new quality control inspectorate (Gospriyomka) that was to monitor the quality of

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<sup>1014</sup> Hanson (1968), pp. 198-99; Angus Roxburgh, *The Second Russian Revolution: The Struggle for Power in the Kremlin*, London: BBC books, 1991, pp. 10-4.

<sup>1015</sup> Holden (1992b), pp. 18-9.

For example, in 1975 the word 'marketing' was used in an article in the daily newspaper *Izvestia* to refer to the promotion of international cooperation and assisted trade development. Another example is the 1970s dictionary which cited three marketing references. Marketing was also mentioned in a design book where design was described as 'active marketing', and discussed in *Pravda* newspaper as 'the rapid development of marketing'.

Prior to the 1970s, the word marketing was only linked to American-style business and advertising. So the appearance of 'marketing' in the dictionary and in literature marked a significant milestone in Russia's economic reforms. See *Great Soviet Encyclopedia (Bol'shaia Sovietskaia Entsiklopediia)*, a translation of the 3<sup>rd</sup> edition, vol. 15, New York; London: Collier Macmillan Publishers, 1977 (3<sup>rd</sup> eds. published in Moscow in 1974), p. 481.

<sup>1016</sup> Nafziger (2012), p. 639.

<sup>1017</sup> Anders Åslund, 'Russia's Economic Transformation' in Alexeev and Weber, eds. (2013), pp. 86-101, esp. 89.

<sup>1018</sup> The catalogue '*Trading Partners USSR, User's Guide*' states that the USSR had a huge potential market of 287 million people, comprising fifteen republics. The import industry accounted for 41% of total imports and was worth RUB 25 billion, whilst the export industry was worth less than half, at RUB 10.6 billion. This marked difference was reflected by the drive to modernise industrial production in the USSR under Perestroika. See *Trading Partners USSR*, Abingdon: Sovinform Ltd., 1990. Section 4: Metal Goods, Engineering and Vehicle Industries and Section 5: Other Manufacturing. 'Other Manufacturing' covers a wide-variety of goods including clothing, cameras and furniture (no page numbers given).

goods.<sup>1019</sup> However, as noted by a British journalist Angus Roxburgh,<sup>1020</sup> this meant that it was the state, as opposed to the consumer, who was deciding whether the quality of products supplied by Soviet factories was up to the required standard. 'Perestroika' and 'Glasnost' also influenced marketing in the Soviet Union, although it was mainly Glasnost' that allowed western marketing ideas to disseminate in the Soviet Union.<sup>1021</sup>

As the Soviet Union crumbled, market ideas filled the gap left by the collapsing Marxist-Leninist world view.<sup>1022</sup> It was decided that these changes needed to be administered quickly in the form of 'shock therapy' which would entail that the crucial elements of the market would be up and running almost immediately, and growth would soon follow.<sup>1023</sup> The Russian government implemented the changes: first price decontrols, then privatisation, and finally macroeconomic stabilisation. By the mid-nineties, they had broadened reforms to include, regulation of natural monopolies, elimination of housing subsidies, policies to improve corporate governance, and fiscal reform. The first half of the nineties was therefore dedicated to dismantling the remnants of a command economy; the second half to rebuilding the state around market principles. However, there was a lack of investment in the economy, and marketisation also brought inequality, crime and corruption.<sup>1024</sup>

The nineties were a turbulent period within Russian society, with economic collapses occurring in 1991 and 1998, the latter revealing that the institutions and policies required for a market economy had been built on sand. The changes in Russia by the end of the nineties were complicated by the fact that the whole political, economic and ideological structure of Soviet Marxism-Leninism had been

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<sup>1019</sup> Gertrude E. Schroeder, "Crisis" in the Consumer Sector: A Comment', *Soviet Economy*, vol. 6, no. 1, Silver Spring, Md: V.H. Winston & Son, Inc., 1990, pp. 56-64, esp. pp. 59-63; Geoffrey A. Hosking, *The Awakening of the Soviet Union*, London: Mandarin, 1991, pp. 147-48; Roxburgh (1991), pp. 39-40.

<sup>1019</sup> Holden (1992b), p. 21.

<sup>1020</sup> Roxburgh (1991), pp. 39-40.

<sup>1021</sup> Holden (1992b), pp. 21-30.

<sup>1022</sup> *Trading Partners USSR* (1990), Section 4: Metal Goods, Engineering and Vehicle Industries and Section 5: Other Manufacturing. From the 1960s onwards parallels can be found between Western and Soviet trends, but ideas concerning free enterprise, markets and private property received very little influence.

<sup>1023</sup> Åslund (2013), pp. 97-8. The plan had already been executed in Eastern Europe in 1989 with some success, appearing to prove that Soviet-style economies could respond well to rapid marketisation.

<sup>1024</sup> Throughout the late 1980s and early 1990s for example, state officials issued distorted information and falsified reports in order to avoid sanctions. With the demise of central planning, many Soviet firms inflated prices, disrupted supply and formed powerful monopolies. As a result, between 1991 and 1992 real prices increased several times over. See Nafziger (2012), pp. 640-41.

overthrown. Despite the theory of shock therapy, the ramifications of these changes meant that the new structures took time to become embedded.<sup>1025</sup> Some industries though, flourished in the changing market economy.<sup>1026</sup> This continued into the 2000s, for example the automobile industry saw significant growth in the 2000s (in 2002 over one million cars and light vehicles were sold, but by 2008 this figure had risen to 2.8 million).<sup>1027</sup> However, the financial crisis halted Russia's boom quite dramatically at the end of 2008, and the automotive industry was heavily affected. Car production fell by 57 percent between 2008 and 2009, but the market began to recover in 2010, evidenced by new car sales volumes of approximately 1.6 million, a rise of 15 percent from 2009. Domestic production also rose from 550,000 units to around 1.2 million in 2010.<sup>1028</sup> In addition, by 2012 the consumer electronics market grew by 12 percent to USD 16.6 billion.<sup>1029</sup>

## Privatisation

From the late '60s onwards, noticeable moves towards the acceptance of private property were seen in three distinct areas. Firstly, the 1977 Soviet constitution enshrined the peoples' right to own farmland.<sup>1030</sup> Second, the advent of the condominium system allowed certain residents to become owners of their apartments;<sup>1031</sup> and third and most important was 'auto mobilisation'.<sup>1032</sup>

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<sup>1025</sup> Gustafson (1999), p. 16.

From 1999 until 2008, the Russian economy grew by an impressive annual average of 7%. See Åslund (2013), p. 86.

<sup>1026</sup> Wilson and Mukhina (2012), pp. 55-9; Jukka Pietiläinen (et al.), 'Changing Media use in Russia' in Arja Rosenholm, et al., *Russia Mass Media and Changing Values*, London and New York: Routledge, 2010, pp. 41-56, esp. 41-2.

In the media industry for example, as newspaper readership dropped from 93% in 1993 to 78% in 1997, and further to 75% in 2004, television became the most popular media, with around 98% of the Russian population regularly watching television between 1998 and 2007.

<sup>1027</sup> Royer, et al. (2009), p. 2.

<sup>1028</sup> Stratmann, et al. (2011), p. 1.

<sup>1029</sup> MarketLine Industry Profile, *Consumer Electronics in Russia*, London: MarketLine, April 2013, pp. 1-27, esp. 8-10.

Between 2008-2012 the compound annual growth rate was 15.4%. Audio visual equipment represented 95.5% of the market's total value. In 2013 the Russian share of the European consumer electronics market was 20.9% while Germany and the UK represented 16.2% and 12.3% respectively. See [www.marketline.com](http://www.marketline.com) (last accessed 05.02.2014).

<sup>1030</sup> Shlapentokh (1989), p. 161. Brezhnev pledged support to private plots, describing the private ownership policy as a 'fundamental element of Soviet agrarian policy'.

<sup>1031</sup> This was in response to the apartment shortage at that time. Ibid, p. 162. Shlapentokh refers to an article in Evgenii M. Babosov (et al.), *Soviet Worker: Social and Spiritual Image (Sovetskii Rabochii: Sotsial'nyi i Dukhovnyi Oblik)*, Minsk: Science and Technology (Nauka i Tekhnika), 1983, p. 262.

<sup>1032</sup> Anna Tikhomirova, 'Soviet Women and Fur Consumption in the Brezhnev Era' in Crowley and Reid, eds. (2010), pp. 283-308, esp. 283-303; Shlapentokh (1989), p. 162; Gronov and Zhuravlev

In January 1987, foreign companies were allowed to invest in the Soviet Union in a joint ventures plan. After 1991, in order to allow SMEs to develop faster, a legislative framework for small enterprises was established, and a systematic privatisation of industry began.<sup>1033</sup> SMEs were converted into joint stock companies, which were then restructured. This was intended to ensure that firms remained independent of state administration, and shareholders were separated from management.<sup>1034</sup> Privatisation was obligatory for some industries such as retail and construction, but others, such as transport industries, required special permission to privatise.<sup>1035</sup> Implementing these reforms actually had a negative impact on growth.<sup>1036</sup> Between 1991 and 1998, output fell by 39 percent. There were a number of reasons for this. Firstly, even before the decline, the per capita GDP (at USD 8,000) in the USSR was one-third that of the United States, making it a relatively poor nation. Secondly, much of the production of the 1990s was wasteful, dedicated to poor quality consumer goods and military purposes. The living standards of ordinary Russians however did not decline, as consumption of household electrical goods and car ownership increased between 1991 and 2000.<sup>1037</sup>

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(2010a), p. 135. The Soviet leaders' 1960s decision to allow large-scale production of cars for personal use led to a sharp increase in car ownership. The ratio of people to cars in 1975 was 54:1 compared to 2:1 in the United States, and 4:1 in the UK. 2% of Soviet house-holds owned a car in 1970, while in 1980 the figure stood at 10% and 15% in 1980 and 1985 respectively.

<sup>1033</sup> Ruben Enikolopov and Sergey Stepanov, 'Corporate Governance in Russia' in Alexeev and Weber, eds. (2013), pp. 221-45, esp. 222-23; ESRC End of Award Report, *Privatisation of Industrial Enterprise in The Russian Federation*, Reference no: R000221142, Swindon: ESRC, 1996, pp. 8-11. The report maintained that in most industrial firms, top managers held idiosyncratic information while other employees performed relatively routine tasks. As the firms were partitioned according to decision-making and decision-control, employee ownership was vulnerable to share acquisitions by managers.

<sup>1034</sup> The two major privatisation programmes, instituted between 1992 and 1994, turned over state assets to the private sector at a faster rate than the previous reform programmes. However, they were less far reaching than they appeared; for example, the state retained 29% of shares of most privatised enterprises. See Barnes (2006), pp. 69-70 and 83.

<sup>1035</sup> 16,462 large and medium size companies had been privatised by the end of 1994, and by the end of 1995 this figure stood at 17,937, representing 88.3% of the country's total industrial output. See Panibratov (2012), p. 9.

<sup>1036</sup> In 1995, the government introduced 'a loans for share' scheme in order to raise funds. The auction of shares in some of the largest state enterprises was flawed, with shares sold for very low prices. The scheme gave rise to the class of Russian business 'oligarchs', concentrating enormous wealth in a few hands, and creating political instability. The period between 1994 and 1997 was one of conflict, as the 'oligarchs' sought to control the oil and media sectors, and organised crime began to play an increasing part in the economy. See Barnes (2006), pp. 106-07.

During this period Russian business began to adopt the notions of marketing, advertising, and consumer awareness. See Poulton (2003), pp. 314-15.

<sup>1037</sup> Grabowski, et al. (2007), pp. 263-65.

The rapid privatisation process of the nineties under president Yeltsin included a system that transferred state-owned companies to Russian 'oligarchs' with significant political connections, and therefore the protection of property rights remains fragile.<sup>1038</sup> Indeed, it has been said that Russian society still retains several elements of feudalism.<sup>1039</sup> By the time Yeltsin handed power to Putin on New Year's Eve, 1999, Russia was, in the words of historian Richard Sakwa, a 'regime-state'; a hybrid of authoritarianism and democracy in which the political handover exemplified the importance of patrimonial ties built in the Communist era.<sup>1040</sup> In 2000 and 2001 the government renationalized 2,811 firms that had been privatised since 1995.<sup>1041</sup> This process continued between 2004 and 2006 when the government re-established control of sectors of the economy that had previously been privatised, for example the oil, aviation and financial sectors.<sup>1042</sup>

## D. Design Practice Strategy

### Design for the Public

Constructivism, which began in Russia around 1919, involved the idea that artistic practice should be used to improve society. A famous constructivist building was Rodchenko's kiosk which was designed in 1919. The kiosk included an area for posters, advertisements, the sale of books and newspapers, as well as a clock

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<sup>1038</sup> Hoffman (2002), pp. 179-93.

Yeltsin made a speech to the Congress of People's Deputies on 7 April 1992, declaring that 'We need millions of owners, not hundreds of millionaires,' which became a populist slogan calling for mass privatisation. The Supreme Soviet approved the law on privatisation on 11 June 1992. The first voucher auctions were held in December 1992, and continued until the summer of 1994. In that time 16,500 large enterprises were privatised. See Åslund (2013), p. 96.

<sup>1039</sup> Vladimir Shlapentokh (collaboration with Joshua Woods), *Contemporary Russia as a Feudal Society: A New Perspective on the Post-Soviet Era*, New York: Palgrave Macmillan, 2007, p. 31. Commentators have referred to four characteristics of contemporary Russia as being features of a 'feudal society': the struggle between the centre (Moscow) and the regions; the casting of the modern corporation as an 'industrial feudal empire'; the increasingly violent and illegal competition between private companies; and the idea that war is the easiest way to increase wealth. The feudal model was first proposed by Schlapentokh.

<sup>1040</sup> Richard Sakwa, *Russian Politics and Society*, 3rd ed., London and New York: Routledge, 2002, p. 456; Geoffrey A. Hosking, *Russia and the Russians: a history*, Cambridge, Mass: Harvard University Press, 2001, p. 612.

<sup>1041</sup> J. David Brown and John S. Earle, *Does Privatization Raise Productivity? Evidence from Comprehensive Panel Data on Manufacturing Firms in Hungary, Romania, Russia and Ukraine*, CEPR Discussion Paper series, no. 4791, CEPR, December 2004, p. 10.

<sup>1042</sup> In July 2003 the assets of Russia's most famous private company were seized and its director arrested, marking the beginning of the so-called 'Yukos affair' which signaled another change in the rules for redistributing property. See Barnes (2006), p. 209.



above the building. Some have interpreted the clock as a symbol of precision and efficiency.<sup>1043</sup> During Stalin's era design was often used to entrench a sense of national identity in the public, for example large buildings were erected that mirrored the American skyscraper but which often possessed facades of great ornamentation. In addition the Moscow Metro was built which again attempted to convey Soviet power, particularly through the monuments that were housed in many of the stations.<sup>1044</sup>

Khrushchev held that in order to create a communist utopia it was necessary to introduce mass-produced and cheap forms of manufacture into Soviet society. This philosophy was extended to house building where prefabricated concrete slabs were introduced to the building process. The large scale housing programme initiated in the 1950s involved utilitarian designs that were sparse in aesthetic features.<sup>1045</sup> Under Khrushchev's rule several American exhibitions in the Soviet Union revealed to the Soviet public that American goods were far superior to their Soviet counterparts. In an effort to quell this dissatisfaction Khrushchev launched a drive to catch up with the West in terms of well-designed products. Part of this effort involved the setting up of VNIITE.<sup>1046</sup> There were also British design exhibitions in Russia i.e. the 'Design and New Technology' of 1964. This exhibition featured around 100 British design industrial products. In addition during Brezhnev's rule British design was also shown in the USSR, for example the 1977 'Design and New Technology' exhibition in Moscow. In a review of this exhibition the *Technical Aesthetics* design magazine claimed that British design seemed somewhat old fashioned and 'flavourless'.<sup>1047</sup>

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<sup>1043</sup> Margolin (1997), pp. 17-9. In addition a billboard positioned at the top of the kiosk featured the slogan 'The Future-Our Only Goal' which was supposed encourage national pride and endeavour.

<sup>1044</sup> Shvidkovsky (2007), p. 369. The metro represented one of the high points of Soviet Neoclassicism and Art Deco, and was designed by Aleksey Dushkin and Leonid Polyakov, among others.

<sup>1045</sup> In fact during the 1960s mass-scale new housing programmes and the industrial specialisation of entire regions all but eradicated the artistic element in architecture. See Shvidkovsky (2007), pp. 373-76.

<sup>1046</sup> In the first half of the sixties, Anglo-Russian exchanges in design consultancy grew. According to a 1964 article in *Design* magazine, the CoID sent an exhibition of case histories, methods and techniques (rather than goods) to Moscow at the behest of VNIITE. Small teams of British architects and designers conducted a week of seminars for Russian designers and teachers, moving towards a 'sociological approach' to the role of the designer. See Paul Reilly, 'Comment: Anglo-Russian Exchanges,' *Design*, no. 187, London: Design Council, 1964, p. 23.

<sup>1047</sup> P.O. Antonov, 'Design and New Technology' (Dizayn i Novaya Tehnologiya), *Technical Aesthetics*, vol. 162, no. 6, Moscow: VNIITE, 1977, pp. 16-9.

## International Relations and Privatisation

In 1969 VNIITE became a member of ICSID. This was an important event because it meant the Soviets could forge new design relationships. For example in 1971 VNIITE organised the ICSID 'interdesign 71' workshop to redesign Minsk's urban area. This workshop lasted for two weeks and had 29 designers participating, 15 of whom were from 14 different nations. The designers split into two groups dependent on interest and experience. The workshop consisted of two projects. One project addressed the problem of loading, handling and transportation of bread, and the way it was marketed in self-service shops. At the time although the production of bread was largely mechanized, the loading, handling, distribution and display were still done manually which was less effective and potentially less hygienic. The designers proposed that the entire system of bread distribution from bakery to shop should be re-designed, and some new equipment should also be designed and manufactured in order to facilitate the new distribution system. The results were expected to increase efficiency, improve hygiene and working conditions for distribution workers, and provide a better service to the consumer. The second project concerned street furniture. The designers noted that a lot of street equipment (lighting, litter systems etc.) were inefficient and harmful to the environment, and proposed to design an integrated system which would view the street as a complete environment and coordinate the various systems. This would lead to improved street design, functionality, and a more aesthetically pleasing urban environment.<sup>1048</sup> In 1977 another *Interdesign* was held that focused on developing designs aimed at helping the elderly and disabled.

During the 1980s the influence of Perestroika (Restructuring) and Glasnost (Openness) saw the Law on the State Enterprise passed in 1987, followed by the Law on Cooperation in 1988.<sup>1049</sup> These laws allowed many new entrepreneurs to set up their own enterprises, and as a result, the first independent self-financing design studio opened in 1988, just after the Soviet Union had begun to embrace capitalism. This studio was headed by Dimitry Azrikan, who maintained that small

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<sup>1048</sup> O. Pronina, 'Interdesign-71: International Workshop for Artist-Designers in Minsk' ('Interdesign-71: Mezhdunarodnyy seminar khudozhnikov-konstruktorov v Minske'), *Technical Aesthetics*, no. 10, Moscow: VNIITE, 1971, pp. 1-3; ICSID Interdesign 71 Seminar handout, produced by the Frank Height Chairman Group III (Stored in the Design Archive, Brighton University).

<sup>1049</sup> Under Perestroika, the Soviets actively sought to export goods to Western Europe in order to help resolve their economic difficulties. These products, however, were uncompetitive in the capitalist markets and were not a great help to the economic revival of the USSR.

design teams working independently were far more effective than the state branch services.<sup>1050</sup> The influence of capitalism is clear here, and in 1992 V.I. Puzanov commented on the question of intellect in the design process. In fact Puzanov maintained that designers, as well as teachers and scientists, should embrace ideas from other cultures in order to enhance their practice and creativity.<sup>1051</sup> When the author discussed these issues with him in 1997, he had come to the conclusion that Russia still had not fully grasped the concept of creativity in design and the need for intellectual property rights.

During the author's stay in Russia from 1996 to 1997, there were very few consultancies dedicated to product design; instead, they were mainly devoted to interior and graphic design, and were clustered in Moscow. This was largely due to the fact that Russia was producing very few of its own marketable products, and international competition was practically non-existent. The reasons for this are numerous. The development of private business within Russia since the 1990s has been slowed considerably by the weight of the past. For one, the perception of Russian goods as rather bland and dated taints the image of Russian products. This situation is not helped by the outdated equipment that many manufacturers relied on. The development of links between business and designers has also been restricted by businesses seeing design as an unreliable and inefficient economic gamble that only the wealthy are prepared to take.<sup>1052</sup> Consequently, more often than not the designers' role within a company is restricted to adding the final touches to an idea or concept that has already been developed by managers

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<sup>1050</sup> According to Azrikan, the studio lacked resources and the creativity to supplant old-fashioned rigid structures. The studio had fifteen full-time employees, with a budget of USD 400,000 (RUB 250,000), and in the first year it completed 8 projects, among which were a concept development and a draft of a design project. The artistic programme incorporated new movements, such as 'Post-modernism'. Designers were paid, but clients paid only for final the final product rather than the 'design' itself since there was no market for this concept. See E.G. Vladichina, 'Independent Studio: The First Experience' ('Nezavisimaya Studiya: Perviy Opit'), *Technical Aesthetics*, vol. 305, no. 5, Moscow: VNIITE, 1989, pp. 7-10.

<sup>1051</sup> V.I. Puzanov, 'Designer's Intellect: Public Conscience and the Paradoxes of Project Practice' ('Intilekt Dizaynera: Obschestvennoe Soznanie i Paradoksi Proektnoy Praktiki'), *Technical Aesthetics*, vol. 338, no. 2, Moscow: VNIITE, 1992b, pp. 1-3. He further states that a designer minus a brain is a maker of models. Designers currently tried to understand their environment without any exposure to wider global culture. As far back as the 1920s, people had had a better understanding of the interconnectedness of culture and economy within different professions, but this understanding was lost in Russia. Designers had to find new ways of integrating their own culture into design, which would in turn make Russian design more successful.

<sup>1052</sup> Maria Stashenko, 'Russia: Surveying the State of Design,' *Design Management Journal*, vol. 4, no. 1, Boston, MA: Design Management Institute, 2009, pp. 83-96. According to a survey conducted in 2006, key factors in company business success were: 'management' (29%); 'financial resources' (24%); 'marketing' (23%); 'innovations' (15%); 'education and training' (9%).

or division heads.<sup>1053</sup> That is, designers are generally more involved in packaging and advertising issues.<sup>1054</sup>

The skepticism that many managers hold towards the importance of designers and design is fuelled by their lack of understanding of the respective parties' roles and responsibilities. Designers that work in-house often face the problem that companies prefer existing models to new ones, and as such designers are limited in the amount of creativity they can bring to their job. In addition, the development of new production lines is often subject to long delays. In terms of the use of external design agencies, there is a belief among companies that, although the prices vary, the agencies all tend to suggest the same ideas.<sup>1055</sup> However, companies that do use in-house designers, as Maria Stashenko notes, enjoy distinct advantages over those companies that do not, for in-house designers can help improve communication within the design process,<sup>1056</sup> and significantly reduce costs, especially in mass production enterprises.

### **International Design Boom**

In 2006, the artistic design consultancy 'man>works>design' was established in Moscow. The agency's 'design objects' provide pleasing products for the public such as novelty USB pens and torches, in much the same vein as the Italian company Alessi. 'Man>works>design' won the Red Dot Design Award for 'design concept' in 2007 for its radiator design. Additionally, there are a striking number of design consultancies that only work at the very highest end of the market, designing luxury products, yachts, and private aircraft interiors (Lobanov being one). However, the design sector in Russia is still relatively young, and there remain very few factories manufacturing Russian products for general domestic wholesale, let alone for the export market. Nevertheless, Russian design is now

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<sup>1053</sup> Ibid, pp. 83-9.

<sup>1054</sup> Shan Preddy, *How to Market Design Consultancy Services: Finding, Winning, Keeping and Developing Clients*, 2<sup>nd</sup> ed. (first published 1997 as 'How to Market Design Consultancy Services: Finding, Winning and Keeping Clients'), Surrey: Ashgate Publishing Ltd., 2004, pp. 156-58.

It was not until the early 2000s that companies became interested in branding, as design agencies like Mulberry began to participate in conferences and seminars in order to promote the notion.

<sup>1055</sup> It still remains the case that in the 2000s, despite increasing Western influence, Russian design retains the essential character of the Soviet period. In other words, Russian design still favours function over aesthetics and collectivism over individualism.

<sup>1056</sup> Stashenko (2009), p. 94. 35% of respondents believed that communication improves within the process of design project realisation when asked 'What are the main reasons for bringing design in-house?'

enjoying a great deal of international attention, not only in terms of home-grown design, but also in terms of exhibitions and awards management. For example, the 'Best of the Best Contest' has been conducted by *Identity* magazine and the ArtGraphics.ru branding agency since 2005.<sup>1057</sup>

In 2008, the Luminknows design agency was established in Moscow by Dr Ekaterina Khramkova. It is a Russian design and research consultancy which undertakes research projects for global and local brands, such as Samsung Electronics, Renault, DEVI (a member of the Danfoss Group) and the Moscow Underground. The consultancy has a diverse range of design projects including work relating to various spaces, medicine, consumer electronics and environments for disabled people.<sup>1058</sup>

In the last few years Russia has made tentative steps towards realising the importance of design, and in 2012 the Design Museum was opened in Moscow. This improvement is due to the efforts of designers themselves who have campaigned to spread awareness of design and its importance to the economy and everyday life. At the time of writing in 2014, a number of Russian design consultancies (as well as Russian branches of foreign design groups) exist, and the products they design range from electrical goods to all types of transport. Examples of these agencies include the industrial design agency Studio Slavasaakyan, established in 2008, specialising in high-end aircraft and car interiors, and Studio Palio founded in 2001 specialising in: furniture, medical equipment, electronics, power tools, telecommunication products, general machinery, and audio-visual equipment for the home.

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<sup>1057</sup> Aimed at promoting intercultural exchange between designers and brand architects from different parts of the world, the contest, according to its publicity, helps form an open and civilized market of branding and commercial design. See <http://identity-best.com/> (last accessed 05.05.2013).

<sup>1058</sup> Luminknows also holds international conferences, helping to boost the global design profile of Russia. See <http://www.lumiknows.com/news/part/?id=2> (last accessed 05.05.2013).

## 3.3 Korea

### 3.3.1 Brief History of Design Policy

#### Korean Handicraft Demonstration Center (KHDC)

The history of the promotion of Korean design can be traced to the KHDC. It was conceived in 1957<sup>1059</sup> by the ex-US army soldier N.R. De Hann under the sponsorship of the ICA.<sup>1060</sup> The KHDC was established with the aim of boosting the potential of the Korean craft industry by providing design and marketing advice and support. In particular, America wanted to make craft products suitable for export, in part to help counter the threat of communism. As part of this plan the ICA contracted the American industrial design company, 'Smith, Scherr and McDermott' (SSM)<sup>1061</sup> to provide technical assistance, through KHDC, to the Korean craft, cottage, and small-scale industries.<sup>1062</sup> Financed by the ICA, as well as partly by the government of the Republic of Korea, the KHDC undertook a variety of activities.<sup>1063</sup> They found that Korea generally lacked the high technical skills of Japan, and therefore needed to improve its basic production methods before developing a distinctive design identity. Further, Korea needed to regain the high quality craftsmanship of their traditional Celadon and metal crafts which are world famous. A lot of this craftsmanship was lost during the Japanese occupation (1910-45) due to master craftsmen and their skills being transported to Japan. SSM recommended technical training for craftsmen in order to improve the quality of their products both for export and local use.<sup>1064</sup> The activity of SSM in Korea only lasted around three years (until May 1960), and although the education programmes they helped to establish were of benefit to Korean design, their efforts to bolster the Korean craft industry were less successful. One of the reasons for

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<sup>1059</sup> It opened in February 1958, and closed in January 1960.

<sup>1060</sup> Park Am-jong (ed.), *Thirty-Year History of the Korea Institute of Design Promotion (Hanguk Dijain Jinheung-won Samsipnyeon-sa)*, Seoul: Kidp, 2002, pp. 4-7.

<sup>1061</sup> 'News: Design Team in Korea,' *Industrial Design*, vol. 5, no. 3, New York: Whitney Publications, Inc., March 1958, p. 20.

<sup>1062</sup> 'News: Korean Crafts Marketed Here', *Industrial Design*, vol. 5, no. 9, New York: Whitney Publications, Inc., September 1958, p. 18; Pulos (1988), pp. 136-41; Chung (1988), p. 6; Park, ed. (2002), p. 7.

As a result of this programme, the KHDC exported Korean craft-based products to America. In 1960 Korean craft sales earned at least USD 600,000, and in 1961 another USD 750,000 was made, despite the revolution in Korea.

<sup>1063</sup> Chung Kyung-won (1998), p. 7.

<sup>1064</sup> Avrom Fleishman, 'Design As A Political Force: Part 2,' *Industrial Design*, vol. 4, no. 4, New York: Whitney Publications, Inc., April 1957, pp. 44-60, esp. 54-6.

this was that Korean craftsmen were becoming influenced by modern techniques and American design, and had little desire to maintain a traditional craft approach. Indeed these craftsmen were interested in developing modern industrial systems of production. Their American allies on the other hand were hesitant about this kind of infrastructural development falling into Soviet control and encouraged traditional Korean craft and design.<sup>1065</sup>

### **The Increasing Importance of Technology and Design**

In order to understand the role of design in Korea, it is necessary to briefly outline Korea's industrial transformation and huge economic development since the 1960s.<sup>1066</sup> In 1965 'Export by Arts' was the official slogan of the Park Chung-hee government (1961-79) for promoting design.<sup>1067</sup> This slogan actually expressed the government's strategy of attempting to boost the economy by increasing the export of products that utilised craft skills (such as textiles and ceramics).<sup>1068</sup> Part of this plan involved the setting up of the 'Korea Craft Design Institute' (renamed 'Korea Export Design Center' in 1969), a new body dedicated to design research which was established in 1966. Prior to this the 'Korea Packaging Technology Association' was established in 1965, and in 1968 the 'Korea Exports Packaging Centre' was formed. In 1970, all three of the above bodies amalgamated to form the 'Korea Design and Packaging Center' (KDPC) with the aim of increasing exports in the design and industrial product sectors.<sup>1069</sup>

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<sup>1065</sup> Pulos (1988), p. 141.

<sup>1066</sup> Shin Jang-sup, *The Economics of the Latecomers: Catching-up, Technology Transfer and Institutions in Germany, Japan and South Korea*, London and New York: Routledge, 1996, p. 130. The sequence of Five-year Economic Development Plans, and the development of around thirty major conglomerates (or Chaebols), have been vital in this process. The Chaebols experienced a substantial expansion during the HCI policy in the 1970s.

<sup>1067</sup> A group of craftsmen and designers, in affiliation with Seoul National University, set up the Korean Design and Craft Research Centre in 1965. Much like the KHDC, the center promoted the importance of design and design education, collaborating with industry to create new partnerships.

<sup>1068</sup> Dennis McNamara, *Market and Society in Korea: Interest, Institution and the Textile Industry*, London and New York: Routledge, 2002, p. 70-2. In the 1960s, the government focused on extending textile production from upstream sub-sectors of synthetics, through mid-stream sub-sectors including weaving and cutting, and down to downstream processes such as garment sewing. Government support of exports in the 1960s spurred on the subsectors of spinning, weaving and sewing. The textile industry, due to the rapid increase in wages, began to lose its international competitiveness in the mid-1980s.

<sup>1069</sup> Kim Kun-bae (et al.), *The Past and Future of Academic Research in Korea: A Survey Study on the Research History and Outstanding Figures in Science and Technology (Hanguk Haksul Yeongu 100 Nyun-gua Mirae: Gwahak Gisul Bunya Yeongu-sa mit Wosu Gwahakja-ui Josa Yeongu)*, Jungchek Yeongu-2010-035, National Research Foundation of Korea, 2012, pp. 85-8.

During the 1960s the need to increase the competitiveness of Korean design and adopt foreign technology became apparent. In response, the government established the Korea Institute of Science and Technology (KIST) in 1966, as well as significantly increasing financial support to the Ministry of Science and Technology (MOST).<sup>1070</sup> Between 1972 and 1980 KIST provided increasing support to private sector firms who were establishing their own in-house R&D,<sup>1071</sup> and KIST actually absorbed the Semiconductor Technology Development Center (STDC) in 1977.

KIST and the Korea Institute of Electronics Technology (KIET) played a major role in various R&D project, including shipbuilding, steel, the chemical industry, and industrial machinery.<sup>1072</sup> This R&D aimed to develop industrial control systems for use in consumer electronics and telecommunications.<sup>1073</sup> KIET (which was set up in 1976 to promote the semiconductor and computer industries) developed, among other things, the 4bit microprocessor in 1980 and the 32K ROM in 1982. In order to achieve this KIET not only bought technology licenses from abroad, but also developed technology internally. KIET became the 'Electronics and Telecommunications Research Institute' (ETRI) in 1985.<sup>1074</sup>

In the early 1970s the most important institute for scientific development was the 'Korea Advanced Institute of Science' (KAIS – est. 1971). It was later based at

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<sup>1070</sup> KIST, *The Korea Institute of Science and Technology (KIST)*, Seoul: KIST, 1973; Mazzoleni and Nelson (2009), p. 393; Kim Kun-bae, et al. (2012), pp. 79-83; Lim Young-gil, *Technology and Productivity: The Korean Way of Learning and Catching up*, Cambridge, Mass. : MIT Press, 1999, pp. 29-33.

<sup>1071</sup> The national average annual growth rate of R&D investment per GDP in 1981-91 was the highest in world, standing at 24.2%, compared to 22.3% in Singapore and 7.4% in Japan. The average annual growth rate of business R&D per GDP was also the highest in the world at 31.6%, compared to 23.8% in Singapore and 8.8% in Japan, leading to Korea's emergence as a world leading exporter between 1980 and 1987. In 1990 Korea embarked on a ten-year plan to promote science and technology with the aim of propelling Korea into the top seven most technologically advanced nations in the world (dubbed the G-7 Project). See Kim Kun-bae, et al. (2012), pp. 85-8; Kim Lin-su (2000), p. 345.

<sup>1072</sup> Mazzoleni and Nelson (2009), pp. 392-93. R&D investments in firms stood at 122 in 1983 and had risen to 604 by 1987, reflecting Korean companies' pursuit of high-tech development. Although small and medium-sized firms accounted for over 50% of the total number of corporate R&D centers, the Chaebols still dominated R&D activities. See Kim Lin-su (1999), p. 205.

<sup>1073</sup> Although the large firms (Chaebols) continued their collaboration with ETRI on various research projects, the development of high tech industries had to await the establishment of in-house R&D programmes in these firms. In addition, the system of in-house design in Chaebols has developed since that time, in order to meet the requirements of export markets. See Mazzoleni and Nelson (2009), p. 394

<sup>1074</sup> Choi Young-rak, *Dynamic Techno-Management Capability: The Case of Samsung Semiconductor Sector in Korea*, Aldershot: Avebury, 1996, p. 59; Paik Eui-sun (et al.), 'Knowledge Transfer of Government Research Institute: The Case of ETRI in Korea', *International Journal of Technology Management*, vol. 47, no. 4, 2009, pp. 392-411.



the innovative science and technology centre, the Daedok Innopolis Park, established by the central government in 1973 with the aim of easing industrial concentration in Seoul, boosting regional development, and creating innovative industries.<sup>1075</sup> This park also played a pivotal role in promoting industry-university cooperation in Korea. The government wanted to ensure superior technological training in universities and so established a dual educational system resulting in the establishment of the KAIST in 1975. This institution was vital in producing high calibre scientists and engineers.<sup>1076</sup> In 1986 KAIST (under the auspices of MOST) established the first ever Design department within a science and engineering institute. The curriculum focused on design technology and business, and due to their connection with MOST, they were able to employ the best international faculty staff. KAIST now ranks as one of the best design schools in the world.

### **Korean Design & Packaging Center (KDPC)**

The development of a government design policy has been repeatedly linked to economic policies, especially in relation to exports.<sup>1077</sup> In 1962 the Ministry of Trade and Industry (MTI) established the Korea Trade Promotion Corporation (initially KOTRA, the Korea Trade-Investment Promotion Agency from 1995) to promote the export of Korean products, and KDPC (1970) to promote design and therefore aid the export market.<sup>1078</sup> In 1966, the MTI created the 'Korea Industrial

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<sup>1075</sup> In 2004, this park consisted of over 204 institutes; 29 private research institutes and 130 venture businesses. Universities in particular were crucial to improving industry output, as they supplied highly skilled manpower and technological knowhow. Currently, Innopolis parks have been established in three other cities. See Park Sang-chul, 'The City of Brain in South Korea: Daedeok Science Town,' *International Journal of Technology Management*, vol. 28, nos. 3/4/5/6, 2004, pp. 602-14, esp. 603-07.

<sup>1076</sup> Kim Lin-su (1999), p. 224. In 1975 KIST merged with KAIS (a research oriented science and engineering institution) to form KAIST. However, in 1989 these two bodies separated due to differing research goals.

<sup>1077</sup> Design promotion activities which have been carried out since 1950 can be summarised as follows: 1950s - crafts industry renaissance; 1960s - arts exports; 1970-80 - design and packaging advancement; 1990s - design industry development; and 2000s - design globalisation and domestic region promotion. See KIDP, *The 'Importance of the Design Industry, and a Development Plan'* (presentation at the Conference for the *Design Industry Policy*), Seoul: Kidp, 23<sup>rd</sup> March 2000, p. 7.

<sup>1078</sup> In the 1970s and 80s Korea started to focus on design promotion and exports. This strategy was modelled on the Japanese design promotion system, with the MTI, KOTRA and KDPC mirroring their Japanese counterparts MITI, JETRO and JIDPO. However, between the 1950s and 1980s Japan poured more resources into its strategy to ensure that design promotion helped the export market, whereas Korea's efforts in this area were arguably insufficient during the 1970s and 80s.

Design Exhibition' competition which aimed to promote exports and find new designers.<sup>1079</sup> In the 1970s the KDPC took over the running of this exhibition.

KDPC organised a series of international exhibitions from the 1970s onwards that have helped improve Korea's industrial and graphic design capabilities. For example in 1970 a Swiss poster exhibition was held, and in 1979 a British industrial exhibition was put on. In the 1980s several seminars and workshops were added to KDPC's list of exhibitions, which further helped improve awareness of good design within Korea. One of these was the third ICSID/AMCOM seminar entitled 'Future Industrial Design' (1981) at which both Arthur J. Pulos and Ekuan Kenji spoke. Also during the 80s a number of Korean and Japan Design Seminars were held to discuss issues surrounding the export and design of foreign products. These seminars, and others (such as the 1988 'Michio Hanyu' seminar entitled 'how to improve store brands'), strengthened the design relationship between Korea and Japan. However, the 'National SMEs design consulting programme' conducted by KDPC was the only design support available to SMEs during the 1970-80s.<sup>1080</sup>

In 1985 the MTI, through the KDPC, introduced a national design award scheme, namely the 'Good Design Award' or 'GD Mark'. This scheme enabled consumers to identify well-designed products,<sup>1081</sup> and additionally sought to draw attention to Korea's economic and creative significance. During the 1980s design competition flourished (this included companies competing against each other for the right to display the GD mark). There were two main ways to exhibit new designs and products. The first was the government-sponsored exhibitions (including the Korea Industrial Design Exhibition and venues displaying GD Mark goods)<sup>1082</sup> where elite designers showed their work.<sup>1083</sup> The second was through exhibitions held by private companies, and included the 'Samsung Good Design

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<sup>1079</sup> The purpose of the Korea industrial Design Exhibition is to introduce guidelines for future industry and culture through design, as well as potential future designers. There are seven independent fields: product, environment/ interior, package, textile/fashion, digital-media contents and craft/jewellery. The competition is open to all independent Korean designers, and is evaluated by sixty judges within each field. In 2000, a total of 953 designs were exhibited, and by 2009 this figure had more risen to 2,409. The Exhibition celebrated its 50<sup>th</sup> anniversary in 2015.

<sup>1080</sup> KDPC's designers and professors played a key role in this consulting programme.

<sup>1081</sup> KIDP, *Korea institute of Design Promotion 40 Years*, Seoul: Kidp, 2010, pp. 68-9.

<sup>1082</sup> Ibid, pp. 58-9.

<sup>1083</sup> The Good Design exhibition shows modern design in the form of pre-existing mass-produced products

Exhibition' and the 'Goldstar Industrial Design Competition' (both of which began in 1983 – the Goldstar exhibition became an international competition in 1991).<sup>1084</sup>

### **The Evolution of Foreign Direct Investment (FDI)**

During the 1960s the Korean government's priority laid with securing foreign exchange reserves, reducing the country's deficit and safeguarding employment. These aims led to a cautious approach towards overseas investment – Korean companies were only allowed to invest overseas to secure stable supplies of vital resources or create new or expanded markets for Korean exports.<sup>1085</sup> One of these new export markets was in consumer electronics, which Goldstar (Geumseong), through its first shipment of radios to Hong Kong in 1962, sought to capitalise on. The company quickly followed this by expanding in the American and European market.<sup>1086</sup> In the same year, the Korean Standards mark (KS mark) was introduced, which arguably symbolised the start of product competitiveness in Korea. All products which carried this mark reassured consumers of their reliability, which in turn increased their competitiveness domestically and overseas.<sup>1087</sup> In the 1960s the Park Jung-hee government's (1963-79) growth strategy was based on promoting exports together with outward FDI.<sup>1088</sup> This aimed to prevent the economy from being dominated by foreign companies, and used foreign borrowing in order to fund growth (this money was in part used to fund the Heavy and Chemical Industry promotion plan of the 1970s).<sup>1089</sup> In the early 1980s however

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<sup>1084</sup> These exhibitions provided a platform for Chaebols to compete, for example Samsung Electronics and Goldstar (Gumsung) Electronics often pitted their designs against one another. Goldstar, founded in 1958, became LG (Lucky-Golstar) Electronics in 1995.

<sup>1085</sup> Judith Cherry, *Korean Multinationals in Europe*, Surrey: Curzon Press, 2001, pp. 104-05.

<sup>1086</sup> *Ibid*, p. 143.

<sup>1087</sup> In 1963, the light bulb was the first product to be awarded the KS mark. In 1986, the Good Design mark (GD mark) was established, which also signified superior design. In July 2009, a new mandatory mark, the Korean Certification Mark, replaced the KS mark, and integrated 13 previous marks.

<sup>1088</sup> Paz Estrella Tolentino, *Multinational Corporation: Emergence and Evolution*, London: Routledge, 2000, p. 250; Kim Eun-mee and Mah Jai S., 'Patterns of South Korea's Foreign Direct Investment Flows into China,' *Asian Survey*, vol. 46, no. 6, University of California Press, 2006, pp. 881-97, esp. 884. In 1968 Korea invested in an Indonesian forest development project which marked the first case of Korean outward FDI. However, during this era the Korean government only approved a small number of outward FDI projects, but these restrictions were gradually reduced, and were fully liberalised by the government in 1996.

<sup>1089</sup> Cherry (2007), p. 19. In addition the government's development plans required access to the technology, skills and know-how that foreign investors could provide.

Korea saw the need to liberalise FDI, upgrade the structure of the economy, and promote more technological and skill based industries.<sup>1090</sup>

In 1986 Korea recorded a trade surplus for the first time since industrialisation. There was also a switch in the way that companies approached the international market, precipitated largely by the collapse of the traditional low-end market. The need to move away from manufacturing low-cost goods forced Korean companies to relocate the intensive labour production side of their business overseas, especially to South-east Asia.<sup>1091</sup> Furthermore, Korean companies targeted more profitable capital and technology-intensive products.<sup>1092</sup>

In the late 1980s Korean firms managed to circumvent EU trade protections by employing the strategy of FDI.<sup>1093</sup> This involved building factories and offices in EU member states. Korean FDI also targeted the US, a policy that continues to this day. The electronics industry in particular has benefited from the FDI policy (indeed, the electronics industry recognised the potential of the European market before the government)<sup>1094</sup> building upon the foundations laid in the 1960s and dramatically increasing their trade volume in both the US and EU.<sup>1095</sup> The FDI success was especially important in the late 1980s when many Korean firms experienced problems related to increased wages,<sup>1096</sup> labour unrest, and unbalanced trade

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<sup>1090</sup> Kim June-dong and Hwang Sang-in, 'The Role of Foreign Direct Investment in Korea's Economic Development: Productivity Effects and Implications for the Currency Crisis' in Ito Takatoshi and Anne O. Krueger (eds.), *The Role of Foreign Direct Investment in East Asian Economic Development*, NBER-EASE vol. 9, University of Chicago Press, 2000, pp. 267-94, esp. 267-69. Before 1984 the government permitted FDI in limited number of industries but after 1984 all industries were allowed to involve themselves in FDI except for certain areas held back by the government.

<sup>1091</sup> Lansbury, et al. (2007), pp. 25; Jeong hyung-gon (et al.), *Review on FDI Among Korea-China-Japan and Strategies for Mutual Investment Promotion* (Han-Jung-II Yukne Jikjuptoja Donghanggua Hwalsung-hwa Bangan), Seoul: KIEP, 2010, pp. 40-4.

<sup>1092</sup> Lansbury, et al. (2007), pp. 25-6.

<sup>1093</sup> Ibid.; Jeong hyung-gon, et al. (2010), pp. 20-1

Production was also moved to Europe in order to overcome trade frictions and embrace the expanding North American Free Trade Agreement (NAFTA) and the European Union (EU) markets

<sup>1094</sup> Shin Sang-hyup, *European Integration and Foreign Direct Investment in the EU: The case of the Korean Consumer Electronics industry*, London and New York: Routledge, 1998, p. 84.

<sup>1095</sup> In 1968, Korea began one of its first FDI projects in Indonesia by investing in the timber trade. However, FDI investment was fairly low until the 1980s when it totalled USD 1.8 billion. This contrasts to the USD 145 million between 1968 and 1980. Notable FDI projects during the 1980s included Goldstar's colour TV plant (est. 1982) in Huntsville, USA, and their European-standards VCR plant (est. 1986) built in Germany. The 1990s saw Korea record an FDI figure of USD 23.8 billion. See Lee Seong-bong, 'Korea's Overseas Direct Investment: Evaluation of Performances and Future Challenges', *KIEP Working Paper 00-12*, Seoul: KIEP, 2000, p. 3.

<sup>1096</sup> From the 1960s until the end of the 1980s the value-added productivity (VAP) of Korean workers was relatively low compared to other industrialised nations. For example, US VAP stood at 126, UK VAP at 95, Japanese VAP at 100, whereas Korean VAP was only 55. See Hitomi (1993), pp. 213-14.

relationships.<sup>1097</sup> In addition although a number of Japanese manufacturing techniques (such as TQC and JIT) had been learned by Korean companies, these techniques had not been applied well. However Korea would go on to perfect manufacturing techniques learnt from Japan, the US, and other countries, which in turn would vastly improve the country's productivity.<sup>1098</sup>

In 1996 after joining the OECD, the government passed the 'Act on FDI and Foreign Capital Inducement' bringing Korea in line with international standards. The early 1990s saw a rapid increase in Korean electronics firms' FDI investment, and by 1997 there were 1,204 cases of FDI investment by electronics firms.<sup>1099</sup> Following the 1997 financial crisis, the government began to promote FDI more actively as a way to move forward economically.<sup>1100</sup> FDI offered several advantages, including cheap labour costs, the ability to overcome some trade restrictions, and access to globally advanced technological design.<sup>1101</sup> These advantages also proved valuable to the Korean automobile industry which witnessed rapid growth in the 1990s.<sup>1102</sup> Korea's FDI strategy from the 1960s through to 1990s can be considered a major success, for example between 1968 and 1997 Korean firms invested USD 20.1 billion in 8,410 outward FDI projects, while between 1962 and 1997 inward FDI totalled USD 24.6 billion.<sup>1103</sup>

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<sup>1097</sup> Shin Sang-hyup (1998), pp. 18-24.

In the 1990s the EU was Korea's principle FDI sector. Examples of Korean companies directly investing in Europe include: Daewoo Electronics, Samsung Electronics and Goldstar. See *Ibid*, pp. 40-3.

<sup>1098</sup> Cho Kyu-kab, 'Manufacturing Technology in Korea,' *Journal of Manufacturing Systems*, vol. 12, no. 3, Dearborn, MI: Society of Manufacturing Engineers Press, 1993, pp. 216-22, esp. 218-20.

<sup>1099</sup> Shin Sang-hyup (1998), pp. 144-45.

Of the 1,204 FDI cases, 30% were located in China, while 19% were in North America.

<sup>1100</sup> Cherry (2001), pp. 104-06.

The government began switching its focus to market-seeking in developed countries rather than resource-seeking in developing countries in order to increase Korean FDI overseas as well as foreign FDI within Korea. The end of the Korean economic crisis ushered in a rapid increase in FDI: for example, in 1997 FDI was USD 2.8 billion, but by 2000 it had risen to USD 9.28 billion. The increase was reflected in the number of individual foreign companies or branches in Korea e.g. in 1998 there were 5,139 but by 2001 the figure stood at 11,515. See Jin Dal-yong, *Hands On/Hands Off: The Korean State and the Market Liberalisation of the Communication Industry*, New York: Hampton Press, Inc., 2011, pp. 23 and 39-40.

<sup>1101</sup> Lee Seong-bong and Yun Mi-kyung, *Does FDI Mode of Entry Matter for Economic Performance? : The Case of Korea*, KIEP Working Paper 06-02, Seoul: KIEP, 2006, pp. 27-32.

An example of FDI is LG Phillips LCD which was set up via a joint venture agreement between LG Electronics and Phillips in 1999. LG was attempting to compete in the LCD market and had developed advanced LCD manufacturing technology, but needed financial investment and a partner such as Philips, which provided the brand name and reputation.

<sup>1102</sup> Ciravegna (2012), p. 4. In 2009-2010 Hyundai opened two large factories in the Czech Republic and Slovakia as part of strategy to increase its share of the compact car market in Europe.

<sup>1103</sup> Cherry (2007), pp. 52-9.

The UK was a particularly attractive outwards FDI location for Korean companies because it had cheaper labour costs and a larger market than most of its EU competitors (Britain received 10 Korean FDIs in the 1990s). In addition non-EU companies received interest related subsidies, tax concessions and capital grants.<sup>1104</sup> FDI investments often involved Korean firms setting up 'design centres' in the countries that they invested in.<sup>1105</sup> The auto and electronics industries were particularly prone to employing this strategy. One of the benefits of such a move was that the Korean firm could employ local designers, and then ship Korean designers over to work with them. In this way innovation was more likely, since you had a pooling of two regions' resources and skills. This kind of policy has contributed to the success of MNEs in Korea, where knowledge transfer and improved design methods have proved invaluable to corporations such as Goldstar and Hyundai.<sup>1106</sup> This increase in FDI activity (particularly outward FDI)<sup>1107</sup> exposed Korean designers to different ways of managing workforces and organising the manufacturing and design process.

Since the late 1990s, more and more Korean outward FDI has moved into China, partly due to better economic relations between the two countries.<sup>1108</sup> Following this growing relationship in industry, the relationship between the two countries' design sectors has also grown. KIDP organized 'Design Korea 2004', which was held in November (2004) at Beijing's Millennium Art Museum, and was hosted jointly by the Chinese Commerce Department and MOCIE. The event provided an opportunity for Korean design firms to both promote their products,

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<sup>1104</sup> Shin Sang-hyup, pp. 159-63.

Other EU countries also attempted to attract Korean firms by offering direct investment incentives (e.g. Germany, Italy and France). However, in the late 1990s, changes to EU regulations meant that investment incentives offered by EU members to non-EU companies became less favourable.

<sup>1105</sup> For example in 1990 Goldstar set up a Design Technology Centre in Dublin, Ireland.

<sup>1106</sup> In fact some globalised industries require FDI investment if they are to survive. For example, the car manufacturers Hyundai/Kia Motors realised their need to invest globally in the late 1990s in order to rival their competitors' production costs. See Chang Sea-jin and Rhee Jay-hyuk, 'Rapid FDI Expansion and Firm Performance', *Journal of International Business Studies*, vol. 42, 2011, pp. 979-94, esp. 983.

<sup>1107</sup> From the 1960s until the mid-1980s FDI was low. However, in the 1980s annual FDI rose from USD 100 million to over USD 800 million. This trend continued, and in 1997 the figure was USD 3 billion, in 1998 USD 5.1 billion, and in 2012 USD 16.3 billion. Over the last decade inward FDI has greatly increased, with an increase from only just under 2,000 foreign companies investing in 1997, to 14,000 companies in 2010. See Chang and Rhee (2011), pp. 984-85;

<http://www.korea.net/AboutKorea/Economy/Foreign-Direct-Investment> (last accessed 22.05.2010).

<sup>1108</sup> Trade between China and Korea saw rapid growth between 1992 and 2012, rising from USD 6.3 billion to over USD 215 billion, and surpassing the combined trade figures for US-Korea and Korea-Japan. See Glosserman and Snyder (2015), p. 132.

and establish improved business relationships with other Chinese companies. During this event a Sino-Korean design forum entitled 'Future and Vision of Design Asia' was held. This forum was attended by roughly 350 people (comprising of Korean and Chinese designers, students and academic experts) who discussed various issues relating to Asian design and future cooperation.<sup>1109</sup> A decade on, having attended such forums, as well as expos and a design week in China, the KIDP opened its Beijing branch in 2014. The branch aims to support Korean SMEs looking to expand their export operations into China. In addition the branch is trying to increase cooperation between Korean and Chinese academic institutions, government departments and Korean industry in general.

### **KIDP and Creative Industry**

The Kim Young-sam<sup>1110</sup> government launched the Globalisation (Segyehwa) policy in 1993, and continued to support the already-implemented 'Design Promotion Policy for SMEs'.<sup>1111</sup> At this time Korean products found it increasingly difficult to compete on cost (as a result of changes to imitation laws, higher labour costs and globalisation), and as such both policies involved full-scale governmental support for design.<sup>1112</sup> From 1993 onwards Korea has seen rapid growth in the design industry (the 'design boom').<sup>1113</sup>

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<sup>1109</sup> KIDP Design Strategy Team, *Report on the National Design Policy in Korea 2004*, January 2005, p. 8/13.

<sup>1110</sup> Lim Hyun-chin and Jang Jin-ho, 'Whither Democracy? South Korea under Globalisation Revisited' in Jan Nederveen Pieterse and Kim Jong-tae (eds.), *Globalisation and Development in East Asia*, New York and London: Routledge, 2012, pp. 166-81, esp. 171.

The globalisation policy led to an increase in business investment between 1994 and 1996. For example, facility investment in manufacturing saw an average annual rise of 38.5%. 1994 and 1995 saw particularly high rises in growth rates (56.2% in 1994, 43.5% in 1995). In 1997 Korean firms experienced increased levels of debt and insolvency as a result of this increase in business investment. See Mo and Weingast (2013), p. 151.

<sup>1111</sup> The economist Yu Ho-min became president of KIDP in April 1993, and implemented a strong design promotion policy for over 3 years. Subsequent presidents of KIDP continued this policy of innovation and in this way furthered KIDP's success.

<sup>1112</sup> Anonymous, 'Korea Design Industry Gains New Image', *Business Korea*, vol. 18, no. 8, Seoul: Business Korea Ltd., 2001, pp. 42-3. KIDP provided subsidies for design development of up to 70% of the total design cost, at a maximum of GBP 22,000 (KRW 40 million). They also raised a Design Venture Fund to invest in venture enterprises through 'The Design Venture Certifying System'. Finally, they provided loans of up to GBP 560,000 (KRW 1 billion) for the development of 'pilot projects' in companies unable to commercialize a design due to financial problems.

<sup>1113</sup> The groundwork for this policy was laid in 1991 when the government passed the 'Design Promotion Law' that enabled KIDP to focus on design promotion. From their establishment up until 1993 KIDP gave direct design consultancy to around 100 companies a year, but from 1994 onwards roughly 1,000 companies per year were given design consultancy by the promotion programme.

KIDP announced 1993 as 'the year of design development' in anticipation of globalisation and the neo-liberal policies that had become prevalent. These changes had resulted in the expansion of the free-market and a more stringent intellectual property law following the settlement of the Uruguay Round (UR), which in turn led to the WTO replacing the 'General Agreement on Tariffs and Trade' (GATT) in 1995. The main effect of these changes on Korean design was the strengthening of worldwide product copyright laws that also prohibited the export of the imitation products that represented a large proportion of Korean exports.<sup>1114</sup> It was also difficult for Korean companies to engage in OEM production for foreign companies due to the rising costs of domestic labour. A further problem for many SMEs was the shortage of their own brands and designs.<sup>1115</sup> KIDP therefore promoted the importance of design competitiveness in the export market with the slogan: 'Go ahead with design!'<sup>1116</sup>

Large companies like Samsung and Hyundai, have undoubtedly made a highly significant contribution to the success of Korean design. However, this success can also be attributed in large part to the four consecutive five-year design promotion plans that began in 1993. These plans intended to meet a number of objectives, namely: producing a steady stream of creative designers; establishing and promoting design consultancies; creating public awareness about the importance of design; strengthening international co-operation; supporting the design development of SMEs; and building a design infrastructure. These objectives were met by employing an array of measures. Interdisciplinary Design Colleges were established in each region of the country, and talented young designers from both home and abroad were provided with financial assistance from KIDP. Furthermore, registered design consultancies were given tax benefits and access to a design development fund. Korea pursued an aggressive design

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<sup>1114</sup> Lee Jun-kyu (et al.), 'International Economic Policy' in SaKong and Koh, eds. (2010), pp. 123-76, esp. 164-65.

<sup>1115</sup> During the early 1990s, government consultants encouraged a number of SMEs to concentrate on producing and manufacturing their own designs. However, these companies were reluctant to follow this advice, partly because they did not want to make additional investments. Many of them subsequently became insolvent and were forced to close down.

<sup>1116</sup> This slogan was introduced in 1994 to emphasize the importance of design competitiveness in the export market and is still currently in use.



promotion policy, establishing strong relationships with many foreign countries and holding a large number of design exhibitions.<sup>1117</sup>

In March 1996, the Committee for Globalisation Policy (CGP)<sup>1118</sup> established a task force to prepare globalisation strategies for the Korean design industry.<sup>1119</sup> Following an extensive report by the committee, the KIDP built a comprehensive blueprint for promoting design in Korea. The policy plan was presented to the President of Korea in July 1997, and a strategic plan was prepared for transforming the country into a world class design nation by the year 2005.<sup>1120</sup> The policy plan focused specifically on creating a close rapport between the government and the private sector to promote design.<sup>1121</sup> These developments mirrored a growing sensitivity among consumers to more sophisticated and imaginative designs.<sup>1122</sup>

The Asian debt crisis of 1997 was not as large a setback for Korean manufacturing as some believed. The crisis forced Korean companies to become more efficient developers of quality goods.<sup>1123</sup> A rise in specialised design firms occurred as design became the core of Korea's economic competitiveness. In what economics Professor Cho calls the 'post-design society' companies needed to build themselves a 'brand' through business ethics and corporate image.<sup>1124</sup> The

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<sup>1117</sup> For example between 1993 and 1996 Yu Ho-min helped Korea create strong relationships and co-operation in the field of design with many countries. He was also the driving force behind the design school IDAS, established in 1996, that aimed to produce designers who had a global vision.

<sup>1118</sup> At this committee a creative development strategy instead of an imitative development strategy began to be emphasized.

<sup>1119</sup> The Ministry of Trade, Industry and Energy (MOTIE) established the 'Department of Industrial Design' in 1996 to work on design promotion.

<sup>1120</sup> Chung Kyung-won (1998), p. 8.

<sup>1121</sup> Its objectives were principally the following: 1) Proclaiming a government desire to cultivate the design industry as one of the key national industries in the 21st century; 2) Preparing an infrastructure for the design industry; 3) Reinforcing design abilities of both corporate in-house design groups and design consulting firms; 4) Reforming the design education system for cultivating well-educated designers; and 5) Consolidating design-related regulations for protecting original designs and prohibiting plagiarism. See *Ibid*, p. 11.

<sup>1122</sup> For example, according to a survey conducted in 1996 in a widely-read newspaper, *Joongang*, brand image and design were ranked as the most important factors in the selection of consumer electronic goods by the customer. In addition in the mid-1990s, the Korea Association of Industrial Designers (KAID) undertook a number of projects given to them by MOTIE, for example KAID initiated the Korea Industrial Design Award Scheme in conjunction with the Korea Joongang Daily. This type of collaboration between sectors helped Korean design to become a global market leader in design. See Anonymous, 'Design Becomes More Important for Selecting Consumer Electronics', *Korea Joongang Daily (Joongang Ilbo)*, 27<sup>th</sup> May 1996.

<sup>1123</sup> In response to the financial crisis, the Kim Dae-jung government sought to develop a strategy that focused on East Asian regionalism: 'Northeast Asia has no economic community and is, therefore, vulnerable to financial crises whenever they occur within the region. Countries in the region need to cooperate in order to survive the global competition.' See Moon and Rhyu (2010), pp. 449-50.

<sup>1124</sup> Cho Dong-sung, Design, Economic Development, and National Policy: Lessons from Korea, *Design Management Review*, vol. 15, Issue 4, 2004, pp. 10-20, esp. 12.

establishment of a Comprehensive Plan for Promoting Industrial Design came about in 1998, and the first Korea Industrial Design Convention, which was attended by President Kim Dae-jung, was held in 1999.<sup>1125</sup>

KIDP continued to advance its international influence in the 21<sup>st</sup> century, hosting major industrial design conferences such as Icoграда 2000 and ICSID 2001,<sup>1126</sup> both of which focused on the Korean concept of 'Oullim', meaning 'the great harmony' and included the notion of sustainability.<sup>1127</sup> The 21<sup>st</sup> Century has seen the government attempt to promote the design industry in the global market through a variety of projects,<sup>1128</sup> including the hosting of the 'World's Best Design Exhibition' and 'Design Korea International Conference', both of which began in 2003 and continue as annual events up to the present day.<sup>1129</sup> The Design exhibition showcases the world's best design products - together with Korean products, such that they can be compared - and leading design consultants, as well as promoting global business partnerships. The International Conference on the other hand provides a venue where people can share information about global design trends.<sup>1130</sup>

In the late 1990s regional development policies led to the introduction of a number of new techno and industrial parks which boosted local industrial development. Coordination and collaboration between regions was improved by creating institutions, such as the 'Leading Industries Offices' and the 'Economic Regions Development Committees'.<sup>1131</sup> Following the implementation of these policies, regional governments started to form Regional Design Centers (RDCs)

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<sup>1125</sup> In the same year, another award scheme was introduced by the KIDP to promote and advertise. See Anonymous, 'Korea Raises Awareness on Importance of Industrial Design', *Business Korea*, vol. 16, no. 12, 1999, Seoul: Business Korea Ltd., pp. 66-7.

<sup>1126</sup> The ICSID Seoul Congress and the 22nd General Assembly drew over 1,200 people from home and abroad to the COEX and Korea Design Center. See *International Council of Societies of Industrial Design (ICSID) 2001 Seoul Congress* (2001), p. 43.  
[http://www.icsid2001.org/english/l\\_congressp/congress\\_vod.html](http://www.icsid2001.org/english/l_congressp/congress_vod.html) (last accessed 05.12.2010).

<sup>1127</sup> In 2001, the Korea Design Center was constructed (in part to house KIDP), comprising of a Design Innovation Center and Exhibition Hall, as well as several other facilities constructed for the promotion of design practice and understanding.

<sup>1128</sup> The success of Korea's attempts was described by the Malaysia External Trade Development Corporation's (Matrade) CEO Noharuddin Nordin: 'South Korea's expertise and experience in product design and packaging has earned acclaim and acceptance in the ultimate testing ground, namely the global marketplace'. Malaysian Newspaper 'Malaysian SMEs Tap Korean Expertise in product Design, Packaging,' *Asia Pulse*, 27<sup>th</sup> October 2010.

<sup>1129</sup> KIDP (2010), pp. 166-67.

<sup>1130</sup> KIDP Design Strategy Team (2005), p. 7/13.

Both events are organized by the KIDP and hosted by MOTIE.

<sup>1131</sup> OECD (2012), pp. 142-47.

during the early 2000s.<sup>1132</sup> These were formed in order to achieve balanced design development across the country by encouraging regional businesses to invest in design. RDCs were built in key cities (such as Gwangju, Busan, and Daegu) between 2002 and 2007, providing different services, from training designers to holding events and exhibitions.<sup>1133</sup>

Since the mid-2000s several government departments have also been involved in design promotion.<sup>1134</sup> The Ministry of Culture, Sport and Tourism was specifically involved in design as it related to culture and the creative industry. To this end, the Ministry established the Korea Creative Content Agency (KOCCA) in 2009 to efficiently support the growth of the cultural industry. A 2011 KOCCA report on the cultural industry cluster showed that over the previous 10 years, the Ministry of Culture, Sports and Tourism (MCST) designated 2 cultural industrial complexes, 11 cultural industrial promotion districts and 2 cultural industrial promotion facilities around the country as a way of setting up a cohesive cultural industry infra-structure for business.<sup>1135</sup> This structure closely mirrors that of the British creative industry system.

In 2012 the government adopted the slogan the 'Creative Economy', an economy in which creativity and productivity are crucial factors in developing a successful high-tech industry.<sup>1136</sup> Korea is now one of the world's leaders in new cutting edge design and technology, and to help maintain this status two important reports were published in 2011, namely the 'Industrial technology vision 2020' published by the Ministry of Knowledge Economy (MKE), and the 'Design strategy 2020 report: Design, Meet the Future' published by KIDP.<sup>1137</sup> These reports emphasised the 'Convergence of industry' and 'promotion of strong small

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<sup>1132</sup> Following the 1997-98 financial crises the country began to promote regional development as part of a shift towards innovation and a knowledge based economy, and in search of new areas for growth. See *Ibid*, p. 65.

<sup>1133</sup> *The Design Census*, KIDP and MKE, December 2009, p. 80.

<sup>1134</sup> These departments include The Ministry of Knowledge Economy (which has been in charge of design promotion through KIDP since 1970), The Ministry of Land, Transport and Maritime Affairs, and The MCST.

<sup>1135</sup> One of the concepts for the creative industries in Korea is S.M.A.R.T (Sustainability, Multi hub and Governance, Anchor Industry, Resiliency, Talent & Technology) which is a cluster ecosystem. According to the 2011 KOCCA report, however, the then Lee Myung-bak government has made little in the way of progress.

<sup>1136</sup> Sung Tae-kyung, 'Application of information technology in ageing society: a pursuit of creative economy in Korea,' *International Journal of Technology, Policy and Management*, vol. 15, no. 1, 2015, pp. 59-76, esp. 71.

<sup>1137</sup> MKE, *Industrial Technology Vision 2020* and KIDP, *Design Strategy 2020 Report: Design, Meet the Future*, 2011.

businesses' by encouraging 'open innovation' so that more companies could benefit from new technology.<sup>1138</sup> The reports also maintained that design had moved from a concern about mere styling and supporting consumer needs, to being focused on what the product represents about the core consumer's lifestyle and image e.g. certain products will be aimed at those involved in youth culture, ecology etc.<sup>1139</sup>

### 3.3.2 Analysis of Design Policy

#### A. Industrial Strategy

##### The Electronics Industry

In 1959 Goldstar began producing its own transistor radio, although it did use parts imported from Sony. In 1966 it also produced a black and white TV using components sourced from Hitachi.<sup>1140</sup> Samsung Electronics was established in 1969. They initially had no technological capability but managed to persuade Matsushita Electronics to sell them colour TV picture tubes which enabled them to start producing their own TV's.<sup>1141</sup> During the 1960s, despite an increase in

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<sup>1138</sup> In 2010 Britain's 'Design 2020 - Designing for the 21<sup>st</sup> Century' (AHRC/EPSRC) report was published. This research identified 4 potential future global scenarios along with their potential benefits to the British design industry: the emerging BRIC economy becoming dominant; global flow and connectivity between countries; eco-imperialism, in which global warming puts pressure on energy and food supply resulting in increased urbanisation and high pollution levels; and finally, special interest groups, communities and Third-Sector Organisations (SIG's), where an ageing population is the dominant market force, along with other previously excluded niche groups. Regarding BRIC, the design industry should increase specialist manufacturing and design services, and expand regional branding and service provision. For Global flow, it should increase trade with niche international markets, develop complex design services, increase automation, and return some manufacturing to the UK. Eco-imperialism would require regulation to stimulate innovation, and the use of specialist design services. For SIG's, the industry should increase automation and short run production, co-innovation, bypass design consultancy, and develop new distribution and service models. See Alex Williams, et al. (2010), pp. 47-9.

This research initiative was supported by the Engineering and Physical Sciences Research Council (EPSRC), and the Arts and Humanity.

In 2010 Britain's 'Design 2020 - Designing for the 21<sup>st</sup> Century' (AHRC/EPSRC) report was published. It is evident that Korea and amities Research Council (AHRC). As such the initiative combined engineering, technological, and design expertise. The initiative lasted from 2005 and 2009. The AHRC and EPSRC each committed GBP 3.25 million of funding to the initiative. See 'Introduction' in Tom Inns (ed.), *Designing for the 21<sup>st</sup> Century: Interdisciplinary Methods and Findings*, Farnham, Surrey: Gower Publishing Ltd., 2010, pp. 11-23, esp. 12.

<sup>1139</sup> Sung Tae-kyung (2015), p. 71.

<sup>1140</sup> Cherry (2001), p. 61.

By 1974, 600,000 black and white TVs were exported – a 200% increase in exports compared with 1969. In addition, 29,000 colour TVs and 4.3 million radios were also exported in the same year.

<sup>1141</sup> Chang (2008), p. 33.

domestic demand for electronics products, electronics manufacturers found the Korean market too small to enable them to grow, and so they embarked on an export drive.<sup>1142</sup> However, in order to encourage domestic electronics firms to increase their exports further, and to buy or develop new technology, the government passed the 'Electronics Industry Promotion Law' in 1969. This law offered tax breaks and subsidies to firms whose policies supported the government's strategy.<sup>1143</sup> During the late 1970s electronics firms, by exploiting their low labour costs, were able to be extremely competitive in the global market. This helped Samsung Electronics and Goldstar set up sales and local marketing companies in the United States in the 1980s to enhance their export strategy.<sup>1144</sup> In addition the production of the microwave and VCR helped the consumer electronics industry develop further during this decade.<sup>1145</sup>

Design in the 1960s and 70s can be described as going through an 'imitation period' where the products produced by industry were mainly imitations of Western products that relied on the import of technologies from Western countries.<sup>1146</sup> However, the 1980s is often characterised as a 'transformation period' in which various laws were passed in an effort to encourage Korean firms to produce original designs. In 1982 the MOST established the National R&D Programs.<sup>1147</sup>

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<sup>1142</sup> In addition FDI was becoming popular, with Korea seen as an attractive base for foreign investors since it offered high-quality, low-cost labour. By the mid-1970s heavy FDI meant that foreign or joint venture companies employed more than 50% of the total electronics industry workforce.

<sup>1143</sup> Cherry (2001), p. 62. Despite an increase in electronic goods exports, the early 1970s has been termed a period of 'passive export orientation' because Korean firms were hamstrung by a lack of experience, knowledge and overseas sales expertise. Nevertheless, firms did develop these skills more fully, and in 1976 electronics production and exports were worth more than USD 1 billion to the economy.

<sup>1144</sup> James F. Larson, *The Telecommunications Revolution in Korea*, Hong Kong; Oxford: Oxford University Press, 1995, pp. 7-8.

Korean firms were so successful at exporting electronics products that the government introduced a voluntary export quota on colour TVs in order to reduce friction with the US. However, the US was not satisfied with this and imposed a quota on Korean colour TVs, later imposing other trade restrictions on various Korean consumer electronics goods as well. See Cherry (2001), p. 63.

<sup>1145</sup> The 1980s saw an increase in domestic demand for electronics products such as colour TVs, and this demand was boosted by the 1986 Asian Games, and even more so by the 1988 Seoul Olympics. See *Ibid*, p. 64.

<sup>1146</sup> For example, until the late 1970s Samsung Electronics was essentially an assembly plant, importing all its key components from Japanese suppliers. When it did begin to produce its own goods, they were generally of poor quality and design. As the 80s approached however, Samsung began to improve its production capabilities. See Chang (2008), p. 33.

<sup>1147</sup> Having been under government control during the 1960s and 1970s, from the 1980s national industry and industrial development was led by private companies that now had the impetus to devise their own R&D systems. In 1980 the government provided 64% of R&D expenditure, but by 1990 this figure had dropped to 19%. However, in 2009 it had risen to 29%, which reflects the government's efforts to encourage more R&D. See Lee Jeong-hyop, *Evolution of Republic of*

These programs contributed to the economic growth experienced in the 1980s. In 1982 the government also launched the 'Long Term Plan for the Enhancement of the Electronics Industry' (Chonja Kongop Kodowha Changgi Kyehoek). The plan included passing the 'Technology Development Promotion Law', which resulted in the establishing of a number of R&D programmes designed to help the development of indigenous science and technology skills.<sup>1148</sup> For example in the mid-1980s the programmes assisted LG, Hyundai and Samsung Electronics in establishing a semiconductor mass production system. Furthermore the electronics enhancement plan specifically aimed to increase growth in the electronics industry, and to this end it established the 'Electronics Industry Promotion Fund' (Chonja Kongop Chinhung Kigum). The fund would provide direct financial support for new product development and R&D (financial support for these areas also took the form of tax breaks and export finance).<sup>1149</sup>

During the 1980s the government funded a number of R&D activities in private firms which helped acceleration of technology development,<sup>1150</sup> including in the semi-conductor memory area. The government's development plans for the semiconductor industry, which ran from 1982-86, forced the Chaebols to make serious financial commitments. The semiconductor plans also required a public investment of USD 400 million, of which 40% was financed by the 'National Investment Fund' and the remainder by the 'Electronics Industry Promotion Fund'. This investment resulted in the successful development of the 64 K DRAMS by Samsung in 1983.<sup>1151</sup> During the 1980s, in addition to government funding of R&D, the private sector themselves also invested heavily in R&D. For example LG established a number of research centres in the late 1980s.<sup>1152</sup> LG's and Samsung's success from the 1980s onwards was crucial in propelling the Korean

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*Korea's R&D System in A Global Economy*, Seoul: Science and Technology Policy Institute, 2006, pp. 54-6.

<sup>1148</sup> Oh Myung and James F. Larson, *Digital Development in Korea: Building an Information Society*, New York: Routledge, 2011, p. 26.

<sup>1149</sup> cherry (2001), p. 65.

<sup>1150</sup> Choi Young-rak (1996), pp. 73-4.

<sup>1151</sup> Oh and Larson (2011), p. 26.

When Samsung initially announced its plan to develop 64K DRAM, general opinion in Korea and abroad was very sceptical about the company's chances of success since only the USA and Japan had previously managed to produce the product. See Choi Young-rak (1996), pp. 89-90.

<sup>1152</sup> Cyhn Jin W., *Technology Transfer and International Production: The Development of the Electronics Industry in Korea*, Cheltenham: Edward Elgar, 2002, p. 207.

LG established the first non-government R&D center in 1975. Today LG boasts 46 major R&D centers, 16 of which are located in Korea, while 30 are abroad. Some of these R&D centers also house design centers. See 'LG Design Philosophy' <http://www.lg.com/uk/design/design-philosophy>

electronics industry to its current world leader status.<sup>1153</sup> However, Korea's success in the early 1980s was hampered by the increasing amount of trade restrictions (including quota restrictions and anti-dumping duties) on Korean electronics goods (these restrictions encouraged electronics firms to make FDI investments in several alternative locations, including the US, Europe and Asia).<sup>1154</sup>

### Major R&D Programmes

Since its establishment in 1985, the Electronics and Telecommunications Research Institute (ETRI) has played an important role in carrying out national R&D programs in the fields of semiconductors, telecommunications and computer industries.<sup>1155</sup> The first Korean R&D promotion policies can be found in the 'Technology Development Promotion Law' of 1972 and the 'Promotion of Engineering Service Law' in 1973. At the time of these laws, the role of the government in R&D promotion was limited to both national research that supported industrial technological learning, and funding university R&D. The government provided little funding for technological development in industry until the early 1980s,<sup>1156</sup> when they followed the 'Japanese model'.<sup>1157</sup> The 1981 amendment of the 'Technology Development Promotion Law' called for government support for R&D in technology-intensive industries, with ETRI playing a major role.<sup>1158</sup> For example, Samsung's close collaboration with ETRI in the 1980s and 90s built up its capability to compete globally, and allowed Samsung to become a major force in

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<sup>1153</sup> Nagano Mamoru, 'R&D investment and the government's R&D policies of electronics industries in Korea and Taiwan', *Journal of Asian economics*, vol. 17, issue 4, 2006, pp. 653-66, esp. 654-55; Lee Soon-bok, et al. (2004), p. 79.

In 1992, total semiconductor production in Korea amounted to USD 7.8 billion, accounting for 5% of the global semiconductor market, a huge increase from 0.3 % in 1983 when production began in Korea. In 1993, DRAM production accounted for 30% of Korean manufacturing firms' total R&D expenditure. In October 2002, Samsung invented a 4Mb FRAM (ferroelectric random access memory) that combined non-volatile memory technology with the performance of a SRAM (static random access memory) and high-density DRAM. Designed specifically for mobile applications, the FRAM has an IT, IC cell structure that gives it a cell size of  $0.94\mu m^2$ -a quarter that of a SRAM.

<sup>1154</sup> Cherry (2001), p. 65.

<sup>1155</sup> Choi Young-rak (1996), p. 59.

<sup>1156</sup> Sakakibara Mariko and Cho Dong-sung, 'Cooperative R&D in Japan and Korea: a comparison of industrial policy', *Research Policy*, vol. 31, no. 5, 2002, pp. 673-92, esp. 679.

Among the 18 industrial policies initiated by the Ministry of Science and Technology (MOST) between 1967 and 1993, only three were recorded before 1980.

<sup>1157</sup> The Korean government sought to emulate Japan's successful R&D model of focusing on a small number of industries, particularly semiconductors. See *Ibid*, p. 685.

<sup>1158</sup> Sakakibara and Cho (2002), pp. 679-80.

the global telecommunications and electronic design market.<sup>1159</sup> ETRI has recently strengthened its technology development capabilities and increased knowledge transfer of developed technology in the Information Communication Technology (ICT) sector.<sup>1160</sup>

While ETRI focused on supporting large-size companies, the 'Korean Electronics Technology Institute' (KETI) is an R&D institute that concentrates on helping the development of SMEs.<sup>1161</sup> KETI mainly supports R&D activities in the electronic technology area, including electronic component development, system development, and automobile control systems.<sup>1162</sup> For example, GSM-type handsets and digital HDTV chipsets were developed by KETI in collaboration with private sector companies, allowing the development of innovative mobile phones and digital TVs that are now Korea's flagship export items.

Korean design in the 1990s can be characterised as going through an 'innovation period', when increasingly innovative designs were produced. This period was driven by long term government strategy that emphasised innovation and creativity over quantity. ETRI and KETI were part of the innovation drive, as was<sup>1163</sup> the 'Highly Advanced National' (HAN) project that focused on developing industrial technologies.<sup>1164</sup> The 1992 R&D project received funding from both the government and private industry.<sup>1165</sup> In addition, the Creative Research Initiative, launched jointly in 1997 with America's National Science Foundation, sought to develop science and technology in Korea.<sup>1166</sup>

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<sup>1159</sup> Between 1985 and 2000, ETRI applied for a total of 10,503 patents, 82% domestic and 18% from overseas. During this, a total of 21,446 research papers were released. 65% of these were published in domestic academic publications and 35% in foreign publications. See Paik, et al. (2009), p. 401.

<sup>1160</sup> Paik, et al. (2009), p. 397. In 2013 ETRI employed 1,944 researchers. The 2014 total R&D budget was USD 618 million (KRW 618.4 billion) with the government providing 88% of these funds, and the remaining 12% procured from private companies.

ICT is used by the OECD, Information Technology (IT) is used mostly Korea, Japan and US.

<sup>1161</sup> KETI was established by MTI in 1991.

<sup>1162</sup> Lee Soon-bok, et al. (2004), pp. 194-95. Lee Soon-bok, et al. (2004), p. 67.

<sup>1163</sup> In 1998, Korea's government altered its funding system and corporate policy in order to promote venture capital and SMEs. This change in policy reduced the preferential treatment given to the Chaebols encouraged innovation amongst SMEs.

<sup>1164</sup> Lee Won-young, 'The Role of Science and Technology Policy in Korea's Industrial Development' in Kim and Nelson, eds. (2000), pp. 269-90, esp. 278.

<sup>1165</sup> The HAN project focused on building internationally competitive high-tech products, including high-definition televisions (HDTV) and the Integrated Services Digital Network (ISDN). It also developed environmental technologies to promote sustainable economic growth, new energy, human sensibility ergonomics, and new-generation semiconductors. See Larson (1995), p. 312.

<sup>1166</sup> This programme aimed to create new satellite technology in three areas: scientific, multipurpose, and communication.



Furthermore, in 1999 the government announced Vision 2025, a new long-term plan for science and technology.<sup>1167</sup> The aim of this plan was to transition science and technology development from government initiated programmes to the private sector, and to increase the global market for Korean electronics products.<sup>1168</sup> The 2000s saw an increasing amount of cutting edge design coming out of Korea. This development can partly be attributed to the establishment of MOST in 1999. MOST went on to launch the '21<sup>st</sup> Century Frontier R&D Programme'<sup>1169</sup> and the 'National Research Laboratory Programme', both of which aimed to develop cutting edge science and technology.<sup>1170</sup>

### **Original Equipment Manufacturer (OEM) Industry**

From the 1970s through to the early 1990s, the Korean electronics industry relied heavily on OEM agreements which enabled companies to sell their products under a more established brand name. For example, Daewoo Electronics' went into an OEM arrangement with Nippon Electronic Company (NEC) of Japan in 1981. This arrangement meant that Daewoo engineers gained technical training which thereby enabled Daewoo to improve product development. In addition the NEC agreement enabled Daewoo to expand its export capabilities and improve its marketing strategies. Daewoo's brand image had been weak in Western and Japanese markets, but entering into an OEM with NEC helped improve Daewoo's brand image and fund global marketing drives.<sup>1171</sup> Daewoo made a larger profit from OEM products than from its own branded products, due to the increased marketing costs of own brand export. For example an OEM 19 inch colour TV earned USD

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<sup>1167</sup> Lee Soon-bok, et al. (2004), p. 64.

The first phase, completed in 2005, saw Korea become competitive in the global market by expanding infrastructure, mobilising resources and improving laws and regulations. The second phase, which is now coming to an end (2015), has seen the emergence of Korea as a major R&D nation, actively engaged in scientific study, and creating highly sought-after innovative products. The third phase (2015-25) aims to make Korea a global leader in science and technology, comparable to, and indeed overtaking the G-7 countries.

<sup>1168</sup> OECD (2014), p. 35; Lee Soon-bok, et al. (2004), pp. 59-60.

<sup>1169</sup> The '21<sup>st</sup> Century Frontier R&D Programme's aimed to have advanced technological capabilities in a number of areas by 2010.

<sup>1170</sup> Another reason why a good deal of cutting edge design came out of Korea in the 2000s is that manufacturing industries continually invested into R&D. For example in 2005, manufacturing industries invested KRW 16.5 trillion into R&D. This accounted for 89% of the total national investment in R&D 83.1% (128,233) of the 154,308 industrial researchers working in Korea in 2005 were from manufacturing industries. See Lee bu-hyeong and Lim Sang-su, 'Review of Korean Manufacturing Industry's Competitiveness,' *Korea Focus*, vol. 16, no. 1, Seoul: Korea Foundation, 2008, pp. 151-60, esp. 151.

<sup>1171</sup> For their part NEC benefitted from Dawoo's expertise in efficient product production.

109 in profit, while Daewoo's own brand TV earned USD 95.<sup>1172</sup> However, OEM tends to encourage copycat products, thereby largely ignoring technological innovation and creative design. As such Daewoo trailed behind its rivals in terms of creating technologically innovative products.<sup>1173</sup>

In 1986, Samsung entered into an OEM with Radio Corporation of America (RCA) in order to sell RCA's VCR machines. Prior to the agreement Samsung had been producing VCRs for the domestic market but were unable to sell many due to the high cost of manufacture. Working with RCA allowed Samsung to grow their VCR industry both locally and globally. Highly profitable OEM exports have allowed Samsung to invest in personnel, technology and equipment, gain global credibility within the industry, and perhaps most importantly, develop its own OBM products for the domestic and global markets.<sup>1174</sup>

OEM was not sustainable in the long term as it both did nothing to promote Korean brand identity, and became increasingly unprofitable as domestic wages rose. Korean firms realized that in order to compete in the global market they needed to produce and sell their own innovatively designed products.<sup>1175</sup> The government also saw that OEM was unsustainable and thus introduced a number of measures. One of these was to establish the International Joint Research Programme (which included the ETRI programme) in 1985. This programme still supports individual research projects arranged through agreements between researchers or institutions with partner countries including Britain, the US, Japan and Russia.<sup>1176</sup>

### **Heavy and Chemical Industry (HCI)**

Park Jung-hee government's industrial policies included export promotion, trade liberalisation, industrial structure, antitrust regulation and crisis imposition aimed at expediting the technology development of firms.<sup>1177</sup> And in 1973 the government sought to establish an export oriented HCI in order to aid industrial expansion.<sup>1178</sup>

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<sup>1172</sup> Cyhn (2002), pp. 181-85.

<sup>1173</sup> Ibid, pp. 186-7.

<sup>1174</sup> Cyhn (2002), pp. 189-92.

<sup>1175</sup> Lee Soon-bok, et al. (2004), p. 60.

<sup>1176</sup> Ibid, p. 66.

<sup>1177</sup> Cyhn (2002), p. 107.

<sup>1178</sup> The HCI drive led to the success of: Pohang Iron and Steel (POSCO), the Hyundai Motor Company, the aluminum sector, shipbuilding, and other automobile production. See Koh Young-sun

The inclusion of the Chaebols in the HCI strategy meant that expansion happened rapidly due to industrial diversification,<sup>1179</sup> a move that was financed mainly by state-controlled banks. The HCI drive led to an increase in automobile production, with the period between 1976 and 1979 seeing an annual growth rate of over 42 percent.<sup>1180</sup> After the 1979 Oil Crisis the government decided to re-orientate the industry towards the export market.<sup>1181</sup> This strategy involved reducing the number of manufacturers in order to concentrate on certain industries. The policy was initially successful, and led to the emergence of two leading manufacturers of passenger cars, Hyundai and Daewoo Motors,<sup>1182</sup> while Kia Motors was forced to concentrate on small trucks and commercial vans, leading them to introduce the Mazda-designed Bongo van into the market.<sup>1183</sup> The 1970s and 80s saw a rapid expansion of the Korean car industry partly due to government and private investment. In addition these years witnessed the implementation of successful export strategies that were designed to help increase the rate of industrialisation.<sup>1184</sup> The period between 1975 and 1979 saw a large increase in the number of Korean firms agreeing technology licensing agreements with foreign firms.<sup>1185</sup> Following the success of the HCI policy, the 1980s saw: increased public

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(2010), pp. 16-7; Joh Jung-jay (et al.), 'Territorial Development Policy' in SaKong and Koh, eds. (2010), pp. 177-226, esp. 186; Stern, et al. (1995), pp. 183-89.

<sup>1179</sup> This diversification occurred quickly: in 1970 the 30 biggest Chaebols had 126 subsidiaries, but in 1979 this subsidiary figure has risen to 429. Furthermore in 1980 there were 30,823 manufacturing firms in Korea but by 1992 this figure has risen to 74,679. See Yoo Seong-min and Lee Sung-soon, 'Evolution of Industrial Organization and Policy Response in Korea: 1945-1995' in Cha Dong-se, et al., eds. (1997), pp. 426-67, esp. 436-47.

<sup>1180</sup> Stern, et al. (1995), p. 156.

Production rose from 9,069 cars in 1974 to 112,314 in 1979. However ownership of private automobiles remained at very low levels throughout the 1970s. See Laura Nelson, *Measured Excess: Status, Gender, and Consumer Nationalism in South Korea*, New York: Columbia University Press, 2000, p. 94.

<sup>1181</sup> Nelson (2000), p. 94.

<sup>1182</sup> Frederick Betz (et al.), *Innovation and Global Competition: The Case of Korea*, New York: Nova Publisher, 2014, p.117.

Hyundai Motors was established in 1967 and sold its first car, the Cortina, in 1968, the parts of which were supplied by Ford, and which was sold under the Ford brand. However, Hyundai was not content merely to produce Ford designs and began to design and manufacture their own cars. Daewoo Motors was established in 1982 as part of the Daewoo Group, rebranding as GM Daewoo in 2001 having sold most of its assets to General Motors. The company was renamed GM Korea in 2011.

<sup>1183</sup> The Jun Doo-hwan government brought in the Automobile Rationalisation Measures Law, forcing Kia to withdraw from the passenger car market. Kia circumvented this by producing the Mazda Bongo under license. The Bongo series was a great sales success, gaining popularity more as a multi-purpose family car than a commercial vehicle. See Matsuo Yoshihiko and Fujimoto Akira, 'Kia Motors and Its Design Organization', *Car Styling*, vol. 69, Tokyo, bimonthly magazine, March 1989, pp. 105-23, esp. 107.

<sup>1184</sup> Lansbury, et al. (2007), p. 112.

<sup>1185</sup> Stern, et al. (1995), pp. 158-59; Shin Sang-hyup (1998), pp. 17-9 and 202.

understanding of industrial design; the major car and electronic companies employing more industrial designers; and expanded technological/engineering design education in colleges and universities.

In 1976, Kia Motors established their own in-house design team consisting of three or four people who were part of the engineering department. Their main brief was to develop front and rear lamp shapes, and design different seat trim for the Mazda car. In 1984, Kia opened an R&D centre, and the design department was moved to this centre. As Kia's in-house design team only developed its technical know-how through design projects such as the 'Concord' and 'Pride', their designers' experience was mainly related to the modification of existing models.<sup>1186</sup> The same was true of designers in the electronics industry where a similar design process took place. That is, designs were largely copied from more established models and simply modified to appear outwardly different.

### **The Promotion of SMEs**

Historically, Korea's economic policies focused on supporting the Chaebols in order to stimulate growth. However from the 1960s through to the 1980s a small number of SMEs were also supported by the government.<sup>1187</sup> During this period KIST helped larger companies and concentrated on technology issues. By contrast, from 1970 onwards the KDPC focused on helping SMEs with product design and packaging technology/design. This policy had high expectations of success, but involved low government investment. As such the consulting offered by KDPC was limited.

A 1985 KDPC report 'Research on the state of industrial design' concluded that design's importance to the development of companies and the country had greatly increased. However, it was expected that it would take longer for a fuller understanding of how design could be implemented on a practical level within companies and used to create higher quality products.<sup>1188</sup> The main problem

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During the 1980s Korean companies began to move away from their reliance foreign technologies by increasing their R&D investments. By the end of the 1980s Korean automobile companies invested a higher percentage of their sales into R&D than both the US and Japan.

<sup>1186</sup> Matsuo and Fujimoto (1989), pp. 114-15.

<sup>1187</sup> Choi David Y. (et al.), 'The Changing Face of Korean Small and Medium-sized Enterprises Management' in Chris Rowley and Paik Yong-sun (eds.), *The Changing Face of Korean Management*, London and New York: Routledge, 2009, pp. 143- 64, esp. 145.

<sup>1188</sup> KDPC, *1985 Report on Research of Industrial Design (Sanup Dijain Siltae Josa Bogosea)*, Seoul: KDPC, 1985a, p. 41.

identified was that companies still considered design as 'dealing only with the outward appearance of products.' This attitude was reflective of the wider belief about the nature of design in Korea at that time, which considered it synonymous with fashion. On the one hand, design was considered important, but on the other, few were willing to invest in it at anything other than a superficial level.

Consequently, most designs were imitative rather than inventive and the design market did not expand. According to the 1982 KDPC report *Research on the State of Industrial Design; in particular the In-house Design Department*, CEOs lacked knowledge of industrial design. This presented the biggest obstacle to installing and managing a design department.<sup>1189</sup> The report advocated the promotion of managers who could operate the design business more effectively. In addition, the KDPC suggested that there was an urgent need for institutions where designers could be retrained, and also for independent consultancies that would be able to help SMEs develop the ability of their designers. This required backing at the level of national policy.<sup>1190</sup> With that goal in mind, the government surveyed and selected SMEs which were planning to develop souvenirs for the 1988 Seoul Olympics, and provided them with institutional support such as design production facilities, design consultation, distribution structure, and copyrights via a registration of their designs.<sup>1191</sup>

The 1987 democratisation of Korea, together with the 1988 Olympics, brought about both political and economic changes. Until this time, the interests of the Chaebols had been prioritised in economic policy. However, after 1987 the emphasis started to shift towards redistribution programmes and welfare initiatives. In addition, government support for SMEs was massively increased. Between 1993 and 1994 alone it doubled from USD 1.1 billion (KRW 1.1 trillion) to USD 2.1 billion

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<sup>1189</sup> KDPC, *1985 Report on the Industrial Design: Mainly About In-House Design Department*, Seoul: KDPC, 1985b, p. 5.

The KDPC report 'Research on the actual condition of industrial design' (1985) illustrated the importance of making use of design for companies' development, and also recognised that the important role of design in Korea's development had greatly increased. See *1985 Report on research of industrial design*, p. 41

<sup>1190</sup> *1985 Report on research of industrial design*, pp. 41-5. At the university level, design education was still undertaken as part of art education; it was proposed that design should become part of professional education instead.

<sup>1191</sup> According to the government plans, KDPC supported manufacturers design development for the Olympic souvenirs from 1982 to 1986 in phases; in 1982, KDPC supported design development of 256 items from the 50 manufacturers selected. See KDPC, *1982 Annual Report on Design (Dijain Gaebal Yeongu Bogosea)*, Seoul: KDPC, 1982, p. 21.

(KRW 2.1trillion).<sup>1192</sup> During this period manufacturing SMEs employed 61 percent of the employable population, but they only contributed roughly 38 percent of value-added and export volumes.<sup>1193</sup> This situation has been a problem since the 1970s and the Korean government has continually tried to solve the issue by passing a series of laws aimed at developing and restructuring SMEs.<sup>1194</sup> These laws helped to enhance collaboration between large global corporations and SMEs.<sup>1195</sup>

The Small and Medium Business Administration (SMBA) was founded in 1996 and robustly supports SMEs' efforts to innovate, as well as various other R&D activities. The SMBA encourage SMEs to partner with academia and research institutes (for example the 'Industry-University-Research Consortium Project for Technological Development').<sup>1196</sup> This means that government institutions purchase technological products from SMEs. In addition SMEs' R&D expertise is increased as a result of large companies sharing their technological knowledge,<sup>1197</sup> which in turn helps SMEs improve their export figures. After the 1997-9 financial crisis SMEs received even more support as the country realised it could not rely merely on large MNEs to drive the economy.<sup>1198</sup>

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<sup>1192</sup> Mo and Weingast (2013), pp. 122-29. The government's financial loans to SMEs, together with public investments in SMEs, exceeded GBP 5.62 billion (KRW 10 trillion) in 2012.

<sup>1193</sup> In 1963 SMEs employed 66.4% of the employable population, but by 1976 this figure had fallen to 37.6%. However, by 1988 it had risen to 51.2%. In parallel, the share of manufacturing value added by SMEs in 1963 was 52.8%, but fell to 23.7% in 1976. This figure rose in 1988, reaching 34.9%. In 2004 the figure stood at 86.5%. See Kim L. and J. Nugent, 'Korean SMEs and Their Support Mechanisms' in Brian Levy (et al.), *Fulfilling the Export Potential of Small and Medium Firms*, Boston, Mass: Kluwer Academic, 1999, pp. 115-67, esp. 115-16; Choi David Y., et al. (2009), p. 146.

<sup>1194</sup> For example the 'SMEs Development and Diversification Act' (1975), 'Credit Guarantee Fund Establishment Act' (1976), 'SMEs' Facility Modernization and Investment Enhancement Act' (1976), 'Small Business Administration and Medium Industry Promotion Corporation Act' (1978), 'Group Free Contract System Act' (1981), 'SMEs Priority Policy Act' (1982), Fair Subcontracting Business Process Act' (1984), 'Special Development of Venture Firm Act' (1997) and the operation of 'Special Committee for SMEs' (1998). See Park and Hong (2012), pp. 208-12.

<sup>1195</sup> An example of this collaboration occurred in 1993 when 124 large firms and 500 SMEs founded an association which secured over KRW 2,090 billion for a fund supporting SMEs. See Park and Hong (2012), pp. 208-09.

In 2010 SMEs made up 99.9% (3,123,284 companies) of all firms of Korea, while Large sized companies (over 300 employees) made up just 0.1% (2,173 companies). See OECD, 'Korea', in *Financing SMEs and Entrepreneurs 2013: An OECD Scoreboard*, OECD Publishing, 2013, p. 143.

<sup>1196</sup> In 1998, the government changed its funding system and corporate policy in order to promote venture capital and SMEs in contrast to their previous preferential treatment of the Chaebols, transferring the policy making function of the MOCIE to the SMBA. See Kim, Y. (2006), Korea's SME Policy Paradigm, SMBA. [www.apec-smeic.org/file/pdf/06forum\\_YTKIM\\_Korea\\_Presentation.pdf](http://www.apec-smeic.org/file/pdf/06forum_YTKIM_Korea_Presentation.pdf). Also see <http://www.smba.go.kr/eng/introduce/history.do?mc=usr0001141>

<sup>1197</sup> 1,337 technological product items from 39 large companies were shared with 572 SMEs in 1993.

<sup>1198</sup> Choi David Y., et al. (2009), p. 145.

Between 2003 and 2007 the Korean government attempted to increase and facilitate cooperation between OEM and SMEs. A number of SMEs supported large companies such as Samsung and Hyundai-Kia Motors by producing parts and developing technology for them which in turn increased the competitiveness of these big-sized companies. Recently, in order to ensure that SMEs receive a fair price for their work, the government has suggested that large companies share more of their profits with the SMEs who work with them. Such a move would also prove beneficial to large companies since they rely to some degree on the R&D work of SMEs.<sup>1199</sup>

### **Globalisation in the 1990s**

Following the end of WWII Japan and Korea faced several problems regarding how to generate industrial development. Neither country was rich in raw materials and both lacked the political influence to fully protect the ownership rights of their multinationals. Since the mid-20<sup>th</sup> century both of the governments have therefore tended to enact policies that favour multinationals who acted broadly in line with national industrial policy objectives. This was particularly successful in the development of Korean industry because the state was able to offer subsidies in exchange for high export performance. The Japanese government role in the development of industry was less significant because group-connected banks were able to provide much of the necessary funding for industry.<sup>1200</sup> Additionally, both countries have developed ties with other resource rich nations and relied heavily on financing via Official Development Assistance (ODA)<sup>1201</sup> loans and FDI credit. There was also pressure placed upon the countries to liberalise their markets, which they tried to do through a number of measures including implementing rationalisation subsidies, increased privatisation and standardisation.

Although Korea began to record a trade surplus from 1986, it still had a large trade deficit with Japan. As stated, Korea had an industrial structure that meant that the more it exported goods the more it needed to import raw materials and technology from Japan to make these exports. Furthermore Korean companies felt

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<sup>1199</sup> Park and Hong (2012), pp. 209-12.

<sup>1200</sup> Solís (2004), pp. 208-09.

<sup>1201</sup> ODA was created by the Development Assistance Committee, a part of OECD, to be a measure of the flow of international aid, including loans, with the aim of promoting economic development especially in developing countries.

there were unfavourable trade conditions with Japan, with the trade terms for Korean exports being too strict.<sup>1202</sup> In order to narrow the trade deficit with Japan, the government offered to help a select number of companies tap into the Japanese market. The KDPC funded research trips to Japan, the goal of which was to improve the design of Korean products and make them more appealing to both Japanese and global consumers. However, a more fundamental reason for Korean companies trailing their Japanese competitors was that R&D in Korea was at a less advanced stage than in Japan right up until the early 1990s.<sup>1203</sup>

During the mid-1980s most SMEs in Korea, and some large companies, were dependent on two things, namely: the availability of cheap labour and following the practice of OEM (or simply imitating foreign products). In light of these issues, the Korean government recognised the importance of design, and of upgrading the quality of products. As such, from 1987 it provided more substantial support for companies exporting to Japan.<sup>1204</sup> During the late 1980s neo-liberalist economic policies spread around the world, which forced Korea to open its domestic market to the global market economy.<sup>1205</sup>

The Kim Young-sam government joined the WTO in the 1990s and began planning Korea's future economic strategy which involved originality in design. KIDP highlighted the need for innovation in design in order to remain competitive in the global marketplace. It referred to the 'Uruguay Round' as the 'Design Round', and recognised the stronger emphasis on respect for intellectual property rights.

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<sup>1202</sup> Lansbury, et al. (2007), pp. 33-4.

Whereas in Japan the Keiretsu system retains control of the retail outlets for their products, thereby limiting the entry of foreign products into those markets. See Lincoln (2001), pp. 111-12.

<sup>1203</sup> Due to full-scale technical development by enterprises in the 1980s, researchers who went to KAIST could develop medical diagnostic technology using an ultrasonic wave. There were some successful cases, including the establishment of Madison co. which produced ultrasonic wave diagnostic equipment in 1985.

<sup>1204</sup> KDPC, *1990 Improving Measures of Adverse Balance of Korean Trade to Japan: The Case Study of Design, Packaging Development (Daeil Muyek Yekjo Gaesun Sicheck: Dijain, Pojang Gebal Yeongu Sarae)*, 1990, Seoul: KDPC, pp. 7-11.

As well as support in the form of design consultation. However, 1987 also saw a rise in labour costs, partly due to the business boom. As a result of this wage increase, industries such as toys, textiles and footwear could no longer compete in the international market and began to move to South East Asia where labour costs were lower. In response to this development the government provided funds to KDPC in order to help companies to upgrade their products in terms of design, packaging skills and packaging design.

<sup>1205</sup> Dicken (1992), pp. 97-8.

In the 1980s-1990s, technology-oriented SMEs in Korea became sub-contractors of large enterprises due to their relatively low wages. Since the 1990s however, Korean SMEs have focused on building more high value-added and technologically advanced businesses. As a result, the number of high value-added manufacturing companies has steadily increased from 219,425 in 2000 to more than 300,000 in 2004. See Choi David Y., et al. (2009), p. 149.



The introduction of intellectual property rights meant that Korean manufacturers needed more than ever to develop their own designs to compete with rivals, even in the domestic market.<sup>1206</sup> The Korean government also realised it would need to strengthen its environmental policies in line with international standards. By the 1990s the pollution and environmental damage in Korea was worse than in many developed countries. The government therefore adopted many eco-friendly policies, including those relating to waste treatment facilities and combatting pollution.<sup>1207</sup>

### **Five-Year Design Promotion Plans**

In the 1990s, the economy changed from a state-dominated system to a privately led system. In addition there was an emphasis on design and technological innovation in order to increase national economic competitiveness. The goal was to improve the image of 'Korean' goods in export markets, as well as to establish the country as a design industry hub of East Asia. In 1993, the government devised the 'Comprehensive Plan for Industrial Design Promotion' which incorporated the 'five-year design promotion plans' (1993-1997, 1998-2002, 2003-2007, 2008-2012 and 2013-2017) into its remit.<sup>1208</sup> These plans saw new industrial design policies implemented in earnest in five-year cycles.

The first 'Industrial Design Development Five-year Plan' (1993-97) led to an increase in the number of design firms. Part of the plan involved setting up the 'Design Support Project for SMEs' (1994) which aimed to encourage SMEs to place more emphasis on design.<sup>1209</sup> This nationwide project (which I devised, co-ordinated and implemented as a member of KIDP) provided companies with domestic and foreign designers to help develop domestic products.<sup>1210</sup> Up until

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<sup>1206</sup> Furthermore, as the Korean currency (Won) appreciated and wages got higher, business couldn't compete internationally by relying on OEM and cheap products.

<sup>1207</sup> Joh, et al. (2010), p. 196. From 1992 increased environmental charges were introduced for polluting industries and vehicle owners, along with waste disposal measures.

<sup>1208</sup> The initiatives were the remit of the MOCIE. They were administered through the Design and Brand Policy Division, and sought to improve the indigenous design industry, increase employment opportunities for designers, and raise design awareness in the general public. See Douglas MacLeod (et al.), *Design as an Instrument of Public Policy in Singapore and South Korea*, Research Reports of Canadian Design Research Network, Asia Pacific Foundation of Canada, 2007, pp. 22-3.

<sup>1209</sup> This project (Jungso kiup design gido saup) sought to revitalise the design cluster. SMEs' were further supported in the 2000s by the projects 'Design Innovation' and 'World's Leading Products,' both of which were funded and promoted by KIDP.

<sup>1210</sup> *The Korea Economic Daily*, 07<sup>th</sup> October 1997, p. 42.

In the early stage of this project (1994 to 1996), KIDP contracted 500 local and overseas designers to consult with SMEs in order to help them with their product and graphic & packaging design. Product design was given a maximum government support of GBP 1,700 (KRW 3 million), whereas

1993 government 'product and graphic design consulting' was never given to more than 200 companies a year (the consulting was done by KIDP designers together with other selected university design professors). However after the 'Design Support Project for SMEs' was implemented in 1994, on average over 700 SMEs benefited from government design consultation annually until 2008.<sup>1211</sup> The overall aim of this project was to encourage SMEs to invest in professional designers, and indeed the project did lead to more SMEs employing their own designers, and Korean design consultancies becoming increasingly competitive. As such the project helped many companies improve their sales figures, which in turn ensured that the government recognised the importance of design. As a result the project has continued through all of the five-year design promotion plans (government support for SMEs increased even during the 1997 economic crisis).<sup>1212</sup>

In the early 1990s the Chaebols also began to recognise the importance of design, partly as a result of the government's growing emphasis on improving design standards. From 1993 onwards the Chaebols expanded their design departments and recruited in-house designers in an attempt to become more competitive. Design Consultancies also strengthened their design workforce in the early 1990s, increasing their practical experience by consulting for manufacturing companies, and promoting public awareness about design.<sup>1213</sup>

The second 'Industrial Design Promotion Plan' (1998-2002) had the following objectives: to raise the public profile of design; improve product quality; improve education; and organise regular international events. The plan aimed to promote innovative design by providing government funding to SMEs. The third 'Design Industry Development Plan' (2003-2007), known as Design Korea, focused on

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graphic & packaging design received a maximum of GBP 850 (KRW 1.5 million) per project. In 1997 the government increased support for product design to a maximum of GBP 2,800 (KRW 5 million), and a maximum of GBP 1,700 (KRW 3 million) for graphic and packaging design. In all, 423 foreign designers from 25 countries participated in the project between 1994 and 1997.

<sup>1211</sup> KIDP (2010), pp. 136-37.

<sup>1212</sup> In 1998, in order to increase the quality of design consulting the government increased its support to GBP 5,600 (KRW 10 million) for product design, and to GBP 2,800 (KRW 5 million) for Graphic & Package design. In 1999 government support was increased to GBP 16,700 (KRW 30 million) for newly designed products. The budget for this project was increased from GBP 1.67 million (KRW 3 billion) to GBP 5.89 million (KRW 10.6 billion) between 1994 and 1999.

The 'Design Development New Product Exhibition' was held every year for public relations and sales promotion of the products produced as a result of this project; these exhibitions have been running since 1995. Accordingly, the government increased its funding to GBP 22,000 (KRW 40 million) per project in 2001.

<sup>1213</sup> John Bryson and Grete Rusten, *Design Economies and the Changing World Economy: Innovation, Production and Competitiveness*, London and New York: Palgrave Macmillan, 2011, pp. 147-48.

promoting the design industry in order to render Korea an industrial hub in the East Asian region. The plan aimed to increase the number of in-house designers, cultivate talented designers via the Next Generation Design Leaders Programme (which was implemented in 2004 and is still active today), and raise the market value of the design industry to 3 percent of GDP.<sup>1214</sup> In 2002 the value of the Korean design industry was estimated at approximately KRW 7 trillion.<sup>1215</sup> During the fourth 'Design Promotion Plan' (2008-2012) the government continued to support industrial complexes, as well as funding IT industries at several of the complexes including a number of new urban high-tech industrial parks that were intended to support both SME networks and venture businesses. This strategy was very effective at increasing creative design competitiveness.<sup>1216</sup>

The current five year plan, the 'Design & Industry Convergence Strategy' (2013-2017), aims to promote design further, as well as encourage greater cooperation among industries.<sup>1217</sup> The plan involves a three-prong strategy, namely: implementing design-led R&D policies; increasing regional design capacity by supporting various design programmes; and strengthening this capacity with training, recruitment and the forming of design clusters.<sup>1218</sup> The 'Design & Industry Convergence Strategy' was written (in report form) in 2012 by MKE. They claimed that engineers within technology R&D often failed to understand the importance of design for turning their technology into end products.<sup>1219</sup> Likewise, designers' understanding of the overall process of production was limited to their work at the aesthetic and design level, and did not extend to a grasp of engineering and

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<sup>1214</sup> Design now plays a key role in the Korean economy, and a number of key design centers are strategically scattered across the country. In 2007 Korea hosted the world's largest design event, Design Korea 2007, hosting design delegates and visitors from 25 countries.

<sup>1215</sup> KIDP Design Strategy Team (2005), p. 3/13

<sup>1216</sup> OECD (2012), pp. 107-12.

In 2010, the complexes were restructured to ensure improved business support for R&D, and improved infrastructure surrounding waste recycling systems and parking spaces, as well as an expansion of road networks. As of 2012, there were 915 industrial complexes. 447 of these focused on general industry, while 6 were urban high-tech complexes. Enterprise at the complexes accounted for 72% of Korea's exports, and 43% of its total employment.

<sup>1217</sup> In 2010, 12.8% of companies invested in design. The government aim to increase this number to 20% by 2020 in line with their stated goal of increased convergence between industry and design. See Kang Min-jung, *Industrial Design Policy: a review of selected countries*, OECD, 2015, pp. 14-6. See

[http://www.oecd.org/officialdocuments/publicdisplaydocumentpdf/?cote=DSTI/IND\(2014\)9/FINAL&ocLanguage=En](http://www.oecd.org/officialdocuments/publicdisplaydocumentpdf/?cote=DSTI/IND(2014)9/FINAL&ocLanguage=En) (last accessed 27.11.2015).

<sup>1218</sup> MOTIE, 2013. Design clusters were established to strengthen the connections between manufacturing and design companies.

<sup>1219</sup> The report was entitled *Design & Industry Convergence Strategy '13-'17 (Dizain sanup yunghap jeonlyag '13-'17)*, Seoul: MKE, 2012.

functional principles.<sup>1220</sup> The report concluded by suggesting that engineering R&D and design R&D should where possible seek closer collaboration and mutual understanding.<sup>1221</sup>

Since the early 1990s, in addition to funding the five-year design promotion plans, the government also supports technology development (this support includes funds for the development of the broadband infrastructure).<sup>1222</sup> In 2013, a new Five-year Basic Plan for Science and Technology (2013-17) was launched. The Plan aims to increase innovation in the science and technology sectors.<sup>1223</sup> The implementation of both design promotion and 'science and technology' plans has resulted in a plethora of innovative design and technology products that have been extremely successful in their respective markets.

### **Surveys and Research on Korean Industrial Design**

The 1997-8 KIDP Design Census found that roughly a third of in-house designers (34.3% of those surveyed) wanted to see more creativity being taught on design courses in order for it to filter through to industry. In addition, 33.1% of them called for first-hand practical training, in the form of internships and apprenticeships, to be integrated into design education programmes. The SMEs interviewed attributed only 10% of their design development to imitation, and only 11.8% to outsourced design consultancies. Despite this, the field of industrial design was somewhat insular and there was little cooperation between domestic designers. This may be

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<sup>1220</sup> One of the reasons for this was perhaps that the 2012 annual MKE budget for design R&D was less than 1%, namely KRW 31.2 billion (USD 28 million) of the government's overall R&D budget which was KRW 4.7 trillion (USD 4.2 billion). See *Ibid*, p. 7.

However In 2014, the government provided KRW 39.4 billion (USD 40 million) of funding to Industrial design R&D. This money was principally used to improve the technology available to designers and increase the ability of companies to use more advanced techniques in their design. A proposed Design Business Support Centre within KIDP will be funded by the five year plan (2013-2017), and manned by specialist personnel who will provide support, incubating and mentoring services. See Kang (2015), pp. 14-6.

<sup>1221</sup> MKE (2012), p.16.

<sup>1222</sup> Stuart Cunningham, *Hidden Innovation: Policy, Industry and the Creative Sector*, University of Queensland Press, 2013, p. 48.

This investment (along with R&D by the country's top ten companies) has also been crucial in helping to provide affordable digital technology. For example, in the early 1990s the government made CDMA communication technology the standard for second-generation digital communication, and prohibited investment in GSM. This temporarily protected Korean companies' domestic market, providing space for them to develop their technology. See Chang (2008), p. 16; Tony Michell, *Samsung Electronics and the Struggle for Leadership of the Electronics Industry*, Singapore: John Wiley & Sons (Asia) Pte. Ltd., 2010, p. 153.

<sup>1223</sup> OECD (2014), p. 40.

partly attributable to the economic crisis at the time, when the growth rate was minus 6.7%, and many Chaebols were forced to downsize operations.<sup>1224</sup>

In 2000, KIDP published another census directed solely at the Korean manufacturing sector.<sup>1225</sup> The results showed that of the 48,522 in-house designers employed by Korean companies, 47.6% were product designers, while 16.7% and 12.4% were graphic and fashion designers respectively. Additionally, out of a total of 89,033 manufacturers surveyed, only 27.9% had in place any form of in-house design, and just 10.3% had a dedicated design department. In 2008, data from the KIDP and the MKE design census revealed that the number of in-house designers had fallen by two thousand, numbering 46,479 in 2008.<sup>1226</sup> KIDP conducts a rigorous design census on a relatively regular basis.

The 2009 KIDP and MKE census revealed that the type of manufacturer most likely to invest in design was one engaged in the design of products (62.5%), followed by graphic design (38.9%), and then fashion (16.5%).<sup>1227</sup> The majority of companies stated that they had started to utilise designers from 2005 onwards. Before 1990, 91.8% of companies did not use in-house designers and only 8.2% of companies' utilised design. However, it is unclear from the data whether all of the companies surveyed were in existence at this time.<sup>1228</sup> By 2010, KIDP surveys had become more detailed and broad, and encompassed the five sectors of industry that relate to design: Production; Construction; Media and Publications; Science and Technology; and Services.<sup>1229</sup> The 2011 KIDP survey revealed that there were a total of 89,441 in-house designers, despite the overall turnover in the design

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<sup>1224</sup> Lee Jong-kyu and Lee Sang-hak, 'Why has Korea Experienced so Many Economic Crises? The Political Economy of Recurring Economic Crisis in Korea' in Walter Levin (ed.), *Political Economy Research Focus*, New York: Nova Science Publisher, 2008, pp. 1-45, esp. 38.

<sup>1225</sup> The census entitled 'Industrial Design Statistics (Figures) Handbook 'The Status of Manufacturers' Design Investment Census', was carried out in December 1999, and published by KIDP in time for the new millennium. See *Industrial Design Statistics (Figures) Handbook: 1997-2000*, Kidp: December 1999, p. 5 and 55.

<sup>1226</sup> KIDP, *The Design Census*, KIDP and MKE, December 2009, p. 27.

<sup>1227</sup> Ibid, p. 24 and 32.

The amount invested in design by Korean companies totaled US USD 286 million (KRW 334.8 billion) in 2008, with the average design investment from a large company being USD 4.9 million (KRW 5.7 billion), and the average design investment from an SME being USD 111,000 (KRW 130 million). Moreover, the overall manufacturer investment in design remains relatively low.

<sup>1228</sup> Since the majority of manufacturers were operating on OEM systems before the nineties, it is unlikely that original design was being used at this time. Korea's entrance into the OECD in October 1996 resulted in a marked reduction in imitation techniques in the interest of fair trade relations. See *The Design Census*, KIDP and MKE, December 2009, p. 33.

<sup>1229</sup> The surveys revealed that in 2008 there were 54,587 designers working in Korea and by 2010 this figure was 122,996.

sector only increasing by 36%.<sup>1230</sup> Arguably, the fact that the number of in-house designers increased disproportionately to overall turnover had much to do with a government initiative aimed at having 100,000 in-house designers working in Korea by 2015.<sup>1231</sup>

### **Increased Cooperation between North and South Korea**

Until the 1990s, the relationship between the two Koreas was almost entirely adversarial, which was reflected in their respective determination to outdo each other in the area of design. However, at the turn of the 21<sup>st</sup> century there was a thaw in relations, which was attributed to the government of Kim Dae-jung, who established the Sunshine Policy.<sup>1232</sup> Economic cooperation between the two Koreas began to grow during the Kim Dae-jung administration. Since 2013, over 53,000 South and North Koreans have been working in North Korea at the 'Kaesong Industrial Complex' (KIC) which was formed in 2002 when 83 South Korean companies set up business there (that number is now over 120). Operations at the KIC have been suspended on occasion in response to increased tension between the two Koreas.<sup>1233</sup> Products manufactured include shoes, bags, kitchenware and fashion accessories. Most of these are non-high-tech and involve labour intensive production. The Kaesong cooperation is a way of resolving political and military tensions between the two countries, and constitutes an effective method of developing economic relations. As mutual recognition may result in the sharing of the potential Korea-wide market,<sup>1234</sup> it is important to first focus upon the harmonisation or integration of the two Koreas' design systems.

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<sup>1230</sup> KIDP conducts a rigorous design census on a relatively regular basis. By 2010 the survey had become more detailed and broad, and encompassed the five sectors of industry that relate to design: production, construction, media and publications, science and technology, and services.

<sup>1231</sup> Bryson and Rusten (2011), p. 148.

<sup>1232</sup> Bluth (2008), pp. 92-3. The Sunshine Policy involved separating politics from economics in order to develop business ties with the North. One of the thoughts behind the policy was that as the North became economically dependent on the South unification would be easier to achieve. In addition a policy of friendly cooperation was safer than continued confrontation.

<sup>1233</sup> Although most employees are North Koreans, products that are produced in the region are categorised by the US as 'made in Korea' not 'made in North Korea' according to Korea-US FTA, and total exports exceed USD 300 million in value (between December 2004 and September 2006 this figure stood at around USD 100 million). Many of products are exported to Europe, China and Russia. See Lim Eul-chul, *Kaesong Industrial Complex: History, Pending Issues, and Outlook*, Seoul: Haenam Publishing Co., 2007, pp. 146-47.

<sup>1234</sup> Korea National Assembly Budget Office, *Kaesong (Kaesong Saup Pyungga)*, Seoul: National Assembly Budget Office 2006, pp. 66-7.

Some countries allow products produced at Kaesong to show that they were made in Korea, while others require them to indicate that they were made in North Korea. Products that show that they

The Kaesong Industrial Complex has been fraught with difficulties since its inception, but in spite of political complexities and uncertainties, it arguably represents the peninsula's best opportunity to overcome the conflict that exists between the two national identities, especially when considering their shared ethnicity, culture and history. For example until the Kaesong cooperation, which arose from the Sunshine Policy, not a single South Korean product had ever been manufactured by North Korean hands, and the image of North Koreans had often been characterised by militarism and aggression. A possible way to improve the image of North Koreans further would be to invite North Korean designers to train in South Korea so that they can contribute more to the companies working at Kaesong. This in turn would help cement relations between the two countries. Indeed both countries could then establish and market a brand which emphasises Korean-ness over South or North Korean-ness.<sup>1235</sup> Of course, it should be recognised that political realities dictate that such objectives are difficult to achieve, but even against the backdrop of a recent escalation in tensions on the peninsula (which included a suspension of operations at Kaesong), the potential that Kaesong offers to the Korean brand should not be ignored. Something that makes successful design collaboration more likely are the values shared by both countries. These values are drawn from Confucianism, Buddhism and Daoism, as well as other traditions, and emphasise inclusivity and sustainability.

## **B. Educational Strategy**

After WWII the Korean education system, including design education, can be said to have passed through four different periods: the development of education infrastructure (1945-1959); education to support industrialisation (1960-1979); education reform (1980-1999); and attempts to globalise the education system (2000-present).<sup>1236</sup> During all of these periods there was an attempt to dramatically

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were made in the North sometimes suffer higher import tariffs. See Cho Myung-chul, *Strategies for Promoting Exports of Companies in Kaesong Industrial Complex*, Policy Analysis 05-19, Seoul: KIEP, 2005, pp. 40-4.

<sup>1235</sup> This could entail a narrative in which the North Korean workforce, which is marketed as disciplined and organised, augments South Korean technical expertise to produce goods which reflect 'Korean-ness'.

<sup>1236</sup> Koh Young-sun (et al.), 'Social Policy' in SaKong and Koh, eds. (2010), pp. 227-310, esp. 238; Lee Chong-jae (et al.), 'A Korean Model of Educational Development' in Lee Chong-jae, et al., eds. (2010), pp. 53-106, esp. 57-68.

increase Korea's economic competitiveness.<sup>1237</sup> The 1980s were particularly important in this regard. In the early 1980s the government expanded college enrollment quotas, and also introduced a graduation enrollment quota system.<sup>1238</sup> Improvements in the education system have provided Korean industry with a highly skilled workforce, particularly in the area of technology and design. This has been vital to the success of the Korean economy since Korea lacks natural resources.

### **The Influence of Japan and America on Korea**

As we have seen in Chapter 2, Korean society and its economy was shaped by American culture from 1945 onwards.<sup>1239</sup> However from roughly the 1920s up until the 1970s Korea's design education was influenced by the craft based concept of Japanese Doan (part of the reason for this was that the fabric and textile industry required workers that were educated in the Doan style). As a result, Doan patterns and shapes were emphasised in graphic design and the crafts, while three-dimensional rendered drawing was prevalent in industrial design.

Design education in Korea began in the Doan Department of the College of Arts at Seoul National University (SNU) in 1946<sup>1240</sup> on the initiative of the United States Army Military Government in Korea (USAMGIK),<sup>1241</sup> and continued in the Craft Department of the College of Arts at Hongik University in 1958.<sup>1242</sup> In 1959 Ewha Womans University also established an art and crafts department. During

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<sup>1237</sup> Between 1966 and 1970 education was thought to contribute 3.8% to economic growth. This figure means that during this period education provided 12.5% of the total increase in GDP during these years. Between 1970 and 1975 this figure stood that 11.2%. However between 1980 and 1994 the figure increased to 15.5%. See Kim Young-hwa, 'Education and Economic Growth in Korea 1945-1995' in Lee Chong-jae, et al., eds. (2010), pp. 326-59, esp. 327-45.

<sup>1238</sup> These changes not only helped transform many colleges into universities (as well as helping to turn two-year junior colleges into four-year colleges), but also enabled a number of new colleges and universities to open. See Kim Young-hwa (2010), pp. 340-41.

<sup>1239</sup> During the period 1945-1959, between 1952 and 1956 UNESCO supported the organisation UNKRA which provided aid to Korea for education, in particular for rebuilding schools during and after the Korean War. See William M. Williams, 'Foreign Assistance to Korean Education', *Korea Journal*, January 1962, p. 17; Francis Green (et al.), *Skill Formation for a Late Industrialising Economy: The Case of South Korea*, Centre for Industrial Policy and Performance, The University of Leeds 1997, p. 8.

<sup>1240</sup> In 1953 the department changed its name to Applied Arts. This new department then subsequently became two separated departments in 1981, namely the Craft and Industrial Art departments. However in 1989, the Industrial Art department changed its name to Industrial Design.

<sup>1241</sup> From 1946 until the early 1960s USAMGIK took advice from several specialists, mainly Koreans who studied in Japan and worked as university professors or government officers, about how to develop science and technology in Korea. See Park Tae-gyun, 'Development in Science and Technology of South Korea during the Cold War' in Bae Young-soo and Park Buhm-soon (2013), pp. 63-93, p. 72.

<sup>1242</sup> In 1964 the college created a Doan department which was separate from the craft department.



this period, design for Koreans generally meant Doan, which involved decorative art and folk craft rather than creative industrial design. The reason for this is because, even after 1945, schools continued with the Doan centred design and craft education that had been introduced in the Japanese colonial period, rather than focusing on modern design concepts or rediscovering traditional Korean aesthetics which could have been the basis for a distinctive Korean craft and design identity.

The focus on art and crafts continued throughout the 1950s, and indeed during the late 1950s KHDC promoted traditional folk crafts whose products were destined for the export market. Between 1954 and 1962 the ICA set up several initiatives (financed by the US government) involving Korean and American universities. These included exchange programs and the introduction of American teaching techniques in Korean universities in areas such as business studies and technology-related subjects. For example between 1954 and 1962 many Korean teachers and professors went to train at Minnesota University, while in the same year 56 Minnesota professors taught in Korea.<sup>1243</sup> This 'Minnesota Plan' was devised by the 'Foreign Operations Administration' (FOA)<sup>1244</sup> in order to aid the reconstruction of the SNU by partnering it with the University of Minnesota. The plan primarily targeted the Colleges of Engineering, Agriculture and Forestry, Natural Sciences, and the Medical school. The US invested 9.5 million dollars in the plan, with 218 Korean natural sciences and engineering professors (together with some SNU faculty members) going to train in the US. The Minnesota plan focused on science and technology, and aimed to produce scholars and technical specialists who could help lead Korea's reconstruction.<sup>1245</sup>

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<sup>1243</sup> Bronfenbrenner (1961), pp. 211-12.

There were some initial problems with the Minnesota project (1954-1962). Several faculty members were reluctant to get involved, especially as many of them would have to serve two year tenure in Seoul. As a result, Minnesota University had to work with other universities, creating an engineering programme directed by MIT consultant William Weems, and this cross university collaboration worked well. See John P. DiMoia, *Reconstructing Bodies: Biomedicine, Health, and National Building in South Korea since 1945*, Stanford, California: Stanford University Press, 2013, pp. 76-7. In addition, the ICA organised the Syracuse Audio-Visual Programme, which was designed to assist the use of audio-visual materials, principally for motion pictures, as well as training Korean audio-visual technicians. Because there was no Fulbright programme in Korea in the 1950s, the ICA sponsored university affiliations accrued a high level of importance. See Bronfenbrenner (1961), p. 164.

<sup>1244</sup> later to become the ICA

<sup>1245</sup> Park Tae-gyun (2013), pp. 74-5.

After Korea sent combat units to the Vietnam War in the mid-1960s, America rewarded the country by further funding the development of science and technology. During the 1965 Johnson-Park summit it was announced that the US would provide Korea with a developmental loan of USD150 million, and would also consider supporting a research center for applied sciences. And indeed in February 1966 both governments agreed to collaborate on the establishing, and operating of, the KIST.<sup>1246</sup>

The connection between America and Korea was further enhanced during the 1960s and 70s when many Koreans went to America to study privately: more than half of them studied science and engineering.<sup>1247</sup> A number of these students returned home and contributed to Korea's science and technology development.<sup>1248</sup> By 1987 5.9% of the total foreign student population (20,520 students) were Korean.<sup>1249</sup> The number of Science and Engineering PhD's awarded to Korean students also increased over three decades (621 PhD's in the 1960s, 1,539 in the 70s, and around 4,000 in 1980s).<sup>1250</sup> A lot of these students remained in the US and worked in the semiconductor industry or in universities. However, as Korea's industrial development boomed in the 1980s and 1990s, many were lured back to Korea, often to work in the electronics industry. This influx of knowledgeable labour enabled Korea to become the global leader in semiconductor technology.

Although many Korean students in the US studied science and engineering in the 1970s, only a handful studied industrial design at postgraduate level. These industrial design students returned to Korea and taught modern design skills in universities. This encouraged more students to study design both at home and abroad. During the 1980s big companies like Samsung and Daewoo also sent their

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<sup>1246</sup> Ibid, pp. 80-2.

In 1966, the non-profit organization KIST was established with support from the US government, which involved a USD 7.18 million grant, as well as a USD 14.1 million endowment from the Korean government for it to be established and operated for the first five years. See Moon Man-yong, 'Technology Gap, Research Institutes, and the contract Research System: The Role of Government-funded Research Institutes in Korea,' in Bae Young-soo and Park Buhm-soon, eds. (2013), pp. 125-51, esp. 130.

<sup>1247</sup> Choi Young-rak (1996), p. 179.

<sup>1248</sup> Park Tae-gyun (2013), p. 82.

<sup>1249</sup> Choi Young-rak (1996), p. 179.

Nonimmigrant Admissions to the United States, 2008 (October 2007-September 2008), 127,185 (14.8%) of Total foreign university students 859,169.

<sup>1250</sup> Choi Young-rak (1996), p. 180. In the 1980s Samsung aggressively recruited Korean engineers working in the US.

designers to train in in the US, Europe and Japan. The skills they returned with helped kick start Korea's industrial development.

### **Education and Industry**

In the 1960s, the education system was supposed to support industrialisation.<sup>1251</sup> However at this time a large proportion of Korea's design education system had an 'art and craft' character. This character was shaped by its links to craft-based industries. Nevertheless industrialisation during the 1960s did lead to some university Doan departments changing their name to 'Applied Arts' departments in anticipation that industry would soon require different skills from its employees.<sup>1252</sup> This was the beginning of awareness of changing design concepts, but was largely superficial. For example, in 1965, Hongik University still had a Doan department, mainly concentrating on handmade crafts, but they also created an Applied Arts department which covered mass product and mechanical design. Also, in 1966 the 'Korea Industrial Design Exhibition' in Seoul, the main goals of which were to promote exports and introduce modern design concepts into commercial (graphic and packaging design), industrial and craft design. These modern ideas began to spread as the designers who embraced them were more successful in the competitions organised by the KDPC from 1970 onwards. This led to the separation of design education and craft education, which were now to be taught as separate subjects.<sup>1253</sup> The separation was also the result of the expansion of the HCI strategy (which required modern industrial designers) and led to an increase in college and university design departments.

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<sup>1251</sup> Lee Chong-jae (et al.), 'The Rise of Korean Education from the Ashes of the Korean War,' *Prospects*, vol. 42, Springer Science + Media, 2012, pp. 303-18, esp. 305.

The economic expansion that occurred between 1962 and 1976 featured a population explosion and a demand for improved standards of education, including higher education.

The strategy to support industrialisation involved significantly increasing the number of universities, for example in 1966 the number of universities stood at 69, but by 1985 this figure had risen to 100, with university student population increasing from 131,354 to 931,884 during the same period. In addition the proportion of high school graduates going on to universities grew from 28.2% in 1966 to 38.3% in 1985. See Kim Lin-su, *Learning and Innovation in Economic Development*, Northampton, MA: E. Elgar Pub, 1999, p. 246.

<sup>1252</sup> In 1963, when the Ministry of Education launched their 2<sup>nd</sup> 'Education Programme' (1963-1973), the term 'Design' was associated with art and craft education, as opposed to being used in reference to a separate discipline.

<sup>1253</sup> While design followed western industrial design movements in the 1970s, crafts also began increasingly to follow the trend of western handicrafts in becoming more like works of art, without a social function.

An important development in the Korean economy in the 1970s was the emergence of the electronics and automobile industries, in which it was recognised that design was crucial. Industrial design subsequently became recognised as distinct from other areas of design, such as those related to fashion and craft.<sup>1254</sup> For the subsequent two decades, Korea had a training levy scheme in place, which was a kind of apprenticeship scheme for craftsmen, designers and technicians.<sup>1255</sup> With the rapid development of industry, creative designers were required, leading many universities to diversify their design departments. In 1972 SNU separated Graphic and Industrial Design education, and in 1977 Hong-ik University established an 'Industrial Doan Department, later creating an Automobile design department in 1978.' Despite this move towards teaching industrial design to Korean students,<sup>1256</sup> there remained significant problems in the design education system.<sup>1257</sup>

According to a 1981 report by the KDPC on 'industrial design education and research',<sup>1258</sup> Korea had not reached the educational goals demanded by its government and people due to a number of issues including: the lack of specialised training courses at universities; an inadequate number of experienced teaching staff; an absence of knowledge and student exchanges with international universities; and a lack of cooperation between industry and education.<sup>1259</sup> These concerns had been raised in the 1970s, but measures implemented to address

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<sup>1254</sup> The 3<sup>rd</sup> education programme (1973-1981) saw design become a distinct area of education, rather than being viewed as part of the arts or crafts. As such the importance of design began to penetrate social consciousness.

<sup>1255</sup> Green, et al. (1997), pp. 23-5. In the 1970s ordinary people understood design as fashion design, while universities understood design as applied art (art related to industry). As a result, university departments were named 'Industrial Art', 'Applied Art' or Doan instead of design.

<sup>1256</sup> Up until the mid-1970s educational institutions taught 'industrial art' and Doan rather than creative design, but after this time, the development of the HCI meant that there was a demand for industrial designers, and institutions started to offer industrial design courses.

<sup>1257</sup> Up until the late 1970s, design education in Korea was not developed as they still defined creative design as Doan, and seemed unable to break away from Japanese imperialist ideas. After independence in 1945, design leaders were aware of changing global design concepts and they should have been able to redefine Korean design by educating potential creative designers. Instead, they insisted on continuing to teach Doan which was basically arts and crafts based, and did not encourage technological or innovative design based on relevant R&D research. This delayed the development of Korean design by several decades.

<sup>1258</sup> KDPC, *Basic Data Research for Industrial Design Education Study*, Seoul: KDPC, 1981, pp. 5-6, 7-9 and 218.

The following year in 1982, through the 'study for industrial design education system' project, the KDPC studied and analysed curricula and suggested a new model that was based on surveys of overseas universities. See KDPC (1982), p. 21 and 99.

<sup>1259</sup> Awareness of the value of design has increased since the 1980s, and now encompasses environmental concerns.

them had not at that time produced the desired results. In addition, teaching staff in design departments consisted mainly of the generation who received an education in design, crafts and art during the 1960s. This meant that most of these teachers did not have practical experience of industrial design. The process of Korean industrialisation was not sufficiently advanced to enable businesses or the KDPC to secure teaching staff with either practical industrial design, or a western education.<sup>1260</sup> In response to the 1981 report, KDPC offered three design courses to working designers. These courses started in 1982 and sought to improve the standard of Korean designers.<sup>1261</sup>

### **Educational Reforms**

Since the 1970s, Korea has pursued policies that promote cooperation among industry, universities and other research institutions.<sup>1262</sup> Students and businesses had lobbied for this since they wanted a university education that offered industrial settings, and further, one that provided teaching staff with business experience. Because of the focus on engineering during the 1980s, craft and design were taught as two separate subjects in art and design universities. The products that became popular in society (i.e. cars) began to influence design education. The craft industry, on the other hand, was less interested in embracing mass production. Instead, craftsmen sought to maintain their status as artisans, and distanced the crafts industry from industrial development. Nevertheless up until the 1990s most of the Korean craft sector disregarded traditional ideas in favour of popular Western trends. However in the 1980s some craft workers did attempt to integrate traditional Korean aesthetics and skills with new technologies in order to create products that were relevant to modern society.

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<sup>1260</sup> While handicrafts were the main item of export in the 1960s, they were replaced by industrial goods in the 1970s when industry began to develop. From the 1980s however, designers who had worked for electronic and automobile companies in the 1970s and those with experience in the west went on to teach at universities. Therefore, in the 1980s faculties could boast of much more experienced designers than was previously the case.

<sup>1261</sup> The three courses were: Professional education for industrial designers (began in 1982); professional education for graphic designers (began in 1985); and education in computer applications (began in 1987). See KIDP (2010), p. 97.

<sup>1262</sup> Hong Seong-min, 'Promoting Industry and Academy Cooperation' in Kim Suk-joon and others, *Empowering Korea with New Innovations*, Seoul: Jimoondang, 2011, pp. 190-96, esp. 192.

From the early to mid-1980s onwards Korea's industrial policy increased its focus on technological innovation.<sup>1263</sup> With the emergence of computers and related software in the mid-1980s, new subjects emerged within product and graphic design departments. These included Photography, Animation, Computer graphic design, CAD design, Ergonomic and Space design.<sup>1264</sup> Some universities, including KAIST, had the resources and experienced lecturers to teach these emerging subjects, but many were unable to keep up with the rapid change. This change in expectations on new employees due to industrial development forced many students to attend private expensive learning centres in order to gain the skills needed to progress in the industry.<sup>1265</sup> As a result, during the 1980s and 1990s the government began to support the development of these subjects on a wider scale such that ultimately the majority of universities were able to offer courses in these subjects.<sup>1266</sup>

In 1989, the KDPC published a survey on industrial design in Korea. The first chapter discussed 'the status of product design education,' and posited that, as design had 'become the most important factor in the whole process of marketing from the stage of product planning to that of sales,' design education needed more resources and structure in order to maintain and build Korea's place in the 'international competitive market.'<sup>1267</sup> In its concluding recommendations, the survey outlined the principal problems it had found: A paucity of theory in design

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<sup>1263</sup> Ahn Hyeon-ju and Jai S. Mah, 'Development of Technology-Intensive Industries in Korea,' *Journal of Contemporary Asia*, vol. 37, no. 3, 2007, pp. 364-79, esp. 377.

<sup>1264</sup> Changes such as this can be attributed, in part, to the the 5<sup>th</sup> education programme (1987-1992) that increased the number of practical design courses on offer at universities. The programme also ensured that design was taught as a separate discipline in secondary schools.

<sup>1265</sup> Further, design graduates often found that despite their education, they did not have the necessary practical skills to work in the industry and so had to do apprenticeships within the company that employed them of between 6 months and 2 years, essentially learning on the job.

<sup>1266</sup> Lee Chong-jae, et al. (2010), pp. 79-80.

These changes were due in part to the 6<sup>th</sup> education programme (1992-1997) that focused on creativity in relation to design. In particular the programme sought to teach students how to turn their creative ideas into real practical products.

Furthermore, the Presidential Committee for of Education Reform (1994-97) was particularly important in changing the course of education policy. See Lee Chong-jae, et al. (2012), p. 308.

<sup>1267</sup> KDPC, *Survey Report on the Status of Industrial Design in 1989*, Seoul: Kdpc, 1989, pp. 1-10. The survey was intended to disseminate basic data for 'local colleges' so that they might tackle the current problems in design education and put in place 'measures for improvement. It emphasised the need to prepare young designers for the working world by teaching them 'human-social and natural-science subjects,' as well as the more obvious 'art-related' and technology subjects. Stating that a total number of 30 colleges and 23 junior colleges had established product design courses at the time, the report noted that the curriculum in Korean schools and colleges placed the most emphasis on teaching, rendering, and the design process, with product planning being low on the scale. The actual *creative* process, together with ergonomic considerations, was less of a priority for Korean professors.

education; the lack of correlation between 'major' subjects and the liberal arts and science subjects; the need for a distinct character of Korean design to be taught in schools; the need for 'provincial culture' to be utilised in design education, and the low number of books and magazines available as educational resources.<sup>1268</sup>

### Higher Education and Globalisation

From the early 1980s onwards spending on education rose significantly (much of this on private education), and by 2009 eighty two percent of high school graduates in Korea went to university.<sup>1269</sup> In the mid-1990s Korean higher education underwent extensive reforms that saw an improvement in both its quality and quantity. Part of these reforms involved increasing links between universities and industry.<sup>1270</sup> From the late 1990s onwards, education policy had an increasing focus on the field of high-technology.<sup>1271</sup>

In the 1997-1998 Korean Design Census, both design education and the design industry were examined.<sup>1272</sup> By this time some of the reforms recommended in the earlier 1989 survey had been put into effect. Indeed, the design sector in education thrived so much between 1993 and 1998 that the number of design graduates doubled, from 15,903 to 31,338, a steady increase of around 14% each year.<sup>1273</sup> This increase can be partly understood from the

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<sup>1268</sup> Ibid, p. 11.

During the 1980s, 36 colleges opened 47 more departments related to industrial design, and 21 existing departments increased the number of places on offer. In 1981 at SNU, an ergonomics course was set up for the first time. In 1985, SNU also added product planning, design methodology, computer aided design and environmental design. In 1986 Hongik University added the law of intellectual property design, the theory of industrial design and environmental design to its curriculum. See Kwak Dae-young, 'Study on the Course of Education in Industrial Design', *Journal of the Seoul Design Forum Society*, vol. 2, Seoul: The Korean Society of Design Culture, 1997, pp. 100-19.

<sup>1269</sup> Koh Young-sun, et al. (2010), p. 242.

Higher education institutions increased from 142 to 411 between 1970 and 2010, with student numbers growing from 201,436 to approximately 3.5million. By 2006 higher education enrolment rates surpassed 95%, the highest share of all OECD countries. See (MEST, 2010, With Paper on Science and Technology Statistics. [www.mest.go.kr/web/1015/ko/board](http://www.mest.go.kr/web/1015/ko/board)) last accessed 20.02.2013.

<sup>1270</sup> Hong Seong-min (2011), p. 192.

<sup>1271</sup> Shin Jung-cheol, 'Higher Education Development in Korea: Western University Ideas, Confucian Tradition, and Economic Development,' *Higher Education: The International Journal of Higher Education and Education Planning*, vol. 64, Springer, 2012, pp. 59-72, esp. 60.

<sup>1272</sup> This examination was divided in three main areas: the 'people,' which were separated into education, design consultants and in-house designers; the 'product,' which was divided into international competitiveness and import/export; and the 'environment', which was analysed in terms of consumption demands.

<sup>1273</sup> KIDP, *The Design Census*, (Oct.1998, Kidp), p. 14 and 147.

perspective of the opportunities that design education offered students, as there was an ever increasing demand for design employees, particularly in new media.<sup>1274</sup> However, some design students had new objectives, grievances, and desires. Several of them voiced the concern that their professors were not actively involved in the modern design world, and that their own education would therefore not adequately prepare them to work within this world. They felt that they lacked the necessary tools, space and resources to learn design in a rapidly-changing design environment, and that their syllabus was not advanced enough to prepare them for real work.<sup>1275</sup> These concerns were reflective of a worldwide issue of education programmes failing to meet the needs of a knowledge-based society. To rectify this situation (and because of the economic insecurity felt after the 1997 IMF crash) the government launched 31 projects (between 1999 and 2009) to increase cooperation and knowledge transfer between educational establishments and industry. The MKE was responsible for 15 of these projects (including the 'IT growth engine technology development program'), while the Ministry of Education, Science and Technology (MEST) had 6 projects which included 'Brain Korea 21' (BK21, launched in 1999), a project still active today.<sup>1276</sup>

BK21 aims to develop creative and high quality students in Korean universities.<sup>1277</sup> Specifically, BK21 provides fellowship funding to graduate students,

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The census concluded that the Korean design industry was becoming overwhelmed by the new wave of graduates. College and university students (at both undergraduate and postgraduate level) numbered 95,688 in 1998, 4% of Korea's Further and Higher Education students. See *Ibid*, p. 147. By 1998, over 31,000 design students graduated from a total of 682 departments and 304 different universities. By 2007 this figure had risen to 36,000 graduates. Additionally, new institutes such as the design departments at KAIST, show the government's support for IT and media research. See Moultrie and Livesey (2009), p. 47; KIDP & KAIST Report (1999), p. 9; McDermott (2007), p. 149.

<sup>1274</sup> KIDP, *The Design Census*, Kidp (October 1998), p. 482, 589 and 607; KIDP & KAIST Report, *A Study for Construction of Evaluation System for Specialisation of Design Education Institutions*, Seoul: MOCIE, November 1999, pp. 14-5 and 53-5.

However, it is debatable whether the universities were adequately equipped to cope with the surge in students, and in some areas, particularly new media, there was a distinct lack of resources. This equipment shortfall had obvious consequences on the quality of the students' education and this issue manifested itself in the workplace.

<sup>1275</sup> KIDP, *The Design Census*, Kidp (October 1998), p. 204.

When surveyed in 1998, 66.7% of design graduates wanted to work in design consultancies, whereas only 15.8% and 15.1% wanted to work as in-house designers in big and small-medium companies respectively. Additionally, the pull of the work seemed stronger than the attraction of a high salary, with 53.6% of graduates citing the possibility of developing their work as the strongest motive to finding a job. See *Ibid*, p. 211.

<sup>1276</sup> Hong Seong-min (2011), pp. 192-93.

<sup>1277</sup> Between 1999 and 2005, more than USD 1.2 billion (KRW 1.4 trillion) was invested. This was used to create 568 research teams from 74 Universities. The second reform programme of BK21 (2006- 2012) had an investment plan of US USD 2.2 billion, mainly used to support human



postdoctoral researchers and contract-based research professors at top universities. BK 21 had two main goals: to develop research manpower; and to strengthen graduate programmes in order to make them globally competitive.<sup>1278</sup> Since 2000 the BK21 initiative has helped increase the quality and number of design theory courses available in Korea.<sup>1279</sup> Design education has also benefited from the government's 'World Class University' project, which was put into effect in 2008.<sup>1280</sup> Its primary aim was to increase the global competitiveness of Korean universities. By 2008 many of the grievances and apprehensions of students and others involved in design education systems had been addressed via a mixture of government investment in education and on-site placements.<sup>1281</sup> In 2010, the number of people studying a four year design course at university greatly increased, along with undergraduate, postgraduate, and PhD university programmes.<sup>1282</sup> Both the BK21 and the World Class University projects were considered a success, and consequently, in 2013 the government launched the BK21 Plus Project, which will run until 2019. BK21 is a true success story built upon high-quality human resources, strong research infrastructure, and enhanced graduate school education.

In addition to launching BK21 projects, the government passed the 'Framework Act on National Standards' law in 1999 with the aim of improving

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resources training and facilitate R&D activities. See Seong So-mi, et al., *Brain Korea 21 Phase II: A New Evaluation Model*, Santa Monica, CA: RAND Corporation, 2008, p. 23; Moon Nug-yeong and Kim Ki-seok, 'A Case of Korean Higher Education Reform: The Brain Korea 21 Project,' *Asia Pacific Education Review*, 2001, vol. 2, no. 2, pp. 96-105, esp. 99.

<sup>1278</sup> Shon So-young, et al., 'A strategic analysis for successful BK 21 initiative based on structural equation model,' *Expert System with Applications* 36, 2009, pp. 5087-093; Seong So-mi, et al. (2008), pp. 29-31; Lee Chong-jae, et al. (2012), p. 309.

<sup>1279</sup> For example, in 2000, the KIDP launched the e-Design Academy in order to meet demand for design education and training in the digital era. The rapid increase in the popularity of the internet and electronic transactions has created a need for experts in digital media design, including web design, character design, animation design and game design. After 2002, a policy of promoting customer-oriented cooperation, called 'new industry and academy cooperation', was initiated.

<sup>1280</sup> Lee Chong-jae, et al. (2012), p. 309.

<sup>1281</sup> The Design Census, KIDP and MKE, December 2009, p. 44.

In the joint KIDP and MKE census published in December 2009, only 17.8% of companies surveyed in 2006 testified that recent design graduates were a helpful addition to the workforce. In 2008, however, 40.1% testified to their value, indicating that university design education between 2006 and 2008 improved remarkably.

<sup>1282</sup> There were 64,780 people studying design at university in a four-year course. A further 55,206 people were studying design at college on a two-year course, while a total of 6,229 were studying design at postgraduate level (MA: 5,391; PhD: 838). A further 5,981 were studying design at an industrial university. A total of 34,461 students entered university to study design. In 2011, a total of 25,276 students graduated from design courses at university. 44.7% found jobs in the first year after graduation (undergraduate: 43.9%; MA: 59.3%; PhD: 65.7%). In total, 278 Universities have a design department; 158 Universities run an MA course and 47 run a PhD course.

education standards and capacity. This law made it a requirement for Korean governments to set up a Korean National Standards Plan (KNSP) every five years. KNSP's are currently required to ensure that any systematic development in human resources follows both national and international standards. In the first KNSP, between 2001 and 2005, the government sought to develop its capacity to improve national education standards.<sup>1283</sup> In the second KNSP, the government expanded the programme of standardisation to university students, focusing on the importance of standards in future jobs in industry, government and academia.<sup>1284</sup> In the third KNSP, the importance of human resources was reaffirmed, and specific objectives for both education and training were presented.<sup>1285</sup> In 2003 the University Education Promotion on Standardisation (UEPS) programme was implemented by the Korean Agency for Technology and Standards (KATS), and the Korean Standards Association (KSA). This programme helped raise education levels in the technology sector to ISO standards.<sup>1286</sup>

In order to combat the issue of Korea's ageing society, the government is now focusing on improving education in the creative industries and IT in the hope that people can continue to work in these sectors when they are past the current average retirement age. Industrial design is part of both the creative industries and IT, and the government further supported industrial design by funding national Design Innovation Centers from the late 1990s onwards. The government (MOICE) sponsored centres are set up in local universities, and students are given practical design experience, which includes them implementing projects that involve cooperation between industry and universities. In this way the centres provide structural support for regional design development. The government also cut

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<sup>1283</sup> Choi Dong-geun and Henk J. de Vries, 'Integrating Standardization into Engineering Education: The Case Study Forerunner Korea', *International Journal of Technology and Design Education*, vol. 23, no. 4, 2013, pp. 1111-126. The second KNSP (2006-2010) became more specific in the sections 'Training standards experts and building expert networks' and 'Increasing awareness about standardisation and strengthening promotion and education activities.'

<sup>1284</sup> *Ibid*, p. 1114.

<sup>1285</sup> The third KNSP (2011 to 2015); the subsection 'Developing standards professionals and improving the capacity of the private sector' presents these objectives. One of these objectives is to give formal education (from primary school to graduate school) to 10,000 students during the period 2011-2015.

<sup>1286</sup> The programme emerged from the national plan as well as discussion between standards experts, and was initiated by the KNSPs, which have a strong emphasis on the development of human resources and management for technical standards, as well as standardisation issues. This system has been benchmarked by other countries, including Malaysia, Indonesia and Peru, thanks to its step-by-step approach which covers long-term strategy, funding, designation of a coordinating organisation, establishment of a syllabus, and actual operation. See *Ibid*, pp. 1115-124.

operational costs by funding improved operating equipment at all the centres. The centres themselves offer attractive incentives to acquire and keep high quality workers, as well as implementing nationwide projects such as the design-internship training programme and the KIDP dispatch project. By 2009 there were 29 DIC's in Korea.<sup>1287</sup>

## **C. Marketing Strategy**

### **OEM & the Adverse Balance of Trade with Japan**

Korea recorded a trade surplus for the first time in 1986, but, consequently, encountered certain difficulties in foreign trade competition.<sup>1288</sup> Among these were: Issues surrounding import regulations; the opening of the domestic market, which led to increased competition from other developed countries; the rising value of the 'Won' (Korean currency) in 1989; a decrease in productivity caused by labour disputes, and an era of internally high wages.<sup>1289</sup> During the 1970s and 1980s Korea had a negative trade balance with Japan, as did other major trade competitors like Taiwan,<sup>1290</sup> Hong Kong and Singapore. Trade statistics from these countries show that they, like Korea, saw their trade deficit with Japan increase by

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<sup>1287</sup> KIDP Design Strategy Team (2005), p. 9.

<sup>1288</sup> KDPC Report (1990), p. 7.

The US, Europe and Japan are the 3 main export-import markets for Korea. Korea recorded a trade surplus (profit) with the US of over USD 9.5 billion in 1987, and over USD 8.6 billion in 1988. Additionally Korea had a surplus with Europe of over USD 2.4 billion in 1987, and over USD 2.7 billion in 1988. However it recorded a trade deficit with Japan of over USD 5.2 billion in 1987, and over USD 3.9 billion in 1998.

<sup>1289</sup> KDPC Report, *1989 Improving Measures of Adverse Balance of Korean Trade to Japan: The Case Study of Packaging Development (Daeil Muyek Yekjo Gaesun Sicheck: Pojang Gebal Yeongu Sarae)*, Seoul: KDPC, 1989, p. 5. Since the mid-1980s global trends such as liberalisation and globalisation have meant that the Korean economy has needed to acquire a sense of urgency about large-scale restructuring. However, despite the attempt to restructure the economy, it remained the same for the next 10 years. Accordingly, four different production costs, namely wages, land price, interest rates and logistical cost, increased significantly. This then produced low efficiency, low technology and low productivity of added value. Korea joined OECD in 1996 without escaping from this economic structure of 'four highs and three lows'. See Nam, Duck-woo, 'Partnership between Schools and Businesses in the Age of Globalisation' ('Kukjaewha Sidea-ui Sanhak Hyupdong') in *1996 Collaborative Partnership Between Schools and Businesses/Industries Workshop*, Seoul: The Korean Federation of Science and Technology Societies, Korea Sanhak Foundation (Hanguk Gwahak Gisul Danche Chongyonhaphwe, Sanhak Hyupdong Jedan), 1996, pp. 9-13, esp. 9.

<sup>1290</sup> The Taiwanese government influenced private sector decisions less forcibly than their Korean counterparts, although they did utilize things like FDI controls, taxes and trade policy to exert their influence. However, the Taiwanese tended to use monetary rather than fiscal policies (so tax breaks etc. were offered as opposed to direct loans) to stimulate investment in selected areas. See Shin Sang-hyup (1998), pp. 83-4.

20% every year from 1970 to 1980.<sup>1291</sup> In an effort to solve this problem each country tried increasing exports to Japan. Around 1990, products from Taiwan, Hong Kong, and Singapore, which were more competitively priced than Korean goods, flooded the Japanese market.<sup>1292</sup> This situation provided something of a 'wake-up' call to Korean companies and indeed the government, and the importance of design and technology was at last understood. Consequently, the government began to support companies which exported not only to Japan, but also in the global market, helping with the development of technology, design and overseas marketing.<sup>1293</sup>

### **The Korean Government's Attempts to Boost Exports**

According to a 1987 KOTRA report the 1988 Olympics helped to improve Korea's national image, and the brand image of Korean companies was enhanced by corporate advertising ahead of the Olympics.<sup>1294</sup> KOTRA also analysed Japanese products and found that Japanese SMEs negotiated with famous brands like Sony in order to sell their products as an OEM under Sony's name. In this way the SMEs could significantly increase the price of their products. However, in Korea SMEs stuck to their own brand, and consequently they found it difficult to increase their

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<sup>1291</sup> The trade deficit of all four countries with Japan between 1970 and 1980 had increased; from USD 437million to USD 3,180 million for Taiwan, from USD 514 million to USD 4,243 million for Hong Kong, from USD 358 million to 2,720 million for Singapore and from USD 575 million to USD 2,819 million for Korea. See KOTRA, *Improving Measures of Adverse Balance of Major Competitors Trade to Japan (Juyo Kyungjangguk-ui Daeil Muyek Yekjo Gaesun Sicheck)*, KOTRA Mugong Jaryo no: 26-116, Seoul: KOTRA, 1987, pp. 1-2.

<sup>1292</sup> KDPC Report (1990), p. 253.

At that time, the wages of the Korean labourer was superior to that of Taiwan and Mexico, so Korea couldn't compete in the global market except in high value added products. Accordingly, Korean companies changed the shape and quality of their products and charged higher prices.

<sup>1293</sup> KOTRA, *Survey on Overseas Market Sales of World-class Products (Segye Illuwha Sangpum Haewe Sijang Sungga Josa)*, KOTRA Mugong Jaryo no: 92-56, Seoul: KOTRA, September 1992, pp. 3-5. As an example, the MKE and KOTRA have pushed ahead with the plan 'growing into a world-class of promising products', which started in 1986 and continues to this day. In the case of a project in 1992, they selected 20 export items such as golf clubs, pianos, bikes, eyeglasses, ultrasound scanners, fax, ceramic tableware, and clothing etc. as the target of their support. After comparing each Korean product with world famous brand products in terms of their quality, design, price competitiveness, marketing strategy, brand image and the response of customers in the US and Europe, the government supported Korean companies efforts to improve themselves in these areas.

<sup>1294</sup> Regarding the marketing of Korean fax machines within the US market, the KOTRA report stated that the brand image of companies like Goldstar and Samsung was positive, but this image had been developed through earlier sales of products such as TVs and microwaves, rather than fax machines.

sale price.<sup>1295</sup> Korean companies soon realised that they needed to improve their technology and brand image.<sup>1296</sup> In an effort to address this problem, the Korean government has provided technology support to specific companies, with the result that exports from these companies were worth USD 13.6 billion to the economy in 1996 (about 10% of total exports).<sup>1297</sup> Further in 1997 the Ministry of Trade, Industry and Energy (MOTIE) decided to support 18 companies who had produced outstandingly designed export products, such as pianos, PC monitors, and semiconductors. According to an announcement from MKE (formerly the Ministry of Commerce, Industry and Energy: MOCIE) in 2009, it conferred 'world class standard' status on about 360 items produced by 427 companies in 2008.<sup>1298</sup>

### **National Identity and Branding**

In 2003 MCST launched the Han-Style project in an attempt to create a Korean identity that could be used to boost exports. The project thus tried to fuse traditional culture and commercialism in order to create a national brand. In 2006, the government issued a policy report that highlighted the following 6 aspects of

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<sup>1295</sup> KOTRA found that the image of Korean electronics brands was lower than Sony and Panasonic, but similar to Sanyo. The deciding factor for customers when purchasing electronic products was the brand, and they were not interested in the country of origin. As such the introduction of low-and-middle priced goods from Japanese brands produced by OEM in Southeast Asia to the U S market made it more difficult to sell Korean products. In addition, the main components of Korean low and middle priced electronic goods were imported from Japan, and as such there was little in the way of difference between them in terms of function and quality.

<sup>1296</sup> KOTRA (1992), pp. 221-23.

By way of contrast, Choong Y. Lee compares SMEs in Japan and Korea, following the effects of the 1997 economic crisis in Korea. He notes that a strategic shift between large corporation-orientated strategies to small business-orientated strategy was required in order to aid economic growth and future technological progress. Small manufacturing firms in Korea have a higher material cost and are more labour intensive. Further, on the whole Korean companies tend not to value quality of innovation as highly as Japan, but err more towards being reactive followers.

<sup>1297</sup> In 1988 20% of Korea's total exports went to Japan, but by 1997 this figure had fallen to 11%. Japanese goods made up 31% of Korea's total imports in 1988, while in 1997 this had decreased 19%. In terms of foreign investments Korea 5% came from Japan in 1998, a decrease from both the 21% recorded in 1995 and the large 70% in 1985. This is evidence of the increasing lack of Korean economic dependence on Japan. See METI, Summary Report, *Toward Closer Japan-Korea Economic Relations in the 21<sup>st</sup> Century*, Tokyo: Research Planning Department Institute of Developing Economies, May 2000, pp. 1-2. Online available:

[http://www.ide.go.jp/English/Lecture/Sympo/pdf/kankoku\\_soron.pdf](http://www.ide.go.jp/English/Lecture/Sympo/pdf/kankoku_soron.pdf) (accessed October 12, 2006).

<sup>1298</sup> Subsequently, examinations showed that 298 items and 353 companies (equivalent to 83%) had actually met the required standards. Among these world class products, 127 items were in the first place of the world market share, and they included various goods such as a memory semiconductor, microwave, TFT-LCD, colour monitor, flash memory and general purpose merchant ship, which were all produced by large enterprises. Also in the first place of the world market share were items such as a laser marker, polyester LM fibre, and bike shoes, which were all produced by SMEs. In 2009, 56 companies were selected as world class goods and companies. See 2010-209, MKE.

traditional culture, which all had commercial potential: Han-guel (Korean alphabet), Han-sik (Culinary arts), Han-bok (traditional clothing), Han-ok (traditional homes), Han-ji (paper making), and Gug-ak (traditional music). The Lee Myung-bak administration (2008-2013) established the 'Presidential Council on Nation Branding' in 2008 because of Korea's perceived need to establish a stronger national brand in order to compete more effectively on the world stage.<sup>1299</sup> However, in trying manipulating the arts in this way, Korea was moving away from the country's attempt to emulate the British system, which had taken the view that too much government intervention in the arts stifled innovation. Nevertheless, from the mid-1990s onwards Korea increased the budget allocated to establishing a national brand, and reclassified a number of cultural industries, including the arts, as 'contents industries'.<sup>1300</sup>

Since the late 1990s, Korean creative and popular culture has become popular in other parts of Asia, a phenomenon which is widely referred to as the 'Korean Wave' (Han-ryu).<sup>1301</sup> This Wave has been followed by a blossoming of Korea's creative industries.<sup>1302</sup> The government has also offered support to companies within these industries, such as tax reductions and financial subsidies.<sup>1303</sup> The remarkable success of Korean dramas may be down to the fact that they tend to dramatise the tensions between Confucian socio-cultural values and modern

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<sup>1299</sup> Hong Ki-won, 'National Branding of Korea' in Lee Hye-kyung and Lim Lorraine (eds.), *Cultural Policies in East Asia: Dynamics, between the State, Arts and Creative Industries*, Houndmills, Basingstoke, Hampshire: Palgrave Macmillan, 2014, pp. 69-84, esp. 74-6.

<sup>1300</sup> Lee Hye-kyung, 'Cultural and the State: From a Korean Perspective' in Lee Hye-kyung and Lim Lorraine, eds. (2014), pp. 87-103, esp. 98-9.

As a result certain areas of culture were treated as commodities. Since the early 2000s, the Korean Wave has popularized Korean culture worldwide, and as such some Korean products are now viewed by the consumer as being linked to a certain culture or lifestyle. See Kim Yung-wook, 'Do South Korean companies need to obscure their country-of-origin image?: A Case of Samsung,' in *Corporate Communications*, vol. 11, no. 2, 2006, pp. 126-37, esp. 127-28.

A products country of origin illicit certain mental responses in consumers, including judgements about quality and image. See Aditi Grover and Philip Ramsey, 'Relative National Identity and Consumer Product Evaluations' in Melvin Prince (ed.), *Consumer Cosmopolitanism in the Age of Globalization*, New York: Business Expert Press, 2012, pp. 101-18, esp. 116-17.

<sup>1301</sup> Kim Chang-wook, 'Labor and the Limits of Seduction in Korea's Creative Economy,' *Asian and Latin American Media Studies*, 2014, vol. 15, no. 6, pp. 562-76, esp. 562-63.

<sup>1302</sup> Hui (2007), pp. 13-4. One major cultural support initiative was the establishment of a Cultural Industry Bureau within the Ministry of Culture and Sports in 1994, renamed the Ministry of Culture and Tourism (MCT) in 1998. The MCT is responsible for setting out Korean cultural policy, and oversees culture, the arts, religion, tourism, sports and youth. In 1994, provincial cultural expenditure totalled KRW 102.5 billion, and by 2002, the MCT was operating on 1.6% of the government's total annual budget. MCT was renamed the Ministry of Culture, Sports and Tourism (MCST) in 2008.

<sup>1303</sup> The government focused on supporting the culture and content sector. This policy gels with the government's aim of improving digital society and technologies. See Hui (2007), pp. 13-4; Kim Chang-wook (2014), p. 563.

cosmopolitan living,<sup>1304</sup> a phenomenon to which people from other Asian countries can relate.<sup>1305</sup> The success of Korean cultural industries has led to a stronger concept of Korean identity, particularly in other East Asian countries, but also in the wider world.

### **The Role of Design in Boosting Exports**

In the mid-90s, it was evident that Korea had embraced consumerist design wholly and rapidly, having achieved in 10 years what it took Japan 30 years to accomplish.<sup>1306</sup> Brand names were becoming familiar in Korea, and although technical innovation was perhaps still not Korea's strong point, products were more eye-catching, durable, and easier to use. Additionally, Korean designers and the Chaebols were beginning to think more about value than volume. They remained competitive, but were more concerned with 'thinking globally and acting locally.'<sup>1307</sup> For example in 1995 Samsung introduced a marketing team to the Overseas Business HQ in Korea. This team oversaw regional and project strategies. In addition in the same year the company invested USD 400 million into 10 emerging markets.<sup>1308</sup> However the 1998 KIDP Design Census that surveyed buyers and sellers in the import and export market found that there was a major dependency,

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<sup>1304</sup> Sherri L. Ter Molen, 'A Cultural Imperialistic Homecoming: The Korean Wave Reaches the United States' in Yasue Kuwahara (ed.), *The Korean Wave: Korean Popular Culture in Global Context*, New York: Palgrave Macmillan, 2014, pp. 149- 87, esp. 165-66.

<sup>1305</sup> Yasue Kuwahara, 'Introduction' in Kuwahara, ed. (2014), pp 1-9, esp. 7-8.

This sudden popularity of Korean pop culture globally is often referred to as 'Korean-ness', combining: the unique emotional sentiment of Han; the multifaceted sensibility of East Asian Culture; consumerist modernity; and Confucianism (with particular reference to family values).

Confucianism is omnipresent in everyday Korean life but reclaiming authentic Korean-ness can be problematic as it has taken on so many other influences. See Oh Chu-yun, 'The Politics of the Dancing Body: Racialized and Gendered Femininity in Korean Pop' in Kuwahara, ed. (2014), pp. 53-81, esp. 54.

<sup>1306</sup> Michael Evamy, 'Big in Korea,' Magazine *Design*, London: Design Council, spring 1996, pp. 32-7, esp. 34 and 37.

<sup>1307</sup> Ibid, p. 35. Companies such as Goldstar and Samsung established design offices abroad. For example, Goldstar established its Design-Tech in Dublin, which designed microwaves, refrigerators, and VCRs. The company also strengthened its activities in North American, South American, Asian, and African markets, creating a huge team in Seoul and a small design group in London, a studio in Tokyo, as well as a three-year partnership with consultancy IDEO in Palo Alto, CA. Samsung also positioned a design team in London, wishing to make the most of the UK's reputable design consultancies, and aspiring to build a team similar to the pioneering Apple team of the 1980s.

<sup>1308</sup> Chang (2008), pp. 72-3.

Furthermore Samsung introduced the concept of Global Product Managers (GPM) which involved a single manager overseeing a number of tasks, including global production and sales, of a single division (for example one responsible for producing TVs) from the Korean HQ. Samsung changed the GPM strategy to GBM (Global Business Manager) which involved manager's widening their perspective to focus on the industry as a whole. By mid-2007 some 3,061 managers had participated in the Programme. See Ibid, pp. 97-8.

particularly in terms of SMEs, on OEM systems. 35.8% of import/export companies surveyed answered that this was the result of demand from foreign buyers, who saw Korea mainly in this capacity. 22.2% answered that this was due to the lack of creativity in the design arena. 15.9% cited the reason as poor resources for brand development and advertising.<sup>1309</sup> Nevertheless with the strengthening of Korea's manufacturing base came a high level of international design registrations. Between 2000 and 2005, design registrations increased from 18,845 (around 400 per million population) to 27,235 (nearly 600 per million population).<sup>1310</sup>

In 2006 Korea's international marketing strategy involved promoting Korean exports and financial results were impressive. The figures for import and export of design alone were also encouraging.<sup>1311</sup> However KIDP's 2008 'Report on Design Competitiveness'<sup>1312</sup> revealed that overall, Korean design related sales remained lower than those of the other design competitive countries surveyed. In fact, despite coming 8<sup>th</sup> in the overall survey, and first for design competitiveness in terms of human resources, Korea ranked 16<sup>th</sup> out of 17 countries in this capacity, beating only India.<sup>1313</sup> Korean design firms' performance was average, ranking 9<sup>th</sup>;

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<sup>1309</sup> KIDP, *The Design Census*, Kidp (October 1998), p. 679.

However, one reason for Korea's continued position as a country 'locked' into the OEM trade is that the expectations and assumptions of the domestic and foreign markets are at odds with one another when considering the key aspects of trade.

A large proportion of Koreans placed the *price* of a product as their top priority (44.3% of Korean companies agreed with this priority, against only 21.1% of foreign companies). Additionally, whereas 25.1% of foreign marketers rated design as the most important aspect of international product trade, only 10.2% of Korean marketers did the same. See *Ibid*, pp. 788-89.

<sup>1310</sup> According to the 2008 International Design Scoreboard, Korea was the leading nation for international design registrations in relative terms and second behind Japan in absolute terms. International trademark activity is similarly strong, with the number of trademark registrations having risen from 700 per million of population in 2001 to nearly 1,400 in 2006. This success is also reflected in the Interbrand top 100, where Korea had three brands in 2008 compared with just one in 2004. See Moultrie and Livesey (2009), p. 36.

<sup>1311</sup> In 2006, for example, the design export turnover was USD 7.9 million (KRW 7.5 billion); in 2008, it totaled USD 21million (KRW 25 billion). The design import turnover increased less dramatically, from USD 26 million (KRW 24.3 billion) in 2006 to USD 23 million (KRW 28.1billion) in 2008. See the Design Census, KIDP and MKE (December 2009), p. 27.

In practice, companies develop global marketing strategies based on the requirements of the local market. See Jang Seong-keun (et al.), 'Design-Oriented New Product Development,' *Research Technology Management*, vol. 52, no. 2, Arlington VA: Industrial Research Institute Inc. 2009, pp. 36-46, esp. 37-43.

<sup>1312</sup> KIDP Report, *National Design Competitiveness Report 2008*, Seoul: KIDP, December 2008, pp. 1-16, esp. 12. The report was compiled with the help of Dr Chung Jai-hak of Sogang University, and used a new method of measuring National Design Competitiveness Power.

<sup>1313</sup> KIDP Report, *National Design Competitiveness Report 2008*, Seoul: KIDP, 2008, pp. 1-16, esp. 12.

Korea also performed poorly in achievement, environment, and investment. Korea ranked slightly lower than Japan in the civil design sector, and was on a par with Japan in terms of industrial design. Government support was above average for investment in design, and both design



whilst Japanese design firms led the field. Conversely, at the level of product design, Korea was one of the market leaders in electronics. In terms of globalisation, several other countries in the report, including the UK, were ahead of Korea due to their overseas presence. Arguably, the lack of English language ability in Korea was partly responsible for this, as Korea was found to have more talented designers than any other country surveyed, and was consistently rated very highly in terms of both quantity and quality. In both general companies and design firms, the proportion of designers to other staff was higher in Korea.<sup>1314</sup>

#### **D. Design Practice Strategy**

In the 1960s more graphic designers were required due to the emergence of newspapers, magazines and TV advertising. Other sectors, such as the medical and banking industries, also required graphic designers to design their packaging and brochures. In the 1970s, following the success of Korea's economic plans, the advertising industry grew rapidly, thereby leading to an increase in the number of advertising agencies who were to meet the growing demand for services. Companies required advertising agencies to not only create TV and print advertising, but also to develop a distinctive corporate identity. Large companies like Samsung, Hyundai and LG began to increase their recruitment of industrial and graphic designers to work for them in-house.

After studying product design at Ulm University and working in Germany from the mid-1960s until the late 1970s, Park Han-yu returned to Seoul and opened a design consultancy company in Yeoido in 1979.<sup>1315</sup> The business was unsuccessful, however, because the market was not yet ready to accept this type of consultancy.<sup>1316</sup> In the mid-1980s other design consultancies began to emerge. These companies were in the main started by two types of people, namely

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consultancies and normal companies were very satisfied with their government support. See Ibid, p.7.

<sup>1314</sup> Ibid, p. 16. Indeed, in design companies, the proportion of designers to total number of employees was a massive 59% in Korea, beating all other countries surveyed by at least 19%, and exceeding the average of 24% significantly. In 2008, Korean industry arguably supported design more than any other country in the market. However, in an analysis of 'investment environment' in design, Korea ranked 15<sup>th</sup>, far below Japan (1<sup>st</sup>) and the UK (8<sup>th</sup>).

<sup>1315</sup> Private communication from Park han-yu at 'Park han-yu Design Research Co.' 15 June 2005.

<sup>1316</sup> Park was vice-president and overall coordinator of the KDPC between 1980 and 1991, playing a pivotal role in the development of both domestic and international designers.

designers returning to Korea after being educated abroad, and designers who left big-sized companies (such as Hyundai and LG) in order to set up on their own.<sup>1317</sup> This improved the quality of design at these consultancies and enabled them to create niche products that were not produced by the bigger companies. In the late 1980s the first officially registered product design consultancies began to spring up. For example, in 1989 '212 Design' was founded by Eun Byung-soo, and it went on to become one of Korea's most successful design consultancies.

In 1994 KIDP launched the 'Design Support Project for SMEs' in order to give companies an awareness of the importance of design. Since companies were unwilling to invest heavily in new design, the KIDP implemented the programme in order to provide Korean companies with a design consultancy that was much less costly than similar services available in the private sector. KIDP invited leading designers from other countries to join the project, and these designers provided design consultancy for the Korean companies taking part in the project. The introduction of foreign designers allowed companies to compare the respective merits of Korean and foreign design, and in doing so improve the level of Korean design.<sup>1318</sup>

### **Development of In-house Design**

In the early 1980s in-house design was embraced by a number of companies who competed with each other thereby driving design innovation. In 1983 one company, Goldstar opened its own Design Center with the hope of becoming 'one of the five top design centres in the world.' The company had 3 objectives: to become a leader in the design development process; to emphasise the global importance of understanding different local cultures; and to create an image of reliability in the eyes of the consumer. Goldstar became LG electronics, and has continued to expand its investment in design.<sup>1319</sup>

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<sup>1317</sup> One individual who returned from abroad to set up his own consultancy was Kwon Young-sung, who in 1988 established the Tandem Design Associates (this company was officially registered in 1990).

<sup>1318</sup> Some private design consultants opposed the 'Design Support Project for SMEs', claiming it had cost them business, but others (including professors with experience of design in industry, and some design consultancies) were enthusiastic about it, since they understood its importance for the improvement of Korean design.

<sup>1319</sup> Mike Jones, 'Korea Opportunity,' Magazine *Design*, no. 516, London: Design Council, December 1991, pp. 30-3, esp. 31-2; Kim Kyung-soo, LG 'Re-design Your Business (*Gyungyoung-ul Dijain Hara*),' *Financial News*, 30<sup>th</sup> September 2008. The company invested GBP 56 million (KRW 100 billion) in design in 2008; at this time LG only employed 700 staff, a small number of whom

Daewoo Electronics was established in 1974 as an assembler of radios and amplifiers. The company quickly grew and they acquired Joo-ahn Electronics in 1975 and Dae-han Electric Wire Ltd in 1983.<sup>1320</sup> In 1993 they adopted a philosophy dubbed 'Tankism', a concept which emphasised strength and durability, and they gave designers more autonomy in which to better respond to the changing times.<sup>1321</sup> Daewoo also established the Paris Design Center in France in 1994, and in 1997 the Daewoo Design Department was renamed the Daewoo Design Research Center.<sup>1322</sup> Like Daewoo, Samsung also took measures to increase the competitiveness of their designs. For example, they established the 'Samsung Software Membership' programme, which selects talented undergraduate IT and design students for Samsung internships.<sup>1323</sup>

In the early 1990s globalisation made private companies increasingly aware of the importance of design. As well as private companies focusing on this the government also realised how crucial good design could be to the economy.<sup>1324</sup> In order to assist Korea's less resourced SMEs KIDP established the first of four 5 Year Design Development plans in 1993. At the same time, the KIDP began to upgrade and put consulting projects into effect. These projects placed designers domestically as well as abroad in order to help SMEs achieve wider market penetration.<sup>1325</sup> KIDP encouraged the setting up of design consultancies since

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worked on design. Today, LG employs 540 designers from 12 nations. Furthermore, LG electronics continues to build global design networks that connect the international design centers of Tokyo, Beijing, New Jersey, London and New Delhi.

<sup>1320</sup> In 1983 Daewoo Electronics also established a subsidiary design branch called 'ID Focus' in Silicon Valley (USA), while in 1987 the company set up the 'Tokyo Design Lab' in Japan.

<sup>1321</sup> See reference number 1761.

<sup>1322</sup> Daewoo categorized the fundamental concepts of design in the following three ways: 'Naturalness' (which emphasises function over fashion); 'originality' (which focuses on product differentiation), and reasonableness (which recognises the need for convenience).

<sup>1323</sup> See <http://www.idsa.org/content/content1/kook-hyun-chung-samsung> (last accessed 19.03.2013); Park and Hong (2012), p. 80. Between 1991 and 2006, the 'Samsung software membership' promoted 1500 undergraduate students to the existing IT workforce. To date, the programme has produced roughly 350 designers, of whom 200 are working as designers at Samsung electronics.

<sup>1324</sup> Broadcasting stations also took notice of the growing importance of design. As a result, MBC broadcasted a special programme entitled 'Why Design?', and, KBS broadcast a special programme entitled 'The World is Running', in 1993 and 1994 respectively. This growing awareness was also reflected in the print media. For example, *The Chosunilbo*, one of the biggest newspapers in Korea, ran a series of 25 articles entitled 'Design Changes History' in 1996. See Park Shin-yeon, 'Technological Warfare' Overseas Documentary: Part 3, Korea Newspaper *Kyunghyang Shinmun*, 10<sup>th</sup> April 1994.

<sup>1325</sup> Hobday and Perini (2009), pp. 490-91.

During this period, the government also ordered some of the Chaebols to merge and acquire each other's subsidiaries, on the principle that the larger firms are better able to compete in the international markets. The Chaebols also received tax benefits and financial support.

these firms could then lend their design expertise to SMEs. As a result of KIDP's initiative, and the amount of available opportunities to work for SMEs, design consultancies numbers increased from around 20 in 1993 to roughly 2,500 in 2013.

Korean companies continue to increase their spending on R&D, and the major electronics manufacturers are now global operators. According to a 2002 KIDP survey, 53% of SMEs outsourced design in order to 'develop new concept models', with the majority of companies surveyed looking to get benefits from improved brand awareness and increased turnover.<sup>1326</sup> When examining the 2009 Design Census, it is apparent that major changes have taken place since the 1997-98 Census. From 1997 to 2009, the number of design consultancies tripled and their annual turnover more than doubled.<sup>1327</sup> These figures also reveal the growing concern and interest in environmental issues, reflected in the significant increase in turnover of environmental design. On the other hand the turnover of graphic design and product design both decreased.

As Korea's manufacturing base has grown, the Chaebols have understood the importance of not competing solely on cost, and are increasingly seeking to differentiate themselves through design and branding. Design has therefore emerged as a fundamental strength of many firms, and the design services sector has flourished, seeing rapid growth in the past 10 years. Such growth is underpinned by substantial economic growth and a strong export market for goods that demand design input (including automobiles, computers, and telecommunications). This national ambition to raise the quality of design is matched by investment: Korea leads the design world in terms of public investment in design in absolute terms (around USD 68 million per annum).<sup>1328</sup>

Despite the success of companies such as Samsung and LG, large Korean companies have as yet failed to establish a brand image as strong as Apple's, or produce a product with the iconic design of the iPhone. To the average consumer,

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<sup>1326</sup> BDI, *Korea Design Report* (13<sup>th</sup> March 2003), p. 9.

Both Samsung and LG Electronics already work extensively with product design agencies around the globe. The 1997-98 Design Census conducted by the KIDP revealed there were 910 design consultancies in Korea, employing 8,301 designers. Of the combined annual turnover of these consultancies (approximately GBP 515 million), 82% of the consultancies had a turnover that was less than approximately GBP 1 million, whilst 18% garnered 57.2% of the total turnover. Ten years later, the 2009 Design Census revealed that the annual turnover for design consultancies in 2008 was USD 1.38 billion (KRW 1.61 trillion). See *The Design Census 2009*, KIDP and MKE (December 2009), p. 24.

<sup>1328</sup> Ibid.

who lacks the in-depth knowledge necessary to fully understand the technology involved in a smart phone, the iPhone simply offers a clearer concept, with seemingly unerring consistency between usability and aesthetics. In order to rectify this problem Korean SME's who wish to create iconic designs could collaborate more with larger companies who possess greater financial resources. In addition Korean SMEs could reference Korean cultural and philosophical principles in order to help make their designs iconic, and to make the concept behind a product's usability and aesthetics more clear. Korean companies would also benefit from allowing designers, rather than management, to have more of a say in all final product design. This management intervention might explain why Apple, despite having very similar technological capacities to Samsung and LG, tends to produce more iconic designs than its Korean rivals.

### **3.4 Summary**

In this chapter, I examined the impact of design policy on the economic performance of Japan, Russia and Korea in a post-industrialisation context. This was achieved in part by examining each country's automobile and electronic industries. It has been demonstrated how, following WWII, both the American and British governments recognized the importance of good design to the economy and promoted this idea through design exhibitions, improved design education, and good design awards. These ideas were adopted by Japan and Korea as part of the drive to increase economic competitiveness. In Soviet Russia however the 'mark of quality' was introduced in less than wholly successful effort to improve its domestic and export markets. This chapter showed that whilst capitalist societies tend to encourage innovative and attractive design (driven by the free market), in communist countries design has been largely functional with scant regard for consumer preference or demand (the planned economic system).

Each country's design marketing strategy was studied by reference to the development of technologies and eco-friendly design. Furthermore, the history of design education in the three countries was traced. Finally, examination was made of design promotion with particular reference to government support for design consultancies.

## CHAPTER 4: Design Practices

### 4.0 Introduction

In this chapter, examination will be made of the impact of design practice on the economic performance of Japan, Russia and Korea in an industrialisation and a post-industrialisation context. In doing so, discussion will focus on technological innovation, design trends, marketing and environmental issues.

Good design is often crucial to the success of businesses, and even entire economies. Design practice is a reflection of design policy, both of which generally (in an industrial context) serve an economic end. The distinction between policy and practice is perhaps best exemplified in the USSR, where policy was detached from reality, rendering it ineffective in practice. Despite the Soviet government's commitment to improve design from the 1960s onwards, there was a contradiction between this commitment and production targets which explain why Soviet consumables languished behind their western counterparts. However, in Korea and Japan, not only did policy emphasise the importance of industrial design to economic competitiveness, but industry itself embraced modern innovative design.

In the 1950s and 60s consumers demanded better products which therefore became more standardized with designers improving their quality and simplicity. By the 1960s, the power of the market, with its mass cultural values, ensured that consumer choice had become more powerful than design idealism. In response to this market reality, design entered the following decades open to a range of new ideas that responded to the 'condition of post-modernity'.<sup>1329</sup> With the arrival of the 1970s, the ideals of Modernism in design had been replaced by a new emphasis on consumerism, in particular within marketing (i.e. advertising and branding).<sup>1330</sup> In many ways, the design industry and in-house design began to develop independently of the production process. In the following decades, the relationship between technology and design changed significantly. The designer was called upon to act as a bridge between technology and the consumer by making technology more user-friendly.<sup>1331</sup>

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<sup>1329</sup> Penny Sparke, *An Introduction to Design and Culture: 1900 to the Present*, 2<sup>nd</sup> ed. (first published 1986), London: Routledge, 2004, p. 189.

<sup>1330</sup> *Ibid*, p. 128,

<sup>1331</sup> As Penny Sparke notes, this was manifested on the simplest level in the work undertaken by industrial designers to make machines look desirable and familiar. Apple Computer Inc., based in

Since the late 1980s globalisation has meant that it is becoming hard to discern the uniqueness of a country or region's design. Our own era can be termed 'creativity-oriented'; guided by an understanding of consumer cultures rather than by product function. Such an understanding suggests the importance of creating brand identity as a means of engaging consumers' desires and emotions, and, in the process, increasing the level of brand loyalty.<sup>1332</sup> In the 2000s we have reached a point in the design process where prime consideration is given to attracting the consumer in an aesthetic or ideological way.

## 4.1 Design Practice of Japan

### 4.1.0 Introduction

Japan, perhaps more than any other country, has adapted foreign culture and civilisation to its national way of life.<sup>1333</sup> In order to understand the progression of Japanese design, the Japanese design historian Izuhara Eiichi, in his book *Design Movements in Japan* (1989, reissued 1996),<sup>1334</sup> has delineated four distinct eras. The first, beginning with the Meiji Restoration and lasting until the World War I, he terms the Industrial movement era. This era combined traditional crafts and modern industrial technology in a design aesthetic that emphasised the skill of the worker more than the expression of the designer. The second era, the Arts Movement era, occurred in the 1920s and saw functionalism and the internationalist design movement taking place across the globe.<sup>1335</sup> He defines the third era as the 'Functionalist Design Era', one that reached its peak in Japan

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California's Silicon Valley, for example, hired the German design consultancy *frogdesign*, and later the British designer Jonathan Ive, to style their machines in a way that would make them seem as 'friendly' as possible. See Ibid, p. 152; Lewis Blackwell and Jeff Feng, 'Jonathan Ive', *Creative Review*, vol. 17, no. 1, London: Centaur Communications, 1997, p. 26.

<sup>1332</sup> Jennifer L. Aaker, 'Dimensions of Brand Personality,' *Journal of Marketing Research (JMR)*, vol. 34, issue 3, Aug.1997, pp. 347-56, esp. 354; Jonathan E. Schroeder, 'Brand Culture: Trade Marks, Marketing and Consumption' in Lionel Bently, et al. (eds.), *Trade Marks and Brands: An Interdisciplinary Critique*, Cambridge: Cambridge University Press, 2008, pp. 161-76, esp. 174-75; Steve Charters, 'Aesthetic Products and Aesthetic Consumption: A review', *Consumption Markets and Cultures*, vol. 9, no. 3, 2006, pp. 235-55.

<sup>1333</sup> Ekuian Kenji, *The Esthetics of the Japanese Lunchbox*, Cambridge: MIT Press, 1998, p. 178.

<sup>1334</sup> Izuhara (1996), pp. 18-26.

<sup>1335</sup> Takehara, et al., eds. (2003), p. 51.

slightly later than in the rest of the design world.<sup>1336</sup> Around this time (from 1945 to 1960) western styles were propagating in Japanese households and American design styles were being appropriated, not least due to the stationing of U.S. troops in Japan under General MacArthur (1945-1951). Finally, he defined the fourth era as the time in which he was writing, namely from the 1960s until the late 1980s. During this era, commercial design was often used as a tool for product sales and advertisements.<sup>1337</sup>

More recently, interior designer Uchida Shigeru, in *A History of Design in Postwar Japan*, defines design eras more practically based on his long experience in the industry: modern design appeared in the 1950s, in the 60s, following industrialisation, design improved in quality, achieving parity with Western products and international recognition. Creating a distinct Japanese design identity was the focus of the 1970s, when the industrial society was transitioning to an information society. An excessive variety of design was prevalent during the period from the mid-1980s to the early 1990s, and from the mid-1990s to the present, the focus is more on environmental design which improves society, and is relevant to everyday life.<sup>1338</sup> Today, design in Japan is an expression of ‘dynamism and opposites’<sup>1339</sup> it is seen as a cultural catalyst, reforming and reinventing the structures of a fast-changing way of life.

#### **4.1.1 Post-War Westernisation**

##### **American Influence**

During the Allied occupation (1945-1952), American consumables were imported for the troops. As such several American products found their way into Japanese homes, and the American way of life began to infiltrate Japan in an irrevocable

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<sup>1336</sup> During this era, design associations and schools were established in Japan, and the Good Design Product Award was launched. See chapter 4 of this thesis.

<sup>1337</sup> Bevis Hillier, *The Style of the Century* (2<sup>nd</sup> ed., new chapter by Kate McIntyre), London: The Herbert Press, 1998, pp. 180-81.

<sup>1338</sup> Uchida (2011), pp. 153-231.

<sup>1339</sup> Albrecht Bangert, ‘Between Coolness and Tradition: Design Made in Japan’ in JIDPO, *Design Japan: 50 Creative Years with the Good Design Awards*, Berkley, CA: Stone Bridge Press, 2007, pp. 14-25, esp. 14.

Japan’s dynamism stalled in the 1990s due to a systems conflict between indigenous institutional systems and the emerging information society, resulting in a lost decade. However, this dynamism was reactivated in the early 2000s and continues today. See Watanabe (2009), p. 212.



way.<sup>1340</sup> In the Housing development 'Toyama Heights', for example, American military houses were distributed to Japanese civilians as well as soldiers, in order to alleviate post-war housing shortages.<sup>1341</sup> Japanese inhabitants became increasingly accustomed to living and eating in the Western way, sitting on chairs, for example, instead of mats (*Tatami*).<sup>1342</sup> Home electrical products such as coffee machines, washing machines, refrigerators, ovens and gas heaters were made by Mitsubishi and Toshiba, both of which used American design technology, and were monitored by the MCI. Such companies were able to prosper mainly due to the Japanese government's policy of supporting design.

In many areas Americanisation was shaping the Japanese way of life. The national daily newspaper *Ashai*, for example, began printing the cartoon 'Blondie' by Chic Young in 1946.<sup>1343</sup> This cartoon strip demonstrated American ways of life, featuring several modern conveniences, such as showers, washing machines, cars, and food blenders.<sup>1344</sup> Japanese anime, which was influenced by the American cartoon, began to gain in popularity after WWII.<sup>1345</sup> In addition modern US advertising techniques, such as employing graphic design in advertising, were utilised by the Zaibatsu corporations.

Sony was established in 1946, with a staff of just 20 people.<sup>1346</sup> In 1955 they introduced the world's first mass-produced transistor radio, the TR-55. This was the

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<sup>1340</sup> Kashiwagi (2002), p. 142; See also the Japanese magazine, *Craft News (Kogei Nyu-su)* 14 (2), 1946, p. 8; Takehara, et al., eds. (2003), pp. 70-1. The Supreme commander for the Allied Powers ordered the MCI in Japan to build 20,000 houses, complete with furniture and home articles for stationed American military personnel.

<sup>1341</sup> IARI (ed.), *IAN (Kogei Nyusu)*, vol. 17, no. 6, Tokyo: Maruzen Publishing Co., Ltd., 1949, pp. 2 and 8-9.

<sup>1342</sup> Ibid; Takehara, et al., eds. (2003), p. 71.

<sup>1343</sup> It was published 1946-1956 in 'Weekly Asahi' and 1949-1951 in newspaper *Asahi Shimbun*. See Kashiwagi (2002), pp. 146-47.

<sup>1344</sup> Takehara, et al., eds. (2003), pp. 74-5.

<sup>1345</sup> Toei Animation, established in Tokyo in 1956, had their first mainstream film success with Hakujiyaden, Legend of the White Snake (shiro hebi) in 1958. From 1963-66, the immensely popular cartoon animation Astro Boy was broadcast by Fuji TV Company, with Tezuka Osamu as the directing animator. So popular did the programme prove to be, that it garnered 30% of the national viewing figures. It was after the 1964 Tokyo Olympics, however, when Japanese styles and innovations became known to a global audience, that anime flourished. The printed cartoons known as manga became popular in the west, as well as in Japan, and aided the move in anime during the 1970s from a young audience (children pre- and primary school age), to an audience of young adults. See Yamaguchi Yasuo, *History of Japanese Anime: The Miracle of Japan's World-conquering Anime (Nihon no Anime Zenshi: Sekai o Sei shita Nihon Anime no Kiseki)*, Tokyo: Ten books, 2004, p. 67 and 81; Takehara, et al., eds. (2003), p. 90.

<sup>1346</sup> Shortly after, the company began providing tape recorders to NHK (NHK network began broadcasting in early 1953), the main national broadcaster, and also provided them to over 80% of Japanese schools. Sony employed its first fulltime designer in 1954.

first product Sony exported, sending 50 samples to Canada.<sup>1347</sup> The solid state transistor had in fact been invented in the United States in 1947. However its use had generally been limited to military purposes. RCA, which had made use of the transistor, worked predominately with military customers, and these funded 75 percent of the research carried out at RCA labs. However Japanese companies, bought the patent licensing and technology training from RCA. Since Japan was prevented from establishing a conventional army, Japanese companies (such as Sony and Toshiba) used transistors for consumer goods including TVs. In this way American R&D, in particular that undertaken for military purposes, influenced the development of Japanese products.<sup>1348</sup>

Japanese design properties were relatively simple. They involved minimum decoration and a modern 'western' aspect.<sup>1349</sup> Design activities became a major factor in the country's post-war economic recovery, when the rebuilding of the country went hand in hand with quantitative increases in trading. In addition, with the introduction of the 'G Mark',<sup>1350</sup> Japanese design exports increased. G-Mark products soon gained international recognition, winning the renowned German *Gute Industrieform* and Italian *Compasso D'Oro* awards.<sup>1351</sup> Indeed, until the early 1960s, design was largely seen as a tool to improve export figures.<sup>1352</sup> The role of traditional crafts in Japan has remained unclear since the Meiji period, due to various shifts in the country's political outlook. Early post-war economic priorities, for example, tended towards the complete abandonment of generations of indigenous craft knowledge and practice, as industrial design became fundamental to Japanese production and international competitiveness. This later reverted back

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<sup>1347</sup> Several Japanese companies made large investments in research and development, putting emphasis on technological innovation.

<sup>1348</sup> Wolfe (2013), p. 77.

<sup>1349</sup> Aoki Shiro, 'A Promotion Plan of Design after War - From G Mark to Mujirushi Ryouhinn' ('Sengo no Dezain Shinkou Saku - G Ma-ku seido kara Mujirushi Ryohin made') in Nagata, et al., eds. (2006), pp. 414-33, esp. 426-27; Takehara, et al., eds. (2003), pp. 86-9; Vicoria and Albert Museum (1982), pp. 14-5, and 82.

<sup>1350</sup> The Japanese MITI was established in 1949 and soon became a key force in the promotion of Japanese design. See chapter 4 of this thesis.

<sup>1351</sup> Initially, these were usually products utilising fit-for-purpose materials and embodying timeless, simple beauty, such as Toshiba's electric rice cooker (1958), Sori Yanagi's Express aluminium kettle, and Masahiro Mori's classic Japanese soy sauce pot (1960). During the seventies and eighties, products that balanced art and design were recognised, such as the Wink chair by Yoshiyuki Kita and Italian manufacturer Cassina (1980).

<sup>1352</sup> Fujita (1999), pp. 51-4; Hiesinger and Fischer (1995), p. 17.

to 'the acknowledgement of the need to reinstate the fundamental qualities and values of the crafts as essential attributes of the practice of good design.'<sup>1353</sup>

#### 4.1.2 Japanese Design Comes Into Its Own

Since the end of the WWII, the customer has become the new 'lord' to whom Japanese designers and producers answer. The work of these designers and producers originated from a tradition that involved all the relevant craftsmen and designers working diligently together, contributing separate elements to a perfect whole.<sup>1354</sup> This concept in manufacturing also extended to the marketing process, and would later mean that the role of the designer was to monitor both production and marketing.

A distinctive Japanese design style can be seen in the Butterfly Stool and the Rice Cooker. The Butterfly Stool, designed by Soetsu Yanagi's son Sori Yanagi in 1954-1956, has become a reference point for Japanese design.<sup>1355</sup> The stool expresses beauty and simplicity and originally it was intended for use with tatami mats, its feet being designed to lie flat to protect the straw matting. However, as lifestyles began to change and tatami became less popular, Yanagi changed the leg portions so that the feet made contact with the floor in the same way as chairs.<sup>1356</sup> The Toshiba electric rice cooker,<sup>1357</sup> which became available in 1955, signified the start of a design revolution in Japan. This trend for time saving devices became increasingly popular, in part because of the high levels of employment, and by 1960, half of all households owned an automatic rice cooker.<sup>1358</sup> By the 1960s, Japanese companies such as Sony, Sanyo and Matsushita were manufacturing high quality technological products based on Japanese aesthetics and craftsmanship. Originally heralded as symbols of

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<sup>1353</sup> Charlotte Benton, 'From Tubular Steel to Bamboo: Charlotte Perriand, the Migrating "Chaise-longue" and Japan', *Journal of Design History*, vol.11, no.1, 1998, pp. 31-58, esp. 50. Also see Aoki (2006), pp. 414-17.

<sup>1354</sup> As Sparke argues, since employees were highly involved participants in the production line, they all had a chance to enhance productivity and quality. See Penny Sparke, *Japanese Design*, London: Michael Joseph, 1986, p. 44.

<sup>1355</sup> Fischer (1977), pp. 361-62; Pollock (2012), pp. 14-5.

<sup>1356</sup> Hagiwara (2006), pp. 15-7.

<sup>1357</sup> Helen Macnaughtan, 'Building up Steam as Consumers: Women, Rice Cookers and the Consumption of Everyday Household Goods in Japan' in Penelope Francks and Janet Hunter (eds.), *The Historical Consumer: Consumption and Everyday Life in Japan, 1850-2000*, New York: Palgrave Macmillan, 2012, pp. 79-104, esp. 82-3.

<sup>1358</sup> *Ibid*, pp. 84-9; Hagiwara (2006), p. 54; Francks (2009), p. 173.

Americanisation, these products saw their aesthetic and functional principles move towards Japanese values in an effort to promote Japanese culture.<sup>1359</sup>

Japanese design gained international recognition when the 10<sup>th</sup> World Design Conference, supported by MITI, was held in Tokyo in May 1960. The theme of the conference was 'Our Century: The Total Image-What Designers can Contribute to the Human Environment of the Coming Age', and this influenced most of the Japanese designers to be more conscious of their responsibility to society.<sup>1360</sup> The staging of the event secured Japan's place in the arena of international design, and allowed designers to demonstrate their individuality.<sup>1361</sup> During the 1960s, Japanese design concerns shifted from an emphasis on economic reform and competition in the global market, to issues pertaining to the environment, and by the late 1960s Japanese art had already become an integral part of the international art scene.<sup>1362</sup>

### Development of Japanese-ness

The sixties also saw a return to a more 'Japanese' style of product design,<sup>1363</sup> whereby reduced form was blended with maximised function.<sup>1364</sup> For example, Kenmochi Isamu's and Noguchi Isamu's 'Stool' (1963), which became an icon of Japanese design in the international world.<sup>1365</sup> A similar aesthetic principle was evident in the electronics field where Matsushita stressed the importance of

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<sup>1359</sup> Low (2013), p. 20.

<sup>1360</sup> 227 delegates from twenty-four countries attended the conference, 84 of whom were non-Japanese. See Takehara, et al., eds. (2003), p. 92.

<sup>1361</sup> Perhaps the most distinctive Japanese exhibit came from a group of architects and designers self-labelled 'The Metabolists'. Interpreting the metropolis as a living organism, these designers sought to break the rigidity of determined lines and form, merging biological and ecological concepts and perspectives. See Lin Zhongjie, *Kenzo Tange and the Metabolist Movement: Urban Utopias of Modern Japan*, London and New York: Routledge, 2010, pp. 16-20. Also see Yoshimoto Midori, 'From Space to Environment: The Origins of Kankyo and the Emergence of Intermedia Art in Japan', *Art Journal*, vol. 67, issue 3, 2008, pp. 24-45.

<sup>1362</sup> Yoshimoto (2008), p. 25.

The contemporary art critic, Haryu Ichiro coined the phrase 'international contemporaneity' (kokusai-leki dojisei) in the 1960s to describe the confluence of global and local art, as opposed to the one-way influence of Western modernism.' It soon gained popularity among Japanese arts professionals.

<sup>1363</sup> Sparke accounts for this change as a move away from surface styling and the need to make things aesthetically pleasing and consumable to a more Japanese style. This style considered how to adapt objects to small spaces, such as the futon, as well as portability, flexibility and miniature dimensions. Further, Japanese designers began to consider how to use technology as a selling point. See Sparke (2009), p. 18.

<sup>1364</sup> Davey (2003), p. 95.

<sup>1365</sup> 'Stool' was a piece of bamboo furniture constructed through traditional Japanese basket weaving. See Sparke (2009), p. 22.

remaining different from American and European cultures in terms of artistic practice, whilst emphasising the need to learn technological advancements from abroad.<sup>1366</sup> Matsushita Electronics “Asuka” SE-200 (1964), a hi-fi stereo radio phonograph,<sup>1367</sup> and “Saga” TC-96G, a television (1965), both of which were made of wood, promoted a specifically ‘Japanese’ design.<sup>1368</sup> The principal reason for such a unique Japanese feel to the pieces was their status as items of furniture rather than simply household appliances. The “Asuka” was an ‘ensemble’ stereo system, a mainstream Japanese product, and had sliding door covers to hide its working parts. These parts were evidently looking to traditional Japanese modular furniture and interior design; sliding paper and wooden doors comprise a key element of Japanese traditional living. The unit was elegant, sleek, with clean lines and four beech legs resembling table legs.<sup>1369</sup> The advertisements of the late 1960s closely connected Japanese electronic technologies not only to the colours of the Japanese natural environment, but also their artistic traditions and beliefs. Matsushita’s advert emphasized the beauty of the lustrous wood grain, as well as the new direction in stereo design, and was sold as furniture in which ‘traditional Japanese beauty and modern sensibility are harmonized.’<sup>1370</sup>

The “Saga” television was similar in ethos. Crafted from either beech or walnut, it resembled a sideboard with its overhanging top-board and slender legs. Researchers for the company had found that Japanese families tended to treat their televisions as furniture, placing ornaments on top of them. The resulting ‘sideboard’ style was a significant departure from the American-style ‘screen-in-a-box’ televisions.<sup>1371</sup> A marketing strategy often employed by electrical appliance companies was to give their products names evocative of elements of traditional Japanese culture. For example, ‘Asuka’ is the site of a famous imperial court (645-

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<sup>1366</sup> Matsushita Kounosuke, the head of Matsushita Electric, first visited the United States to study manufacturing policy and techniques. In 1953 he successfully launched washing machines, televisions, and refrigerators onto the Japanese domestic market, and subsequently introduced vacuum cleaners the following year. See Miyamoto Kanji (ed.), *International Management Accounting in Japan: Current Status of Electronics Companies*, World Scientific Publishing Co. Pte. Ltd. 2008, p. 36.

<sup>1367</sup> Industrial Arts Institute (ed.), ‘Design Review 1964: Sound’ (1964-Nen Dezain Tenbo: Onkyo), *IAN (Kogei Nyusu)*, vol. 33, no. 1, 1965, Tokyo: Industrial Technology Institute Industrial Arts Institute (Kogyo Gijutsuin Sangyo Kogei Shikenjo), pp. 14-47, esp. 28-9.

<sup>1368</sup> Shunya Yoshimi, ‘Consuming America, Producing Japan’ (trans. David Buist), in Garon and Maclachlan, eds. (2006), pp. 63-84, esp. 80-1.

<sup>1369</sup> Traditional Japanese design characteristics often involve rectilinearity and grid systems. See Evans (1991), pp. 94 and 95.

<sup>1370</sup> Shunya (2006), pp. 80-1.

<sup>1371</sup> Ibid.

710), while Saga was an ancient emperor. The “Asuka” and the “Saga” won the Good Design Award in 1965 and 1966 respectively, since they appealed to the prevailing Japanese taste in interior design.<sup>1372</sup> As result, in the latter half of the 1960s many other manufacturers, including Toshiba and Mitsubishi, produced televisions that resembled up market Japanese furniture. This boom soon spread to other household products such as washing machines, refrigerators, air conditioners and vacuum cleaners. All these appliances were marketed under product names evocative of Japanese tradition and nature.<sup>1373</sup>

Japanese car makers also incorporated traditional design into their models. For example, echoing the concepts evident in Japanese lunch boxes, small Japanese cars feature the arrangement of ‘spatial components in this high-density but attractive mode’, which maximises the use of space.<sup>1374</sup> With the advent of such outstanding products, Japanese product design during the sixties may be understood as an attempt to express a unique kind of ‘Japanese-ness’ that distinguished it from the west. The cheap imitations that had begun to characterise Japanese products a decade earlier were virtually eradicated from the market, which in turn led to Japan commanding a powerful and highly competitive global export market position.<sup>1375</sup> Although, firms in this period were heavily dependent on foreign technology for the initial production of common consumer products such as radios and TVs, their success was based on quality and efficiency in the manufacturing process.<sup>1376</sup>

Following Kamekura’s poster designs for the 1964 Tokyo Olympics, Japanese graphic design moved away from traditional ‘Japanese’ images of geishas, mountains and chrysanthemums, employing instead high-technology graphic design techniques and photography.<sup>1377</sup> The Persona Exhibition of 1965 moved graphic design away from traditional images and towards a more modern creative

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<sup>1372</sup> Takehara, et al., eds. (2003), p. 98.

<sup>1373</sup> Shunya (2006), pp. 81-2.

<sup>1374</sup> Ekuan (1998), p. 137.

<sup>1375</sup> Johnson (1982), p. 211.

<sup>1376</sup> Solís (2004), p. 176.

During this period around 20 million households bought new technologically innovative products due in part to extensive advertising in newspapers, radio, and television. This buying culture meant that Japan had become a country of mass consumption. See Sumiya, ed. (2000), pp. 417-18.

<sup>1377</sup> Sano Hiroshi, ‘Media-Design-Advertisement’ (‘Media-Dezain-Kokoku’) in Nagata, et al., eds. (2006), pp. 486-503, esp. 488-89; Otake Makoto, ‘As a Turning Point of 1960s- Question, Critic, Objection to Design’ (‘Tenkanki to Shitenno 1960 Nendai - Dezain he no Gimon, Hihyo, Igi Moushitate’) in Nagata, et al., eds. (2006). pp. 434-55, esp. 451-54; Fujita (1999), pp. 165-73; Thornton (1991), p. 69.

style. Graphic design flourished in Japan in the mid-1960s and early 1970s, with Pioneers like Tanaka Ikko, Fukuda Shigeo and Awazu Kiyoshi producing subtle and internationally acclaimed advertisements and posters.<sup>1378</sup> Companies such as Sony took advantage of the fact that department stores were also acting as crucial patrons of graphic design and advertising.<sup>1379</sup>

Following the success of the 1964 Tokyo Olympics, Japan experienced a surge of national pride, and in 1970 went on to hold the first international exposition to be held in Asia.<sup>1380</sup> Throughout the 1970s the government continually encouraged the Japanese people to 'rediscover' traditional Japanese culture and values, which in turn led to the emergence of a neo-Japanese national identity in the 1980s.<sup>1381</sup>

### **Environmental Awareness (Kankyo)**

Environmental awareness has become a common concern in the fields of urban design, product design, and art.<sup>1382</sup> The Japanese term 'kankyo' relates to environmental awareness and refers to the relationship between a human being and their environment. In November 1966, thirty-eight Japanese multidisciplinary artists and designers gathered in Tokyo under the name 'Environment Society' (Enbairamento no Kai) in order to hold the two-part exhibition and event programme, 'From Space to Environment' (Kukan kara kankyo e). The event was to have considerable impact on architecture, design, visual art, and music in

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<sup>1378</sup> Takehara, et al., eds. (2003), p. 102.

New design magazines were also launched in an effort to breathe new life into design, for example *Design Critic* (*Dezain Hiho*) magazine launched in November 1966. Writers included Awazu Kiyoshi, Izumi Shinya and Hara Hiroshi. In a piece for *Dezain* magazine, Awazu asserted that 'post-war design' was about to end. He called for 'truly liberated creative activities' and a 'critical spirit' among the design pioneers of the new era. See Otake (2006), p. 434.

<sup>1379</sup> Kuroki Yasuo, who designed the famous Sony logotype, said that it is easy to invent new images for products when you use the latest design technology. See Victoria and Albert Museum (1982), p. 10.

<sup>1380</sup> Cox (2003), pp. 199-200; Ivy (1993), pp. 251-52.

<sup>1381</sup> Marilyn Ivy, *Discourses of the Vanishing: Modernity, Phantasm, Japan*, Chicago and London: The University of Chicago Press, 1995, pp. 36-40.

Exotic Japan ideas were typified in a 1980s Japanese essay collection written by young critics, folklorists and historians, which promoted neo-Japanesque ideas, and contained references to Western Orientalism and Japanese folklore. Essentially, Exotic Japan was still a campaign which promoted traditional values, but was perhaps more commercially driven than Discover Japan, and was viewed by some at the time as a kind of 'refurbished folklorism'. See *Ibid*, pp. 59-60.

<sup>1382</sup> In fact, environmental design, which interprets the environment as an organically and dynamically related system of parts, has turned away from the rigidity of fixed, separate structures such as architecture, space, function, and form, and is now concerned with notions of interrelated sustainability.

Japan.<sup>1383</sup> A principal aim of the exhibition was to promote a dynamic relationship between the viewer and the artwork, and kinetic or interactive elements were often employed to achieve this.<sup>1384</sup> The exploration of the multiplicity of kankyo's origins rendered it 'a socially relevant concept connecting the separate genres of architecture, design, visual art, and music'.<sup>1385</sup>

#### 4.1.3 Expansion in Quantity and Quality

During the 1960s and 1970s, Japanese design developed in quality and quantity, keeping pace with the rapid growth of the country's economy. This was a period of conceptualising design and establishing brand images. The demand for televisions grew particularly in the build up to the Tokyo Olympics in 1964. As Japanese family life continued to emulate that of America, the demand for a television in every household increased further. Sony, who had enjoyed enormous success with their TR-55 radio in 1955, released the smallest and lightest micro-TV in the world (the TV5-303) in 1962.<sup>1386</sup> This design move towards portability and micro-ism, coupled with the company's now established brand image of high and precision technology, helped to promote Japanese design worldwide as aesthetically and technologically innovative.<sup>1387</sup> An important design event in 1955 was Toyota's launch of the 'Crown' automobile, which was marketed as the first domestically made passenger car.<sup>1388</sup> This car became the Toyota RS Crown in 1964 when its design was further

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<sup>1383</sup> Yoshimoto (2008), pp. 25-6. Scholar Yoshimoto has accurately noted that due to the overlap of contributors between this event and the Japan World Exposition in Osaka (hereafter Expo '70), 'From Space to Environment' has often been reduced to the mere starting point of a linear development toward the technological spectacles which dominated Expo '70.'

<sup>1384</sup> For example, designer's Ito Takamichi's twin cylinders made of striped rings, generated a noise when turned by viewers. Ay-O's Finger Boxes invited viewers to put their fingers into a hole to feel what was inside each box. 'Hidden objects included a soft rubber item, sharp nails, and even nothing, for an unexpected recognition of the void.' See Yoshimoto (2008), pp. 28-9.

<sup>1385</sup> Ibid, pp. 36-8.

It is worth noting that four of the designers involved with the Environment Society, had organized the Persona exhibition at the same venue the previous year in order to revitalize creativity in design.

<sup>1386</sup> Vicoria and Albert Museum (1982), p. 15.

<sup>1387</sup> A history of utilising small space domestically through screens (shoji) can be attributed to the immediate success in developing micro-ism and portability in new products at that time.

<sup>1388</sup> Wada (1995), p. 11. This was to meet the demand for public transportation and they were initially used as taxis. Toyota uses the 'Crown' name as inspiration for their primary sedans, the Corolla which is Latin for 'small crown', the Camry a phonetic transcription of the Japanese word kanmuri that means crown, and the Corona which is also Latin for crown. The Crown eventually allowed Toyota to enter the American market in 1957.



'Americanised': it exhibited a streamlined design style, a look later echoed by Tokyo's Bullet train.<sup>1389</sup>

### **Management Innovation**

The success of Japanese companies could be due to the fact that they enjoy greater co-operation across departments than their US counterparts.<sup>1390</sup> This can be explained as a legacy of Japanese groupism, a strong characteristic of Japanese culture and the foundation of the Keiretsu system. This ethos encouraged cooperation and led to continual improvements in terms of costs, quality, and delivery times, which resulted in Japan possessing a superior system of QC, namely Japanese Total Quality Control (JTQC), than that used by the US. However, with the development of a globalised market, weak domestic market and the strong yen, the Keiretsu system no longer flourished and was forced to change by becoming more open and globalised.

In the 1980s the global move towards more individualised high-tech goods was particularly suited to JTQC, which enabled the fast production of market-orientated products.<sup>1391</sup> Japan's vision for industrial expansion in the 1980s aimed at vitalising the economy by advancing the development of knowledge-intensive industries centered on cutting-edge technology sectors. These sectors included biotechnology, new materials, new energy technologies, and the development of fifth generation computers. Japanese products, which displayed good design principles and possessed high quality components, reached a wider international market. This saw confidence in design grow significantly.

Whereas in the 1980s emphasis had been put on the allure and symbolic features of products, Japanese industrial design in the 1990s was characterised by an emphasis on rationalism and function in a competitive atmosphere following the

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<sup>1389</sup> Sparke (2009), p. 18.

<sup>1390</sup> In contrast to the US, the technological proficiency of the EC components industry compares favourably with its Japanese competitors. EC car producers have traditionally pursued a superior technological performance strategy coupled with product distinctiveness and model variety. See Annette Bongardt, 'The Automotive Industry: Supply Relations in Context,' in Henk Wouter De Jong (ed.), *The Structure of European Industry*, 3<sup>rd</sup> ed., Dordrecht; Boston; London: Kluwer Academic Publishers, 1993, pp. 147-70, esp. 156-57.

<sup>1391</sup> Shimizu (1989), pp. 56-7. EC car producers give primacy to the R&D department in order to ensure product design focused on technological refinement; compared to Japanese producers who tend to compromise product design features when consensus-seeking with other departments.

collapse of the bubble economy.<sup>1392</sup> Consumer demand for lower prices meant that designers became increasingly concerned with the need to reduce costs, shorten delivery dates and provide quality rather than quantity.<sup>1393</sup> The second half of the 1990s saw considerable progress in the development of IT-related equipment and user-friendly interfaces. Notions of barrier-free, universal design went hand in hand with ecological production, and the earlier trend for compactness and portability now included recyclability and normalisation.<sup>1394</sup> The late 1990s was a turning point for Japanese design, as this was when young designers such as Fukasawa became known in the West. Their innovative and functional designs were hugely popular, as once global consumers sampled these clever, striking and unique products, they demanded more of the same, thus boosting Japanese design.<sup>1395</sup>

In the early 2000s, the role of information technology and the internet changed the nature of procurement. The traditional Keiretsu system, which was based on personal connections, was no longer useful to companies who were using data bases to systematically restructure the supplier system. Japanese car manufacturers had many plants overseas and were therefore able to secure the best procurement deals internationally. The globalisation of the supplier system obliged suppliers to move from being 'design-in' suppliers to 'concept-in' suppliers.<sup>1396</sup>

## Innovation in Industry

In its initial stages, the Japanese car industry emulated European and American motor manufacturers by establishing overseas manufacturing plants. In the 1950s

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<sup>1392</sup> The 1980s saw Japanese historical stereotypes of 'narrowness' being discarded as many were able to spend freely in top European luxury shops owing to the high value of the Yen. See Francks (2009), pp. 4-5.

After the economy crashed the link between government and business was less strong. See Maclachlan (2003), p. 230.

<sup>1393</sup> Chiu Lei-Mei Julia, 'Managing Design for Global Value in Japan,' *Design Management Reiview*, vol. 12, no. 4, Fall 2001, pp. 72-8, esp. 72.

The 1980s were a period of mass consumption and diversified tastes. For example, ski wear was considered as utility goods in Japan; necessary to everyday life. However, this excessive consumption disintegrated rapidly after the bubble economy. See Fukumori Daisuke, 'Transformation of Sportswear into an Intelligent, Integrated Information Product' in Mizuno Seiichi, et al. (eds.), *Design Index from the Twentieth to the Twenty-first Century (20-21 Seki Design Index)*, Tokyo: INAX Publication, 2000, pp. 150-51.

<sup>1394</sup> Takehara, et al., eds. (2003), pp. 148-49.

<sup>1395</sup> Pollock (2012), pp. 19-20.

<sup>1396</sup> Shimokawa (2010), pp. 194-99.

The idea of design-in involves suppliers realising the design and specifications provided by the car makers, while concept-in involves suppliers proposing their own concepts and designs for parts.

there was a rapid increase in the number of nuclear families in Japan, and this led to a demand for a no-frills, fuel-efficient small car that was still capable of ferrying around a small family in relative comfort. Honda and Nissan responded to this market need by designing a series of Japanese 'mini-cars'. These competed favourably in terms of price with western models, partly because of the lower cost of materials. The mini-cars were also better suited to the winding streets found in Japan.<sup>1397</sup> Since the 1950s Honda has benefitted from its constant innovation. Honda Soichiro introduced the idea of 'the three joys' into the company culture. The three joys are based on the Zen Buddhist concept of 'wabi-sabi,' although Honda adapted it for marketing purposes.<sup>1398</sup> Briefly, 'wabi-sabi' defines existence in terms of imperfection, impermanence and incompleteness. In design, this has been interpreted to mean finding splendour in flawed simplicity, such as a petrified log, and using that as inspiration to create designs from natural shapes and rhythms.<sup>1399</sup>

The 1960s saw a growth in the newly affluent urban classes, which in turn led to the need for different designs. Up until the 1960s Japanese car manufacturers tended to produce cars licensed from European or American companies. But the increase in domestic car ownership accelerated Japanese product development with Toyota creating a specialised organisation for this purpose. The globally accepted four year car model change cycle actually originated in Japan in the 1960s largely due to the competition between the two leading car manufacturers at the time, Toyota and Nissan.<sup>1400</sup> The competition between these two manufacturers led to accelerated product development, creating faster and more varied model renewals with unique features. The competing companies also aggressively marketed their products domestically and internationally. By 1966, in

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<sup>1397</sup> Evans, p. 166. Honda and Tohatsu also provided affordable motorcycles that were economical to run.

<sup>1398</sup> Honda Soichiro, the engineer who founded Honda, reinterpreted the concept further, namely that the Joy of Producing was the engineer's happiness and satisfaction in using his creativity and contributing a superior quality product to society. The Joy of Selling was the pleasure that salesmen experienced from selling high quality, reasonably priced, high performance vehicles. And the Joy of Buying was the consumer's satisfaction when using the product. See Hasegawa Yozo, *Clean Car Wars: How Honda and Toyota are Winning the Battle of the Eco-friendly Autos* (trans. Tony Kimm), Singapore: John Wiley & Sons Asia, 2008, pp. 174-75.

<sup>1399</sup> Rothfeder (2014), pp. 140-42.

<sup>1400</sup> Fujimoto (1999), pp. 174-76.

Business managers focused on the Japanese trait of group competition in order to boost a sense of rivalry with other Japanese companies. See Wada Kazuo, 'The Emergence of the 'Flow Production Method in Japan' in Shiomi and Wada, eds. (1995), pp. 11-27, esp. 11-2.

the midst of the 'my car era', more than 10 million cars were in private ownership in Japan.<sup>1401</sup> Toyota produced 50,000 cars in the same year, and TQC was expanded to include part suppliers and assemblers. In terms of marketing, Toyota also introduced the American influenced 'wide selection' policy in 1966, which allowed consumers to choose between different combinations of body, transmission, engine, etc (the 'Crown' model was available in 48 different versions).<sup>1402</sup> Japanese car manufacturers were leaders in small engine combustion technological advancement throughout the 1970s, and remain so today.<sup>1403</sup>

Nissan was founded in 1933 and initially sourced technology processes from America, later entering into a licensing agreement with Austin Motor Company in 1952 (although Nissan had been building the Austin 7 under license since the 1930s). They maintained this agreement until the 1960s, producing popular models like the Datsun 240Z sports coupe. Nissan also learned from and modified the sports car production methods developed by the British in the late 1940s and the mid-1970s.<sup>1404</sup> British Leyland produced Nissan's Datsun Z series in the 1970s by utilising Fordist mass production techniques. This is an example of Nissan adopting the innovative production and design methods that were to make the company successful.<sup>1405</sup> During the 1970s, Japan was also successful in making a distinct class of car that adhered to the motto 'smallest possible frame with the greatest performance', a philosophy which is consistent with traditional Japanese aesthetics.<sup>1406</sup> In addition, the 1970s saw large cars becoming less attractive due in part to the oil crises that occurred during the decade. This helped the Japanese car industry, especially Toyota, which was adopting the 'just-in-time' production system in order to make small cars for the mass market.<sup>1407</sup> In this respect the

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<sup>1401</sup> Francks (2009), pp. 201-02.

The 'my car' era continued through to the 1970s before being replaced by the 'my home' era in the 1980s, when home ownership exceeded 50%. See Coaldrake (2011), pp. 206-08.

<sup>1402</sup> Shiomi Haruhito, 'The Formation of Assembler Networks in the Automobile Industry: The case of Toyota Motor Company (1955-80)' in Shiomi and Wada, eds. (1995), pp. 28-48, esp. 38.

<sup>1403</sup> Fujimoto (1999), pp. 43-4, and 176.

<sup>1404</sup> Timothy R. Whisler, 'Design, Manufacture, and Quality Control of Niche Products: The British and Japanese Experiences' in Shiomi and Wada, eds. (1995), pp. 87-106, esp. 88-9.

<sup>1405</sup> Whisler (1995), p. 103; Kim Young-chan, *Japanese Inward Investment in UK Car Manufacturing*, Hampshire: Ashgate, 2002, pp. 224-25; Paul Collins and Michael Stratton, *British Car Factories from 1896: A Complete Historical, Geographical, Architectural & Technological Survey*, Godmanstone; Dorset: Veloce Publishing Plc., 1993, p. 27-8.

<sup>1406</sup> Honda's first generation Civic catapulted the car manufacturer to international status as a world-class automaker in 1972, with the Civic earning nominations for car of the year in the US, Europe and Japan.

<sup>1407</sup> Dicken (1992), pp. 278-81.

Japanese were perfecting the 'spirit of quality control within a limited format'.<sup>1408</sup> Other firms to collaborate with European car makers included Nissan who launched a joint venture with 'Alpha Romeo' in Italy to produce a version of the 'Cherry', and invested in the Spanish car industry.<sup>1409</sup>

In the early 1980s, the Japanese discovered an individual design style and confidence. The Japanese share of the European car market was relatively small until the mid-1970s, after which it increased dramatically, and by 1980 it was 10 percent of the total market. Japanese cars in the 1980s benefited from continual R&D investment, and as such displayed increasing technological sophistication. After the oil crisis of the 1970s most countries car manufacturers began to produce smaller cars that consumed less fuel. This increased competition made product development and quality important for success, as was car manufacturing lead times. Japan excelled in all these areas, and its car industry became world leaders during the 1980s.<sup>1410</sup> Small scale cars, such as Nissan's 'Prairie', Toyota's 'Sprinter' and Honda's 'City', appealed to young customers,<sup>1411</sup> and smaller more varied models were added to production lines.<sup>1412</sup> Car design in the 1980s was influenced by the craft-based fields of architecture, interior design, fashion, textiles and ceramics, which were linked to Japanese traditions (for example to Zen Buddhism-inspired aesthetic minimalism, which then influenced the traditions of portability and flexibility in the design of audio and video equipment).<sup>1413</sup>

### **Market-Oriented Manufacturing**

Experimentation with organic shapes, mutating surfaces, robotics, fuel cells and interior concepts pushed Japan to a leading innovative position in the industry in

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<sup>1408</sup> Ekuan (1998), p. 137.

<sup>1409</sup> Kim Young-chan (2002), pp. 222-24. In 1984 there was collaboration with Volkswagen to produce the 'Santana' in Germany and a joint venture with BL in the UK. Nissan also invested in the US in 1983 in order to compete with GM.

<sup>1410</sup> Fujimoto (1999), pp. 176-79.

<sup>1411</sup> For example, Honda aims to produce the, 'smallest possible frame, greatest possible performance.' See Siân, p. 167.

The 'kei' (small) car sector, proved to be popular in Europe, and included Mitsubishi's Minica (1981), Suzuki's Fronte (1981) and Honda's City (1982).

<sup>1412</sup> During the 1960s-80s the Japanese automobile industry experienced rapid growth. Whereas in 1960 Japan had made 1.3% of the world's cars, in 1989 that figure rose to 26%, with Japan producing 9 million automobiles, and in the process overtaking the US as the number one producer of passenger cars. This period also saw a decline in UK car production, for in 1960 it had produced 10.4% of the world total, but by 1989 this figure had fallen to 3.7%. The late 1980s also saw the emergence of a new power in car production as Korea secured 2.5% of the world market by 1989. See Dicken (1992), pp. 271-72.

<sup>1413</sup> Sparke (2009), p. 25; Sparke (1987b), pp. 76-7.

the 1980s. In addition, the average Japanese car would be a re-designed model within two years or less, whilst in the US and EC it was 5 years.<sup>1414</sup> Unsurprisingly, the development period in Japan was shorter, at 46 months, compared to the US (60 months) and the EC (57 months).<sup>1415</sup> Furthermore, the Japanese car companies were able to produce a diverse range of models in small quantities from one output line, due to the high-tech, efficient assembly lines and the parts supply system.<sup>1416</sup>

In terms of product design, especially in the field of cars, Japan and the US differ in what they focus upon. Professor Shimokawa Koichi, a leading researcher on the automotive industry, has claimed that although US technology was more advanced in some areas, Japan's level of innovation in the area of engines and major drive-train components was superior. He also claimed that complex components using engineering plastics, aluminum and castings displayed greater innovation in Japanese products.<sup>1417</sup> Meanwhile, a more recent study by Abernathy cites superior strategic management of equipment, materials and employees as a reason for better Japanese car quality and lower associated production costs when compared to their US counterparts.<sup>1418</sup> A key advantage for Japanese car manufacturers was 'process yield', which referred to 'process related technology innovations' influenced by JIT. The Japanese management system involved in JIT eliminates down time, maximises operating time and ensures high quality. This, rather than differences in labour and parts costs, is the central reason for Japanese car manufacturers' advantage over their US competitors. In addition, in terms of

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<sup>1414</sup> In 1969 Japan produced 85 models whereas in 1986 this figure had risen to 420. However the number of automobiles produced per model actually decreased from 32,000 in 1969 to 18,000 in 1986. The increase in car models can be seen to be directly linked to the low average of the lifecycle of Japanese cars which stood at 2 years in 1986. See Hitomi (1993), pp. 210-11.

<sup>1415</sup> Shimokawa (2010), pp. 75-6.

In 1989 the average design time per model was 47 months for Japanese manufacturers, while it was 60 months for US manufacturers. See Dicken (1992), p. 283.

<sup>1416</sup> Louis Giust, 'Just- in-time Manufacturing and Material Handling Trends,' *Industrial Management & Data System*, vol. 93, iss.1, 1993, pp. 3-9, esp. 4. The JIT system implemented by Japanese companies in the late 1970s and early 1980s allowed them to manufacture a greater variety of products to satisfy a diverse range of consumers but at a production rate less than the US. It is this ability to satisfy a wide range of consumers that has led to the continued success of Japanese companies. See Hitomi (1993), p. 2.

<sup>1417</sup> Christopher Sawyer, 'Car Design: It's All in Your Head', *Automotive Design & Production*, vol. 115, no. 5, May 2003, pp. 26-28, esp. 27-8.

<sup>1418</sup> Shimokawa (2010), pp. 40-4.

The seven areas that Abernathy analysed in relation to management and productivity, which were: 1. process yield, 2. Quality systems, 3. process automation, 4. Product design, 5. Managing absenteeism, 6. Job structure, 7. Speed of work. He found that product yield had the highest influence on productivity, followed by job structure.

designing small cars for manufacturability, the Japanese have more experience than the US. However, the design for recent US models, such as the J-car by GM, rivals Japanese specifications.<sup>1419</sup>

Japanese car brands are highly competitive in the international marketplace, and its car industry leads in design processes that optimise sales, comfort and safety.<sup>1420</sup> An example of this success is Toyota, which is the largest car manufacturer both in Japan and the world.<sup>1421</sup> However, despite its success during the early 1990s, high level executives at the company questioned whether their existing R&D arrangements would prepare the company for a 21<sup>st</sup> century in which they predicted that demand for economical and eco-friendly cars would rise. Consequently, in September 1993, a project called Global 21 was given the task of designing a car for the future that would be more fuel-efficient and smaller, a car which was to eventually become the 'Prius'. They aimed to make fuel economy 1.5 times greater than other existing small cars like the Corolla, a reference point for fuel efficiency at that time.<sup>1422</sup> It was decided that all the design, engineering, parts production and assembly would have to be done in-house.<sup>1423</sup> For the design of the Prius, a competition was held in 1996 with design teams from California, Europe, Tokyo and Toyota city. The futuristic design from Calty Design Studio in California was chosen by a panel of judges consisting of Toyota executives and employees.<sup>1424</sup>

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<sup>1419</sup> Ibid, pp. 49-50.

As result of the success of Japanese production methods, the Japanese export market for high-tech products, such as electronic goods and automobiles, increased from 12.4% in 1967 (USD 10.4billion) to 29.6% in 1987 (USD 229.2 billion). See Funk (1992), pp. 8-11.

<sup>1420</sup> James Morgan and Jeffrey K. Liker, *The Toyota Product Development System: Integrating People, Process, and Technology*, New York: Productivity Press, 2006, p. 125; Morimoto Masao, 'Design of Toyota' ('Toyota Jidosha no Dezain') in Nagata, et al., eds. (2006), pp. 468-85.

By the early 1990s, Japanese vehicle manufacturers accounted for 28% of the global market compared with US companies 21%. Japanese companies also claimed a third of all sales in the United States. See Lansbury (2007), p. 12.

<sup>1421</sup> Wada (1995), pp. 11-8.

<sup>1422</sup> Nonaka Ikujiro and Vesa Peltokorpi, 'Knowledge-Based View of Radical Innovation: Toyota Prius Case' in Hage and Meeus, eds. (2006), pp. 88-104, esp. 93-6; Hasegawa (2008), pp. 27-35. Battery powered vehicles had never become a commercial success because of high cost and low operating radius. Therefore, Toyota's R&D department started to work on a hybrid system, combining an engine and an electric motor. See Ibid, pp. 3-4.

<sup>1423</sup> Nonaka and Peltokorpi (2006), p. 98.

There were three main benefits to keeping design and production in-house; firstly the accumulation of knowledge, techniques, and skills; secondly the reduction of costs through the improvement and simplification of technology; thirdly Toyota has been able to use the knowledge gained in other developments such as alternative energy, diesel and gasoline engines, and electronic vehicles.

<sup>1424</sup> Nonaka and Peltokorpi (2006), p. 97.

The winning design was a conventional sculpted three-box design. See Hagiwara (2006), p. 100.

Honda was keen to emulate the success of Toyota's Prius. Although Toyota and Honda both began research into developing a hybrid system in the early 1990s, Toyota was the first to put a hybrid vehicle on the market e.g. the 1.5-liter Prius which was launched in 1997. Two years later in 1999, Honda launched the Insight, a smaller vehicle with a three-cylinder, one-litre engine.<sup>1425</sup> Since 1997, Honda has embraced concept 'small is smart', and in 2001 their 'Fit' car embodied this approach. The 'Fit' car combined the capacity of a compact van with the maneuverability of a small car, while also incorporating fuel economy and a spacious interior. It quickly caught the public's imagination, winning 'Japan car of the year'.<sup>1426</sup> Honda's design philosophy involves the production of high quality 'functional, desirable, and affordable' products that have minimal impact on the environment.<sup>1427</sup>

Up until the 1990s, Japanese car manufacturers marketed their products as reliable and high quality, which indeed they were. However they were not as innovative as their western counterparts, and Japanese car makers thus marketed their cars mainly on the basis of the general 'compactness' common to most Japanese cars. However by the early 2000s, Japanese car companies had built up the confidence to change their marketing and design strategies, focusing on producing vehicles with distinctive Japanese as well as company specific styles. They promoted their own unique brand identities, and this, combined with the already globally recognized efficiency and quality of Japanese vehicles, ensured their place as global leaders. At the 2003 Frankfurt Motor Show, Toyota revealed their compact sports and speciality (CS&S) model. It had a 1.5 litre hybrid engine which powered the rear wheels, with a separate electric motor powering the front

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<sup>1425</sup> Hasegawa (2008), pp. 7-8; Aldo Enrietti and Pier Paolo Patrucco, 'Electric Cars: Will It be Boom or Another False Start?' in Ciravegna, ed. (2012). pp. 173-200, esp. 175-77. Toyota launched the Prius in the US, and Honda launched its Civic Hybrid - a petrol-electric hybrid - in 2000 and 2003 respectively.

The market share of electric vehicles remains small despite optimistic predictions. In 2008, there were 56,901 electric vehicles in the USA, which represented 0.03% of the market. Hybrid cars had a slightly higher share, rising from 1.4% to 2.6% between 2005 and 2010, with global market share for hybrid vehicles expected to reach 1.3% in 2010, and electric vehicles forecast as reaching 0.3% in 2015. See Enrietti and Patrucco (2012), pp. 176 and 194-95.

<sup>1426</sup> Nagasawa Shinya and Iwatani Masaki, 'Design Management of HONDA in Product Development of "fit,"' *Journal of the Asian Design International Conference*, vol. 1 (6<sup>th</sup> Asian Design International Conference in Tsukuba, Japan), Tsukuba: University of Tsukuba, 2003, (CD-ROM).

<sup>1427</sup> Rothfeder (2014), pp. 143-44. The company continues to follow these tenets, adapting over the years to changing customer preferences and global markets, but always ensuring manufacturing processes are sustainable. According to the current CEO, Honda aim to make vehicles that facilitate personal mobility in a pristine plant, and to ensure that the planet remains pristine. As such Honda dedicates substantial resources to sustainable and low impact production.



wheels. In 2003, the Nissan cube was launched globally having had two previous successful incarnations (in 1998 and 2002) in the domestic market.<sup>1428</sup> Also in 2003, Mitsubishi showed their concept cars, the 'i' and the 'Se-ro' at the Frankfurt and Tokyo motor shows respectively. The 'i' was a 4 seater car with curved and smoothly rounded surfaces, while the Se-ro was a combination of high tech materials and minimalist shapes, creating a futuristic, almost 'spaceship' look. Both concept cars influenced the creation of the 'kei cars' series that Mitsubishi launched in 2006.<sup>1429</sup> Toyota opened a Design Center in France in 2000 to develop cars that were more suitable for the European market.<sup>1430</sup> Total production was 3.5 million vehicles that year, rising to 8.4 million in 2007, with 32,000 different design models being produced. Since 2008, Toyota has maintained its position as the largest car manufacturer in the world, currently selling more than 10 million vehicles per year worldwide. The extent of Toyota's FDI can be seen from the fact that in 2012 there were 63 plants located in 26 countries.<sup>1431</sup>

#### 4.1.4 Mass Consumption and Design Trend

##### Consumer Activism

During the 1950s and 1960s, 90% of the Japanese population believed themselves to be middle-class, and aspired to make acquisitions that would match this status.<sup>1432</sup> The fashion for Western household appliances had grown considerably during the fifties, when vacuum cleaners entered the Japanese market and sold

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<sup>1428</sup> Saitou Kinichi and Ikeyama Etsuro, 'Product Design "March/Micra and Cube"', *Nissan Technical Review (Nissan Gihō)*, no. 53, Kanagawa: Nissan Motor Co. Ltd. 2003, pp. 18-21; 'Nissan Cube: Irreverently Original', Torino, Italy: *Auto & Design*, no. 181, 2010, p. 68.

<sup>1429</sup> Silvia Baruffaldi, 'Japanese Modern', Torino, Italy: *Auto & Design*, no. 144, 2004, pp. 32-7, esp. 32-4.

<sup>1430</sup> Ciravegna (2012), p. 4.

<sup>1431</sup> Arnaldo Camuffo and Davide Riccardo Weber, 'The Toyota Way and the Crisis: A New Industrial Divide?' in Ciravegna, ed. (2012). pp. 57-103, esp. 71-2. In 1980 there were 11 plants in 9 countries, rising to 20 plants in 14 countries in 1990.

<sup>1432</sup> Takehara, et al., eds. (2003), p. 74 and 97; Hiroshi Sano (2006), pp. 490-91.

Awareness of these modern lifestyles was first brought by television, which quickly became extremely highly most sought after, with over 50% of the population owning a television by the end of the 1950s. By 1960, 2 million Japanese households owned a fridge, 6 million owned a washing machine; 9 million owned a television set despite their costing three times as much as a washing machine, and by the mid-1960s virtually all Japanese households owned one. See Penelope Francks, *The Japanese Consumer: An Alternative Economic History of Modern Japan*, Cambridge University Press, 2009, pp. 163-74.

remarkably well. During the sixties, the ‘three Cs’ – car, cooler, colour TV – were in high demand.<sup>1433</sup>

During the 1960s, there were virtually no laws at national level that guaranteed consumer’s rights. The 1968 Consumer Protection Basic Law (Shoshisha hogo kihon ho) makes no mention of safety and knowledge, reflecting the power of business interests in government decision making.<sup>1434</sup> However, the 1960s did see the formation of a number of organisations<sup>1435</sup> concerned with consumer affairs,<sup>1436</sup> the most prominent being the Japan Consumers Union (Nihon Shohisha Renmei) established in 1969. In addition, the Japanese Consumer Association, which was affiliated with MITI, made efforts in their publications to educate the public and turn them into ‘wise consumers’.<sup>1437</sup> In 1970 the government formed the Consumer Information Center which undertook a range of operations including: consumer research, mediation between consumers and companies, product testing, complaint resolutions and the education of consumers. During the early 1970s municipal and prefectural consumer centers were set up around the country in order to provide similar services at a local level.<sup>1438</sup>

## Design and Minimalism

The move in Japanese design aesthetics from a trust in the innate quality of large, heavy objects (such as the ‘Saga’ music system) to the demand for small, light, compact objects occurred after the oil crisis, when a need to save energy and space overruled the desire to emulate American ‘grandness’ in design and architecture.<sup>1439</sup> In addition the early 1970s saw consumers begin to place greater value on functionality and compactness in design. The Sony Walkman, for example,

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<sup>1433</sup> Martin Bronfenbrenner and Yasuda Yasukichi, ‘Economic Welfare,’ in Yamamura Kozo and Yasuda Yasukichi, eds. (1987). pp. 93-136, esp. 107; Sumiya, ed. (2000), p. 417. 1970 figures: Passenger car 22.1% (57.2%, 1980), colour TV 26.3% (98.2%, 1980), Refrigerator 84.6% (99.1%, 1980). See National Livelihood Centre, *Kokumin Seikatsu Tokei Nempo (Statistical Yearbook on National Livelihood)*, Tokyo: Shiseido, 1967 (134ff; 1972, 106ff); 1982 (84ff).

<sup>1434</sup> Maclachlan (2003), pp. 214 and 224-27; Takao Nishimura, ‘Household Debt and Consumer Education in Postwar Japan’ in Garon and Maclachlan, eds. (2006), pp. 260-80, esp. 273 and 279.

<sup>1435</sup> During the 1960s the network of consumer cooperatives called the *Seikatsu Club (Seikatsu Kurabu Seikyo)* was launched and embodied concept of *seikatsusha* which saw the individual as both as consumer and worker as well as an active citizen. By 2010 the network had 150 seats in local government assemblies throughout Japan. See Alisa Gaunder (ed.), *Routledge Handbook of Japanese Politics*, London: Routledge, 2011, p. 239.

<sup>1436</sup> Maclachlan (2003), pp. 219-20.

<sup>1437</sup> Nishimura (2006), p. 273.

<sup>1438</sup> Maclachlan (2003), p. 219; Nishimura (2006), pp. 274-78.

<sup>1439</sup> Takehara, et al., eds. (2003), p. 108.

designed in 1978, is now a landmark of 20<sup>th</sup> century design, and perhaps the most well-known representative product of Japanese 'minimalist', high technological, and user-friendly design.<sup>1440</sup> Also Panasonic's 'Concise Compo' component stereo won the 1978 Good Design Award for its sleek, compact, and unobtrusive design.<sup>1441</sup> Instead of elevating one's status, the ownership of a product with high design quality meant enhancing quality of life. In 1974, for example, electronics manufacturer Matsushita began selling a series of household appliances in different, vibrant colours (the 'Ai-no', or 'colour of love' series) – something that was unheard of before this time, when monochrome was the ubiquitous choice of the consumer.<sup>1442</sup> An absence of colour in fashion was often deliberately intended not to be representative of the rank, status or identity of the wearer. In a similar way audio-visual products and consumer gadgetry in the late 1970s and early 1980s almost uniformly possessed matt black finishes. However, the burgeoning home computer market ushered in a need to design products in a way that demystified them. Pastel colours were often used for the fascia of products, and this saw the end of black as the dominant colour of technological products.<sup>1443</sup> Furthermore, a variety of colours were applied to products such as toasters, rice cookers and mixers, etc. and aimed at young couples beginning their lives together.<sup>1444</sup> Colour for Japanese designers often draws upon the cultural heritage of Japan, and in doing so utilises an, '... established, well-understood visual language.'<sup>1445</sup> In accordance with the diversity of modern, metropolitan life, product designs in the 1970s and 80s also emphasised variation, catering to consumers who clamoured for those products that were suited to their multi-functional

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<sup>1440</sup> David Raizman, *History of Modern Design*, Laurence King Publishing Ltd., 2003, p. 287; Paul Kunkel, *Digital Dreams: The Work of the Sony Design Center*, London: Laurence King Publishing, 1999, p. 43; Hagiwara (2006), p. 68.

<sup>1441</sup> Evans holds that minimalist design is encapsulated in the shape of the kimono. According to her the garment's flat shape presented the artist-craftsman with the opportunity to create eye-catching patterns. See Evans (1991), pp. 99-100.

<sup>1442</sup> During the 1970s recession Matsushita Kounosuke, the company's founder, granted lifetime employment to the company's staff. A decade later, Matsushita Electric Industries (MEI) was the largest electronics company in the world. However, the success was relatively short lived as the company lost its market leadership in the TV and faced increased market competition, notably from South Korea, in its core segment of household goods. See Schaede (2008), pp. 80-1.

<sup>1443</sup> However an exception to this practice were the goods produced by Sony, it continued to use mainly primary colours. Contemporary interior design that utilised a lack of vivid colour is connected with traditional and cultural notions of creating an almost anonymous backdrop. See Evans (1991), p. 110.

<sup>1444</sup> Sparke refers to the increase in demand for electronic gadgets due to the apparent decline in the use of domestic servants in Japan at the time. See Sparke (2009), p. 18.

<sup>1445</sup> Evans (1991), p. 113.

lifestyles.<sup>1446</sup> This clamour was enhanced by graphic designers who were forced to create modern advertising with pre-digital technology (their job became easier in the 1990s with the advent of modern computers which enabled them to use techniques such as airbrushing).

## Design Trends

Japanese product design has always reflected contemporary national issues. A current example is the nation's increasing environmental awareness and ageing population – factors that need to be considered in any appraisal of Japanese culture. These social and demographic changes have resulted in a stronger demand for 'universal design' and 'ecological design'.<sup>1447</sup> Furthermore in the 1970s there was a 're-awareness' or rethinking of design functions, leading to a focus on designing for everyday life and the urban environment<sup>1448</sup> for example, street furniture.

Some argue that the economic success of Japan during the eighties led to the nation's loss of creativity.<sup>1449</sup> However, as the nineties progressed, more emphasis was put on the creative individual's part in the design process, and this aided the country's bid to secure a leading place in the global competitive marketplace. Companies such as Canon and Sony began to infuse their products with the flair for design found in objects from the pre-1960s before industrialisation rendered mass-produced goods standardised and bland.<sup>1450</sup> Canon and Sony's goods set

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<sup>1446</sup> However, from the end of the 1960s into the 1970s, the Japanese advertising industry encountered a serious problem. Technological advances virtually eliminated the differences in quality and performance between competing products. According to the makers of course, the differences are decisive, but from the standpoint of the consumer, the differences were minimal. It required creative advertising to persuade consumers that particular brands were not only different from each other but were manufactured to suit various lifestyles. See Yukichi Amano, 'Design from the Advertising Standpoint' in Japan Graphic Designers Association (ed.), *Graphic Design in Japan* vol. 3, Tokyo, New York & San Francisco: Kodansha International Ltd., 1983, pp. 1-3 of chapter 'Design from the Advertising Standpoint' (no page numbers given).

<sup>1447</sup> Imura and Schreurs, eds. (2005), p. 46; 'Creative Japan: Design' at <http://www.uk.emb-japan.go.jp/en/creativejapan/design/index.html> (last accessed 12.12.2009). Text by Masafumi Fukagawa (Curator, Kawasaki City Museum) Copyright 2007 - Ministry of Foreign Affairs, Japan.

<sup>1448</sup> Uchida (2011), pp. 153-54.

<sup>1449</sup> For example, Michael Fitzpatrick, 'Back on Form (new products from Sony and Canon),' *Creative Review*, vol. 17, no. 7, London: Centaur Communications, 1997, pp. 39-40.

<sup>1450</sup> Hugh B. Johnston, 'Japan Designs a Camera: National Photo Show Puts the Focus on a Growing Japanese Industry,' *Industrial Design*, vol. 4, no. 4, New York: Whitney Publications, Inc., April 1957, pp. 102-09. In 1953 Cannon formed a three member Industrial Design Department which began developing the Canon V, 35mm. The department followed a two-dimensional approach as opposed to the sculptural approach favoured by American designers. In 1956 the Canon V, 35mm was produced.

the standard for other Japanese technical products throughout the 1990s, and their products often boasted a blend of advanced technology and visual and tangible attractiveness.<sup>1451</sup> This enhanced attractiveness was made easier when it became possible for graphic designers to utilise techniques involving things such as 3D and improved printing technology. An important value that Sony held from the 1970s onwards (i.e. with the Sony Walkman) was that, 'at the end of a product life cycle, it is imagery, fashion, symbolism, and storytelling that become more apparent than technology.'<sup>1452</sup> For Sony, 'the making of a market for new products is as important as is technical inventiveness,' and one ingredient of the company's success was its ability to 'culturally reinvent products and the consumers they focused on.'<sup>1453</sup>

A major success story of the 1990s was Nintendo, a success that continues to this day.<sup>1454</sup> With several games aimed at developing the mental agility of all age groups, Nintendo broadened its market in the 2000s.<sup>1455</sup> Nintendo's reinvention of its products began with a consideration of the balance between engineering and design, and such a consideration has enabled many other Japanese companies to reinvent their products. By the late nineties, as the critic Michael Fitzpatrick noted, Japanese design could no longer be called imitative. As I stated in chapter three of this thesis, one reason for the steady increase in Japan's design acumen over the last thirty years is the fact that designers in Japan are held in very high esteem.<sup>1456</sup>

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<sup>1451</sup> The digital revolution of the late 1990s enabled the two companies to experiment with miniaturisation (in keeping with the Japanese traditional elements of compartmentalisation and attention to detail) and the IXUS and Cybershot by Canon and Sony respectively became sleek, small, stylish digital cameras that functioned and sold extremely well.

<sup>1452</sup> Fitzpatrick (1997), p. 39; Kunkel (1999), pp. 34-5. The first phase of the Sony voice recorder, for example, the reel-to-reel period, was engineering-driven: emphasis was given to perfecting the mechanism and providing the best possible sound. The goal of the second, design-driven phase was to create an icon (model TC-50). Finally, the third phase involved 'giving the icon a statement...a range of images that are infused with narrative, lifestyle references, and the strongest pull a design can exert: pure desire.'

<sup>1453</sup> Ibid, p. 37.

<sup>1454</sup> Nintendo's main games designer Miyamoto Shigeru has an industrial engineering background that has enhanced his game designing skills. Miyamoto's training in industrial design allowed him to design user friendly hardware since industrial design focuses on the human within the technological systems. See Jennifer deWinter, *Shigeru Miyamoto: Super Mario Bros, Donkey Kong, The Legend of Zelda*, New York; London: Bloomsbury Academic, 2015, pp. 17-20.

<sup>1455</sup> The advent of the Nintendo DS (dual screen) handheld games console in 2004 - and subsequently the Wii - reflects the trend in design towards well-being.

<sup>1456</sup> In the 1980s firms such as Sony, on average, were spending three times as much on design in relative terms than their US and European rivals. See Fitzpatrick (1997), p. 40.

## 1980s Edo Boom

In the 1980s, much of Japanese manufacturing shifted towards producing micro-technology goods, and as a result heavy industry became less visible in the Tokyo landscape. Between 1985 and 1991, there was a real estate bubble in Japan with prices in Tokyo reaching historical highs. Large retail complexes and office blocks dominated the city which now also contained many bars, boutiques and restaurants. This meant Tokyo could be described as a postindustrial city. The younger generation was dubbed Shinjinrui (the New Breed). They were politically disengaged from their parents' generation and differed from them by their lifestyle choices and values.<sup>1457</sup> This left many older Japanese wondering if important parts of Japanese culture had been forgotten, and this nostalgia led to the 'Edo boom'.<sup>1458</sup>

During this period 'furusato products' (food and craft goods beautifully packaged and tied to rural localities) became widely available.<sup>1459</sup> The tradition is over 400 years old, and is reflected today by the formation of the Arimatsu Narumi Shibori Industry Cooperative (ANSI), whose vision is realised in the activities of the SOU SOU Company.<sup>1460</sup> SOU SOU aims to create modern objects through the use of Japanese traditional designs, and its three-fold policy of employing only Japanese designers, producing entirely in Japan, and targeting the youth market, defines the company.<sup>1461</sup>

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<sup>1457</sup> Jordan Sand, 'The Ambivalence of the New Breed: Nostalgic Consumerism in 1980s and 1990s Japan' in Garon and Maclachlan, eds. (2006), pp. 85-108, esp. 87-8.

Shinjinrui (also referred to as new Japanese) were brought up in an Americanised, affluent country in which a lot of the traditional Japanese culture appeared more exotic than Western culture and products. See Ivy (1995), p. 55.

<sup>1458</sup> Jordan Sand (2006), pp. 91-92 and 108. Many of Tokyo's residents were worried about its perceived loss of local identity due to the ever increasing influence of global capitalism. These feelings fueled the Edo movement, which sought to revisit Japan's former Shogun history. The movement succeeded in making memorials of areas of the pre-modern city, as well as establishing the Edo-Tokyo Museum which opened in 1993.

<sup>1459</sup> Francks (2009), pp. 214-15.

<sup>1460</sup> The SOU SOU company, based on Kyoto, produces modern designs based on Japanese traditions. Omotesando Hills in Tokyo is another company that produces modern goods that are influenced by traditional Japanese style, for example their fashion dresses that are designed for everyday use. See Saito Kaori and Miki Pamela, *Neo Japanese Design*, Tokyo: PIE Books, 2007, p. 7.

<sup>1461</sup> Wada Yoshiko Iwamoto, 'The Sou-Sou Impulse', *FiberARTS*, vol. 35, no. 1, Loveland, CO: Interweave Press LLC, 2008, pp. 38-9. The policy is risky, but SOU SOU does not wish to produce cheap 'Japanese-look' goods made in China or expensive, 'exquisite' items targeted for an elitist market at home and abroad. ANSI applied to collaborate with SOU SOU for a project in 2006. This project was under the aegis of MITI's funded collaborations of business groups and craft industries. The initial collaboration was so successful that the project is continuing into 2009.

## Muji Design

The Japanese home ware company Muji has a wide fan base among consumers and in design circles.<sup>1462</sup> The appeal of Muji is linked intrinsically to the highly individual aesthetics of its products. Unadorned, simple, and at times plain, the objects on sale in Muji emit a distinctly 'Japanese' feeling of minimalism and sparseness.<sup>1463</sup> Muji uses a mixture of independent practitioners and in-house designers. Their products are made from neutral materials, such as wood, paper, steel or plastic. In the early 1990s, when Japan's economy crashed, Muji products reflected the rejection of 1980s excess and the embracing of simple, clean functional design.<sup>1464</sup>

Muji's communications designer, Kenya Hara, who has worked for Muji since 2001, explained that 'simplicity' should *not* be confused with the Japanese aesthetic: 'Simplicity is a concept that emerged in the West around 150 to 200 years ago. After the arrival of modern society it was no longer necessary to symbolise great authority with complex patterns and decorations. Something is simple when form and usage are closest to each other.'<sup>1465</sup> Simplicity for the Japanese does not, therefore, imply a lack of sophistication.<sup>1466</sup>

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<sup>1462</sup> Beginning in 1980, Muji started out as the house brand of a large supermarket, selling affordably priced packages of regular food stuffs. Now, the extensive range of household furniture, kitchen ware, and stationery is slightly less affordable than at the start, and export prices to countries such as the U.S. elevate prices considerably.

<sup>1463</sup> These products share characteristics with the earlier work of Hasuike Makio, who designed desk products including pens, pencil cases and diaries. Hasuike's work showed Japanese tradition through aesthetic characteristics of purity, clarity, simplicity, transparency, portability and a love of materials. See Sparke (2009), p. 25 and 31.

<sup>1464</sup> Pollock (2012), p. 18.

<sup>1465</sup> Mason Currey, 'Empty Promise', *Metropolis*, vol. 28, no. 8, New York: Bellerophone Publications, 2009, pp. 100-03.

Instead, Japanese culture respects 'emptiness.' Hara notes that the concept of emptiness has its roots in the late 15th century, when Murata Shuko -- an adviser to Shogun Ashikaga Yoshimasa wished to eschew Chinese cultural traditions by developing a tea ceremony that had uniquely Japanese values at its heart. Ornament was dismissed in favour of 'austere beauty' and 'elegant rusticity' called *wabi*. This was manifested in the unadorned utensils and small, ceremonial tearooms with a few, uniform elements. See, Boye De Mente, *Elements of Japanese Design: Key Terms for Understanding & Using Japan's Classic Wabi-sabi-shibui Concepts*, Tokyo: Tuttle Publishing, 2006, p. 58.

<sup>1466</sup> Since it was not always appropriate to apply the traditional Japanese concept of simplicity to mass-produced products in the early 20<sup>th</sup> century, it is only from the 1950s onwards that the concepts of 'simplicity' and 'complexity' have been used harmoniously in Japanese design. See Pollock (2012), pp. 18-23.

## Manga and Anime

Manga and anime, distinctive forms of Japanese graphic art, were originally influenced by the Disney films and American cartoon strips that appeared in Japanese newspapers. Following WWII manga began to spread in popularity, and from the mid-1950s onwards anime became popular in cinema and on TV.<sup>1467</sup> Nowadays anime and manga are so much a part of Japanese cultural life that the Kyoto International Manga Museum was opened in 2006 to popular acclaim. Additionally, the phenomenon of 'Cosplay'<sup>1468</sup> has, over the last two decades, proliferated over Asia.<sup>1469</sup> Furthermore Japanese popular culture is beginning to be recognised in the arena of high art. In February 2009, for example, an exhibition of manga images was staged at the Louisiana Museum of Modern Art, in Humlebaek, Denmark. This is an example of how modern culture is infiltrating more traditionally austere cultural spaces. The Louisiana Museum managed to deter dissenters of the 'popularising' of art and culture by widely emphasising education and context throughout the exhibition. Rather than treating manga as fine art, the exhibition explored its antecedents and examined its influence on culture, revealing it as 'a vital piece of Japan's long and unique history of art and publishing.'<sup>1470</sup> Manga has influenced many areas of Japanese society, and it commands an impressive 30% of the country's entire publishing output<sup>1471</sup> largely because it expresses a variety of viewpoints and attitudes that all generations in Japan can relate to.<sup>1472</sup> Street fashions, internet sites and dating organisations are all heavily influenced by manga styling (as well as, much more recently, car design).<sup>1473</sup> In addition, the

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<sup>1467</sup> The production company Toei Animation was established in 1956 in Tokyo, and was soon labeled as the Disney Studios of Asia. See Yamaguchi (2004), p. 81.

<sup>1468</sup> A kind of performance art involving dressing up as favourite characters from anime, manga, video games, and so on, 'Coplay' incorporates popular culture with role play and consumerism. Cosplay takes place in various places such as anime and manga conventions. These meetings of cosplayers represent a subculture and provide cosplayers with a 'social structure'. See Theresa Winge, 'Costuming the Imagination: Origins of Anime and Manga Cosplay' in Frenchy Lunning (ed.), *Mechademia, vol. 1: Emerging Worlds of Anime and Manga*, Minneapolis: University of Minnesota Press, 2006, pp. 65-76, esp. 74-5.

<sup>1469</sup> Matthew Thorn, 'Girls and Women Getting Out of Hand: The Pleasure and Politics of Japan's Amateur Comics Community' in William W. Kelly, ed., *Fanning the Flames: Fans and Consumer Culture in Contemporary Japan*, State University of New York Press, 2004.

<sup>1470</sup> Luke Strosnider, 'Drawn In (Exhibit),' *Afterimage*, vol. 36, no. 5 (March/April 2009), pp. 26-7; Yamaguchi Yumi, *Warriors of Art: A Guide to Contemporary Japanese artists* (trans. Arthur Tanaka), Tokyo: Kodansha International, 2007, p. 68 and 168.

<sup>1471</sup> Robin Brener, *Understanding Manga and Anime*, Westport: Libraries Unlimited, 2007, p. xi.

<sup>1472</sup> This media was used to express the attitudinal gap between the generation that lived through the WWII and the 'baby boomers' that came after it. See *Ibid*, p. 145.

<sup>1473</sup> Ronald Khol, 'Automobiles Styled for Cartoons,' *Machine Design*, vol. 77, no.18, New York: Penton Media, Inc., September 2005, p. 10. Whereas Japanese cars have appeared to have a



current Japanese government appears to be using manga in order to encourage a departure from old stereotypes such as the Kimono, and bring modern Japanese ideology to a global audience.<sup>1474</sup>

Product design has also been influenced by the 'cute', dreamy trend of doe eyed characters that anime has produced. Kawaii is the Japanese word for 'cute',<sup>1475</sup> and this aspect of design appeals most to females in the youth market. As a result, designers started to focus heavily on kawaii design in the 1980s, and in more modern times it is seen in the globally successful 'Hello Kitty' brand.<sup>1476</sup> The brand's success can be partly attributed to the Japanese government, who have been actively promoting manga and anime abroad since the early 2000s. This promotion has involved exhibitions, screenings and sponsoring students of manga, anime and computer games (which has led to a marked increase in global students of Japanese culture). In 2008, the Ministry of Foreign Affairs (MOFA) designated Hello Kitty a cultural ambassador to the West, as part of its 'Anime Ambassador' project. In 2009, it extended this by assigning more 'kawaii' female ambassadors in what the government called 'pop culture diplomacy'.<sup>1477</sup> Kawaii culture was originally an antidote to the mainstream uniformity of Japanese group oriented society (and the prevalent Disney animation culture), and introduced different values like community and cultural heritage.<sup>1478</sup> As its global popularity grew the

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cartoon look for years, according to Ronald Kohl, editor of Machine Design magazine, this approach to car design has more recently spread to other parts of the automobile industry. He gives modern examples of cars with a seemingly cartoon appearance as being the Chrysler 300, the original BMW Z3, the Saturn Sky and the Pontiac Solstice. Kohl views this trend in a negative light, comparing these designs to the drawings of cars made by schoolchildren.

<sup>1474</sup> Choo (2012), p. 98.

Japanese graphics cover a wide variety of styles, from Kitty to Mario to Zelda, and often portray character or regional fetishism, which refers to landscapes or times that induce a sense of nostalgia, such as the 'Samurai' settings in Zelda. These appeals to gamers' romanticism by combining attractive elements of past landscapes with popular contemporary cultural references, resulting in a timeless and familiar present which encourages nationalistic sentiment. See Saito (2013), pp. 47-8.

<sup>1475</sup> Consumer society in the 1980s favoured products based on popular culture, especially pink electrical products and other cute (kawaii) products aimed at young girls. See Sparke (2009), p. 33; Evans (1991), p. 193.

<sup>1476</sup> Francks (2009), p. 193. Also see Ito Kinko, 'Manga in Japanese History' in Mark W. MacWilliams (ed.), *Japanese Visual Culture: Explorations in the World of Manga and Anime*, New York; London: M. E. Shape, 2008, pp. 26-47, esp. 39. A range of manga comics aimed at females started during the 1960s with titles such as Shojo manga (girls' comics), Shojo furendo (Girls' Friend) and Magaretto (Magaret) both 1963, and shojo komikku (Girls' Comics) in 1968.

<sup>1477</sup> Choo (2012), pp. 95-100,

<sup>1478</sup> Thorsten Botz-Bornstein, *The Cool-kawaii: Afro-Japanese Aesthetics and New World Modernity*, Lanham: Lexington Books, 2011, pp. 28-30.

government appropriated kawaii culture in order to promote Japan and secure a recognisable national brand.<sup>1479</sup>

In the 1970s and 80s, Japan changed global consumer lifestyles with the invention of such seminal products as the Walkman and Nintendo, but although they dominated global electronic markets, they were less successful at promoting Japan's culture.<sup>1480</sup> With the rise of kawaii, Japanese culture, as well as its products, have become desirable worldwide, allowing Japan to build an attractive national brand. However, most kawaii exports do not reflect Japanese traditional culture. Products like Hello Kitty or Pokemon are not distinctly Japanese but rather are more fluid in that they can be adapted to any culture while still retaining a vague 'Japanese colour'. This gives them greater transferability than more ethnic exports.

#### 4.1.5 Towards a New Start

##### Environmental issues

Although Japan has implemented a number of environmental policies since the 1970s, some would say that many of them have only benefited corporate interests.<sup>1481</sup> However according to Kanatsu Takashi, a Japanese political science scholar, Japan in the 1970s tried to protect its environment without sacrificing economic development.<sup>1482</sup> Nevertheless Maggie Hohle maintains that in the 1990s 'the Japanese government, in league with national industry, still does its best to quell questions about waste and resources,<sup>1483</sup> preferring to continue

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<sup>1479</sup> This is a perfect example of a government using 'soft power'. Soft power can be defined as co-optive as opposed to authoritarian, and it leads to a country's culture becoming globally attractive, thus stimulating economic growth. See *Ibid*, pp. xii-xv.

The success of this strategy can be seen in the proliferation of kawaii and anime influenced art in the West (such as the animated group Gorillas or the Wachowski brothers' *Matrix* trilogy).

<sup>1480</sup> Not all Japanese games omit traditional culture though. Super Mario and Zelda creator Miyamoto Shigeru for example often adds Shintoist elements of an active, spiritual nature, for example: kami's (nature spirits), the landscape portrayed as a living character, and talking trees (Legend of Zelda's Deku tree). Miyamoto thus creates a design which is an extension of his cultural narrative, and thereby he subtly introduces elements of traditional Japanese culture to a global audience. See deWinter (2015), pp. 13-4.

<sup>1481</sup> Lincoln (1993), p. 157.

<sup>1482</sup> Kanatsu Takashi, 'Killing three birds with one stone: Possibilities of achieving environmental success in confirming societies – what Japanese experiences may suggest to China' in Carmen Meinert, ed. (2013), pp. 283-318, esp. 285-86.

<sup>1483</sup> Maggie Kinser Hohle, 'Uniquely Deranged', *Print* (New York, N.Y.) vol. 58, no.1, January/February 2004, pp. 92-7.

headlong on the industrial path established in the 1950s.' She argues that economic recessions in the 1990s allowed policy-makers to marginalise concerns about sustainability and overconsumption, despite a burgeoning movement to redress environmental problems. I was invited to Japan by JETRO in the early 1990s to work as a design consultant. Whilst in this position I conducted a report on Japanese design companies and their dedication to ecological concerns. Indeed I discovered that any interest in recycling and sustainability was often largely 'cosmetic' i.e. recycling and sustainability solutions were presented to visitors at several companies, but then not implemented as any type of core design activity or policy.<sup>1484</sup> Perhaps one of the reasons for this is the economic problems occurring in the early 1990s which meant that funding for environmental projects was not a priority. However, by the beginning of the new millennium, Japan had recovered from its economic crisis and was able to invest more money and time in ecological design and production. Environmental concerns are now commonly an integrated aspect of design and manufacture. For example at the Tokyo 2007 Motor Show, a range of zero-emission vehicles were on display,<sup>1485</sup> including the Toyota single person electric vehicle called the i-REAL. Toyota also announced the 1/X (one-xth), which is small hybrid concept car designed to weigh one-third of a Prius. The car, which has a carbon fiber body, consumes half as much fuel as the Prius.<sup>1486</sup> However, Toyota has continued to sell its hybrid Prius to the international general public, and to some US government agencies.<sup>1487</sup>

Japan is seismically very active with over 1,500 earthquakes per year. With a population of over 127million, nearly 30% of whom live in the Tokyo Metropolitan Area', environmentally friendly products that also assist during earthquakes are

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Packaging designers must increasingly reconcile two opposed concepts: mass consumerism and environmental awareness. According to James Gaddy, the Japanese consumer marketplace has the fastest product cycle in the world. Government efforts to persuade companies to 'go green' (including 1995's Containers and Packaging Recycling Law and 2000's Green Purchasing Law) have exerted further pressure on Japanese packaging design. See James Gaddy, 'Pretty Persuasion,' *Print*, vol. 59, no. 4, July/August, 2005, p. 78; OECD, 'Governance for Sustainable Development: Five OECD Case Studies', Paris: OECD Publications Service, 2002, p. 168; Gianfranco Pistoia, et al. (eds.), 'Used Battery Collection and Recycling,' *Industrial Chemistry Library*, vol. 10, Amsterdam: Elsevier, 2001, p. 173; Imura and Schreurs, eds. (2005), p. 346; Gregory Eyring, *Green Products by Design: Choice for a Cleaner Environment*, Darby, PA: Diane Publishing, 1992, pp. 73-4.

<sup>1484</sup> This view is supported by David Hulme who has written that recycling was more a matter of academic discussion at this time than a measurable practical reality. See David C Hulme, 'Japan Inches Toward Recycling', *Machine Design*, vol. 65, February 1993, p. 50.

<sup>1485</sup> Enrietti and Patrucco (2012), p. 175.

<sup>1486</sup> Hasegawa (2008), pp. 134-35.

<sup>1487</sup> Takashi Kanatsu (2013), p. 301.

highly desirable.<sup>1488</sup> For example, the Sanyo 'Eneloop Lamp' (produced in 2009) is environmentally friendly and impressively designed to have three separate uses.<sup>1489</sup> The lamp, which recharges by standing on a stylish small white plate, is a white light-emitting desk lamp (with a blue 'healing light' option), and an emergency flashlight. This last function operates when the product is tipped to more than 90 degrees. In a country that suffers from frequent earthquakes, the flashlight function is particularly useful.<sup>1490</sup> The 2011 Fukushima Earthquake and Tsunami Disaster, which could be termed a 'Black Swan event' (a low probability high impact event), highlights the need for designers and manufacturers to assume social responsibility in the development of new products.

At the G8 summit at Hokkaido in 2008, Japanese environmentally friendly products were on prominent display. Hiroshi Fukada, the secretary general for the summit at the Foreign Ministry, commented that although many Japanese products had energy-saving components, they were usually not easily visible to the public. The environmental display at the summit was therefore designed to showcase Japan's leading position in the design and manufacture of such technologies.<sup>1491</sup> A further important exhibit was a house built on the concept of the 'three Rs: reduce, reuse, and recycle'.<sup>1492</sup> It boasted a 'green wall' constructed out of plants native to Hokkaido, biodegradable containers, a storage space for snow, an air conditioning system, and transparent solar paneling on the roof. Inside, exhibitors such as Sharp displayed their eco-friendly products, including Liquid Crystal Display (LCD) lights and energy saving televisions.<sup>1493</sup>

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<sup>1488</sup> Jackson and Tomioka (2004), p. 75.

<sup>1489</sup> The Sanyo Eneloop Lamp was developed from Sanyo's 'Eneloop', a rechargeable nickel-hydrogen battery (2005). It was the world's first rechargeable battery that could be used immediately after purchase, and lasted several years longer than other conventional rechargeable cells.

<sup>1490</sup> Sustainability is clear, and eneloop's design, with its soft blue and off-white colouring and smooth surfaces, connotes the regenerative powers of nature. Eneloop products promote the same concept: user-friendly and safe-looking designs with no straight edges and translucent paneling.

<sup>1491</sup> The Japan Times online, 3<sup>rd</sup> January 2008. See <http://search.japantimes.co.jp/cgi-bin/nn20080103f4.html> (last accessed 12.08.2010).

The display, presented in cooperation with relevant government branches and the private sector, included fuel cells, heat pumps, solar energy devices, carbon fibres, reverse osmosis water treatment, and a model house, allegedly 'zero emission.'

<sup>1492</sup> Official document of the Ministry of Foreign Affairs, Japan, found at <http://www.mofa.go.jp/POLICY/economy/summit/2008/info/consider.html> (last accessed 12.08.2010).

<sup>1493</sup> Davey (2003), pp. 102-04; Sharp Corporation press release, 04<sup>th</sup> July 2008. See <http://www.sharpworld.com/corporate/news/080704.html> (last accessed 12.08.2010).

## Japanese Design and Traditional Values

'Monozukuri' is an important tradition in Japan. It relates not only to the making of things, but also to the ability to improve production processes. Rather than relying purely on scientific analysis, this tradition places an emphasis on using experience and professional intuition to solve problems. This approach to problem solving is often used by skilled Japanese craftsmen.<sup>1494</sup> In the early 1990s the term Monozukuri was used to highlight the need to value creativity in both manufacturing and design. In the mid-1990s it became clear to many that Japanese industry had not emphasised creativity and risk-taking enough.<sup>1495</sup> Hence, Monozukuri became associated with Japan's need to become an 'inventor' nation, in particular by embracing some of the skills used by traditional craftsmen. However, many have claimed that by focusing on craftsmanship, the Monozukuri tradition has curtailed innovation in software and content.<sup>1496</sup>

Building on this concept of Monozukuri, the Kansei Initiative of 2007 aimed to promote Japanese traditional products, craftsmanship and design identity in the global marketplace. As discussed in chapter three, the highly important and influential Kansei Initiative helps evaluate products in terms of how deeply they can move human sentiment, and how functional they are. This indicates that Japanese design takes as its starting point the needs of the consumer. The role of design is seen in relation to all five human senses. For example, one feature of contemporary automobiles, electrical appliances and other industrial products is that they are designed to be appealingly soft and rounded.<sup>1497</sup> Round shapes

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<sup>1494</sup> From 7<sup>th</sup> December 2013 to 6<sup>th</sup> May 2014 Japan's National Museum of Emerging Science and Innovation held an exhibition entitled 'The Sekai-ichi – Unique Inspirations "Made in Japan"'. This exhibition showcased both modern and ancient examples of items influenced by Japanese Monozukuri.

<sup>1495</sup> Monozukuri has existed for centuries, but it was not till after the 1997 economic crash that the government began to promote the idea as a way of restoring Japan's global industry status. Book titles such as 1998's 'Monozukuri Revolution' (Monozukuri Kakumei) reflected this concern. See Low (2013), pp. 21-5.

<sup>1496</sup> Nevertheless, traditional manufacturing industries have benefited from Monozukuri. For example, Japanese car makers use their Monozukuri sensibility to greatly reduce lead time and costs, which in turn leads to lower retail prices when compared to German models. See Aoki Katsuki (et al), 'Monozukuri capability to address product variety: A comparison between Japanese and German automotive makers', *International Journal Production Economics*, vol. 147, part B, 2014, pp. 373-84, esp. 380.

<sup>1497</sup> Boye De Mente (2006), p. 54.

Also see Yagi Koji, *A Japanese Touch for Your Home*, Tokyo and New York: Kodansha International, 1982, p. 8. Yagi maintains that the Japanese perception of beauty is 'seen in the concepts of wabi (simple quietude) and sabi (elegant simplicity)... at the same time it contains aspects of the philosophy of 'less is more' of enclosing a simple structure with a thin membrane to create a composition in which there is a sense of tension in simplicity.'

connote an organic nature, which fits well with current drives towards ecologically friendly and sustainable design. Japanese design is now at a level of maturity, far above its former imitation of Western design, and seeks influence from its traditional origins once more. Characteristics based on traditional handcrafted artifacts, such as variation, smallness, clarity, and symbolism of shape, are becoming harmoniously integrated into modern industrial production systems, and are also influencing graphic design.

Morris Low maintains that, although the concept of Monozukuri can be useful in building Japanese confidence in its manufacturing capabilities, it is unlikely that such a buzzword can help Japan increase its design creativity and catch up with the West. Low feels that the prevalence of the Monozukuri concept will not be enough to instill creativity, a strong work ethic, self-discipline and a spirit of entrepreneurialism into young Japanese people.<sup>1498</sup> However, Monozukuri is more than a 'buzzword'; rather it is an idea that draws on centuries of creative and ethical traditions. Moreover, Low's implication that the young Japanese generation lacks creativity and a strong work ethic is not supported by recent history. I believe that Monozukuri can in fact help Japan rediscover its cultural history, which can then be applied to design in order to improve inclusivity and sustainability.

## **Humanism in Design**

When companies such as Sony started to dominate the global marketplace, Japanese design was associated with 'high-tech' products. As the market reached near saturation point, the consumption cycle slowed, and value perception changed. Emphasis on user friendliness and ecologically sound design is now replacing the need or desire for products which look technologically advanced and are difficult to use. Today, the dominating philosophy of the design groups in Japanese industry is humanism, which relates to the theory of harmonisation between human beings and machines. The Japanese concept of pathos is closely related to humanism and is commonly used when referring to a product's features.<sup>1499</sup>

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<sup>1498</sup> Low (2013), pp. 24-9.

<sup>1499</sup> Davey (2003), pp. 15-8.

Japan has a long fascination with a stylised world involving technologically advanced heroes and fantasy characters, many of whom have appeared extensively in film, particularly manga. This trend has found its way into industry, with a growing focus on creating artificially intelligent robots. 40

The humanist concept has found its way into the artificial intelligence industry, especially the building of intelligent robots. These robots, which are being designed to both assist and entertain humans, are intended for the mass market where it is hoped that 'smart robots' will be at the heart of new 'smart homes'. The Japanese are currently at the forefront of this R&D and so may play a leading role in implementing this technology globally. For example, the Honda-developed robot Asimo (Advanced Step in Innovative Mobility) was the first step towards creating a robot that coexists and cooperates with people in a 'human way'.<sup>1500</sup> Unveiled in 2000, the robot is capable of sensing changes in environments where people are present, and taking autonomous action. As such Honda hope that the fully developed robot will soon be able to help the blind, disabled and elderly etc. Furthermore, Honda maintains the robot could provide social companionship since it is designed to appear gentle, intelligent and friendly.<sup>1501</sup>

## 4.2 Design Practice of Russia

### 4.2.0 Introduction

The Stalinist ideal of the home had luxurious and spacious qualities, as well as containing many decorative elements.<sup>1502</sup> However after Khrushchev came to power, this concept was seen as a tasteless aesthetic ideal. During the Thaw, there was an effort to combat the 'philistinism' that had gripped large parts of the population, and the communist regime attempted to introduce its ideals of artistic

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million units of the Tamagotchi toy were sold in 1996. Robert Pet ('a human friend') which was more advanced than the Tamagotchi, sold 3000 units in Japan and 2000 in the US in 1999 immediately after going on sale. See Kayama Rika, 'AIBO' in Mizuno, et al., eds. (2000), pp. 208-09.

<sup>1500</sup> ASIMO has thirty-four separate computer-driven motors that constantly monitor its environment.

<sup>1501</sup> Rothfeder (2014), p. 149.

Asimo's development began in the 1970s and was originally focused on entertainment (i.e. a singing robot). As this development progressed its designers began to see uses in surveillance and security. See Shigemi Satoshi (et al.), 'Development of New Asimo' (Shingata Ashimo no Kaihatsu), *Honda R&D Technical Review*, vol. 18, no. 1, Tochigi-ken: Honda Technical Research Institute, 2006, pp. 38-44, esp. 38-9; Koshiishi Takeshi, 'Styling and Design of New ASIMO: Evaluation for Continuing Engagement with People' (Shingata ASIMO no Dezain: Hito to Aite o re Tsudzukeru Tame no Shinka), *Honda R&D Technical Review*, vol. 25, no. 1, Tochigi-ken: Honda Technical Research Institute, 2013, pp. 7-13, esp. 7-8.

<sup>1502</sup> Karen Kettering, "'Ever more Cosy and Comfortable": Stalinism and the Soviet Domestic Interior, 1928-1938,' *Journal of Design History*, vol. 10, no. 2, Oxford University Press, 1997, pp. 119-35, esp. 132.

beauty into everyday life. Journals and newspapers joined the fight against 'tastelessness', attacking objects from paper flowers to polish and curved furniture.<sup>1503</sup> In addition, the Society for the Dissemination of Knowledge helped to spread these new anti-philistine ideals by organising public lectures.<sup>1504</sup> This new movement was about the search for a new socio-aesthetics, and the teaching of taste.<sup>1505</sup> In this period the ideal of home design changed to include the notions of functionality, minimalism and rationality.<sup>1506</sup> This change had a political dimension as it was part of the campaign of de-Stalinisation<sup>1507</sup> and represented Khrushchev's drive to move the communist project forward to the next stage.<sup>1508</sup>

As the above new ideas took shape, mass-produced items such as porcelain objects became more diverse,<sup>1509</sup> and by the end of the 1950s Soviet designers were working to convey an image of a bright and comfortable domestic life through everyday objects; rational, yet without intellectual coldness. The style of the new ceramics preserved folk tradition, which served to soften the severe functional forms with the warmth of live, fluid contours.<sup>1510</sup> Soviet design in the 1950s was also influenced by modern design and architectural movements from Czechoslovakia and Poland, as well as other Eastern European countries.<sup>1511</sup> As a result of these new influences design began to function as something that could

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<sup>1503</sup> Gerchuk (2000), pp. 89-90.

<sup>1504</sup> Hutchings (1976), pp. 190-93.

<sup>1505</sup> Gerchuk (2000), pp. 97-9.

<sup>1506</sup> These design ideas however were not new and can be traced back to 1920s constructivism. See Chernyshova (2013), p. 163; Gerchuk (2000), pp. 86-8; Victor Buchli, 'Khrushchev, Modernism, and the Fight against *Petit-Bourgeois* Consciousness in the Soviet Home,' *Journal of Design History*, vol.10, no. 2, Oxford University Press 1997, pp. 161-76, esp. 166-70.

<sup>1507</sup> This policy shift was to anger North Korea who was subsequently inspired to develop their own policies based on the concept of *Juche*.

<sup>1508</sup> The design revolution of the Khrushchev era was rejected when Brezhnev came to power and was part of the policy to put and to de-Stalinisation. Under Brezhnev home design harked back to the 1930s and furniture styles of the Stalinist era were welcomed back. See *ibid.* also see Susan Reid, 'The Meaning of Home: "The Only Bit of the World You Can Have Yourself"' in Siegelbaum, ed. (2006a), pp. 145-70.

<sup>1509</sup> Hutchings (1976), pp. 190-93. However many experimental porcelain objects were left white, especially those from Leningrad's Lomonosov Factory, as decoration was seen to hinder the perception of the living elasticity inherent in the form.

<sup>1510</sup> Gerchuk (2000), p. 96.

<sup>1511</sup> Ferebee (1958), pp. 41-7; Hutchings (1976), pp. 150-51 and 190-93; Gerchuk (2000), pp. 90-1. Czechoslovakia was the first to train design specialists (1947) and also the first to establish a design centre. Design centres were established in Poland in 1950, Hungary in 1954 and GDR in 1950s. Furthermore other goods and technologies imported from Eastern Europe in the 1950s and 60s, such as furniture from Czechoslovakia and Estonia, helped raise the Soviet standard of living, giving Soviet buyers access to furniture that was comparable in lightness and elegance to Scandinavian designs.



differentiate generations and social strata.<sup>1512</sup> One example of this was the 1950s youth subculture of the 'Stilyagi' who attempted to emulate the 'Teddy boys' of British fifties culture. The Stilyagi wore 'irregular' clothing, consisting of, for example, tight jeans, wide jackets, and long bright ties.<sup>1513</sup> They were heavily criticised in the official mass media.<sup>1514</sup> However, changes in cultural politics meant that autocratic State control of the arts, although by no means relinquished, were to a certain extent relaxed.<sup>1515</sup> Despite this, the state continued to use design as a tool for ideological programming, and for attempting to demonstrate the superiority of Soviet styles over others.

#### 4.2.1 Design and the Thaw

##### Khrushchevki

In 1954, Khrushchev attacked Soviet Realism, associating it with an outmoded Stalinist regime, and casting it as irrational.<sup>1516</sup> He denounced extravagant construction as unjustified, and denigrated decorative facades.<sup>1517</sup> This criticism was also leveled at a number of one-off building projects that had won prizes under Stalin. His view was that, 'Architects must learn to count public money'. A key part of the cultural policy of the Thaw was its social mission in which the arts were to actively improve the well-being of millions of people by bringing rational order and beauty to their lives.<sup>1518</sup> This did not, however, mean that he embraced Western modernism. In fact he declared that 'we do not want to build cities filled with boxes,

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<sup>1512</sup> Susan E. Reid, 'Modernizing Socialist Realism in the Khrushchev Thaw: The Struggle for a "Contemporary Style" in Soviet Art' in Jones, ed. (2006b), pp. 209-30, esp. 215-16.

<sup>1513</sup> Deborah A. Field, 'mothers and fathers and the problem of selfishness in the Khrushchev period' in Melanie Ilič, et al., eds. (2004), pp. 96-113, esp. 99; Hilary Pilkington, 'Youth and Popular Culture: The Common Denominator?' in Russell Bova, ed. (2003), pp. 319-50, esp. 322-23.

<sup>1514</sup> Azrikan (1999), p. 47.

<sup>1515</sup> Lavrentiev and Nasarov (1995), pp. 8-9. Simultaneously, the system of State design offices was consolidated, and the professional image of the designer was defined in distinction to that of the engineer, model builder or technical drawer. This did little, however, to change the bureaucratisation of design, which continued under the auspices of a Socialist planned economy.

<sup>1516</sup> Nikita Khrushchev, 'Remove Shortcomings in Design, Improve the Work of Architects', reproduced in Joan Ochman (ed.) with the collaboration of Edward Eigen, *Architecture Culture 1943-1968: A Documentary Anthology*, New York: Rizzoli, 1993, pp. 184-88, esp. 184.

<sup>1517</sup> He complained that architects of the Stalin era would even decorate cowsheds with columns. See Elidor Mēhilli, 'The socialist Design: Urban Dilemmas in Postwar Europe and the Soviet Union,' *Kritika: Explorations in Russian and Eurasian History*, vol. 13, no. 3, Summer 2012, pp. 635-65, esp. 646 and 664-5.

<sup>1518</sup> Gerchuk (2000), p. 82 and 89.

as the French architect Le Corbusier recommends.’ In his opinion, the west had produced little new in the field of housing since WWII and that a socialist housing policy should include the overriding principle of serving the people.<sup>1519</sup> During the Thaw, the home was seen as the focus for building a communist way of life.<sup>1520</sup> Khrushchev told the Twenty-First Party Congress in January 1959 that the state has not only to provide people with good housing, but also to teach them to live correctly and ‘observe the laws of socialist communality’.<sup>1521</sup>

In 1953, Khrushchev initiated a major domestic building programme consisting of prefabricated tower blocks, known as *Khrushchevki*. This introduced a new domestic architecture of short, broad, concrete apartment buildings that were characterised by restricted living space.<sup>1522</sup> The new minimal style, as argued by Susan Reid,<sup>1523</sup> was an attempt to create a visual environment that was markedly different from that of Stalin’s reign.<sup>1524</sup> In 1954 Khrushchev gave a speech<sup>1525</sup> calling for builders and architects to use new progressive materials such as reinforced-concrete sections. This ushered in a new era of constructivist architecture that was orientated towards its functional capacity rather than ornamental and decorative elements.<sup>1526</sup> This movement spread through countries under Soviet influence where people were keen to overthrow what remained of

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<sup>1519</sup> Mēhilli (2012), p. 664.

<sup>1520</sup> Castillo (2010), pp. 130-31. In 1955 a Soviet delegation, headed by the USSR’s Minister of Construction I.K. Kozuilia, accepted an invitation from Earl W. Smith of the National Association of Home Builders (NAHB), issued via the US State Department, to attend a tour of US residential construction sites and materials manufacturers. This visit influenced subsequent Soviet construction of social housing.

<sup>1521</sup> Reid (2006), pp. 147-48.

<sup>1522</sup> Designers had to respond to the need for furniture that occupied less floor space in the new residential settings. This saw the introduction of transformable furniture, collapsible furniture and items such as desks being rapidly reduced in size. See Nataliia B. Leбина and Aleksandr N. Chistikov, *General Masses and Reforms: The Pictures of Citizens’ Everyday Life at the time of the New Economic Policy and the Khrushchev decade (Obivatel’ i Reformi: Kartini Povsednevnoy Zhizni Gorozhan v Godi nepa i Khrushchevskovo Desyatilet’iya)*, S. Peterburg: Dmitrii Bulanin, 2003, pp. 162-66; Gerchuk (2000), p. 88; Lynne Attwood, ‘Housing in the Khrushchev Era’ in Melanie Ilič, et al., eds. (2004), pp. 177-202, esp. 188.

<sup>1523</sup> Susan E. Reid, ‘Destalinisation and Taste, 1953-1963’, *Journal of Design History*, vol. 10, no. 2, 1997, pp. 177-201, esp. 178-79.

<sup>1524</sup> Khrushchev’s era, in contrast to Stalin’s saw Soviet fashion designers attempt to incorporate a modicum of Western luxury styles into socialist clothing. Designers were encouraged to incorporate the government’s ideals of ‘good taste’ and ‘useful benefit’ of Western designs to aid Soviet clothing production. See Zakharova (2010), pp. 99-100.

<sup>1525</sup> At the *All-Union Conference of Builders, Architects and Workers in the ‘Building-Materials Industry.’*

<sup>1526</sup> Khrushchev (1993), p. 184.

Stalin's legacy.<sup>1527</sup> Such design schemes were viewed as experimental and were early examples of prefabricated building. Although they were later criticised for their uniformity, they were regarded with optimism during the 1950s.<sup>1528</sup> According to the historian Roger Bartlett, the housing policy was very successful, as between 1955 and 1964 the amount of housing in the Soviet Union nearly doubled (100 million people were rehoused),<sup>1529</sup> while rent and utility charges remained very low.<sup>1530</sup> The architects and planners of the housing construction campaign of this period were not only concerned with providing people with housing, but also with how they should furnish and live in their homes.<sup>1531</sup> The journal *Technical Aesthetics* declared in 1964 that the creation of modern apartment interiors had become one of the most important problems facing the Soviet state.<sup>1532</sup> The success of the Soviet housing campaign can be seen from the fact that between 1953 and 1970, 38,284,000 new apartments were built throughout the Soviet Union and a total of 140.9 million people, or 38 million families were housed.<sup>1533</sup>

The Utopian ideal of a world without private property also took the form of housing schemes. Between 1962 and 1965 teams of architects at the Institute of Standard and Experimental Projects explored ideas for housing to be built in

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<sup>1527</sup> R.W. Davies and Melanie Ilic, 'From Khrushchev (1935-1936) to Khrushchev (1956-1964): Construction Policy Compared' in Jeremy Smith and Melanie Ilič, eds., 2011, pp. 202-31, esp. 211-12; Kimberly Elman Zarecor, *Manufacturing a Socialist Modernity: Housing in Czechoslovakia, 1945-1960*, University of Pittsburgh Press, 2011, pp. 216-17.

<sup>1528</sup> *Ibid.*, pp. 211-12.

<sup>1529</sup> Reid (2006), p. 148; K. Zhukov, 'Technical Aesthetics and Apartment Design' ('Tehnicheskaya Estetika i Oborudovanie Kvartir'), *Technical Aesthetics*, no. 2, Moscow: VNIITE, 1964, p. 1. Between 1961 and 1963 the growth rate in housing construction was the highest Europe, with a completion rate of 11.7 units per 1000 population per annum. This may be compared to UK rate of 5.9. This achievement was based on system building with factory-made sections and the typical apartment consisted of 42 square meters of living space. See Hanson (1968), pp. 66-7.

<sup>1530</sup> Bartlett (2005), p. 258.

<sup>1531</sup> Lebina and Chistikov (2003), pp. 175-82.

In summer 1958, the International Union of Architects (Union Internationale des Architectes, or UIA)'s fifth annual congress was held in Moscow. It was attended by fifteen hundred architects from fifty-one countries and held at the Moscow state university; a symbol of Stalinist architecture. The congress and its' related exhibitions lasted a week, and the theme was 'the construction and reconstruction of cities from 1945-1957'. See Cooke with Reid (2007), pp. 184-86.

<sup>1532</sup> Bartlett (2005), p. 258

<sup>1533</sup> Steven Harris, "'I Know All the Secrets of My Neighbors": The Quest for Privacy in the Era of the Separate Apartment' in Siegelbaum, ed. (2006), pp. 171-89, esp. 171.

In 1970, Western architects and designers visited a number of Soviet housing schemes in several cities and following this, attended the Third Economic Commission for Europe (ECE) Seminar on the Building Industry in Moscow between 5<sup>th</sup> and 10<sup>th</sup> October. Here they exchanged ideas on the latest developments in mass housing construction with their Soviet counterparts. See 'Progressive Methods of Design, Organisation, and Management in Building; Report on the Proceedings,' *The Third ECE Seminar on the Building Industry Prepared by the ECE Secretariat, 5<sup>th</sup>-10<sup>th</sup> October 1970, Moscow, USSR, ST/ECE/HBP/42*, vol. 1, New York: United Nations Publication, 1971, pp. 29-30.

Moscow, under the project name 'Dom Novogo Byta' (House of the New Lifestyle). The design incorporated 812 tall apartment blocks connected by lower stretches of buildings which housed a library, a canteen, laundrettes, television rooms, a cinema and a sports complex.<sup>1534</sup> Many residents closely associated the tasteful, compact designs of the apartments with 'Western' trends. These trends were often linked to the idea of obsolescence which was promoted by American designers and bureaucrats in order to encourage sales and thus hold off recession.<sup>1535</sup> Despite the Soviets not following this capitalistic model, an improvement in the design of some housing services and consumer goods in the 1960s was discernible to critics, although the strategy for improvement was reliant on European and US designs.<sup>1536</sup>

### International Exchanges

Khrushchev's famous 'Secret Speech' to the Twentieth Congress of the Communist Party in February 1956, was met with sharp criticism from students, intellectuals and workers, many of whom had previously been enthusiastic supporters. The congress ushered in a change of Soviet policy with regards to international relations, for what was now sought was peaceful co-existence and increased partnerships. To this end in 1956, the Soviets started to establish cultural exchanges with other countries.<sup>1537</sup> An agreement was signed with the US in 1958<sup>1538</sup> and with the UK in 1959.<sup>1539</sup>

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<sup>1534</sup> The scheme owed something to the visionary housing schemes proposed during the 1920s, which included on-site boarding schools. See Buchli (1997), p. 173; M.F. Ladur, 'The New Arbat in the Old Moscow' ('Noviy Arbat v Staroy Moskve'), *Decorative Art of the USSR*, no. 4, Moscow: Soviet Artist, 1968, pp. 12-25.

<sup>1535</sup> George Nelson, 'Obsolescence' in *Industrial Design*, vol. 3, no. 6, New York: Whitney Publications, Inc., 1956, pp. 81-2; Nigel Whiteley, 'Toward a Throw-Away Culture, Consumerism, "Style Obsolescence" and Cultural Theory in the 1950s and 1960s', *Oxford Art Journal*, vol. 10, no. 2, 1987, pp. 3-27.

George Nelson was an advocate of obsolescence and believed that America needed more of it, stating that it was wealth-producing rather than wasteful and was necessary for the continued renewal of industry. Waste only occurred where this obsolescence was too slowly implemented, and hence a reliable method was needed to get rid of outmoded products. See Slade (2007), p. 158.

<sup>1536</sup> This was in part due to Soloviev's inviting the American industrial designer Raymond Loewy and the director of the British Design Council, Paul Reilly, to Russia. The initiative was part of his official drive to improve Russian design before VNIITE was established. The structure of VNIITE actually mirrored that of the British Design Council, perhaps because of advice that Soloviev received from Paul Reilly.

<sup>1537</sup> John Van Oudenaren, *Détente in Europe: The Soviet Union and the West since 1953*, Duke University Press, 1991, pp. 286-89.

<sup>1538</sup> The 'Agreement between the United States of America and the Union of Soviet Socialist Republics on Exchanges in the fields of science, technology, exhibitions, publications, athletics, students, research, cultural and performing arts' (Lacy-Zarubin) was signed on 27 January 1958. See Richmond (2003), p. 15.

The 1958 cultural exchange agreement between the Soviets and the US led to the United States Information Agency (USIA) organising the 1959 'American National Exhibition' which was held in Moscow and successfully promoted the American way of living.<sup>1540</sup> This shocked the Soviet public as it revealed the high standard of living enjoyed under capitalism.<sup>1541</sup> Nevertheless, the Soviets did not follow the the idea of obsolescence which was being promoted by American designers.<sup>1542</sup> Reid points out that the purpose of the exhibition was to focus on products of convenience that aided the housewife in order to demonstrate the superior American standard of living.<sup>1543</sup> The USIA also organised three exhibitions in the 1960s that were shown in the USSR. 'Graphic Arts USA' (1963) displayed visual communication including advertising, signs and trademarks. Power tools and machines were shown at 'Hand Tools USA' (1966). 'Industrial Design USA' (1967) was devoted to various American products, including TVs, refrigerators, and automobiles (this exhibition was shown in Moscow, Leningrad, and Kiev).<sup>1544</sup>

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On average, each exhibition attracted about 250,000 visitors in each city with more than 20 million Soviet citizens attending the 23 exhibitions during the 32-year period (1958-1988). More than 50,000 Soviet citizens also visited the US under various cultural exchange schemes. See Yale Richmond, 'American Communist History: Cultural Exchange and the Cold War: How the West Won', *American Communist History*, vol. 9, no. 1, 2010, pp. 61-75, esp. 63.

<sup>1539</sup> Oudenaren (1991), p. 289.

<sup>1540</sup> Anonymous, 'American National Exhibition in Moscow', *Industrial Design*, vol. 6, no. 4, New York: Whitney Publications, Inc., April, 1959, pp. 47-55, esp. 49; Pulos (1988), pp. 262-63. The exhibition (from 25<sup>th</sup> July to 4<sup>th</sup> September, designed by George Nelson and Company) comprised two major structures: a large dome containing displays presenting American lifestyles and environment, and a glass pavilion displaying 5,000 American products such as TVs and kitchen products, demonstrating the strength of American technology.

<sup>1541</sup> Nevertheless, Osgood Caruthers, chief of the Times Bureau in Moscow, reports that Western countries were portrayed were portrayed in the Soviet media as full of misery, unemployment, injustice, poverty, inequality, racial prejudice and even slavery. See Osgood Caruthers, 'What Ivan Knows- And Doesn't Know: Eisenhower's Visit to Russia Will Continue the Exchange of View Begun', *New York Times*, 09<sup>th</sup> August 1959, p. SM7; Frederick C. Barghoorn, 'America in 1959-As Seen from Moscow,' *The Review of Politics*, vol. 22, no. 2, Cambridge University Press, 1960, pp. 245-54.

<sup>1542</sup> George Nelson (1908-1986), the man given the job of designing the interiors of the pavilions at the American National Exhibition in Moscow, wrote in 1956 that obsolescence was the 'American way of design', as well as the future of design everywhere. See Ronald Beckman, 'George Nelson: Prophet of the Modern Office', *Innovation*, IDSA (Industrial Design Society of America, vol. 9, no. 3, 1990, pp. 4-7, esp. 4-5.

<sup>1543</sup> Susan Reid, "'Our Kitchen is Just as Good": Soviet Responses to the American National Exhibition in Moscow, 1959' in Crowley and Pavitt, eds. (2008), pp. 154-61.

The modern Kitchen exhibition showcased many labour-saving devices that subsequently led to the famous 'Kitchen Debate' between Nixon and Khrushchev at the opening of the exhibition on 24<sup>th</sup> July 1959. Because of the Kitchen Debate the American home and its contents became an anticommunist icon. See Irma Weinig, 'American Exhibit Combines Soft Sell with Hard Facts', *Industrial Design*, vol. 6, no. 9, New York: Whitney Publications, Inc., September, 1959, pp. 66-73, esp. 73; Castillo (2010), p. xiii.

<sup>1544</sup> Pulos (1988), p. 262.

In 1959, at the Twenty-First Congress of the CPSU, Khrushchev, having recognised technological and material advances in the West, maintained that the Soviet Union would 'catch up' with the United States. During the years of the Thaw, the Soviet Union vowed to overtake the USA in terms of consumer goods.<sup>1545</sup> In an effort to demonstrate the improving quality of Russian life the 'Soviet exhibition of science, technology and culture' was held at the New York Coliseum in 1959, and comprised over 10,000 objects. However, the reaction was not what the organisers had hoped for, as many critics claimed that the exhibition was not a true reflection of the standard of living of Soviet citizens.<sup>1546</sup> Furthermore, some critics maintained that the products on display were outdated and often clumsy copies of western designs.<sup>1547</sup> However, they also made the point that the unevenness of the design of Russian products was not surprising, given that it was a rapidly industrialising nation.

In 1961, as part of the 1959 UK/USSR 'Agreement on Relations in the Scientific, Technological, Educational, and Cultural Fields', the Soviet Exhibition took place in Earl's Court, London and showcased 10,000 consumer goods.<sup>1548</sup> The exhibition was poorly received by the British journal, *Design*, who pointed to a distinct 'split between production and consumption values' within Soviet industrial design.<sup>1549</sup> The magazine criticised the 'battery of signs, displays, models and, artifacts, which had a cumulative weight far beyond their individual interest to the public.' While acknowledging that the Soviets were embracing rising levels of

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Additionally between 1989 and 1991, the USIA organised an exhibition called Design USA which featured US industrial design, architecture, and graphic design. It made a 10-city tour of the Soviet Union, lasting 19 months, which started in Moscow and ended in Vladivostok. See Gantz (2011), pp. 252-53.

<sup>1545</sup> The Soviet Union enjoyed a period of economic and social modernisation (as well as political and cultural liberalisation) in the late 1950s and early 1960s. At the Twenty-First Congress of the CPSU in 1959 (27<sup>th</sup> January-5<sup>th</sup> February), Khrushchev, having recognised technological and material advances in the West, maintained that the Soviet Union would 'catch up' with the United States. See Reid and Crowley eds. (2000), pp. 3-6.

<sup>1546</sup> A similar point is made by the journal *Industrial Design* which commented 'Russians show smiles without being friendly, blurs line between hopes and realities of Soviet life'. See Anonymous, 'The Russian Profile: 1959', *Industrial Design*, vol. 6, no. 8, New York: Whitney Publications, Inc., August, 1959, pp. 54-61, esp. 55-8.

<sup>1547</sup> Anonymous, 'Foreign Trade: Red Sales' Weekly Newsmagazine *Time*, Chicago; New York, 6 July 1959, p. 64.

<sup>1548</sup> For a full discussion see Verity Clarkson, 'The Organisation and Reception of Eastern Bloc Exhibitions on the British Cold War "Home Front" c.1956-1979,' PhD Thesis, University of Brighton, 2009.

<sup>1549</sup> Lawrence Alloway and Fred Ashford, 'USSR at Earls Court,' Magazine *Design*, no. 154, Glasgow; London: Design Council, October 1961, pp. 42-9. However the left-wing *Daily Worker* praised the Soviet designs, and lauded the event as the 'next best thing to a visit to the Soviet Union'. See 'Sputniks and Sideboards Coming to Town', *Daily Worker*, 15<sup>th</sup> February, 1961.

consumption, their approach was branded as 'naïve,' and the exhibition's focus on projected sales figures rather than present ones belied an 'imagery unadjusted to present reality.'<sup>1550</sup>

Soviet design began to improve in the 1960s partly as a result of the relationship between Soloviev and both the American designer Raymond Loewy, and the director of Council of Industrial Design (CoID), Paul Reilly who helped establish VNIITE and put on the exhibition 'The Role of the Industrial Designer in Britain' in 1964.<sup>1551</sup> This exhibition was organised by CoID and the British Central Office of Information, and was well attended by both the Soviet public and Russian officials.<sup>1552</sup> The cooperation between Britain and the Soviet Union did not stop there. For example in 1966, an Anglo-Soviet cultural agreement resulted in an exchange of designers between the two countries.

## 4.2.2 Soviet Products and Quality

### Product Design in the 1960s

Despite the Soviets not following the capitalist model an improvement in the design of consumer, and some capital, goods was discernible to critics in the 1960s.<sup>1553</sup> In the early 1960s the design of many Soviet products was influenced by the space race, and sleek designs were plentiful; for example, the vacuum cleaner 'Raketa', or 'Rocket'. It was launched in 1953 and sported a smooth, sleek, rocket-like design. The cleaner also benefited from an extremely long shelf-life.<sup>1554</sup> In the 1950s, design in other USSR countries was heavily influenced by Soviet design. For example, in 1957 the first 'Trabant P50' car was made in the East

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<sup>1550</sup> Ibid, p. 46.

At a British trade fair in Moscow, Khrushchev commented that trade was 'an excellent ambassador, contributing to peace.' See Michael Kaser, 'Trade Relations, Patterns and Prospects' in Alex Pravda and Peter Duncan (eds.), *Soviet-British Relations Since the 1970s*, Cambridge University Press, 1990, p. 193.

<sup>1551</sup> Paul Reilly, *An Eye on Design: An Autobiography*, London: Max Reinhardt, 1987, p. 94.

<sup>1552</sup> Ibid, pp. 99-101. This exhibition designed by Terence Conran, it aimed to display Britain's technological excellence in designing and manufacturing consumer products in Moscow.

<sup>1553</sup> Beckman (1990) pp. 4-5.

<sup>1554</sup> Michael Idov (ed.), *Made in Russia: Unsung Icons of Soviet Design* (text by Bela Shayevich), New York: Rizzoli International Publications, 2011, pp. 88-9; Chernyshova (2013), p. 186.

Production for vacuum cleaners totalled half million in 1960 compared to 60,000 in 1950; in 1965 11% of families owned a vacuum cleaner rising to 39% in 1981.

Germany.<sup>1555</sup> The P50 was inspired by the Soviet Sputnik – Trabant means ‘satellite’ in German – and was the pride of East German industry, aimed at providing affordable cars to the average citizen and therein seen as embodying Socialist values.<sup>1556</sup>

The Soviets not only increased investment in labour-saving devices, but also so-called cultural goods, for example TV and radio sets.<sup>1557</sup> These were signs of progress in technological development and also useful as means of propaganda.<sup>1558</sup> Another Soviet product that has seen technological advances was the 1962 refrigerator which featured a rectilinear streamlined design. Such a design was commonly associated with American capitalism, and was an effort to ensure that Soviet consumers had access to better designed goods.<sup>1559</sup>

Changes were also occurring in art and design during the 1960s. The distinctive visual flair and wit of Picasso, for example, was influencing textiles, which were brightly coloured with abstract patterns. This was in sharp contrast to the Stalinist era when textiles tended to be based on peasant or military designs; either for ideological reasons, or due to the poor quality of dyes used.<sup>1560</sup> The 1960s also witnessed the popularity of *Pikasy*, which were colourful enamel and ceramic

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<sup>1555</sup> In 1963 the GDR produced the P601, which became the standard Trabant model until production ended in 1991. See Eli Rubin, ‘Understanding a Car in the Context of a System’ in Siegelbaum, ed. (2011), pp. 124-40, esp. 124-26.

<sup>1556</sup> Raymond G. Stokes, ‘Plastics and the New Society: The German Democratic Republic in the 1950s and 1960s’ in Reid and Crowley, eds. (2000), pp. 65-80, esp. 69-72. The Trabant had a plastic body and a weak two-stroke engine, which made it an object of ridicule in the West, but it was regarded as innovative, functional and, most importantly perhaps, different from Western design. Moreover, plastic was deliberately chosen to allow people to repair any problems with the car themselves, making it more sustainable than most capitalist products which were prioritised marketing and profit.

<sup>1557</sup> Leбина and Chistikov (2003), p. 169. The ‘Spidola’ wireless transistor radio, which enabled the Soviet public to gain access to forbidden Western radio transmissions, was also introduced in the 1960s. The radio, manufactured in Latvia, was small, light and portable. Despite Western radio signals being routinely jammed - and the consequences of being caught for listening to banned broadcasts - the radio proved to be extremely popular.

Annual production of TV sets rose from 11,900 in 1950 to 1,726,000 in 1960. TV was expensive, RUB 2,200-2,900, in 1953 and 1955. TV ownership in the urban population increased from 32 per hundred families in 1965 to 95 per hundred in 1981; in 1985 99% of households possessed radio and TV sets. See Idov, ed. (2011), p. 194; Chernyshova (2013), p. 186.

<sup>1558</sup> However, during the Khrushchev period, these household appliances were not widely distributed amongst the population and it was only after Brezhnev came to power that consumers became familiar with them in the home. The Brezhnev era also saw other technological advances, for example colour television transmission in 1967. See Chernyshova (2013), pp. 187.

<sup>1559</sup> Susan E. Reid, ‘This is Tomorrow! Becoming a Consumer in the Soviet Sixties’ in Anne E. Gorsuch and Diane P. Koenker (ed.), *The Socialist Sixties: Crossing Borders in the Second World*, Bloomington: Indiana University Press, 2013, pp. 25-65, esp. 41-2.

<sup>1560</sup> Additionally, Soviet leaders at this time adopted a semi military style of tunic in order to express austerity and the spirit of struggle, a style which subsequently was adopted by the Chinese leadership and continues in North Korea today. See Hutchings (1976), p. 191.



products (manufactured in Poland) that conjoined the desire for modernity with inexpensive, decorative and functional home ware. During this period, VNIITE was also experimenting with automobile designs, and several prototypes of taxi cars and scooters were produced, although unlike the 'Raketa', they did not go into production.<sup>1561</sup>

Despite some of the utilitarian rhetoric of standardisation, the 'Thaw' facilitated a creative period of design. The new style of the Moscow Palace of Young Pioneers (1959-1962) building was low and irregular (not at all like the university in whose shadow it was constructed) and its multiple functions (it also served as a cultural and educational centre for the Communist Youth Organisation) were articulated as distinct architectural features. Additionally, the growing consumer market led to the building of supermarkets that reflected modern trends in design.<sup>1562</sup> In the design of objects, plastic was used abundantly at this time. Synthetic materials provided the best means to combine affordability with utility and durability. Radios, plates, kitchen furniture and flooring were all produced in plastic and widely bought.<sup>1563</sup> If plastic goods served their purpose and lasted, they were not considered cheap or disposable. Indeed, in a society that was making the transition to consumerism, an increasing amount of Western design influences began to permeate the market.<sup>1564</sup>

#### **4.2.3 The Mark of Quality and Consumerism**

In order to improve the quality of its goods, the Soviets introduced a new standard, 'the mark of quality' in 1967. Its aim was to ensure comparable standards to Western products without the need for market pressures to raise standards: the mark was also an attempt to stimulate sales. Soviet products had a poor reputation with their new western trading partners and these new measures attempted to

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<sup>1561</sup> Lavrentiev and Nasarov (1995), pp. 93-5; Azrikan (1999), p. 51.

However, many of these designs did not go into production, which served to underline the fact that although the Soviet Union was making steps towards it, they were inexperienced in consumerism. The Soviet Union struggled to produce marketable designs that could quickly become a strong source of national revenue, and oil and gas continued to be its principal exports.

<sup>1562</sup> Lavrentiev and Nasarov (1995) 'Supersam', for example, was an 'experiment' which blended American architecture with abstract art exhibition. Patterns of bright ceramic, glass and mosaic panels along the supermarket walls loosely suggested 'socialist' themes like the conquest of space, industry or youth.

<sup>1563</sup> Crowley (2008b), p. 139.

<sup>1564</sup> These extended to architecture, although the designs retained a distinctly Russian feel. See Lavrentiev and Nasarov (1995), p. 50.

improve this image.<sup>1565</sup> The degree to which they were successful at improving product quality is debatable. Products that were awarded the 'highest category' represented only 2% of sales turnover in the USSR economy in 1972,<sup>1566</sup> but this figure increased to 6.5% in 1976 and by 1981 it had risen to 15.7%.<sup>1567</sup> However, by 1986 the share of 'highest category' products in the total output was only 14%. As little as one-third of all inventions were useful to the economy, the reorganisation of the production programme was very slow, and the average period for developing a new engineering item was estimated at 5 or 6 years.<sup>1568</sup> Furthermore, products sometimes received the award without being comparable to similar international products. Nevertheless, in the case of the KamAZ truck,<sup>1569</sup> while its quality improved its price increased by 40%.<sup>1570</sup>

Receiving the mark of quality was based only on the success of a manufacturer in conforming to product specifications, it did not consider whether the initial product specifications actually reflected customers' desire in the first place. Many commentators favoured a user-based approach, which focuses on satisfying consumer needs. Seen through this lens, the 'mark of quality' could never truly increase product quality.<sup>1571</sup> More broadly, the issue of whether

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<sup>1565</sup> Forker (1991), p. 63; Idov, ed. (2011), p. 148.

<sup>1566</sup> Mikhail G. Lapusta and Dmitrii N. Nikitin, *Stimulation of Product Quality Increase (Stimulirovanie Povysheniya Kachestva Produktsii)*, Moscow: Profitzdat, 1980, p. 23.

<sup>1567</sup> V.G. Shteingauz, 'Urgent Problems of the Further Improvement of Product Quality Control' (Aktualnye Problemy Dalnejshego Sovershenstvovaniya Upravleniya Kachestvom Produkcii), *Economic Series (Seriya Ekonomicheskaya)*, no. 3, Moscow: Academy of Sciences Proceedings of the USSR (Izvestiya Academi Nauk SSSR), 1983, pp. 53-61, esp. 54; Hill and Mckay (1988), pp. 35-6.

<sup>1568</sup> Vernikov (1989), p. 7. Additionally, nearly 30% of the machinery produced had entered the programme over 10 years previous, with another 25% being under production for between 6 and 10 years.

<sup>1569</sup> The truck was built in the KamAZ factory (Kamskii Avotmobilnyi Zavod) in the new city of Naberezhnye Chelny. Both the city and the factory were built in the 1970s and 80s, and in fact Naberezhnye Chelny was considered an exemplary post-Stalinist city of the future. Due to the absence of quality controls until 1986, products did not always meet international standards, but once they were introduced after that year, the KamAZ became an exemplary vehicle with high exports. See Esther Meier, 'On the Streets of a Truck-Building City: Naberezhnye Chelny in the Brezhnev Era' Siegelbaum, ed. (2011), pp. 105-23, esp. 105-06.

<sup>1570</sup> Hill and Mckay (1988), p. 37.

In 1978 the output proportion of highest quality products by Ministries were as follows; the Ministry of the Electrical Engineering Industry 42.9%, the Ministry of the Automobile Industry 37%, the Ministry of Consumer Products 5 Engineering 30%, the Ministry of Heavy Engineering 28.5%, and the Ministry of the Instrument Building Industry 25.3%.

<sup>1571</sup> Forker (1991), p. 73.

Inadequate technology and poor manufacturing equipment were a factor to the Soviet quality control programme 'Gospriyemka' failing to increase efficiency in production. The new quality levels were unable to be regularly met by the antiquated Soviet machinery, which lead to as much as 30% of industrial output being rejected as unacceptable under the new programme. See Ibid, p. 72.

products were really comparable to a 'world standard' has been questioned, given that technology in the USSR fell short and information on Western products was often lacking.<sup>1572</sup>

### **Soviet Products and Consumers: Cars and Electronics**

In the West the 1960s the automobile market was heavily orientated towards the needs of the consumer, and more attention was paid to style and design. By contrast, cars manufactured in the USSR were viewed more in terms of their 'price competitiveness' and 'adequacy'. One of the most popular cars in the 1960s was the Soviet-designed and manufactured 'Moskvich', although the manufacturing expertise was purchased from the French-owned company Renault. The 'Moskvich' was considered by the Soviets to be equivalent to Western manufactured cars in terms of acceleration, tractability and top speed; it was also cheaper than Western equivalents of similar engine capacity.<sup>1573</sup>

Another popular car model was the 'Zhiguli' (Lada), which was based on product technology purchased from Fiat and manufactured in Tol'yatti at the Volga Automobile Factory (VAZ) in the early 1970s.<sup>1574</sup> The prototype for the VAZ 2101 and VAZ 2102 was based on the prototype of the Fiat 124, but several elements were modified to suit Soviet conditions. The Zhiguli was also exported with greater critical success than the Moskvich.<sup>1575</sup> By the mid-1970s there were more than

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<sup>1572</sup> Vladimir G. Treml, 'The Inferior Quality of Soviet Machinery as Reflected in Export Price', *Journal of Comparative Economics*, no. 5, part 2, 1981, pp. 200-21.

<sup>1573</sup> Hill and McKay (1988), pp. 71-2.

The UK Consumers' Association's claim that the Moskvich 412 had a number of faults was publicly refuted by the Managing Director of the importing company, and the magazine 'Izvestiya' also reported that owners of the Moskvich 412 in Britain had no complaints about the cars' quality. As a result of extensive tests carried out at the French state vehicle testing station in 1970, the Moskvich 412 was awarded an international safety certificate. A new model, the Moskvich 2140, introduced in 1975, addressed many of the problems of its predecessor. See Charles Cook, 'Recall of Russian Cars Urged after Safety Test,' London: *The Guardian*, 17<sup>th</sup> October 1973, p. 7; A.M. Tarasov, *Automobile Industry – National Economy (Avtomobilnaya Promyshlennost-narodnomu Khozyaistvu)*, Moscow: VNIITE, 1971, p. 52; Hill and McKay (1988), pp. 73-4; B.M. Petrova, "Muscovites", the Heroes of Automarathon - Cars on Parachutes' ("Moskvichi", Geroi Avtomarafona - Machini na Parachyutah'), *Journal Za Rulem*, no. 8, Moscow: Izd-vo DOSAAF, 1970, p. 7.

<sup>1574</sup> Meier (2011), p. 105.

In 1971 the Moscow factory combined forces with the new AZ factory at Togliatti to produce family cars. Neither firm needed to compete with each other in the domestic market since the demand for their cars always exceeded supply; however the two companies did compete on the international market. See Gronov and Zhuravlev (2010a), p. 135.

<sup>1575</sup> V. Yargin, 'The First-born of the Volga Automobile Factory' ('Pervinets Volzhskogo Avtomobilnogo Zavoda'), *Journal Za Rulem*, no. 8, Moscow: Izd-vo DOSAAF, 1970, pp. 4-6; Charles Cook (1973), p. 7.

5.5 million cars in private ownership in the USSR and 5% of Soviet households owned a car in 1975 compared with 2% in 1970. By 1980 car ownership was 10% of households and 15% in 1985.<sup>1576</sup> Nevertheless prices were set at a level to discourage all but the most affluent from owning a car.<sup>1577</sup>

Other popular Soviet export goods included refrigerators and cameras. The domestic refrigeration industry was established in the early 1950s. The industry saw sales increase by 35% per year and nearly 5 million units had been sold by 1973. By the mid-1970s, over 5.8 million machines were being produced each year, a level comparable to the USA, Japan and Italy.<sup>1578</sup> By 1984, 90% of homes owned a refrigerator. The most well-known and popular range, both in the USSR and internationally, was the 'Biryusa', which was first produced in 1964. The first Soviet refrigerator to receive the 'Mark of Quality' was the 'Biryusa-1' in 1970, and nearly 100% of the 'Biryusa' range, manufactured by the Krasnoyarsk Engineering Factory, received the mark.<sup>1579</sup> The 'Biryusa' range also provided the first Soviet electrical goods to be exported to Europe, namely Britain, who initially ordered over 20,000 units; it was also exported to Holland, Belgium and Ireland.<sup>1580</sup>

In the mid-1970s, the Communist Party (at the 25<sup>th</sup> Communist Party Congress, 1976) introduced important measures to improve the quality of consumer goods. In 1977 the percentage ratio of good quality products was 8.8%. However, in the electronic engineering sector this figure stood at 38%, and the automobile industry managed 36%. Other industries achieved much lower figures i.e. the consumer goods and food industries managed only 4.8% and 3.7% respectively,<sup>1581</sup>

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By 1975 the VAZ factory was producing 667,000 Zhigulis per year which was more than half of all the cars produced in the USSR. See Siegelbaum (2006), p. 89.

<sup>1576</sup> Siegelbaum (2006), pp. 89-90.

<sup>1577</sup> Ibid, p. 90. For example the VAZ 2101 cost RUB 5,500 in 1973 which was 3.5 times the annual workers wage. Surveys from 1978 and 1983 recorded that it took an average of eight years to save up enough to buy a new car.

<sup>1578</sup> Hill and McKay (1988), p. 93.

<sup>1579</sup> J.M. Cooper, 'The Civilian Production of the Soviet Defense Industry' in Ronald Amann and Julian Cooper (eds.), *Technical Progress and Soviet Economic Development*, London: Blackwell, 1986, pp. 31-50.

<sup>1580</sup> B.G. Mihaylov (et al.), 'Refrigerator: Experience and Production Problems - The Period of Big Reformation' ('Holodilnik: Obit i Problem Proizvodstva - Vremya Bolshoi Perestroika'), *ECO: Economy and Organisation of Industrial Production (EKO: Ekonomika i Organizatsiya Promishlennogo Proizvodstva)*, vol. 60, no. 6, Novosibirsk: Izd-vo 'Nauka', Sibirskoe otd-nie, 1979, pp. 33-42; Hill and McKay (1988), p. 95.

<sup>1581</sup> Leonid A. Kostin, *The Production of Consumer Goods: Social and Economic Aspect (Proizvodstvo Tovarov Narodnogo Potrebleniya: Sotsialno-ekonomicheskii Aspect)*, Moscow: Ekonomika, 1980, p. 86.

During the 1970s and early 1980s, products such as washing machines and TVs were owned by a significant number of households.<sup>1582</sup> However, in 1987 industrial consumer goods made up only 2.6% of total exports.<sup>1583</sup>

### **VNIITE and Design in the USSR**

That VNIITE evolved so quickly from a small industrial design bureau to an enormous, nationwide research and development institution is interesting, not least because after it had gained financial aid and widespread respect, it gradually became a bureaucratic 'ministry' of ergonomics, design, and quality control; as Azrikan asserts, VNIITE was, 'trying to rule all Eastern Bloc industry.'<sup>1584</sup> In 1965, there were eight specific design consultancies organised, controlled and directed by VNIITE, uniting around 2000 specialists; more than 160 designer groups worked at factories and engineering bureaus. In the three years since its inception, VNIITE had been given 6000 projects by the Special Design Office of Leningrad National Council.<sup>1585</sup> An important VNIITE event was the All-Soviet Design conference held from the 9<sup>th</sup> - 11<sup>th</sup> of June, 1965 in Moscow, where discussion primarily focused on the problems connected with introducing design into real life. Issues were raised concerning the fact that several directors only narrowly understood the role of the designer, thinking that he/she only had to add the final, decorative touches.<sup>1586</sup>

In an article for *Technical Aesthetics* in 1965, Soloviev argued that 'design' in the USSR had a special meaning, that it was about a particularly human future - the future of a communist society. Comparing Soviet with foreign products,

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<sup>1582</sup> Chernyshova (2013), pp. 186-88. In 1965 there were 32 TV sets per 100 families, but by 1981 this figure had risen to 95. By 1985 nearly 99 families out of 100 owned a TV set, and in urban areas 10% of homes owned 2 TV's. Furthermore in 1965 only 17% of people were able to store their food in a refrigerator, but 1980s some families owned two fridges. Around 33% of urban households owned a washing machine but by 1981 this figure had risen to 78%.

<sup>1583</sup> Vernikov (1989), p. 27. Fuels and electricity accounted for 46.5%, machinery and equipment made up 15.5%, and chemicals 3.4%. Looking at trade with developed market-economy countries, just 8.2% of Soviet exports were made up of finished industrial products.

<sup>1584</sup> Azrikan (1999), p. 65.

<sup>1585</sup> Soloviev (1965), p. 1.

According to Hutchings between 1962 and 1971 the staff employed by VNIITE increased from 2 to 1,800. Also in 1970 there were an estimated 4,000 specialists employed by design organisations. See Hutchings (1976), pp. 152-61.

<sup>1586</sup> Anonymous, 'The First All-Union Conference on Artistic Design' ('Pervaya Vsesoyuznaya Konferentsiya po Hudozhestvennomu Dizaynu'), *Technical Aesthetics*, no. 7, Moscow: VNIITE, 1965, pp. 1-3. Additionally, low wages failed to attract skilled, high-level professionals, and designers were often only allowed to work on graphic and packaging projects, or act as engineering assistants. New products were deemed 'old' due simply to their appearance. As Western manufacturers were updating the look of their products, the Soviet designers campaigned to do the same.

Soloviev noted that they still fell behind their Western rivals and were often overly decorative, to the exclusion of a scientific approach. Further, Soloviev believed that Soviet design did not consider the economics of maintenance, arguing that it was better for the product to be more expensive to produce if it paid for itself 'five times afterwards.'<sup>1587</sup> In this respect, Soloviev noted that the projects the SKB<sup>1588</sup> were not of great importance, not least because high-priority goods were being produced without the participation of trained product designers.<sup>1589</sup> There were no studios for designers at the factories, and Soloviev felt that this had to be addressed immediately: directors had to understand that space was needed in order to build up and test prototypes. Soloviev argued convincingly that SKB did not represent the only way to develop design in the USSR: 'Designers should be everywhere where a new product is being created.'<sup>1590</sup> New, immediate ways were needed to attract designers, and Soloviev campaigned for a society of artists to work for industry, and for courses to be organised for artists who wished to receive engineering knowledge.<sup>1591</sup>

In 1966 'The brief methodology of artistic design' was released, the first of its kind for design students in the Soviet Union. Design was also becoming more influential, largely due to a number of exhibitions, conferences and seminars.<sup>1592</sup> At around the same time VNIITE established a system to train staff to achieve higher level qualifications. Postgraduates took part in the work of the leading research and project groups, and three of these were formed to develop the theory and

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<sup>1587</sup> Soloviev (1965), pp. 2-3. 'Indeed, design – the science of taking care of a person – directly follows the program of our party. Products must not only be comfortable, aesthetically pleasing, reliable and economical – but they should also educate a person, making him/her proud of their socialistic country, its culture, science, its people who made all this.'

<sup>1588</sup> Soloviev (1965), p. 1; A. Antonov (1964), pp. 1-2.

Leningrad's central SKB worked and completed around 6,000 design projects between 1962 and 1965, including improving the appearance of products, making prototypes, increasing the production of household products, and other R&D work. In addition SKB helped increase the industrial output of the Leningrad economic region by 50% in the years from 1959 to 1965.

<sup>1589</sup> SKB worked in 3 main areas: designing heavy machinery industry and everyday goods for households; designing industrial interiors and surroundings; and fashion design. See Anonymous (1964), p. 1.

<sup>1590</sup> Soloviev (1965), p. 4. In fact, he argued for the development of a new SKB, beginning in Siberia and progressing to the larger centres in order to stimulate greater efficiency and higher competition in the foreign market.

<sup>1591</sup> Ibid, p. 6.

<sup>1592</sup> Kalinicheva, et al. (2009), pp. 219-20. There were also travelling exhibitions, such as the 1968 exhibition 'Artistic design in the USSR' in Poland and Belgium, which comprised of around 1000 exhibits. Moscow also welcomed design shows from GDR and Denmark (1968-1969).

methodology of design, namely: Methodologists; Architects and fine art experts; and Designers and ergonomists.

## Design and Ergonomics

The scientific foundation for studies of human work and activity were created within the framework of a single discipline - projective ergonomics.<sup>1593</sup> Ergonomics in capitalist countries tended to be associated with increased productivity and labour efficiency, but in socialist countries the emphasis was more on harmonious working conditions and job satisfaction.<sup>1594</sup> Early ground-breaking research in ergonomics in the 1920s and 30s was conducted by physiologists such as N.M. Dobrotvorsky, who focused on aircraft design, and Nikolai A. Bernstein (1896-1966), who worked on designs for production processes.<sup>1595</sup> But it was not until the 1950s that ergonomics began to be studied as a scientific discipline in its own right. In the late 1950s Soviet scientists were able to renew dialogue with fellow scientists in the international community, which led to progress in many areas, including ergonomics<sup>1596</sup> which became an important design issue in the 1960s and 1970s in the Warsaw Pact countries.<sup>1597</sup> In the Soviet Union, this embracing of

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<sup>1593</sup> 'Artistic Design in the USSR, 1968-1969' (*Hudozhestvennoe Konstruirovaniye v CCCP, 1968-1969*), Moscow: VNIITE, 1971, pp. 8-9.

<sup>1594</sup> Vladimir P. Zinchenko (et al.), 'Ergonomics - Its History, Subject, and Methodology' (in this except constitutes the first chapter of the 'Ergonomic Foundation of the Organisation of Labour' [*Ergonomicheskie Osnovy Organizatsii Truda*]), Moscow: Ekonomika, 1974), *Soviet Psychology*, winter 1974-75/vol. 13, no. 2, New York: International Arts & Sciences Inc. Press, 1975, pp. 34-53, esp. 51.

Ergonomics shared with design the goal of creating a comfortable habitat for people. 'The singling out of the "human aspect" in industrial design can be considered one of the most significant events in the development of modern design'. This approach took account not only of the physiological aspects of design but also the psychological aspects of the relationship between people and their surroundings. See Munipov (2010), pp. 143-44.

<sup>1595</sup> Vladimir Munipov, 'Applied Ergonomics in the USSR', *Applied Ergonomics*, vol. 9, no. 4, Guilford: life Science and Technology, Publications, 1978, pp. 215-22, esp. 215-16; Vladimir Zinchenko and Vladimir Munipov, *Fundamentals of ergonomics*, Moscow: Progress Publishers, 1989 (Originally published in Russian in 1979), pp. 37-41; Munipov Munipov, 'Ergonomics and Labour Protection in the USSR and the Common Wealth of Independent States-historical Landmarks and Present Status,' *International Journal of Industrial Ergonomics*, vol. 11, issue 2, 1993, pp. 153-61, esp. 155; Vladimir Munipov (et al.), 'The influence of Bartlett's Work on Soviet and Russian Ergonomics', *Ergonomics*, vol. 51, no. 1, London: Taylor & Francis, 2008, pp. 35-41, esp. 35.

<sup>1596</sup> Zinchenko, et al. (1975), pp. 34-6.

Although Soviet psychologists were aware of Bartlett, they had mainly used his works in the field of experimental psychology. The first USSR laboratory of engineering psychology was established in 1959 at Leningrad State University. See Munipov (1978), p. 216.

<sup>1597</sup> Vladimir Munipov, 'Psychological and Social Problems of Automation and Computerisation' in Darek Haftor and Anita Mirijamdotter (eds.), *Information and Communication Technologies, Society and Human Beings: Theory and Framework*, Hershey; New York: Information Science Reference,

ergonomics was heavily influenced by the work of British psychologist Fredric Charles Bartlett (1886-1969). In fact, VNIITE was established in 1962, the same year that Bartlett published his book *The future of Ergonomics*. VNIITE reintroduced ergonomics into the Soviet design industry<sup>1598</sup> by establishing an ergonomics department in 1962 which was led by renowned psychologists Vladimir Munipov and Vladimir Zinchenko. The department was very influential and most ergonomists working at VNIITE participated in the department's industrial design projects.<sup>1599</sup>

Ergonomics research at VNIITE was approached from two main directions: firstly, those involving the application of colour, form and space, and secondly through methods of orientating a person within the surrounding space of an object.<sup>1600</sup> In 1970, VNIITE began collaborating with specialists from Moscow and Leningrad Universities, and other organisations, on research in ergonomics. They disseminated scientific and methodological information via a series of magazines and books.<sup>1601</sup> VNIITE also collaborated with the 'Indian National Institute of Design' (NID).<sup>1602</sup>

Soloviev believed that if Russian designers did not use their physiological and psychological knowledge then they would not meet the needs of the people. The Soviet term for design, at this time was translated as 'technical aesthetics,' reminding us of the Marxist ethos of creating our life both materially and according

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2010, pp. 136-46, esp. 143. In 1968 a symposium entitled 'The Man and the Machine' was held in Varna and attended by leading figures from engineering, psychology and ergonomics.

<sup>1598</sup> Munipov, et al. (2008), p. 35.

<sup>1599</sup> Vladimir Munipov, 'Development of Theory and Practice in Ergonomics' in Christopher M. Schlick (ed.), *Industrial Engineering and Ergonomics: Visions, Concepts, Methods and Tools*, London: Springer Science & Business Media, 2009, pp. 455-68, esp. 457. In 1973, VNIITE's advanced lathe was presented to the Italian Utita Company and considered a triumph of industrial design and ergonomics. From the 1960s until the 1980s, designers and ergonomics experts worked together at the VNIITE as an effective team.

<sup>1600</sup> New materials (both native and foreign) were used, renewing State standardisations with the inclusion of plastics, paints, and artificial leather (Prototype of scooter M-175. Designed by the vehicle section of VNIITE, and the Industry Committee). See Azrikan (1999), p. 51

<sup>1601</sup> VNIITE published an ergonomic design journal in the early 1970s and also published a monthly journal, *Technical Aesthetics*, with a supplement, *Industrial Design Abroad*. See Hutchings (1976), p. 162.

<sup>1602</sup> I.L. McClelland, *The Development of Ergonomics in the National Institute of Design, Ahmedabad, India*, Loughborough, Leicestershire: Institute for Consumer Ergonomics, University of Technology, 1979, p. 3 and 10. During the period 1979-84 collaboration began between the Indian National Institute of Design (NID) and VNIITE, which was presented in a paper entitled 'Ergonomics - proposals for NID-VNIITE Cooperation'. A key point involved proposals to introduce ergonomics into design education and consultancy in India.



to aesthetic laws.<sup>1603</sup> From July 28 to August 1 1972, the first international conference on ergonomics in Moscow, during which the possibilities for international collaboration were discussed.<sup>1604</sup> The conference was organised by Vladimir Munipov, who had worked on ergonomic projects at VNIITE as well as helping produce ergonomic guidelines for the Council for Mutual Ergonomic Aid (CMEA).<sup>1605</sup> In the 1970s several ministries were involved in developing a national programme for ergonomics and industrial design that was intended to create optimal employee performance in the workplace and lay down high ergonomic and design standards for industry. VNIITE managed the design aspects of the project, while Munipov dealt with many of the ergonomic issues.<sup>1606</sup>

From the 1970s to the 1990s VNIITE published 39 ergonomic papers that were related to experimental psychology since this discipline was related to engineering psychology.<sup>1607</sup> VNIITE eventually established its own department of ergonomics which helped them to complete various ergonomic projects in the civil sector. Furthermore VNIITE helped increase the use of ergonomics in industrial design.<sup>1608</sup> During the 1970s and 80s ergonomics also became important in the defense sector, and a number of ergonomic design standards were established for military equipment. However the influence of ergonomics on consumer goods remained minimal due to a number of factors including a lack of materials and an absence of competition between manufacturers.<sup>1609</sup> Today much of the research into ergonomics has stopped in Russia, often because of a lack of funding. In

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<sup>1603</sup> Zinchenko, et al. (1975), pp. 50-1.

<sup>1604</sup> Kalinicheva, et al. (2009), pp. 232-33.

<sup>1605</sup> Vladimir Munipov, *Main Results of and Prospects for Scientific and Technological Cooperation of CMEA Countries in Ergonomic and Industrial Design Problems*, Moscow, 1981, VNIITE, Coordination Centre, CMEA.

The ergonomic projects that were collaboration between VNIITE and CMEA concentrated on four types of ergonomic standards relating to product quality. These standards were: 'basic' (which included human functions i.e. sensory, motor, etc.); 'functional' (the ergonomic needs of technical facilities, industrial products etc.); 'indices' (relating to chemical, biological and other environmental factors upon man); and 'ergonomic investigations' (relating to standards of investigative procedures). See Zinchenko and Munipov (1989), p. 277.

<sup>1606</sup> Waldemar Karwowski (ed.), *International Encyclopedia of Ergonomics and Human Factors*, vol. 3, 2<sup>nd</sup> eds. (first published 1993), Boca Raton; London: CRC/Taylor & Francis, 2006, p. 3458.

The programme was run in accordance with the principles of the CMEA programme (1976-1980) entitled Development of Science Based of Ergonomic Norms and Requirements. See Zinchenko and Munipov (1989), p. 56.

<sup>1607</sup> Munipov, et al. (2008), p. 35.

<sup>1608</sup> Zinchenko and Munipov (1989), pp. 55-6. From 1970 the magazine *Technical Aesthetics* (published by VNIITE) focused on human factors such as tools and the working environment.

<sup>1609</sup> V. Zinchenko (et al.) 'Methodological Problems of Ergonomics' ('Metodologicheskiye problem ergonomiki'), *Technical Aesthetics*, no. 12, Moscow: VNIITE, 1972, pp. 5-7; <http://ergo-org.ru/history-e.html>

addition when standardisation is applied to the production of ergonomic products the results are often unsatisfactory because of the time and costs associated with ergonomic products.

#### 4.2.4 Movements in Design during the 1970s and 1980s

By the mid-1970s, Soviet society was on the brink of collapse as the economy stagnated, and culture and science were in a state of decline.<sup>1610</sup> There were attempts at material stimulation but this failed partly because the quality of the goods was poor and consumers' opinion about the quality of goods and services was all but ignored. This failure led Soviet sociologists and economists to search for other means of increasing productivity.<sup>1611</sup>

##### 'Artistic Design'

Inspired by the 1975 ICSID Congress in Moscow, teachers and designers at VNIITE discovered an area of design that had long been neglected: the design of toys.<sup>1612</sup> Endorsed by the Soviet Artists' Group and developed under the umbrella term 'artistic design,' toy designs were meant to inspire public discussion and aid aesthetic education. The principal aim was to place more stress on the creative component intrinsic in design.<sup>1613</sup> The most famous proponent of this trend was Evgeni Rosenblum, whose book, *Artists in Design* (1974), spoke of the central importance of collective design expression and project work.<sup>1614</sup> Rosenblum's book brought to the Soviet Union a greater public sense of design, as well as a sense of the consumer as part of a certain group or demographic. Designers and architects

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<sup>1610</sup> Shilapentokh and Shlapentokh (1988), p. xi. Reportedly, this situation was well known to the political elite by the end of the 70s but did not become clear to the intelligentsia or masses until after Brezhnev's death when the media were able to disclose further information.

<sup>1611</sup> Ibid, pp. 9-15.

The growth in USSR from the late 1920s to the 1950s was due to higher accumulations of capital and participation in the workforce and could not be reproduced after 1970. Productivity need to be raised through technological change, however the Soviets lacked the natural resources and the technology to achieve this. See Nafziger (2012), p. 639; Michael Ellman and Vladimir Kontorovich (eds.), *The Disintegration of the Soviet Economic System*, London: Routledge, 1992, pp. 8-9.

<sup>1612</sup> Lavrentiev and Nasarov (1995), p. 110; B. Belikob, 'To Serve Man and Society: International Congress Designers' ('Sluzhit Cheloveku i Obshchestvu: Mezhdunarodnyy Kongress dizaynerov'), newspaper *Izvestiya*, no. 241, 13<sup>th</sup> October 1975, p. 5.

<sup>1613</sup> Ibid. 'The aesthetic appearance of toys was not a priority for Soviet designers - toys had to be functional and educational. See <http://www.realussr.com/ussr/funtime-with-soviet-playthings/>

<sup>1614</sup> He proposed that there were two principal design paths to follow: the scientific 'artistic construction,' and the construction of a work of art, based on the skill and expertise of the designer. See Lavrentiev and Nasarov (1995), p. 111.

wished to give the created object a sense of individuality and artistic merit that had been buried under socialist rhetoric, standardisation, and mass production. This new experimental vein in design inspired projects such as an underground cultural centre, a cosmos museum, and the reconstruction of the Deribasovskaia Street in Odessa.<sup>1615</sup>

## Design Education

In Soviet higher education, design was taught using a distinctive model. The ubiquitous design text book, *The Methodology for Artistic Design*, published by VNIITE in Moscow in 1978, cited the American designer Harold van Doren's book *Industrial Design* (1954), and the designer Tomas Maldonado (who taught at Ulm School of Design from 1954 to 1967), as examples of design aesthetics that were at odds with the Soviet way.<sup>1616</sup> The Soviet system was founded on the perception of design as 'a project activity participating in transforming the object world.' The conceptual emphasis in Soviet design, dubbed 'paper design', is clear.

The Methodology for Artistic Design also refers to a previously published VNIITE book, entitled *The Foundation Methods of Artistic Design* (1970), which enabled young designers and students to understand the 'methods of analysis, synthesis, estimation and classification of design', because 'a modern designer cannot work productively without the knowledge of economics, production and the consumer market. The collaboration with engineers, ergonomists and sociologists is crucial for the profession of design.'<sup>1617</sup> Throughout *The Foundation Methods of Artistic Design*, the stress is on process as opposed to product; on prototype and 'sample' as opposed to mass-produced finished objects.<sup>1618</sup>

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<sup>1615</sup> Ibid, p. 113.

Standardisation was believed to promote higher quality, reduced costs and reduced material consumption. See Hutchings (1976), p. 112.

<sup>1616</sup> The State Science and Technology Committee of the USSR (1978), p. 3.

Translated for the purpose of this book from Russian. The authors saw the American methodology as based on obsolescence and consumer drive. The German model was seen as equally unsuitable, due to its propensity to 'single out the scientific basis for organising the process of design.'

Ulm School of Design (HfG) was founded in the 1953 and was most influential design school after the Bauhaus. It combined pre-war functionalism with the consumerism that developed following WWII. See Aynsley (2009), pp. 178-79; Hillier (1998), pp. 165-66.

<sup>1617</sup> Soloviev, et al., ed. (1978), p. 3.

<sup>1618</sup> Ibid, p. 6. The introduction to the textbook concludes with the statement: 'the objective of design is to include engineering products in the world of human culture by creating cultural samples of industrial objects.' When the author visited VNIITE in the late 1990s, this textbook was still the standard issue book for students at post graduate level.

## Paper Design

Designs on paper comprised one design element of the new artistic experimentation during the 1970s. Young artists came together to create 'paper design', a movement which involved 'paper architecture' and the creation of models for cars, tractors, and furniture.<sup>1619</sup> In 1976, at the First Exhibition of young Designers in Moscow, the 'paper designers' displayed their work in public.<sup>1620</sup> Most exhibits demonstrated great originality and flair, as designers were given free reign to express themselves with a variety of materials and abstract, experimental ideas.

A second exhibition was held in 1978, entitled 'Design for a City.' Among the twenty-eight participants were ten architects, and the exhibition maintained that 'the architects are exhibiting designs, not products.'<sup>1621</sup> This tendency in the Soviet Union towards making paper models of design ideas, rather than the realisation of the ideas in tangible products, reveals a strong characteristic of Russian design that stems from a historical mix of austerity and utopianism.<sup>1622</sup> Paper architectural models were creative and frequently won acclaim at foreign exhibitions, but they were never considered by the state to be utilitarian enough to be built. However, the success of the exhibitions served to promote further passion for ideas and usable designs in the fields of artistic and industrial design.<sup>1623</sup> This began to change attitudes in the Soviet Union from the 1980s onwards. Design became increasingly geared towards individual human needs, as well as those of society as a whole.

Victor Sergey, the author of the textbook *Design Methodology* (1978) and designer at VNIITE during the 1970s, was a design pioneer and urged his graduate students to explore professional design with the idea of creating 'new values' in the

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<sup>1619</sup> Furthermore Paper Architecture became a medium for young architects, such as Aleksandr Brodsky and Iosif Utkin, to produce works influenced by 'architectural utopianism'. See Shvidkovsky (2007), p. 379.

<sup>1620</sup> Lavrentiev and Nasarov (1995), p. 116. The central theme of the exhibition was 'the apartment,' and several designers constructed paper models of furniture and interior decor.

<sup>1621</sup> Ibid, p. 119.

<sup>1622</sup> Lavrentiev and Nasarov (1995), p. 7.

<sup>1623</sup> Functional buildings like apartment blocks were often built hastily, and some architects believed that there was no need to consider the long term future as they were only building for the 'now'. Many of these new buildings were constructed on historical ruins which proved contentious among the public, but this style of architecture was firmly linked to the 'paper designs' in terms of its impermanence and insubstantial nature. See Andreas Schönle, *Architecture of Oblivion: Ruins and Historical Consciousness in Modern Russia*, DeKalb, Ill. : Northern Illinois University Press, 2011, p. 195.

conjunction of science and art.<sup>1624</sup> Seeing design as a movement which aimed to unite and perfect the human living environment, Sergey viewed product design as a problem-solving task, applying the Marxist-Leninist ideology that an 'artistic image is the reflection of objective reality.'<sup>1625</sup> The ethos of design at VNIITE during the late seventies is captured in Sergey's edict that design's task is not to create 'a lamp, but lighting; not a chair, but comfort; not a bridge, but a connection.'<sup>1626</sup> Interestingly, Sergey's conviction that design was involved with creating an abstract result rather than a concrete object was reflected in various workplace-environmental experiments that took place at VNIITE during the late seventies.<sup>1627</sup>

### **Western Influences on Soviet Design**

By the late 1960s and early 1970s criticism of the austerity of the Khrushchev era led to interior design being featured in magazines and newspapers and modern furniture being installed in public places such as cinemas.<sup>1628</sup> Immediately after Brezhnev came to power, Khrushchev's attitude to design was much discussed by designers and architects. The editor-in-chief of the journal *Decorative Art of the USSR (Dekorativnoe Iskusstvo SSSR)* argued that the rational nature of design under Khrushchev was a 'dead-end for artists' and neglected 'the sense of beauty that is natural to the majority of Soviet people.'<sup>1629</sup> In the previous decade, beginning in 1956, considerations relating to rationality, the economy, comfort and hygiene were put ahead of aesthetics. However by 1965 this style had begun to fall out of favour, with principles of home design such as minimalism, rationality and standardisation coming under criticism for being out of step with contemporary Soviet society. This signaled a new turn in social policy.<sup>1630</sup>

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<sup>1624</sup> Victor Sergey, *Design Methodology*, Moscow: VNIITE, 1978, p. 3.

<sup>1625</sup> Ibid, p. 6.

<sup>1626</sup> During the same year (1978), technological advancements were being made in computer engineering in the USSR. The magazine *Technical Aesthetics* published plans for improvements in 'small-scale' computer design in line with governmental plans for economic expansion. See Ibid, p. 11.

<sup>1627</sup> One such experiment involved the different effects on the worker of various levels of chromatic lighting. Among the effects monitored were emotional responses, and the speed and sequence of work performed. See 'Aesthetic level of the perception of lighting in Ibid, pp. 3-5.

<sup>1628</sup> S. Zemtsov, 'The New Interiors of Moscow' ('Novie Interieri Moskvi'), *Decorative Art of the USSR*, no. 9, Moscow: Soviet Artist, 1966, pp. 16-20.

<sup>1629</sup> Chernyshova (2013), p. 164.

<sup>1630</sup> Ibid, p. 165.

V. Glazychev in *Decorative Art of the USSR* in 1966 maintained that Soviet society contained different strata 'according to the level of, education, culture, professional prestige and so on' and that the standard interiors were unsuitable for the modern consumer who did not have standardised

During the Brezhnev era, the idea of the modern apartment began to develop in two ways. Firstly, individual spirituality was emphasised over standardisation and the home was seen as a refuge from the rationality of the outside world.<sup>1631</sup> The second development was the move towards greater individual autonomy, as residents were encouraged to take greater control over their living space. This contrasts with the 1950s and early 60s when residents were seen as responsible only for the décor of their residence.<sup>1632</sup> The concept of interior design in the Khrushchev era involved creating a socialist home and thereby forming a communist mentality in the residents' minds. However in Brezhnev's era, the residents' tastes and needs dictated the shape of the interior. Several films from the 1970s satirised the functionality and standardisation of Thaw era design.<sup>1633</sup> Behind this criticism of Khrushchev's aesthetics was an attempt to bolster the popularity of the new Brezhnev administration. Following the Khrushchev's era of de-Stalinisation the old Stalinist concept of the home was rehabilitated under Brezhnev.<sup>1634</sup>

Along with these developments in interior design, Soviet society was opening up to more diverse influences. The Soviet conceptualist movement was gathering pace and artists who were unwilling to work within the state-run (poster) art sector would gather together, record their discussions, document statements, and then often combine these records with other texts and visual images to create art. In Moscow in the early 1970s, two main groups represented Russian conceptualism;

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requirements. See V. Glazichev, "Like Everybody's" or Not "Like Everybody's" ("Kak vse" ili "Ne Kak Vse"), *Decorative Art of the USSR*, no. 5, Moscow: Soviet Artist, 1966, pp. 2-6, for the quotation from p. 5.

Further criticism of standardisation came from the furniture designer M.F. Ladur, who warned that standard apartments with standard furnishing would 'extinguish any trace of personal taste and choice.' Natalya quoted from V. Ribitskiy, "'What Furniture Makers is Worried About' - Discussion at The Architecture House" ("Chto Besspokoit Mebelschikov" - Diskussiya v Dome Arhitektorov'), *Decorative Art of the USSR*, no. 9, Moscow: Soviet Artist, 1968, pp. 33-7, esp. 35.

<sup>1631</sup> In 1968 the furniture designer V. Rybitskii declared that a dwelling must meet the need for 'space, isolation and tranquility for each person.' See Chernyshova (2013), pp. 165-66.

<sup>1632</sup> In addition the 1970s and 80s saw a return to Stalinist ideals in literature and cinema. In the 70s the greater autonomy given to residents meant that the authority of designers and architects decreased. A sign of this change in attitude can be seen in the Third All-Union Furniture Competition in Moscow in 1975. Not only was there a wide range of styles on display but an important criterion mentioned by commentators was the opportunity for individual choice. The austerity of the Thaw years was rejected and many of the exhibits featured ornamentation, for example decorative reliefs and folkloric patterns. See Chernyshova (2013), pp. 167-68.

<sup>1633</sup> For example the popular *The Irony of Fate, or Have a Nice Bath* and *A Sweet Woman* both released in 1976.

<sup>1634</sup> From descriptions of interiors in films and novels of the era the influence of the Khrushchev minimalist-functionalist style has disappeared. See Chernyshova (2013), pp. 171-72.

one group was more theoretical and fused literature and visual art, while the second concentrated on playfully deconstructing Soviet ideology and was influenced by US Pop Art.<sup>1635</sup> This reflected the changing political and social climate of the Soviet Union during the second half of the 1970s, which was characterised by significantly increased Soviet foreign trade with the west.<sup>1636</sup>

The improved relations with the West ensured that the 1980s saw even more influences impact upon Soviet society. Exhibitions such as The Mars Gallery Moscow exhibition in 1988 aimed at widening traditional concepts of art and design. Courses in experimental design were held at several art schools which also exhibited work under the auspices of the State Artists' Association. Such developments represented the change in political climate and revealed a curiosity for contemporary Western art, which helped Russian experimental art to emerge from private exhibitions successfully.<sup>1637</sup> Young designers renounced the old regime of soviet realism, searching instead for innovative creative methods. The spontaneous and explosive nature of their designs and output reveals a need for communication and expression that had been suppressed for a great length of time. Such events in 'experimental design' had pedagogical and demonstrative aims, and provided excellent opportunities for networking. Some of the collectively created projects provided responses to Western artistic phenomena such as Pop Art and Postmodernism. However, V.I. Puzanov observed that there was a difference between 'artistic and non-artistic actors'. He cited a speech by L.P. Monakhova in which she stated that art design grew from advertisers trying to make their products attractive to buyers. As such, advertisers hired artists to create posters showing their goods in the best light. Puzanov noted that as a consequence, some industrial designers declared themselves art designers, since there was no need to prove product quality if you were merely dealing with the

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<sup>1635</sup> Duzs (2003), p. 203.

From the 1970s to the 1990s, Russian conceptualism was preoccupied with clichés of totalitarian ideology. The stereotypes that the Soviet state incessantly bombarded its' citizens with later surfaced in the property and visual art of Russian postmodernism. Artists Ilya Kabakov and Eric Bulatov, and poets Dimitry Prigov, Lev Rubinshtein, and Timur Kibirov were the most popular conceptualists of the late Soviet and post-Soviet periods. See Mikhail Epstein, *The Transformative Humanities: A Manifesto* (translated and edited by Igor Klyukanov), New York; London: Bloomsbury, 2012, pp. 161-62.

<sup>1636</sup> Nove (1992), pp. 391-92.

<sup>1637</sup> The curiosity surrounding Western influence was not welcomed by everyone. In 1984 high-ranking politician Victor Mishin went so far as to equate the pursuit of Western trends with political treason. See Shlapentokh (1989), p. 142.

representation of it. This situation needed to be addressed before it became the norm.<sup>1638</sup>

#### 4.2.5 Changes in Design Policy and Practice

The advancement of Gorbachev to General Secretary of the Communist Party in 1985, the subsequent policies of Glasnost and Perestroika, and the final dissolution of the Union in 1991, all led to dramatic changes within the design sector. Some of these changes involved the attempt to emulate design successes in the West.<sup>1639</sup> In 1985, 1986, and 1987, VNIITE ran seminars on 'Experimental Design'. These seminars addressed topics such as: Colour and light, structure and form, and dynamic and kinetic forms respectively. Additionally, separate design councils were set up across the republics. New company laws set up in 1987 meant that factories and companies had more civil rights and opportunities with regards to design innovation and production.<sup>1640</sup> Following the laws of free enterprise, and inspired by foreign equivalents, several small and medium private enterprises were founded during the 1980s,<sup>1641</sup> and a new era of Russian design emerged. Consumers had more choice, and Russian design traditions were largely forgone in the interests of modernisation.<sup>1642</sup>

Designers in the 1980s had the opportunity to work on a freelance basis if they wished. In the summer of 1987 (the same year that the Association of Russian Designers was founded), several exhibitions held around the Soviet Union promoted the design traditions and innovations of Western and Eastern countries, and it was now relatively easy for Russian designers to travel to congresses all over the world. Large-scale exhibitions were organised by the Committee for Science and Technology in the USSR, demonstrating the latest designs and

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<sup>1638</sup> V.I. Puzanov, 'Design in Movement: Who is Going Where' ('Dizayn v Dvizhenii: Kto Kuda Iyot'), *Technical Aesthetics*, vol. 337, no. 1, Moscow: VNIITE, 1992a, pp. 3-6.

<sup>1639</sup> In 1989, especially, the design department of the Tula mechanical engineering plant produced five prototypes of a motor scooter with ample leg room and ameliorated suspension on old unpopular models. With the dissolution of the USSR, it is unclear whether this scooter was produced or not; no documentation could be found.

<sup>1640</sup> Lavrentiev and Nasarov (1995), p. 173.

<sup>1641</sup> Ibid, p. 135.

<sup>1642</sup> An example of a successful Soviet product in the 1980s was the LOMO camera. This was first mass-produced in 1984, and became quickly popular due to the fact that it was compact, light and affordable. However after 1991 it could not compete with cheap Asian imports, and was eventually discontinued. See Idov, ed. (2011), p. 202.



technologies from around the world.<sup>1643</sup> In April 1989, the Moscow Council was founded; and in 1991, very soon after the Soviet Union dissolved, the Russian Design Council came into being, not least to reinforce Russian hopes for industrial development.<sup>1644</sup>

### **The 1990s and into the 21st century**

After the collapse of the Soviet Union, Russia had to learn to live without the familiar world of state planning and one-party control which had lasted for seventy years. The early 1990s saw Russian design both thrive and fail. Poor production conditions still impeded quality; many products were uncompetitive on the international market, with the market breakdown in Eastern Europe exacerbating this problem.<sup>1645</sup> With the disbanding of the Council for Mutual Economic Aid in 1991, economic ties between former Soviet States were subject to regulatory free market laws. Russian industries had to deal with new challenges. In particular, the core business of the Soviet automotive industry had been heavy duty trucks, but this market declined dramatically, and the market for locally made luxury cars could not compete with foreign manufacturers.<sup>1646</sup> However, these setbacks were not necessarily a reflection of poor craftsmanship or questionable work ethics. Sergei Alashev, in his examination of life in a ball bearings factory in Russia just after the fall of the Soviet Union, argued that Russian workers improvised in the face of material shortages and unreliable equipment. He even documented attempts to rationalise production methods, which were underpinned by incentives such as reward schemes and recognition in the form of certificates. Workers became extremely adept at repairing machinery, and on occasion, they designed new equipment which was more efficient than the government issued equivalent.<sup>1647</sup>

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<sup>1643</sup> Lavrentiev and Nasarov (1995), p. 137.

<sup>1644</sup> Crowley (2008b), p. 141. Although the majority of designers and architects embraced the move towards modernisation, small groups of dissenters still clung to an older style. One important aspect of their aesthetic was the continued recourse to surrealism, especially in poster art.

<sup>1645</sup> Lavrentiev and Nasarov (1995), p. 144.

<sup>1646</sup> Gustafson (1999), pp. 55-6 and 178; 'Advertised at the 1995 Moscow Automotive Salon as "Perfect for Three People and Two Cows."' *Kommersant-Daily* (31 August 1995), p. 10. One manufacturer that responded effectively to the new market challenges was GAZ, the manufacturer of the Volga car: popular demand for the Volga saw production numbers rise from approximately 70,000 in 1990 to 120,000 by 1995. Building on its success, GAZ invested in new technology to develop the Gazelle, a light truck, which also became very popular as it filled a gap in the home market for a low cost, short haul vehicle appropriate for small businesses.

<sup>1647</sup> Sergei Alashev, 'On a Particular Kind of Love and the Specific Soviet Production' in Glenn Adamson, ed. (2010), pp. 287-96.

After 1991 the majority of factories were closed, and Russian production was minimised. Thousands of jobs were lost, and design industries suffered as a result. Design practices were limited to smaller, more individual pursuits since no real wider industry was allowed to thrive.<sup>1648</sup> Consequently, design industries based on craft and studio work (for example, fashion and furniture) have managed to stay alive, not least due to the passion and talent of Russian designers working in adverse conditions for the last two decades.<sup>1649</sup> Other creative industries had also faced problems during the 1990s. A 40% cut in state funding for cultural activities between 1991 and 1997<sup>1650</sup> increased the need for profit. The free market had led to a rise in demand for popular culture such as cinema and broadcasting. Marketing cultural goods suddenly became important after the fall of communism. However during communism Russia did not have widespread means to inform consumer choice (such as critical debate, advertising, and magazines) and the new creative industries had to embark on a steep learning curve if they were to survive.<sup>1651</sup> In the post-Soviet era the improved legal situation meant that consumers were able to exercise their consumer rights to a higher degree than previously.<sup>1652</sup>

Design in Russia and the former Soviet Union had traditionally not played an important part in society. In the shortage economy of the Soviet years, consumers paid scant attention to design. Producing products in large volumes under set specifications to enhance efficiency left no room for worrying about the design needs of consumers. This has changed since the late 1990s as a wider range of products available to consumers has led to industrial companies taking their requirements more seriously, leading to a rapid increase in Russia's design industry.

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<sup>1648</sup> Of the studios outside the control of the VNIITE, Dmitri Azrikan's was perhaps the most well-known. He assembled a group of designers and created projects which were modern alternatives to traditional Russian design. See Gustafson (1999), p. 147.

<sup>1649</sup> Indeed, when the current author visited Russia in the 1990s he saw first-hand the paucity of practical opportunities for design ideas to grow and flourish. In 1996 and 1997 the author worked closely with the director of VNIITE, Lev A. Kuzmitchiov in helping to forge international relations between Korea and Russia (between KIDP and VNIITE). Kuzmitchiov's chief dilemma seemed to be funding – the state funding of all design outfits was insufficient, and budgets consequently did not stretch to investing in new promotional or educational tools. When the author attended the annual Russian Design Award exhibition at Moscow in 1996, the design award was given to Sukhoi, a state-owned military aircraft manufacturer. Even as we enter the second decade of the 21<sup>st</sup> century, the Russian government continues to disregard the importance of funding the design industries.

<sup>1650</sup> Linda Moss, 'Encouraging Creative Enterprise in Russia' in Henry, ed. (2007), pp. 142-58, esp. 144-49.

<sup>1651</sup> Today advertising in Russia is often slick and stylish, and the creative industries have learnt to effectively inform consumer choice. See *Ibid*, pp. 156-57.

<sup>1652</sup> Chernyshova (2013), pp. 202-05.

Following the economic collapse in 1998, the economy once again grew,<sup>1653</sup> largely aided by the increase in oil prices. With disposable income again available, the Russian automobile market quickly became one of the fastest growing in the world.<sup>1654</sup> Currently, Russian consumer behaviour reflects its restrictive past as well as its unreliable present. The consumer is typically impulsive, attaching great importance to brands and product quality. Nevertheless, much of product design in Russia during the 1990s remained influenced by traditional societal values, which were perceived as favouring spirituality over materialism, and collectivism over individualism.<sup>1655</sup> By the end of decade however these values appeared to change several times, and the shift is now firmly towards materialism and pragmatism.<sup>1656</sup>

Countries without an abundance of natural resources have tended to focus on manufacturing in order to grow their economies. In general in the 20<sup>th</sup> century countries that have possessed a strong economy and/or a manufacturing base have had a significant interest in design which in turn led to advancements in this sector. However as we have seen whereas countries like Britain and America (both of which have natural resources and a strong manufacturing base) have seen advancements in the design of consumer goods, the Soviet Union did not. One of the reasons for this is that the Soviet Union failed to take inspiration from Russia's cultural past. Even today this situation still exists. If the government were to offer more support to the country's cultural and creative industries, including design, it would mean that Russia would not be so dependent on the sales of natural resources. By referencing the country's heritage more often Russian design can help to establish a more distinctive Russian design identity. This in turn could

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<sup>1653</sup> The 'wild nineties' nearly ended in disaster with the devaluation of the Rouble in 1998, but by the winter of 1999 the economy was recovering. See Gustafson (1999), p. xi.

<sup>1654</sup> In 1991 there were 0.6million registered cars in Moscow which rose to 3.5 million in 2006. In Russia as a whole car ownership was 75 per thousand inhabitants in 1993 and by 2003 were 150 per thousand. The total number of cars was 11 million in 1992 and 25 million in 2003. See Siegelbaum (2008), pp. 253-56.

A European Bank report on the automotive industry in Russia states that the industry grew in value terms '14% year on year in 2005, 36% in 2006, and 67% in 2007.' However, the declining trend of sales of Russian produced cars continued. In 2007, sales of new foreign imports accounted for 43% of the car sales market, predicted to increase to 8% by 2010.

See <http://www.ebrd.com/downloads/research/economics/auto.pdf> (last accessed 11.05.2012).

<sup>1655</sup> Asta Salmi and Elmira Sharfutdiniva, 'Culture and Design in Emerging Markets: The Case of Mobile Phones in Russia,' *Journal of Business & Industrial Marketing*, vol. 23, no. 6, 2008, pp. 384-94, esp. 384-85.

<sup>1656</sup> In the past over-consumption was regarded by Russians as a bad thing, if not completely sinful. This derives in part from a religious mentality and the necessity of being thrifty in times of shortages. See *Ibid*, pp. 385-90.

improve the worldwide demand for Russian goods, thereby strengthening the economy.

## 4.3 Design Practice of Korea

### 4.3.0 Introduction

In order to understand the history of Korean design between the 1960s and the 2000s, one has to consult a publication by KIDP entitled 'A 40 Year History of the Korean Design & Packaging Center'.<sup>1657</sup> This is because it is the only book recording design promotion activities in Korea from 1960 until the 2000s, although some articles about design activity in Korea between 1950-1960 still exist.<sup>1658</sup> During most of the 20<sup>th</sup> century, the stages of design development and promotion in Korea closely mirrored the development and promotion of the manufacturing industry which has existed in Korea since the late 19<sup>th</sup> century. The close connections between design and everyday life were shown in a special exhibition at the 'Gwangju Biennale 2005' by the curator, Kim Sang-gyu.<sup>1659</sup> Though somewhat fragmentary, it was a new approach and a positive attempt to understand the relationship between design and consumers in socio-cultural contexts.<sup>1660</sup>

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<sup>1657</sup> Also see KDPC (ed.), *20 Years' History of The Korea Design & Packaging Center (Hanguk Dijain Pojang Centeo 20 Nyeon-sa)*, Seoul: KDPC, 1990.

<sup>1658</sup> Park Am-jong published the 'History of Korean Design 1895-1995' serially in a monthly magazine *Design*; this was based on historical records which he collected personally between 1895 and 1996.

He classified the historical flow of Korean design into various stages, namely the beginning (end of 19C-1945), confused (1946-65), promotion, growing and leaping stages (after 1988-1995). See Park Am-jong, 'A Century of Korean Design-1 (Hanguk Dijain 100 Nyeon-sa-1),' *Design Monthly*, vol. 206, Seoul: Designhouse published, 1996, pp. 116-67, esp. 117.

The view of most other influential researchers on these stages and periods was not appreciably different to Park's. The *30 years' history of Korean design promotion* published by KIDP classified design promotion activities in Korea into these stages: the handcrafts renaissance (1950~1959); art exports (1960~1969), design & packaging promotion (1970~1979), good-design recognition (1980~1989), design industry development (1990~1999), and design globalisation promotion stages (2000~). See Park, ed. (2002).

<sup>1659</sup> Park Hae-chun (ed.), *Design in Korea: Industry, Culture and History (Hanguk-ui Dijain: Saneop, Munhwa, Yeoksa)*, Seoul: Sizirak, 2005.

<sup>1660</sup> This new approach was emphasised by Kim Chong-gyun in the publication *Korea design history* (the first history of design publication in Korea). He classified Korean design history according to periodical divisions such as 1945-1950: the formation of modern Korean design; 1960-

Western design ideas were introduced to Korea through the books *History of Modern Design: From the Industrial Revolution to the Bauhaus* (1983) by Gwon Myung-gwang and Myung Seung-soo,<sup>1661</sup> and *Industrial Design 150 Years: 1830-1980* (1991) by Jung Si-wha.<sup>1662</sup> The 1950s saw the growing influence of US culture on Korean design. From the 1960s to the 80s, South Korea imitated or borrowed techniques and designs from more advanced countries in order to develop industry, and to dominate in its rivalry with the communist North. The adoption of the 1960s dictum 'modernisation of the fatherland - work and fight at the same time' was considered the only way South Korea could compete with North Korea, which was superior to the South both in terms of its economy and military strength.

North Korea as opposed to South Korea understood the power of design due to its economic success in the 1960s. Indeed in 1966, North Korea published *Light Industry and Industrial Art*, a seminal book about industrial art (design). It contains a lucid description of the concept of design, insisting that products should be aesthetically beautiful, functional, and useful in everyday life. It also encouraged industrial designers to be responsible to the public and to explore their creativity when designing products.<sup>1663</sup> Despite this, everyday products were still poorly made just like in the Soviet Union, as the emphasis throughout the 1970s was on producing propaganda such as posters and architecture that reflected the country's competition with South Korea. Furthermore there was, and still is, a lack of material to produce quality products meaning good design ideas often fail to come to fruition.

### **Industrialisation and Beyond: From Imitation to Innovation**

During the 1960s and 1970s rapid industrialisation led to South Korea producing many OEM goods, as well as making products by imitating or borrowing

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70s: modernism and Korean-style design; 1980s: globalisation and Orientalism; and 1990s: post-modernism and industrialisation of culture. See Kim Chong-gyun (2008).

<sup>1661</sup> Gwon Myung-gwang and Myung Seung-soo, *History of Modern Design: From the Industrial Revolution to the Bauhaus (Gunde Dijainsa: Sanup Hykmyung-eseo Bauhaus-gaji)*, Seoul: Mijinsa, 1983.

<sup>1662</sup> Jung Si-wha, *Industrial Design 150 Years: 1830s-1980s (Sanup Dijain 150 Nyeon: 1830 Nyeondae -1980 Nyeondae Dijainsa-ei Juje)*, Seoul: Mijinsa, 1991.

<sup>1663</sup> The Research Department for National Light Industry Product Registration and Exhibition of Industrial Art (Kukka Kyonggongop Wiwonhoe Chepum Tungnok mit Chollamgwan Sanop Misul Yongusil) and The Book Department of the Food Industry (Singnyo Kongop Toso Pyonjippu), eds., *Light Industry and Industrial Art (Kyonggongop-kwa Sanop misul)*, Pyongyang: Kyonggongop Chulpansa, 1966, pp. 2-4. In this book, the concept of design was described in terms of the Japanese word 'Doan', as it had also been in South Korea.

technology and designs from advanced countries.<sup>1664</sup> This was due to Korea's lack of technology, raw materials and design experience. However, from the mid-1960s onwards the Korean government began making great efforts to improve the standard of the country's science and technology in order to boost Korea's economy, especially in the area of exports. Until the mid-1970s however, many home appliances and cars were manufactured using imported materials or parts from Japan. In response to the over-reliance on imports, the government constructed the Gumi Electronic Industrial Estate in 1971 (these industrial towns were built all over the country until the middle of the 1980s), which in turn stimulated exports. Although industrialisation improved the living standards in urban areas, the 'Saemaul' Movement (New Community Movement), launched in 1971, aimed to improve the living environment of rural areas.<sup>1665</sup> The government also promoted the HCIs from 1973, which enabled Korea to supply materials and parts to domestic manufacturing firms. As a result, Korea achieved USD 10 billion in exports in 1977 (this represented 1% of global exports at that time).<sup>1666</sup> The world called this achievement the 'miracle of the Han River' and it was influenced by Japan and Germany's successful post-war rebuilding strategies.<sup>1667</sup>

The Korean OEM system was developed during the 1960s and 1970s and involved large foreign companies subcontracting production to smaller Korean firms. In the first half of the 1980s there was a large increase in private research and development investment which had accounted for a mere 0.21% of gross

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<sup>1664</sup> Nafziger (2012), p. 60.

For example Goldstar, influenced by western designs, produced home appliances including a radio in 1959, fan (1960), refrigerator (1965), black-and-white TV (1966) and a washing machine (1969); all of these were produced for the first time in Korea. See LG Electronics, *LG Electronics 50-Year History, 1958-2008: The People Company, vol. 4, English edition*, Seoul: LG Electronics, 2008b, pp. 26-9.

<sup>1665</sup> Joh, et al. (2010), pp. 191-96; Han Do-hyun, *2011 Modernisation of Korea's Development Experience: The Successful Cases of the Korea's Saemaul Undong (New Community Movement)*, Ministry of Strategy and Finance (MOSF), Republic of Korea (Government Publications Registration Number 11-1051000-000248-01), 2012, p. 10; Kim and Kim (1997), p. 26.

During the 1970s and 1980s, the movement focused on agricultural infrastructure, with the aim of increasing income so that people were able to stay in rural areas. In the 1990s the aim was better quality of life and the pursuit of globalisation through the implementation of environmentally-friendly policies. Since the 2000s, the focus has been on social and ethical issues.

<sup>1666</sup> Koh Young-sun (2010), p. 21. While 'Catch-up the West' was a Slogan of Japan After the Second World War, Korea coined a slogan 'Catch-up Japan' after the Korean War.

<sup>1667</sup> For example, Japan managed to instill a spirit of 'sacrifice in service of the nation' among its population, and Germany was renowned for preventing waste both in industry and in the home. See Sheldon Garon, 'The Transnational Promotion of Saving in Asia: "Asian Values" or the "Japanese Model"?' in Garon and Maclachlan, eds. (2006), pp. 163-87, esp. pp. 172-73.

national product (GNP) in 1980, but which had risen to 1.17% of GNP in 1985.<sup>1668</sup> In addition this period saw more Chaebols adopt an OBM strategy to replace their former OEM practices. In the late 1970s some Korean firms had begun to produce their own original products (for example Samsung introduced their own microwave oven in 1978 and LG their own colour TV in 1976). This trend continued into the 1980s and as such the decade can be seen as a transition period in which Korean industry laid the foundations for future growth. From the mid-1980s onwards the situation within Korea continued to change, as companies felt the strain of increased prices and wages but not increased payment for the goods they produced.<sup>1669</sup> Despite this, the Korean design sector was still principally focused on manufacturing imitative products for the international market.<sup>1670</sup>

By the mid-1990s, many smaller OEM companies also remodelled themselves as ODM companies, engaging in their Original Brand Manufacturing (OBM). Furthermore, companies that had already engaged in OBM became more creative with their own designs. These companies manufactured and distributed their own goods, carrying out their own R&D.<sup>1671</sup> However, many companies still relied on OEM.<sup>1672</sup> Since the late-1990s, Korea has relied more on its own technology as opposed to that which has been developed elsewhere. One reason for this shift is the creation of government financed technology research institutes aimed at encouraging development in key industries.<sup>1673</sup> This resulted in an increasing number of Korean companies developing their own in-house technology.

#### **4.3.1 Modern Society and the Influence of Western Culture**

After Korea was liberated from Japanese imperialist rule in 1945,<sup>1674</sup> the nation's design culture began to change radically. Whilst Korea was still under U.S military administration, the country was unavoidably and directly affected by western

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<sup>1668</sup> Lee Won-young (2000), p. 271.

<sup>1669</sup> If the companies had been producing their own products they may have had more chance of survival, but there had been a philosophy of 'short-termism' in most companies; they had thrived on the income from the manufacture of OEM products whilst it was there but had no longer-term plan or strategy.

<sup>1670</sup> Yu Ho-min, 'Industrial Design and Compleitive', *The Korea Economic Daily*, 15<sup>th</sup> February 1995.

<sup>1671</sup> Di Maio (2009), p. 133.

<sup>1672</sup> For example in 1996 Korean electronics firms OEM involvement stood at 39.2%, with technology imports at 10.6%, joint R&D at 10.2%, joint ventures at 12.8%, and other types of business arrangements making 27.2%. See Cyhn (2002), pp. 29-94.

<sup>1673</sup> Kim and Koh (2010), pp. 111-12.

<sup>1674</sup> Any good history book can tell you about the liberation of Korea from Japanese Imperialism. Korean perspectives include: Palais (1998); Sin Yong-ha (2000) and Kim Young-soo, et al. (1983).

cultural influences. Korea accepted and welcomed American aid, as well as magazines, chocolate, cigarettes, chewing gum, sweets and packaging, which inevitably led to the U.S. playing an important role in Korean culture and packaging design.<sup>1675</sup> However, the KHDC, as outlined in the previous chapter, made important contributions to the development of the design industry,<sup>1676</sup> and to design education during the late fifties and early sixties. From 1958 to 1960 six Koreans (artists, craftsmen and designers) had the opportunity to visit the United States for a year.<sup>1677</sup> This visit was funded by the ICA and enabled the Koreans to learn various design skills. They returned to teach modern design to a new generation at educational institutions and the workplace.<sup>1678</sup>

### **The Role of Technology and Design R&D in Korea's Economic Success**

From the mid-1960s onwards, the Korean government began to invest in the country's industry and exports sector. It established the KDPC to support design, and KIST to support science and technology. However, during the 1970s and 1980s the 'National SMEs Design Consulting Programme' conducted by the KDPC under the direction of MTI was the only design support available to SMEs. As the MTI only had a limited budget available, the programme had insufficient coverage. The KDPC's designers, together with a number of professors they had selected from universities, played a key role in the design consulting programme. This programme included a mere 30 designers working in the field of product design, and 20 in the field of graphics and packaging design.<sup>1679</sup> In the 1970s, the success of products like the Pony produced in 1976 by Hyundai<sup>1680</sup> made Korean firms

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<sup>1675</sup> Park, ed. (2002), p. 7; Sin Yong-ha (2000), p. 14.

<sup>1676</sup> The center promoted the design and traditional craft of textiles, a key export for Korea. During the fifties and sixties, at a time when steel, shipbuilding, auto and electronics industries were yet to confront the challenges of industrial adjustment, the cotton spinning industry was among the first on the peninsula to modernise its machinery and production practices. See McNamara (2002), p. 24.

<sup>1677</sup> Min Cheol-hong and Kim Cheong-sook were the designers in 1958, while in 1959 it was Kwon Sun-hyung and Bae man-sil. Also Lee Jung-hoon and Kim Ik-young in 1960.

<sup>1678</sup> Park, ed. (2002), p. 6.

<sup>1679</sup> Park Han-yu, who was working in Germany in the 1970s following graduation from Ulm University, worked as a design promotion director in the *KDPC* and played a pivotal role for local and foreign designers who participated in the project, especially during the 1980s and the early 1990s.

<sup>1680</sup> Hyundai hired George Turnbull to help them develop the Pony. Turnbull had formerly been employed at British Leyland in the 1970s and had worked on the Morris Marina. His experience coupled with parts from Mitsubishi and the Ford Cortina, as well as a hatchback design from 'Ital Design', helped the Pony become a success. See Betz, et al. (2014), p. 118.

Italdesign is owned by Giorgetto Giugiaro. After designing the Pony in 1974 he designed many other Korean brand cars for Hyundai such as: the Pony Coupe ('74), Stella ('83), Presto, Pony



realise the importance of technology and design R&D<sup>1681</sup> and encouraged other companies to make their own brand products and invest in their own technology. This represents the beginning of Korea's move away from mainly producing imitative products to the production of their own goods based on Korean design and technological advancement. Hyundai created an in-house design department in 1977, with four designers and developed the 'Sonata' in 1988, which was the first ever 'Korean designed' car.<sup>1682</sup>

Another successful area of Korean-designed technology is the semiconductor. This industry made great strides in the mid-1980s after large investment by the government and Chaebols.<sup>1683</sup> Technical and product design innovation in the semiconductor field has made Samsung one of the leading electronics companies in the world. In 1994, as part of a government initiative to create a national telecommunications infrastructure, efforts were made to build a high speed broadband network.<sup>1684</sup> Technological developments such as these led to an increase in R&D investments, which in 1997 rose to 2.4 percent of GDP. Around 70-80 percent of this R&D investment was provided by the private sector, which

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Excel ('85), Sonata ('88). In addition he designed several cars for Daewoo Motors, including: Bucrane ('95), Lanos Notch ('96), Lanos Hatch, Leganza ('97), Matiz ('98), Magnus (2000), and Lacetti (2004). See Car Life, Apr.2000; [http://www.italdesign.it/dinamic/gallery/gallery\\_results.php](http://www.italdesign.it/dinamic/gallery/gallery_results.php) (last accessed 16.06.2010).

<sup>1681</sup> During the 1970s, Hyundai used technology from a variety of foreign countries including Italy, UK, Japan and the US. For example its Excel car was based on a Mitsubishi design. The Excel was exported in large numbers to countries including the US, thereby competing with Japanese manufacturers, but only in a narrow product and price range. This strategy of competing with Japan in 'narrow' fields proved successful for Hyundai. See Dicken (1992), pp. 286 and 305-06; Nelson (2000), p. 94.

In 1970 R&D expenditure stood at USD 22million (KRW 11billion) but by 1980 this figure had risen to USD 265 million (KRW 212 billion). This expenditure continued to rise, for example in 1990 the figure stood at USD 3.3 billion (KRW 3,345 billion), and in 2003 it has reached USD 19 billion (KRW 19,069 billion). See Ahn and Mah (2007), p. 369.

<sup>1682</sup> Hyundai started to develop its own engine technology further by signing an agreement with the British car company *Ricardo* in 1984, and finally succeeded in developing the 'Alpha' engine in 1991, as its first indigent engine. See Betz, et al. (2014), p. 120.

<sup>1683</sup> Samsung's commercial production of 64K DRAM chips began in 1984, while Hyundai Electronic and Goldstar began producing the chips in 1985. Samsung developed the world's first 64Mb DRAM in 1992, and the memory semiconductor field became Korea's leading industry. See Shin Jang-sup (1996), pp. 128-29; 'The 40<sup>th</sup> Anniversary of Samsung Electronics Semiconductor, History of Challenges and Myths,' newspaper *Seoul Economic Daily*, 29<sup>th</sup> October 2009; Shin Jang-sup and Jang Sung-won, *Research on the Secret: How Samsung has created the World's Best Semiconductor*, Samsung Economics Research Institute, 2006, p. 123; Michell (2010), p. 23.

<sup>1684</sup> Jin Dal-yong (2011), pp. 175-76. A broadband service was first introduced to Korea in 1998. Consumers rapidly bought internet connections for their homes, and by late 2002 over 70% of households had a high speed connection compared with 50% in Canada, 23% in the US, and 11% in the UK. By late 2008 95% of Korean household had high speed broadband.

contrasts sharply with previous eras when the government funded most R&D.<sup>1685</sup> Korea's success in the ICT sector was the result of fast and aggressive R&D investment, as well as significant government funding. Furthermore, in the early 1990s, the government put in place strategies to prepare for the inevitable changes that globalisation would bring. The KIDP ran a media campaign promoting the importance of design. It also offered companies, especially SMEs, practical assistance in the form of a consultancy programme that worked on original designs. In 1993 the government began a design promotion drive, for which the KIDP was chiefly responsible. The Chaebols also increased their investment in design, which would pay dividends later.<sup>1686</sup>

### 4.3.2 Industrialisation and Beyond

Korea's manufacturing industry during the sixties and seventies can be roughly divided into two sectors. The first of these was led by big businesses such as Samsung, Goldstar, Daewoo and Hyundai, which were nurtured by the government following the Japanese model of enterprise.<sup>1687</sup> The second was a manufacturing industry subordinate to a large-scale international subcontracting system.<sup>1688</sup>

### Development of the Motor Industry

In 1957, Kia Industry began to produce bicycles and motorcycles, followed by trucks in 1962.<sup>1689</sup> The first Korean passenger car, the Sibal, was produced in

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<sup>1685</sup> Kim and Koh (2010), p. 113. This was reflected in the number of private research institutes that existed in 2000, which had risen to 7,100, up over 6,000 from the total in 1990. Such figures confirm that by the late 1990s the Korea private sector was driving technological development in the country. This trend continued into the 2000s, for example in 2009 Samsung had 42,100 employees working in the R&D area. See Park and Hong (2012), pp. 70-1.

<sup>1686</sup> In 2008 Korea had achieved an impressive 46.5% share of the global LCD market, and in 2009 it was the second largest producer of mobile phones. In the same year it held the third largest market share in the global semi-conductor market. Korean companies such as Samsung had laid the foundations for their success by anticipating the rapid rise of the PC industry, which meant they were quick to focus on developing LCDs, semiconductors and mobile phones. See Kim and Koh (2010), pp. 113-14.

<sup>1687</sup> Kim En-mee and Park Gil-sung, 'The Chaebol' in Kim Byung-kook and Ezra F. Vogel (eds.), *The Park Chung-hee Era*, Harvard University Press, 2011, pp. 265 -94; Heo Uk and Terence Roehrig, *South Korea Since 1980*, Cambridge University Press, 2010, pp. 80-1; Mitchell and Schoeffel, eds. (2003), p. 66.

<sup>1688</sup> Stern, et al. (1995), p. 154.

<sup>1689</sup> Kia Motors, *Kia 50 Years Story (Kia 50 nyun-sa)*, Seoul: Kia Motors, 1994, pp. 155- 6. In 1944 'Kyung Sung Jung Kong' (or KyungSung Precision Industry) opened. In 1952, the company changed its name to Kia Industry, and produced cars from 1974: Kia has been a part of the Hyundai auto group since 1998.

September 1955 with an annual production of 1,500 units.<sup>1690</sup> However it was during the sixties that the modern Korean automobile industry can be said to have begun.

In 1962, the motor company, Sae Na Ra (New World), established the first assembly plant to mass produce Japanese subcompact cars in Korea. The move was supported and promoted by the Korean government as part of its First Five-year Economic Development Plan (1962-1971).<sup>1691</sup> The Sae Na Ra plant, which used technical assistance, parts, and senior engineers from Nissan and the military, evolved quickly into the Daewoo Motor Company.<sup>1692</sup> Beginning in 1972, the Korean car industry gained more autonomy, freeing itself from a dependence on the Japanese and American automobile industries and developing its own production infrastructure.<sup>1693</sup> By 1976 there were three major players in the Korean auto industry, namely Hyundai, Kia and Shinjin Motors which along with General Motors (GM) established General Motors Korea (GMK) in 1972, before becoming Daewoo in 1983. In the same year, export of Korean cars to South America began. This was also the period during which the major companies began to produce their own designs: Hyundai with its 'Pony' model in 1974;<sup>1694</sup> Kia's first passenger car 'Brisa' in 1974; and GMK with its 'Gemini' model in 1977. These developments led to full scale mass production and further development of the infrastructure from the mid-1980s onwards, with both Hyundai and Daewoo building plants with an increased annual capacity.<sup>1695</sup>

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<sup>1690</sup> Lansbury, et al. (2007), p. 32; Kia Motors (1994), pp. 120-29.

The Sibal car represented the first Korean-made vehicle. Two months after its launch, the Sibal received a presidential award. The award sparked interest in the vehicle; sales suddenly peaked, and the price quadrupled. The Sibal design was based upon a reconstructed American jeep.

<sup>1691</sup> Lee Nae-young, 'The Automobile Industry' in Kim and Vogel, eds. (2011), pp. 295-321, esp. 302; Stern, et al. (1995), p. 18.

The government adopted the Law for the Projection of the Automobile Industry in 1962. In 1966, 3,268 passenger cars and 761 buses were produced.

<sup>1692</sup> Kim Lin-su, *Imitation to Innovation: the Dynamics of Korea's Technology Learning*, Harvard Business School Press, 1997, 107; Kia Motors (1994), pp. 139-49.

Tariff and tax exemptions were put in place for imports and assemblers respectively, as well as the introduction of local market protection from foreign cars.

<sup>1693</sup> Lansbury, et al. (2007), pp. 32-4.

<sup>1694</sup> Hyundai Pony was introduced in the Turin Motor Show in October 1974. The car was sold from December 1975 and exported worldwide became Canada's bestselling car in 1984. The introduction of the Pony with a continued hyper growth of per capita GNP, helped expand South Korea's total number of auto production over seven times to 204,447 between 1973 and 1979. See Lee Nae-young (2011), pp. 312-14.

<sup>1695</sup> Hyundai and Daewoo increased annual capacity to 300,000 units and 170,000 units respectively. Kia also increased its production capacity to 120,000 units, following the removal of restrictions on production of small passenger cars in 1987. See Lansbury, et al. (2007), p. 33.

From the 1960s through to the 1980s motor companies imported a lot of western technology to build their export models. As a result these companies increased their technological abilities which in turn greatly improved the quality of their products, making them more desirable in the global market. In 1990 Daewoo launched the Daewoo Global Management Plan to meet the challenges of the changing international business environment. The plan involved restructuring Daewoo's management and business operations in order to adapt to a rapidly maturing domestic market and a world market that combined free trade with protectionism in the form of regional trade blocs. By 1997, Daewoo had investments in 380 projects that included motor production in eighty five different countries. Many of these projects were concentrated in emerging market nations which were judged to have the greatest potential for growth in the coming century.<sup>1696</sup>

Korean car manufacturers began to expand FDI from the early 1990s, during which time they had begun to significantly narrow the gap with their Japanese counterparts in terms of production capacity, quality and global presence.<sup>1697</sup> Although Korean cars were still considerably less reliable than Japanese cars due to inferior designs, they were able to compete strongly on price. Despite the considerable increase in FDI activity among car makers during the 1990s, the proportion of Korean cars manufactured overseas remained very small until the late 1990s; the vast majority of cars were produced domestically for both the overseas and domestic markets. Although in the early and mid-1990s Japanese car makers continued to see growth in their overseas markets, domestic demand was in decline. Therefore Japanese manufacturers scaled back domestic production and expanded their overseas operations.<sup>1698</sup> But Korean car

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<sup>1696</sup> Kim Eun-mee (2000), pp. 116-17. Daewoo had substantial investments in major auto production plants in Poland, Romaina, the Czech Republic, Uzbekistan, India, China, the Ukraine, Vietnam, the Philippines, Iran, and Indonesia. As well as investment programmes for manufacturing electronics and home appliances in the UK, France, Spain, Poland Mexico, Vietnam, and Uzbekistan. Daewoo also provided telecommunications equipment and service in China, Uzbekistan, the Ukraine, and Kazakhstan.

<sup>1697</sup> There were four stages in Korean car makers' globalisation strategy: 1) send sales agents to target markets (1980-90); 2) establish sales offices in target markets (1990-94); 3) establish overseas production capacity (1995-98); 4) relocate complete production systems (1999-2001). See Lansbury, et al. (2007), p. 43.

<sup>1698</sup> Lansbury, et al. (2007), pp. 35-9.

For example, between 1992 and 1995 Korean overseas production rose from 40,000 to 105,000 units. Domestic car production (overseas and domestic) rose by 800,000 units over the same period. Meanwhile, although Japanese overseas car production rose from 4,093,000 to 5,622,000 units,

manufacturers saw a rise in both domestic and overseas demand, and so they increased production. This increase in domestic demand was the result of increased living standards among consumers. These consumers now demanded more individualised products. Accordingly, in the mid-1990s, Hyundai and Kia began to incorporate Japanese Lean production methods into their manufacturing processes which until then had been largely characterised by Fordism.<sup>1699</sup>

The 1997 financial crisis forced a lot of Korean companies to accept both internal and foreign takeovers. Hyundai bought Kia, GM acquired Daewoo and Renault purchased Samsung car. This drastically changed the market share of Korean companies. In the early 2000s Hyundai and other Korean brands such as Kia were still struggling to change their brand image in order to convince consumers of their quality.<sup>1700</sup> In 2005 Kia changed its strategy of focusing on turnover and instead concentrated increasingly on improving their design capability. In 2006, Kia created its own design 'the simplicity of the straight line' and applied it to its entire line (today all of Kia's models display a common design approach that gives their cars a distinctive identity).<sup>1701</sup> Hyundai, in the meantime, was developing its Fluidic Sculpture design identity which was first introduced in 2009 with the Hyundai Tucson and Sonata models. This is an organic, nature inspired range, created with exceptional craftsmanship. In 2014 Hyundai's Genesis and New Generation i10 received Red Dot Awards for their Fluidic Sculpture 2.0 design concept.<sup>1702</sup>

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domestic production fell from 12,627,000 in 1992 to 10,656,000 units in 1995. However because of the nature of Japanese tax system there has been fall in FDI from over USD 40 billion in the early 1990s to about USD 20 billion in 1997.

<sup>1699</sup> Lansbury, et al. (2007), pp. 41-2. The former also collaborated with Mitsubishi on engine design, while the latter established a partnership with Mazda on production systems. In addition, Daewoo formed alliances with companies such as GM, Honda and Isuzu, among others.

<sup>1700</sup> Stefan Paul Jaworski and Don Fosher, 'National Brand Identity & Its Effect On Corporate Brands: The Nation Brand Effect (NBE),' *Multinational Business Review*, vol. 11, no. 2, 2003, pp. 99-113, esp. 101-02. The 2002 JD Power's Initial Quality Study ranked Hyundai and Kia as the most improved car manufacturers. The following year Hyundai was ranked equal with Honda in Consumer Reports magazine's rating of 'problems per 100 vehicles', narrowly behind first-placed Toyota.

<sup>1701</sup> Kia's strategy of focusing on design, led to increase in product quality and sales. In 2012 Interbrand placed Kia in the top 100 Best Global Brands; a ranking again achieved in 2013 and 2014.

<sup>1702</sup> The international reputation of the Korean motor industry was also enhanced by several awards in 2012. The US consumer reports magazine named the Hyundai Sonata the best mid-range, while the Avante (Elantra) claimed first place at the Beijing International Automobile Exhibition and the 'car of the year' award at the Canadian International Auto Show.

## Development of the Electronics Industry

The importance of the electronics industry to the Korean economy over the last fifty years cannot be overestimated. Judith Cherry states that the industry began with the simple assembly of imported parts in the late 1950s, followed by a more developed production of consumer electronics in the 1960s and 1970s, to a more advanced industry capable of producing a range of high-tech products from semiconductors to telecommunications equipment, in the 1980s and beyond.<sup>1703</sup>

The beginning of both the electronics and the design industry, was heralded by a simple valve radio, the A-501 model produced by Goldstar<sup>1704</sup> in 1959. This was the first time that Korean designers were involved in the production process. The A-501, which used five vacuum tubes and a five-inch speaker (designed to receive 50v rather than the standard 100v), was a two-band super heterodyne radio.<sup>1705</sup> It was the first Goldstar product to receive the crown-shaped trademark logo, which would soon become familiar in Western as well as Eastern markets.<sup>1706</sup>

During the 1960s Korea started to produce a number of different electronic goods, including escalators, air conditioners, and electric typewriters, which were developed for the export market. During this period, designers tended to focus on characteristics such as colour when improving products, because awareness of the broader basis of design was somewhat lacking.<sup>1707</sup> At that time, the government was trying its utmost to encourage the consumption of Korean goods, and to this end, made extensive use of propaganda, to persuade consumers to purchase Korean produced goods as a way of supporting the development of the country's industries. The government's support of the electronics industry was also evident in the implementation of the Foreign Capital Inducement Act in 1966, which

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<sup>1703</sup> Cherry (2001), pp. 58-9.

<sup>1704</sup> Goldstar (Gumsung-sa), *Goldstar's 35 Year History (Gumsung-sa 35 Nyun-sa): 1958-1993*, Seoul: Goldstar (Gumsung-sa), 1993, p. 79.

<sup>1705</sup> LG Electronics, *LG Electronics 50-Year History, 1958-2008: The People Company, vol. 2, The History of Growth (Songjang Tongnyok-sa)*, Seoul: LG Electronics, 2008a, p. 207.

Goldstar, which was established in Korea in 1958 under the name 'Lucky, designed the radio to run on just 50v because of the poor electricity supply in Korea at that time. It was able to receive long and short wave and had an earphone socket. The product was available in 5 different colours.

<sup>1706</sup> After the A-501 model was released, GoldStar developed as many as seven models the following year. The company performed well financially during the 1960s and 1970s and was the first Korean manufacturer to establish a solid export trade. The Goldstar logo was kept on products exported to the United States in 1977, ensuring international recognition of its products. See *Ibid.*

<sup>1707</sup> The Republic of Korea's commercial and industrial art exhibition was held in 1966 and was important in raising levels of design. With the help of the South Korean commercial trade fair (1968), the design arena began to increase in size as the design business environment now included gallery design and display.

encouraged inward investment by foreign firms, designated the industry as a strategic export industry, and earmarked it for accelerated development.<sup>1708</sup> This had a positive impact, and by the mid-1970s foreign or joint venture firms accounted for over half the workforce in the Korean electronics industry. Inward investment also went a long way to help develop the semiconductor sector,<sup>1709</sup> and further strengthened the indigenous electronics industry that had been dominated by foreign firms.<sup>1710</sup> There was also substantial growth in the export of electronics.

In 1968 electronics exports were worth USD 19.44 million, a figure that had risen to USD 1.36 billion by 1976.<sup>1711</sup> The reason for this incredible increase can be partly explained by the fact that the domestic Korean electronics market was too small, leading many firms to compete for a share of the export market. The Korean government made this move easier by passing the 'Electronics Industry Promotion Law' in 1969, which offered tax breaks and subsidies to firms who attempted to increase their exports, and to companies who invested overseas in order to expand their operations. In addition during the early 1970s Korean electronics companies gained an advantage over their overseas competitors due to the high custom duties imposed on foreign electronics products. During the late-1970s, the Korean government promoted the design and manufacture of domestic electronics parts and components in order to lessen Korea's reliance on foreign manufacturers. In the early 1980s, production in the electronics industry expanded by roughly 30 percent each year, with exports also increasing by approximately 25 percent each year. As a result of this success there was an increased demand in Korea for product and graphic designers.<sup>1712</sup>

The late 1980s saw increasing domestic consumer demand for electronic products.<sup>1713</sup> The 1982 'Long Term Plan for the Enhancement of the Electronics Industry' made a provision for financial support for R&D as well as new product

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<sup>1708</sup> Cherry (2001), pp. 61-2.

<sup>1709</sup> Ibid. The first approved inward investment project was in 1965 and helped establish KOMI semiconductors.

<sup>1710</sup> Shin Jang-sup (1996), pp. 125-26.

<sup>1711</sup> Goldstar (1993), p. 83; LG Electronics (2008a), p. 69; O Won-chol (2009), p. 26.

One very popular design was the 'Goldstar Number 1' automatic dial telephone. The design was blunt-edged, black and yellow in colour, with a receiver that resembled dumbbells.

<sup>1712</sup> Stern, et al. (1995), pp. 62-4. And the mid-1970s also saw Korean firms such as Samsung and Goldstar set up sales and marketing companies in the US in order to promote their exports.

<sup>1713</sup> Chung Myung-je, 'What Korea's Electronics Industry has Done' in *Korea IT Times* 7<sup>th</sup> August 2009; *Korea Herald*, 13<sup>th</sup> May 1988; Dennis Hart, *From Tradition to Consumption: Construction of a Capitalist Culture in South Korea*, Seoul: Jimoon-dang Publishing Company, 2001, p. 71.

development, with firms being able to draw funds and financial support from the 'Electronics Industry Promotion Fund'. However, competition from emerging markets forced Korean firms to reduce their export prices in the early 1990s, and to address this, industry moved from labour-intensive production to automated production, focusing on the development of its own technology. In 1992, the Korean government launched another plan designed to reduce reliance on imported technology. This plan involved focusing on high-tech items such as LCDs, and standardising a number of parts and components. By 1996, the electronics industry accounted for nearly a third of Korea's total exports.<sup>1714</sup>

### 4.3.3 Increased Living Standards and Awareness of Design

The Five-year Economic Development Plans that ran from the early 1960s to the mid-1990s included policies aimed at increasing the level of available housing. The government's industrialisation policy throughout this period led to rapid urbanisation - in 1960 a mere 28.3 percent of Koreans lived in cities, but in 1979 this figure had risen to 54.9 percent.<sup>1715</sup> As a result the government was compelled to build many high-density apartment blocks in cities. These buildings were often inhabited by Korea's middle class, for example the Apgujeong apartment complex at the north end of Gangnam, which was built between 1979 and 1982.<sup>1716</sup>

From the mid-1970s, as well as urbanisation, Korea<sup>1717</sup> also saw an increase in living standards among its people, who began to enjoy widespread affluence.<sup>1718</sup>

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<sup>1714</sup> Stern, et al. (1995), p. 65-71.

<sup>1715</sup> Lee Chong-sik, 'Historical Setting' in Andrea Matles Savada and William Shaw (eds.), *South Korea: A Country Study*, 4<sup>th</sup> ed. (first published 1982), Washington, DC: US Government Printing Office, 1992, pp. 45-6.

Furthermore in 1990 this figure had risen to 74.4%. In 1960, 2.5 million (9.8% of the population) people lived in Seoul, but by 1990 this figure had risen to 10 million (over 20% of the population). In 2014, the Seoul Capital Area population has grown to 25.6million, 50% of the population.

<sup>1716</sup> Jung In-ha (2013), p. 77.

From 1989 until 2007 Korea experienced a housing supply boom which saw 10,705,656 housing units built. See Jeong Sang-kyu and Ban Yong-un, 'The Spiritual Configurations in South Korean Apartments built between 1972 and 2000' in Charles L. Choguill (ed.), *Habitat International*, vol. 42, London: Elsevier, 2014, pp. 90-102, esp. 90-1..

By 2008 it was reported that over half of the Korean population lived in apartments. See Jun Sang-in, *Mad for Apartments (Apart-e Michida)*, Seoul: Esoop, 2009, p.24.

<sup>1717</sup> The development of individual specialized factories in the Changwon Industrial complex followed President Park's 1973 Heavy and Chemical Industrialisation Policy. The four automobile producers were Hyundai, Daewoo, Kia and Asea, and the policy was a success: figures showed a three-year growth of 62.4%. See, O Won-chol (2009), pp. 628-33.

<sup>1718</sup> Jung In-ha (2013), pp. 74-5. Many apartment interiors were influenced by western designs, and apartments' were frequently seen as symbolising differences in wealth and status.



Household electric appliances such as TVs, refrigerators and radios, were now widely owned.<sup>1719</sup> As the quality of life improved, the increasing importance of communications media became more apparent. As a result, specialised and commercial design activity spread across all sectors of society, heightening the widespread demand for better standards of design. In response to this demand, the KDPC organised a series of international exhibitions from the 1970s onwards such as the Swiss Poster (1970), French Ceramic (1976), German Modern Ceramic (1976), Italian Industrial Design (1977), and British Industrial (1979) exhibitions. In addition, the first media contents group in Korea, Designhouse Inc., published the *Design* magazine monthly from 1976, and the magazines *Craft* and *Home Living and Style* soon followed.<sup>1720</sup>

It is the monthly magazine *Design* that continues to make the most significant contribution of any Korean publication to the popularisation of design. During the 1970s, design magazines, exhibitions, an increase in design courses, and designers returning from overseas study all contributed to an increasing understanding of the importance of design. Furthermore, some craftsmen started to research traditional craft techniques in search of authentic Korean identity. In the early 1980s, Korea began to question its cultural identity and move away from the authoritarianism of military rule. This helped advance international exchange of culture and arts by the end of the decade.<sup>1721</sup> Following the introduction of colour TV in 1981,<sup>1722</sup> changes began to be seen in society, as the nation became more fashion conscious. Cars, and the exterior of apartment buildings, were no longer being painted in sombre colours, instead they acquired bright decorative patterns. In 1983 a TV series entitled 'World Design Revolution' focused on the designs of

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<sup>1719</sup> Hong Doo-seung, *The Middle Class in Korea*, Seoul National University publishing, 2005, p. 147. The increased ownership of electronic goods illustrates the closing of the gap between the upper and middle class. In the 1960s the gap was significant. In the 1970s, only 7% of Seoul residents owned a refrigerator and 22% a television. By the 1980s, ownership had increased to 61% and 94% respectively. However, according to another survey (1981), as many as 91.1% of Koreans owned a refrigerator. See Kim Kwang-suk and Michael Roemer, *Growth and Structural Transformation*, Cambridge: Harvard University Press, 1979, p. 111.

<sup>1720</sup> On the back of the magazine *Home Living and Style* success, the Seoul Living Design Fair, a living brand marketing exhibition has been organised by Designhouse Inc. since 1994. The exhibition focuses on new trends, with leading brands and expert designers of the industry exhibiting.

<sup>1721</sup> Yim Hak-soon, *Creative Society and Cultural Policy*, Seoul: Jinhan Doseo, 2003, p. 83.

<sup>1722</sup> *The Korea Economic Daily*, 11<sup>th</sup> November, 1980, p. 1.

The new military government launched a test-run broadcast of the colour TV with a national broadcast on KBS on 1<sup>st</sup> December 1980, and began regular broadcasting from 1981.

new products around the world.<sup>1723</sup> The programme educated the public on the importance of electronic and industrial design.<sup>1724</sup>

In the mid-1980s several symposiums and seminars were held to discuss the state of Korean crafts, including the 1986 symposium 'The Direction of Korean Crafts' (held by KDPC).<sup>1725</sup> The title reflected the soul searching that the Korean craft community was engaged in, partly motivated by the wish to disassociate Korean craft from western styles, and rediscover traditional styles. This traditional craft could then be used to influence design, and in so doing help create a distinctive Korean design identity. In this spirit, the Korean company Designhouse Inc., published the *Craft* magazine monthly from 1988, which encouraged the production of everyday products such as furniture, textiles, ceramics and jewelry. Traditional Korean sources were also used by Korean graphic designers in the early 1980s. For example Ahn Sang-soo experimented with Hangul typography which he incorporated into his poster and publication designs.

## Technology in Korea

In 1974, the foundation of the Goldstar Design Laboratory enabled Goldstar to expand its design department. The design laboratory concentrated its energy on producing more elegant, economical and practical products.<sup>1726</sup> During the 1980s, Goldstar continued to thrive, creating a design research institute (previously the Design Laboratory) in March 1983.<sup>1727</sup> It was the ethos of the institute that design should have a guiding role in production and material culture, rather than simply a supporting role in the fields of technology and marketing. The science of design thus influenced designs that were seen in everyday products, and Goldstar actively

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<sup>1723</sup> 'Wonderful Design is the Key to Successful Exports', Seoul: *Mail Business Newspaper*, 07<sup>th</sup> January, 1983. In 1983 KBS, Korea's national broadcaster, produced the programme 'World design revolution,' visiting 50 different companies, 60 designers as well as design schools and design firms in advanced countries such as the U.S, Japan and West Germany.

<sup>1724</sup> Park, ed. (2002), p. 27.

The 6 different programmes were: Design Enterprise – developing the new model; how look and function can make a product appealing; good designer - design education, techniques, artistic qualities, and knowledge; design in the sports industry; design in relation to advertising, exhibition and trading; current Korean design; and the aim for beauty' - a government industrial programme aimed extensively at design not industrial technology.

<sup>1725</sup> 'Hanguk gong-ei nagal banghyang', Seoul: KDPC, 1986.

<sup>1726</sup> LG Electronics (2008a), p. 66.

The 1979 Korean Image Exhibition held by Myung-gwang Kwon presented one means of escaping from the general poverty of Korean image sources. This was followed soon afterwards by the Graphic Design Korean Exhibition (1980), The Beauty of Korea Poster Exhibition (1981), and The Face of Korea Exhibition (1982), all of which suggested new approaches to design.

<sup>1727</sup> Park, ed. (2002), p. 27; LG Electronics (2008a), p. 86.

used design as a key marketing strategy.<sup>1728</sup> The design direction of Goldstar Electronics, as it became known, focused on convenience. This became a design characteristic associated with Korean products in those countries importing its goods.<sup>1729</sup>

In the mid-to-late 1990s, disposable income levels among Korean consumers began to rise, and design began to be seen less as something that provides a pleasing aesthetic characteristic, and more as something that could improve one's standard of living, particularly in the field of technology

### **Market Liberalisation and the GD Mark**

American and EC trade structures changed during the 1980s in the wake of national market pressures,<sup>1730</sup> and Korea recognised the increased importance of competitive design in a new<sup>1731</sup> expanding and open international market.<sup>1732</sup> The Korean government invested heavily in design projects, with the aim of showcasing Korea's design capabilities to the consuming public. To foster this aim, the government established the GD Mark (Good Design Mark) in 1985, and held a Good Design exhibition in the same year. The government then began its promotional policy for industrial competitiveness. The Good Design exhibition differed from prevailing industrial design exhibitions in that it embraced the ethos of real tangible design, rather than the presentation of a prize for a prototype idea.

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<sup>1728</sup> The R&D group was composed of three teams. The first proposed new product design and researched the 'human element'; the second worked on colour and information; the third worked on system design, product control and foundation data transfer using CAD. See [http://www.lgcorp.com/about/history/history01.jsp?section=obj\\_history&from=main](http://www.lgcorp.com/about/history/history01.jsp?section=obj_history&from=main) (last accessed 16.06.2010).

<sup>1729</sup> One such product was the WF-941HW washing machine (1986). As home televisions became ubiquitous, Korean national TV corporations highlighted the importance of design. GoldStar recognized the necessity of having a systematic design management system to achieve their goal of 'the creation of new and pleasant living culture' in electronics. See LG Electronics (2008).

<sup>1730</sup> Oh Seung-gu (et al.), *Future of the Korean-American Alliance and the Choice of Korea*, Seoul: Samsung Economic Research Institute, 2005, p. 39. Initially, Korea was resistant to American pressure to open its market as it feared many of its own companies would be adversely affected. However, once trade began between the two countries, Korea had a fixed duty of more than 60% on many of its exported goods.

<sup>1731</sup> Newspaper *Dong-A Ilbo*, Seoul: 23<sup>rd</sup> October 1985, p. 5.

In the 1980s there was increased pressure from the US on Korea to respect the universal copyright convention.

<sup>1732</sup> *The Korea Economic Daily Newspaper*, Seoul: 29 April 1986, p. 5; Lee Jae-soo, *Product Advertising Theory*, Seoul: Hakmunsa, 1996, p. 89.

In the 1980s, there was discussion in Korea about 'industrial competitiveness reinforcement' due to structural changes in EC trade, and the opening of the distribution market in Korea.

Each company introduced Corporate Identity (CI) strategies with brands and appropriate model production.

In the 1970s and 1980s, Korea followed global design trends, which mixed geometric figures with modernism; a style that dominated architecture, visual design, and product design in most of the world. The educational and industrial community followed this trend, and Korea's own traditional cultural designs were re-articulated. After the 1980s, Korean design had a dual face: on the one hand it exhibited an enlightened design policy that was led by elite designers drawn from the MTI; while on the other it was characterised by commercial design that followed market trends.

#### **4.3.4 Consumerism and National Identity**

As Koreans increasingly expressed their individuality through conspicuous consumption, they also clamoured for greater political freedom.<sup>1733</sup> Despite government frugality campaigns consumerism continued apace during the 1980s.<sup>1734</sup> The new found affluence began to erode the traditional social hierarchies and create social positions that were more subject to the vagaries and fluctuations of the market. This consumerism led to social insecurities, which in turn led to ever more consumption motivated by a desire to achieve exclusivity.<sup>1735</sup> The frugality campaigns did however highlight a common concern amongst many Koreans about the widening gap between the rich and poor in society.<sup>1736</sup>

The 1980s saw a great expansion in the number and variety of products in the domestic and export markets<sup>1737</sup> and the start of the 'my car era'. This refers to a significant increase in car ownership during the early 1980s, which then accelerated rapidly in the mid-1980s, rising from 250,000 in 1980 to just over 650,000 in 1986.<sup>1738</sup> Cars were seen as a manifestation of individualism among

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<sup>1733</sup> In 1980 for example, the Chun Do-whan government responded brutally to pro-democracy protests in the south-western city of Kwangju, which in the medium term only served to intensify the demand for democratic elections. Seven years later huge pro-democracy demonstrations in Seoul forced Chun Doo-hwan to commit to democratic elections in 1989.

<sup>1734</sup> Garon (2006), pp. 173-76.

<sup>1735</sup> Hart (2001), pp. 81-2.

<sup>1736</sup> Garon (2006), pp. 173-76.

<sup>1737</sup> In addition in 1985, 99% of South Korean households owned a TV compared to 33% just ten years earlier.

<sup>1738</sup> Hart (2001), p. 73. By this time, the Korean automobile industry had become a major export industry, and since the mid-1990s more than 50% of production has been exported.

Koreans and also as status symbols, reflecting the owner's lifestyle.<sup>1739</sup> After Korea achieved democracy in 1987, the country quickly modernised, leading to a further increase in consumerism and car ownership. In terms of cultural development, the KPDC heavily subsidised beautification projects in the city of Seoul. In addition, it backed graphic design campaigns on taxis, buses and, as mentioned earlier apartment blocks.<sup>1740</sup> Furthermore the 1988 Olympic Games presented an opportunity for Korean designers to showcase their skills. One example of a particularly successful design was the Olympic mascot 'hodori' which was based on a familiar image from Korean folk paintings and legends.<sup>1741</sup> After the Olympics people and the government began to better understand how design could be used to advantage the country economically and culturally.

This expansion of consumerism, however, created a division between those who had benefited from the economic growth and those who had not. The rising availability of consumer goods increased the sense of dissatisfaction among those who could not afford them.<sup>1742</sup> Social 'class' in Korea continues to be defined by material possessions and consumption.<sup>1743</sup> For example, apartments continue to symbolise wealth and status. The growth of consumer culture (*sobi saenghwal*) during the 1980s was a manifestation of social changes that had already begun during the Park administration.<sup>1744</sup> At that time, there was a great deal of public discussion as to whether the new consumerism was an example of Western corruption and whether, by consuming foreign products, Korean culture would be overwhelmed by Japanese or Western influences. There was a public campaign to

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<sup>1739</sup> Nelson (2000), p. 95. By 1985 there was one car for every hundred people in South Korea compared with one per fifty people in Taiwan. One reason for this was the prohibitive cost of automobiles in Korea. For example the Hyundai Pony was priced at USD 3,552 in 1982, and average household incomes were USD 4,500 annually.

<sup>1740</sup> Until the institution of democracy the appearance of everyday life had been marked by blandness. Buses, apartments, streets and fashion lacked variation in colour or style. After 1987 however, the promise of democracy, rising incomes and the festival-like atmosphere sparked by the 1988 Seoul Olympic Games gave rise to a feel-good factor, which manifested itself in campaigns to beautify the city. In addition, Seoul City Hall was eager to present a positive image of the city to a global audience during the games and so turned to the designers at KDPC.

<sup>1741</sup> Designed by Korean graphic designer Kim Hyun.

<sup>1742</sup> Nelson (2000), pp. 23-4.

<sup>1743</sup> Jung In-ha (2013), pp. 74-5.

<sup>1744</sup> Nelson (2000), p. 27; Hart (2001), p. 83. Also see Roh Mi-hye, 'An Investigation into Women's Employment' (Yeoseong-ui Chuiop Siltae Josa), *Women's Study (Yeoseong Yeongu)*, spring, 1987, p. 26. One of the social changes was the role of women in the work place. Whereas previously it was only young women who worked it became increasingly necessary for married women to join the workforce, and in 1985 42.9% of married women were engaged in some form of economic activity.

avoid imports and buy Korean-made products. The government recognised the potential of conspicuous consumption (a euphemistic way of referring to the consumption of foreign goods) as Korean goods were not considered luxury items, to erode national unity.<sup>1745</sup> As a result, during the late 1980s and the early 1990s they launched a campaign called 'kwasobi ch'ubang' (eliminate overconsumption), the aim of which was the reduction in consumption of foreign designer brand products.<sup>1746</sup> In discussing these changes in Korean culture, sociologist, Hong Sung-tae stated that Korean society was drastically westernised during the 1980s and 1990s, resulting in a far more diverse society. This sense of Western cultural influence led, paradoxically, to an attempt within Korea to rediscover its traditional culture,<sup>1747</sup> which continued until Postmodernism became highly fashionable in the late 80s, influencing Korean product design. In this respect, the Korean imitation of foreign products continued much as it had in earlier years when the dominance of modernism was widespread; Post-modernist trends infiltrated Korea, so the majority of designers followed these developments.<sup>1748</sup> Meanwhile a number of Korean designers became widely known worldwide, increasingly won prizes, exhibited in international contests and attended various conferences. As a result these influences from abroad opened new ground in the design arena. The sense of freedom that accompanied the Korean liberalisation movements of the late 1980s also influenced design, as designers began to exercise their new freedoms.<sup>1749</sup>

Prior to 1987, design trends were largely influenced by the demands of government and industry. Many designers who worked for SMEs followed their companies' aim to deliver customer satisfaction, rather than pursuing their own

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<sup>1745</sup> Nelson (2000), p. 25.

<sup>1746</sup> Ibid, pp. 141-49. The campaign was reported on in a Newsweek article entitled 'Too Rich, Too Soon' in 1991, which recounted that Koreans were celebrating their economic success by going shopping, and questioned whether they were living beyond their means.

<sup>1747</sup> Hong Song-tae, *Cultural Formation of Modern Korean Society (Hyondae Hanguk Sahoe-ui Munhwa-jok Hyongsong)*, Seoul: Hyonsil munhwa yongu, 2006, p. 151.

For example, in 1986, symposiums on the theme of new approaches to Korean crafts were launched, and in the 1990s, 'Korean-Japanese joint research project redevelopment' conferences and symposiums were held for three consecutive years. I worked as a researcher for the government for all three years of these symposiums, and experienced firsthand how design sources aided the countries' search for their respective national identities.

<sup>1748</sup> Korea Newspaper *Kyunghyang Shinmun*, 18<sup>th</sup> June 1992, p. 15. *Kyunghyang Shinmun*, in an article entitled 'Korean art reconsidered', was highly critical of the artwork being produced in Korea at that time.

<sup>1749</sup> Newspaper *Dong-A Ilbo*, 7<sup>th</sup> December 1989, B5; Hart (2001), pp. 161-75.

originality and creativity.<sup>1750</sup> My experience of working in a Korean design consultancy during this period showed me that this attitude from designers could be explained by several factors: Firstly, the OEM mentality was still firmly embedded in managers and owners; secondly, Korean companies did not yet enjoy global brand recognition, and finally, changes in product design (which would require upgrades in production facilities/assembly lines and incur design fees) were considered too risky and costly. The achievement of democracy in 1987 together with the 1988 Olympics provided opportunities for designers to pursue their creativity and for design to flourish again, free from political restraints.<sup>1751</sup> These designers were often influenced by traditional Korean culture which had been increasingly explored by designers and intellectuals in the 1980s. Throughout the 1970s Korean traditional culture struggled to make its presence felt due mainly to the legacy of the Japanese colonial education system. However in the 1980s a new generation of intellectuals sought to rediscover Korean identity in traditional Korean culture. This culture contained many elements of Confucianism, an ideology that is embedded in many aspects of Korean society, cutting across class and religious boundaries.<sup>1752</sup>

### **The Transition from OEM to Product Innovation**

East Asian economies began to experience difficulties in the late 1980s and early 1990s. One of the reasons for this was the increased standardisation of electronic goods, including the production of semiconductors, which led to fierce competition among Asian manufacturers. This resulted in rapidly falling prices, and in response many companies expanded their production.<sup>1753</sup> In the face of this challenge, the Korean government urged electronic companies to adopt a multi-pronged strategy,

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<sup>1750</sup> Unfortunately, although the export managers were aware of the designers' wishes, they did not attempt to reform or suggest any changes since sales figures were impressive.

<sup>1751</sup> Son Day-hyun (2008), p. 8.

General liberalisation of overseas trips was emotionally shocking due to the previous control of the military government. Following the termination of the army regime in June 1987, and the victory of a democratic government, Korea's future looked bright for the 1990s. See Park Sang-phil, *NGO Study: Dynamics of Autonomy- participation and Solidarity*, Seoul: Arce publishing company, 2011, p. 287.

<sup>1752</sup> Kim Kwang-ok, 'Colonial Body and Indigenous Soul: Religion as a Contested Terrain of Culture' in Lee Hong-yung, et al. (eds.), *Colonial Rule and Social Change in Korea, 1910-1945*, Seattle & London: University of Washington Press, 2013, pp. 264-313, esp. 265.

<sup>1753</sup> In fact, the massively increased production of memory chips led to their price falling by around four-fifths in 1996 alone. See José Gabriel Palma, 'Flying Geese and Wading Ducks: The Different Capabilities of East Asia and Latin America to "Demand-adapt" and "Supply-upgrade" Their Export Productive Capacity' in Cimoli, et.al. eds. (2009), pp. 203-38, esp. 207 and 233.

including heavy investment in R&D.<sup>1754</sup> The electronics industry was one of the six strategic industries chosen by the government to spearhead further economic growth, and was given preferential treatment including tax incentives. Therefore, it was in the interest of the government to support these firms when they encountered protectionist EU policies or anti-dumping measures. The development strategy of the Korean government was particularly orientated toward exports, which made the economy heavily dependent on external markets. With the increase in US and Japanese protectionism, the EU became an attractive market for Korean firms.<sup>1755</sup>

Since Korea joined the OECD the government's Committee for Globalisation Policy has recognised that Korean design sectors need to adhere to international standards and law. Therefore, Korea now exercises its intellectual property rights, and also retains its prohibition on imitation.<sup>1756</sup> The new open market changed the way Korean industry functioned.<sup>1757</sup> Previously labour-centred, the Korean market became focused more on design, as OEM work reduced dramatically. Industrial designs were given the opportunity to develop further, and this became a primary factor in the advancement of Korean industry, in terms of both its make-up and infrastructure. Large enterprise companies began to establish bigger and better design departments and gave designers more influence, even at the managerial level. SMEs also employed more designers and aimed to exploit opportunities in more niche industries. Those companies that continued to produce copies of established foreign designs did not survive these changes. Additionally, the majority of medium-sized enterprises, which had some level of brand image recognition, had a tenuous hold on success, since they had to invest heavily in new product development. However, from 1994 onwards, the design support

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<sup>1754</sup> Dicken (1992), pp. 326-27.

At that time, many commentators maintained that South Korea was the only country in newly industrialising Asia to develop its manufacturing of high value-added goods to such an extent that it was able to maintain high growth rates over the following decade.

<sup>1755</sup> Since 1987 Korean electronics firms have invested heavily in the EU. Changes within the Korean market and the appreciation of the Won forced Korean firms to try to expand their foreign sales. During the 1980s and 1990s protectionist measures by the EU against foreign imports meant that Korean electronics firms had little option but to invest in local production. See Shin Sang-hyup (1998), pp. 194-96.

<sup>1756</sup> 'Intellectual Property Rights', Korea Newspaper *Kyunghyang Shinmun*, 02<sup>nd</sup> May 1997, p. B2. In 1997, the newspaper *Kyunghyang Shinmun* reported that Korea has kept an agreement with the WTO regarding trade-related aspects of intellectual property rights (TRIPS), and that it had progressed in protection of intellectual property rights by reducing illegal copy of software.

<sup>1757</sup> Che Soo-myung, *Marketing Tour of a Marketing Expert*, The Korea Economic Daily Publishing, 1996, p. 156.



programme for SMEs from the KIDP helped 1,000 enterprises reap the benefit of design consultancy every year (the companies participating in this programme were helped by both domestic and foreign designers).<sup>1758</sup>

The open market brought about radical reform in the domestic home appliance industry with regards to product design. As the pressures of an open market put local producers under strain, the Korean government developed a counter strategy designed to encourage national loyalty, by buying home-grown products. Home appliance enterprises like Goldstar soon followed the trend, and developed 'Korean style products' such as mobile phones and dishwashers, which appealed to the specific lifestyles of the public, and in this way combatted the encroachment of foreign products.<sup>1759</sup> Domestic appliance companies attempted to protect themselves in this more open market by pursuing two strategies: The first was to develop a strong brand and more innovation in overseas markets, and the other was to create high domestic demand. As a result, Korean brands made products that were tailored to Korean domestic life, eating and consumption habits.<sup>1760</sup> These strategies yielded great advances in a relatively short space of time, and Korean design has now achieved recognition for technological innovation throughout the world. As the nineties continued, Korean manufacturers sought imaging and branding methods that promoted their products as durable and reliable, especially for the domestic market.<sup>1761</sup> Furthermore companies

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<sup>1758</sup> *The Korea Economic Daily* (07<sup>th</sup> October 1997), p. 42.

As a chief consultant at KIDP, I planned and led a large project that aimed to bring 120 famous foreign designers from across the world to Korea to consult with domestic industry in 1995.

<sup>1759</sup> Lee Eun-hyung (et al.), 'Foreign Brands Face a Hard Time in the Korean Market but Domestic Suppliers Understand the Customers' Needs,' Korea Newspaper *Kyunghyang Shinmun*, 20<sup>th</sup> October 1997. Foreign products dominated the Korean domestic market, until advertising by Korean companies utilised Koreans' sense of national identity. For example, Motorola had 80% of the Korean market until the early 1990s but Samsung advertised their handset 'Samsung AnyCall' with the slogan that the handset was stronger than the Korean landscape. This message helped dramatically increase the market share of Korean handsets.

<sup>1760</sup> One example of such a strategy is the Kimchi Refrigerator, now being designed and manufactured by Wina-Mando Climate Control Corp (Dimchae), LG, Samsung, and other Korean companies. Kimchi comprises a part of the Korean diet; a hot (piquant) vegetable that, when stored in a normal refrigerator, can contaminate other food stuffs with its smell. Aimed at the Korean market, the Kimchi refrigerator was designed to eradicate this problem via sophisticated storing and cooling methods. See [http://www.lovethatkimchi.com/kimchi\\_refrigerator.html](http://www.lovethatkimchi.com/kimchi_refrigerator.html) (last accessed 16.06.2010).

Another example is the v-773k1 vacuum cleaner. Manufactured by LG and released in 1991, the vacuum cleaner had a damp cloth function with a rotary function, suited to the wooden and vinyl floors common in Korea. See LG Electronics (2008a), p. 227.

<sup>1761</sup> From 1993, for example, Daewoo Electronics, adopted the slogan 'like a tank', which indicated that their products had the resilience and strength of an army tank – an image that proved highly successful in terms of product sales. See newspaper *Hankyoreh Shinmun*, 16<sup>th</sup> January 1993, p. B6.

increasingly worked on developing new corporate identities (i.e. in 1993 Samsung actually introduced a 'new corporate identity' programme which included a changing of its logo, and in 1995 Goldstar decided to change its name to LG).

In the mid-to-late 1990s, disposable income levels among Korean consumers began to rise, and design began to be seen less as something that provides a pleasing aesthetic characteristic, and more as something that could improve one's standard of living, particularly in the field of technology. Now Korean companies had established greater brand recognition, they began to promote their goods more aggressively in overseas markets, and rode on the wave of new trends in international design, such as 'new minimalism', which was helping the Japanese find great success in the export market. Korean design, which had received substantial investment from both the public and private sectors, was now beginning to differentiate itself internationally, and was attracting demand.<sup>1762</sup>

#### 4.3.5 A New Start: Global Competitiveness

By the mid-1990s, the design industry in Korea had grown exponentially, a development arguably triggered by the 1988 Olympics. The Games represented a testing ground for Korea's designers and advertisers as well as its journalists, who now benefited from increased freedom of the press. In 1993 when Kim Young-sam, a civilian and long-time freedom fighter, was elected president, the press was freed further.<sup>1763</sup> Mirroring these huge political changes, Korea's economy had begun to

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Article by Gak Jung-soo, 'Strong (Korean Language = tuntun,T) Safe (Korean Language = Angern, A) New Korea (NK) TANK Product'; Go Jeong-nam, *The Promise of the Future: The Secret of Daewoo Myth Keyword 10 (Mila-ui Yagsog: Daewoo Sinhwa-ui Bigyeol Kiwodeu 10)*, Seoul: Chang Hyeon Publishers, 1997, p. 19; their concept was 'back to basics'. Sales of Daewoo's electronic products rose by 25% in the five years after the slogan was introduced. ; Lim Gyu-nam, *Tankism Tankition*, Seoul: Hyeondae Media, 1997, p. 114. In 1992, before the concept of Tankism was introduced, total sales of Daewoo electronic products was only USD 1.7 billion (KRW 1.5 trillion) but the total sales was nearly USD 3.5 billion (KRW 3.1 trillion) in 1996.

<sup>1762</sup> The Korean government invested heavily in the subsequent design projects, with the aim of showing Korea's design capabilities to the consuming public. Various advertising designs and posters directed towards this end were promoted through the mass media.

<sup>1763</sup> Lim and Jang (2012), pp. 168-70; Park Sang-phil (2011), p. 287. Park Sang-phil has stated that the civic movements in Korea began when the basic civil rights were secured and the political situation become more open following the events in June, 1987. After this, people had more channels to protect their human and civil rights, which had previously been denied them under the military leadership. The country was also widely recognised internationally when it held the Olympic Games in Seoul in 1988.

Horizontal writing was started by the Sports Seoul in 1985. After that in 1999, all the newspapers started a horizontal writing system. In the mid-1990s, reflecting these huge political and economic changes, national evening dailies started printing their text horizontally, like English-language

outgrow its OEM past, and by 1996 top advertisers were selling electronics, cosmetics, food, cars, IT and telecommunications. For Korea these economic and political strides ushered in a new era, and it had now overcome the stifling influences of its colonial past, authoritarianism and the demonising of the communist North, all of which had dogged the nation throughout the Cold War.<sup>1764</sup>

However, after the 1997 economic crash Korea required an IMF bailout. The government initiated a series of policies in order to support SMEs, as well as implementing new R&D plans that encouraged cooperation between SMEs, laboratories and universities. Prior to this it had been difficult for SMEs to compete in terms of R&D because the Chaebols had greater resources to fund this area. Fortunately, the Korean economy recovered from the aforementioned 1997 economic crisis faster than expected.<sup>1765</sup>

The 2003 British Design Innovation (BDI) Korea Design Report found that the positive public relations that Korea received after the 2002 World Cup helped the country develop its international profile, both as a nation and as a producer of quality designs and brands. In the early 2000s, the potential of 'holistic branding' and the need to deliver 'total experiences' through products and services was much better understood, as illustrated by Korean companies' willingness to pay 'well over double the fees of local agencies when international reputation or reach

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newspapers, and used much fewer Chinese characters. See Park Gwang-soon, 'Changes in Korean Newspaper Since Mid-1980s: Mainly Chosun, Dong-A Ilbo (1984-2006)', *The Korean Press Society*, vol. 52, no. 4, 2008, p. 284.

<sup>1764</sup> Reflecting the growing influence of design in Korea, a graphic designer from Daejeon, named Park Young-chu, designed a T-shirt for supporters of the South Korean football team shortly before the World Cup, which would become iconic. The T-shirt was red with the slogan 'Be the Red' written in white letters. This represented a litmus test in Korea, as red was always associated with North Korean Communism and oppression. The design was successful and showed how a designer could help enormously to end a colour's negative connotations once and for all. The T-shirt is an example of emotional design.

<sup>1765</sup> James Grotty and Lee Kang-kook, 'A Political-economic Analysis of the Failure of Neo-liberal Restructuring in Post-crisis Korea', *Cambridge Journal of Economics*, vol. 26, no. 5, 2002, pp. 667-78, esp. 669.

The success with which the Kim Dae-jung government carried out politically difficult post-crisis reforms has been attributed to the following factors: the crisis conditions, external pressure, and coalition dynamics. The crisis conditions effectively neutralised political opposition to economic reform. See Mo and Weingast (2013), p. 166.

is required'.<sup>1766</sup> In addition the Seoul Design Festival has thrived due to the substantial economic growth that Korea has enjoyed over the last decade.<sup>1767</sup>

In the 1990s Korea kept pace with global IT developments and exported many popular products. In the 2000s Korea began demonstrating its strength in the global IT industry.<sup>1768</sup> By the early 2000s it was fast becoming a world leader in this field, introducing digital products such as world class PDP TVs, LCD TV monitors, and up-to-date mobile phones.<sup>1769</sup> In the mid-2000s Samsung became the market leader in digital technology, and LCD technology in particular. Their success can be explained partly by the fact that they have a higher patent to investment ratio than Sony, and invest in technologies that have clear trajectories. Sony by contrast invested large sums in a wide variety of technological areas many of which had no clear trajectory, thereby spreading their investment too thin in an attempt to develop brand new products.<sup>1770</sup>

In the mid-2000s, the distinction between appliance design, fashion, and art became blurred. This is perhaps not a surprising development given the importance of appearance within Korean society.<sup>1771</sup> One example of this is the highly successful super-slim LG Chocolate Phone, launched in 2005,<sup>1772</sup> which used a design-orientated NPD strategy.<sup>1773</sup> At the International Consumer Home Appliance Show held in Las Vegas that same year LG won 16 worldwide design

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<sup>1766</sup> BDI (2003), p. 3. South Korea cohosted the 2002 football World Cup with Japan, and the unprecedented performance of its national team in reaching the semi-finals led to national pride among the Korean people, and confidence in the nation's potential to become an important player on the world stage.

<sup>1767</sup> The Seoul Design Festival, held since 2002 by Design house Inc., is a specialised design exhibition promoting designers by attempting to introduce cultural trends. See Seoul Design Festival promotional design document, 2008.

<sup>1768</sup> In 2004, IT exports accounted for almost 30% of Korea's exports, totalling USD 74.7 billion. Overseas sales were dominated by mobile phones, computers and semiconductors. See Cherry (2007), p. 144.

<sup>1769</sup> Since 2002, Samsung has established its position as the largest producer of memory chips and flat-screen television and computer monitors, the second largest maker of DVD players, and the third largest of cell phones. Lee Soon-bok, et al. (2004), p. 133.

<sup>1770</sup> Chang (2008), pp. 39-40.

<sup>1771</sup> Within Korean society there is a strong emphasis on 'first impressions' and so outward appearance is one means of creating a good first impression. Product design has come to incorporate this in order to satisfy customer needs. Also, the marketing strategy of the Chocolate Phone reflects the need to create an emotional sense of prestige as it followed the example of Western fashion houses through its use of the 'black label' concept - the Cyon black label series was the name given. See Jang, et al. (2009), pp. 36-41.

<sup>1772</sup> The phone was launched in the international market in May 2006 in the UK before being launched in 100 other countries, including the United States and China. See Jang, et al. (2009), pp. 37-41.

<sup>1773</sup> NPD is a customer-following approach to design that considers both the, consumers' expressed and latent needs.

and technology innovation prizes, while Samsung received 13 prizes thereby conquering giants such as Motorola, Philips and Sony.<sup>1774</sup> In 2006, LG electronics began its 'Design Management' strategy and worked with designers, artists and innovators to create household appliances that could be labeled stylish and artistically appealing.<sup>1775</sup> In addition in 2012 LG took second place to Samsung in terms of global share of the worldwide Plasma TV market.<sup>1776</sup>

Since Korea became industrialised, successive governments have given more consideration to large businesses as opposed to SMEs, believing that big companies were more important for economic growth. This caused a certain amount of social conflict (unequal hierarchical relationships) and economic polarisation (in terms of production, income and consumption) between SMEs and bigger companies. In response to these issues, the left-leaning Kim Dae-jung and Roh Moo-hyun governments (from the late 1990s until the late 2000s) urged greater cooperation between large businesses and SMEs. The government believed that SMEs, known for their innovation in various fields (especially IT), and large businesses with established brands could benefit each other and ultimately spur greater economic growth.<sup>1777</sup> Other important measures aimed at increasing the quality of Korean design included a government support fund to help SMEs improve their design, and the establishment of RDCs to support industrial development in their region. The success of all these measures led to an improvement in local government urban design, which, according to a 2010 survey, now focuses heavily on space and installation, for example 'urban

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<sup>1774</sup> Business and financial news magazine, *Forbes* ran a cover story article by Heidi Brown and Justin Doebele, entitled 'Samsung's Next Act' (26<sup>th</sup> July, 2004) which highlighted the brand power of Samsung, noting how it had outperformed the likes of Sony in the mobile phones stakes. See Magazines *Forbes*, vol. 174, issue 2, 2004, p. 102.

<sup>1775</sup> The LG 'Shine' Dios fridge range, for example, makes use of photo-etching technology with tempered glass. Featuring flower patterns designed by the artist Ha Sang-rim, the fridge's patterns are engraved on the stainless surface of the fridge. Article by Kim Sun-woo, 'Kkotmu-nui Dalgo, Wonsaek Ot Ippo, IT Jepum-edo Bom-i Pie-otsseupnida', newspaper *Dong-A Ilbo*, 10<sup>th</sup> April 2007, p. B8.

<sup>1776</sup> LG won two 'best of the best' awards in design at the Red Dot Awards 2014 (these awards were for the G Flex, an ergonomic, curved smartphone which matches the contours of the human face, and a Smart 3D Blue-ray Cinema system).

<sup>1777</sup> Lee Yeon-ho, 'Participatory Democracy and Chaebol Regulation in Korea: State-Market Relations under the MDP Government, 1997-2003,' *Asian Survey*, vol. 45, no. 2, University of California Press, 2005, pp. 279-301, esp. 290-96.

infrastructure', 'convenience installations', and 'walking or transportation infrastructure'.<sup>1778</sup>

## Environmentally Friendly Design

In the early 2000s, Koreans began to show greater concern for the environment, which was reflected in the development of more energy efficient household products.<sup>1779</sup> Indeed, according to one survey, environmentally friendly and conscious housing concepts are highly valued, and thus form part of many important marketing strategies used by Korean construction firms.<sup>1780</sup> An example of this green consciousness can be seen in the Cheonggyecheon Restoration Project which began in 2003 and was completed in 2005. It restored a stream which, since the 1960s, had been heavily polluted and covered by a concrete flyover. The flyover was dismantled, the stream cleaned and walkways made available so that the general public could enjoy the natural space once again.<sup>1781</sup>

Designs that take in to account the desire for both modern convenience and green living,<sup>1782</sup> will become even more important features of future design. In the

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<sup>1778</sup> It is the author's view that urban facilities should consider the elderly, the disabled and children to be a priority, and inconvenient spaces should be made convenient and safe; in addition new cultural spaces need to be created. In order to make safe urban environments that include clear signage for all (which includes those with disabilities), project leaders should have specialised knowledge and try to improve regional environments by discussing decisions with design organisations in the region.

<sup>1779</sup> For example, The Woongjin Coway air purifier AP-1008CH was launched in November 2001 and quickly became a market leader in the air purifier sector. The popularity of the purifier and other Woongjin products is a result not only of the high levels of technology involved in the products, but also their appeal to health-conscious Koreans. See Korea Marketing Association Consultants (KMAC), *Korea Best Brand Story*, Seoul: KMAC, 2008, pp. 174-82; Woongjin Coway, *Sustainable Report: Dialog with World*, Seoul: Woongjin press, 2008, pp. 33-5.

<sup>1780</sup> Lee Jae-hyuk (et al.), 'Marketing Strategy of Housing Construction Firms and Consumers Residential Consciousness: Evidence from Apartment Residents in Korea', Conference Paper in *International Conference on Sustainable Building Asia (27<sup>th</sup>-29<sup>th</sup> June 2007)*, Seoul: Korea, 2007, pp. 949-54.

<sup>1781</sup> Joan Busquets, *Deconstruction/Construction: The Cheonggyecheon Restoration Project in Seoul*, Cambridge, Mass.: Harvard University Graduate School of Design, 2011, pp. 8-9.

It addressed the growing environmental concerns by preserving the natural environment and the history of the Seoul business district. The project is very popular with both locals and tourists, not least because of the pedestrianised road network.

<sup>1782</sup> In 2008, major phone manufacturers in Korea moved to integrate eco-thinking into their handset designs. See article by Lee Sun-young, 'Green Drive Reaching Cell Phone Market', newspaper *The Korea Herald*, 4<sup>th</sup> July 2008, p. 7.

Samsung Electronics Co., the world's No. 2 phone manufacturer, was the first to realise the importance of eco-thinking with the introduction of two new handsets, one of which, the SCH-W510, was endorsed by the Ministry of Environment with the eco-mark. The phone uses bio-plastic material made from cornstarch and features an environmentally-friendly metal-finishing process. See Article by Tim Alper 'Design Meets Technology', *The Korea Times* 10<sup>th</sup> March 2008.

2000s, Samsung attempted to become a leader in 'eco-innovation'.<sup>1783</sup> This involved making products energy efficient when in use and on standby. In fact, Samsung set them a 2013 deadline to improve the energy efficiency of their products by more than 40 percent. Such a reduction would reduce CO2 emissions by 84 million tons. Part of Samsung's strategy involves moving away from high environmental impact LCDs to low impact LEDs. Moreover, Samsung has made an effort to reduce the use of environmentally harmful ingredients, such as brominated flame retardants, in their products.<sup>1784</sup>

#### **4.4 Summary**

In this chapter, careful examination has been made of the impact of design practice on the economic performance of Japan, Russia and Korea in a post-industrialisation context. Furthermore, the chapter addressed technological innovation, design trends, marketing and environmental issues, as well as the effect of consumerism in capitalist countries which led to the phenomena of planned obsolescence and overconsumption. In Soviet Russia, however, attention has been drawn to the ways in which political considerations and the demands of a centrally planned economy had an overriding effect on design practice. Specifically, consideration was given to the development of the car and electronic industries in each of the countries, and the quality control that these products were subjected to. The chapter was concluded by proposing a new green strategy for Korean design.

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<sup>1783</sup> For example, Samsung established the Eco Design Management Process in 2004, and more recently, the Eco Rating System. The latter graded products as Eco-product, Good Eco-product, and Premium Eco-product, and Samsung aimed to have 100% of products achieve a Good Eco-product rating by 2013.

<sup>1784</sup> Al Iannuzzi, *Greener Products: The Making and Marketing of Sustainable Brands*, CRC Press, 2012, pp. 63-

## **CONCLUSION**

### **A. Design Policy and Practice in the Three Countries**

#### **Design under Communism and Capitalism**

The nineteenth century was a ferment of communitarian and humanitarian concerns, which had a significant impact on design. In what could be described as a moral awakening, leading designers such as William Morris began to question the motives behind design, and called for designs which better serve the collective good and achieve humanitarian goals. These calls coincided with the advent of mass production, which was negatively regarded as soulless by Morris, who advocated hand-made designs. However, he could never have envisaged the degree to which mass-produced goods would improve in quality over the next century, a period characterised by an ideological battle between communism and capitalism.

In the capitalist world, advances in science and technology enabled manufacturers to deliver durable and aesthetically pleasing goods to the masses. Nonetheless, humanitarian and social values still often came second to profit in the design process, and demand for new designs was driven by ever more sophisticated marketing campaigns and technological developments. In this regard, those nineteenth century designers who drew attention to moral issues being left behind and replaced by a more materialistic and profit driven design process, have been vindicated.

As the world moved into the twentieth century, revolution in Russia paved the way for a new Communist state which would have huge repercussions for designers, craftsmen and artisans in that country. In the communist world, communitarian values were, ostensibly at least, put at the forefront of the design process. Nevertheless, as the 20<sup>th</sup> century wore on, the design of goods produced in Communist countries was seen to be of an inferior quality to those manufactured in the capitalist world. One of the reasons for this was that militaristic needs were prioritised at the expense of the civilian economy, resulting in dissatisfaction among the population in general who demanded material improvements.

Politics are integral to the way we live, and the influence of a political system or regime can dictate design to a significant extent. Capitalist societies tend to



encourage innovative and attractive design (driven by the free market), whereas in communist countries design has been largely functional with no regard for consumer preference or demand (the planned economic system). Despite their apparent differences, both systems shared some similar characteristics: modernity, rationality and the discontinuing of traditional ways of thinking. However, Soviet production had far less of an environmental impact than its Western counterparts due in part to the increased prevalence of mass production in the West. In the USSR products were designed to last whereas in the west they favored a more profit driven system based on obsolescence. As such, Soviet products generally possessed a longer lifespan than those in the West, even though Western products were more technologically advanced.

The 1920s and 30s saw 'Consumer society' arrive in the USA. Designers worked to ensure that consumers continually desired new products, and consumption often went well beyond the basic needs of the consumer. During the 1940s and 50s the concept of 'good design' (as opposed to simply functional design) started to be heavily promoted in America, Britain, Western Europe and Japan. This concept further encouraged consumerism since people frequently wanted aesthetically pleasing products. From the 1960s onwards a number of elements have contributed to global over-consumption among consumers, including: mass production; rapid technological development; and increasingly sophisticated marketing strategies. During this time the electronics and automobile industries have been particularly successful in convincing consumers to over-consume.

Culture, entertainment and style were all standardised in the Soviet Union whose ideology differed sharply to the 'affluent' society of the West. The Soviets emphasized function above aesthetics and rejected market led consumerism. Although the state provided most consumer goods cheaply, the quality of these products was often inferior to their western counterparts. Once Western ideas began to infiltrate Russia during the 1950s, consumers began to complain about the poor quality of homemade goods, from household goods to automobiles.

As result of these complaints VNIITE was established in Moscow, in part to improve product design. But despite VNIITE making several good product design suggestions, the government did not ensure that these products were made. As such VNIITE ultimately did little to improve Soviet design quality. In addition the

1960s saw the introduction of the 'Mark of Quality', which was placed on products that were considered to exhibit a high standard of quality. This 'mark' was intended to raise standards, especially on export goods. However the mark was generally not applied to consumer products but was instead placed on items the state deemed important such as tractors. From the 1960s onwards a consumer goods 'design and technology gap' began to appear between the Soviet Union and the West. This continually adversely affected the economic and industrial competitiveness of the Soviet Union, thereby contributing to the eventual break-up of the union.

### **Design Policy and Practice**

Japan's design policy began in the 19<sup>th</sup> century, although it was in the late 1800's that the policy was properly formulated with the arrival of the 'Japan Craze'. After Japanese craft goods became popular in the West, the Japanese government established Doan (Design) education firstly in private design schools, and later in state schools. By the early 20<sup>th</sup> century, design departments were established in universities. Elements of Doan design can be seen in manga and anime, and it is this familiarity that perhaps explains why both art forms were so readily accepted by most sections of Japanese society. In the 1950s the government had a coherent design policy that was established and organized by MITI and JETRO.

In addition in the 1960s JIDA and JIDPO also made important contributions to the promotion of design. Furthermore Japan used effective marketing and industrial strategies, as well as in-house designers and design consultancies, to successfully promote design. This success was aided by the establishment of regional design centres in the 1970s and 80s (these centres continue to flourish today).

Right into the 1950s Japanese design practice was largely imitative of western design, and the products were of questionable quality. It was not until the mid-1960s that Japan embarked on a new design and marketing strategy that involved the production of smaller, simpler designs, in contrast to US products which tended to be big. Subsequently, there developed a US niche market for smaller, Japanese designed products. These developments in design coincided with the 1964 Tokyo Olympic Games, which featured a 'Japanese style'. The Olympics helped restore national pride to Japan, as well as highlighting the importance of design to the general public. The 1960s also saw the strengthening of consumer rights, which

encouraged Japanese companies to produce better products and increase quality control, making them even more competitive.

The Tokyo Olympic Games was turning point in the government's realisation of the importance of technology. From the 1950s until 1980s, MITI, recognising the technology gap between America and Japan, had been supporting technological R&D. This support helps explain the economic success Japan experienced in the 20<sup>th</sup> century, a success that was partly driven by outstanding design innovation. This success can also be explained by the concepts of smallness and simplicity, embedded in Japanese culture and derived from Eastern ideals which influenced the design of products.

Modern design promotion in America began in the 1940s when the Walker Arts Center in Minneapolis put on two 'Idea House' exhibitions, functional homes specifically designed to promote appreciation of modern design. The 1950s saw the MoMA's Good Design campaign finally convince Americans that modern design was something to aspire to. In fact, products that had a MoMA Good Design Label gained status and therefore sold well, as society increasingly associated well designed products with living a thoroughly modern life. Meanwhile, in the UK, the 1946 'Britain Can Make It' exhibition adopted the slogan 'Good Design is Good Business.' This slogan would have a global impact on design throughout the second half of the twentieth century. In the early 1950s, the British Standards Institute (BSI) adopted a certification scheme to help protect consumers from poor quality products. At the same time the British government put design at the forefront of its bid to revitalise the economy, which had been decimated during the war. The 1951 'Festival of Britain' exhibition helped to give hope to both British society and to a relatively stagnant British industry. In 1957 the CoID established the 'Design Centre Award Scheme' in Britain, and Japan introduced their very own stamp of quality, the 'G-Mark', in the same year as part of its industrial and marketing strategies.<sup>1785</sup> The G-Mark was significant in helping define a distinct Japanese identity that distinguished it from Western competitors. As a result, Japan was able to enjoy a commanding position in many global markets.

The emphasis on design in Britain and US helped foster a new

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<sup>1785</sup> The G-Mark with its focus on the importance of form and function, natural quality and the ability of a product to be mass-produced was influenced by the theory of Mingei, proposed by Yanagi Muneyoshi towards the end of 1920s

era of pop design during the 1960s, with both countries becoming leading exporters of pop and emergent post-modern culture. However, Britain's industrial design did not quite match the global success and dominance of its creative industry. While UK design in the 1960s tended to focus on disposable culture, by the 1970s it began to address environmental, social and ecological concerns. Pollution and the rising cost of oil drove a trend for smaller and greener products. The 1970s also saw the beginning of increased collaboration between Japanese, British and US companies, especially in the field of computers and cars. These partnerships improved the quality and competitiveness of the countries' products, especially in Japan.

In the 1920s the USSR embraced standardisation. Science, design and technology was controlled in the Soviet Union, to a large extent, by the state. Much of the state funding in these areas however focused on military research and production. As a result the design standard of everyday products was considered secondary. So although Soviet science achieved considerable success, these successes were not reflected in the design of everyday products. As such, when compared to the West, the technology gap (in terms of everyday products) was wider than the science gap.

In 1920 Lenin announced that he wanted industry and art to work together to further socialist ideals, and this can be seen as the beginning of Russian design policy. Lenin's wish led to the establishment of the Higher State Technical Artistic Studio (Vkhutemas). As the Soviet Union was not concerned with export, much of the state funding for design went into ship and aircraft building for the military. In the 1950s Khrushchev's government instituted a number of reforms to the design sector. This led to a series of cultural exchanges with other countries, including the UK and the US. These exchanges led to the establishment of VNIITE design centre (which mirrored to a large extent the UK CoID) in 1962, and meant that Soviet design and consumer tastes were increasingly influenced by the west. However, much of Soviet design remained austere when compared to western design. During the 1960s and 70s, design policy centred more on heavy industry and agriculture, although consumer goods gained popularity in the 1980s. The 1990s brought an economic crisis that halted investment in design, a situation which continues in Russia at the present time. Some private enterprises successfully export products to the West, in particular Soviet cars which became

popular worldwide due to their reliability and value. During the 1970s and 1980s Soviet design benefited from increased international cooperation, but today the government no longer supports design.

Just like Soviet Russia, the Korean government from the mid-1960s onwards began to improve the standard of the country's science and technology sectors in order to boost the economy. In 1962 Korea, like Russia in the 1920s, began implementing a series of 5 year economic development plans. However, Korea's design policy started in 1958 when, with the support of the US, the KHDC was established. The policy aimed to boost the Korean craft industry by making craft products suitable for export (this move was intended to help counter the threat of communism). This coincided with the start of industrialisation in Korea, and by 1970, the Korean government established a Design Center (KDPC). Korean design policy in the 1970s was heavily export orientated, and concentrated mainly on developing art-based products and packaging technology. The country's industrialisation programme centred on OEM production, which did not require a great deal of creative input.

From the mid-1970s, as the economy developed and living standards improved, consumers began to demand better quality products which did indeed lead to better products. From the 1980s onwards globalisation led to modern design concepts becoming more influential in Korean industry and education. The government introduced the 'GD Mark' in 1985, in part due to a desire to improve export figures, but also because domestic consumers were demanding even better designed products. Throughout the 1990s Korea continued to follow the global design trends which dominated architecture, visual design, and product design in most of the world. The KIDP announced 1993 as 'the year of design development' in anticipation of globalisation which had become prevalent since the collapse of the USSR. The government promoted design via marketing and industrial strategies, and initiated a series of 5 year Design Promotion Plans which began in 1993 and continue to this day. Since 2000 regional governments have played an increasing role in design promotion, in part by managing to spread design activities around the country. This, along with the five-year plans, has helped Korean design (including design consultancies) reach unprecedented levels of success. Nevertheless Korean designers continue to search for a design identity of their own, leading to traditional cultural designs being re-articulated.

## The Three Countries Compared

All three countries in this study are at different stages of embracing social innovation. Furthermore, all three countries established a design centre that steered their country's design policy. These design centres in turn influenced the way private companies worked. The central aim of the design policy and practice present in each country was to increase economic strength, and thereby living standards. Despite this, in Japan and Britain central government support has recently been withdrawn from design promotion. In 2011 JIDPO was renamed the JDP, after which it became dependent on private donations. An analogous situation occurred in Britain when the Conservative-led coalition withdrew tax-payer support for the Design Council in 2011. In Japan, however, METI still controls national design policy and there is support for manufacturers and regional design centers. In Britain, however, no such government support exists. In the last few years the Russian government has started to realise the importance of design both culturally and economically, largely because of the efforts of designers to promote their industry and obtain government support. However, Russia's Design Council VNIITE closed in 2013 following the death of its influential director Yuri Soloviev who had probably helped to keep VNIITE open despite heavy opposition for over three decades. The design sector in Russia today, despite the efforts of VNIITE, industry and other designers, has failed to ensure a steady stream of Russian designs that reflect Russian cultural heritage.

While Britain, Japan and Russia have wavered in recent times in their support for design, Korea has increased investment. Since 2000, central and regional governments have actively supported the design industry. In 2012, Korea launched a Creative Economy Policy which encouraged increasing convergence between science, technology and design. It is this author's contention that in Korea the Creative Economy ought to be utilised more by the manufacturing and service industries. If this were achieved the Korean manufacturing industry would produce better-designed products and thereby be in an improved position for future success.

The economic success of Korea and Japan can be partially attributed to their Confucianist ideals. In the mid-1900s Japan and Korea, in order to modernise, decided to utilise western technology, although both countries were determined to retain their 'eastern spirit' (which included elements of Confucianism). The ideals present in this 'spirit' later influenced industrial techniques in both countries (for

example 'Toyotatism'). From the 1960s through to the 1980s, Toyotatism helped Japan become the leading Asian country in the design and technology global market, but the country was overtaken to some extent by Korea in the 1990s. Confucianism however, has not always been without negative effects. For example the 'family orientated' nature of the ideology played its part in the creation of the system of Chaebol in Korea, and the *Keiretsu* in Japan. Both these systems have faced charges surrounding nepotism and inhibiting open competition. Today however both countries increasingly embrace the ideal of a meritocracy.

The effect of Confucianism on Korea and Japan differed according to their particular cultural identities. Korea initially adopted Confucianism as a way to support education for the people and train citizens for public life. Korea as such embraced Confucianism politically and socially, as did Japan but to a lesser extent because Shintoism retained a strong influence in the country. Nevertheless, Confucianism continues to have a big influence on society in both countries, and it especially impacts the economic models of both countries. For example the Japanese Keiretsu system and the Korean Chaebols both emphasise harmony, family orientated human resource management, creativity, and a commitment to providing complete customer satisfaction. Buddhism has also influenced the two countries' cultures. This influence can be seen in the philosophical and aesthetic traditions inherent in both Korean and Japanese design.

The design, engineering and marketing strategies of Korea and Japan continue to use the Daoist and Neo-Confucianist ideas embedded in their respective societies. For example, Japan uses the concept of simplicity and compactness inherent in its nature to create practical products that are beautifully designed but also small and affordable, making them ideal for export. Similarly Korea is also now a leading producer of small, practical, well designed technological products such as mobile phones and home electronic goods. Neo-Confucian principles have heavily influenced both countries' economic system, and indeed these systems are often described as 'Confucian Capitalist'. Confucian and Capitalist principles have been synthesised by many Japanese and Korean companies to improve things like quality control and mass production techniques.

Daoist and Buddhist principles were evident at the 1973 ICSID congress, in Japan's presentation of the 'Soul and Material things' design concept, which emphasised harmony between man, nature, culture and manufactured goods. At

the 2001 ICSID congress in Seoul, the Korean representatives promoted the concept of Oullim or harmony, with particular emphasis on sustainable, inclusive products in harmony with the environment. This demonstrates the fundamental difference in approach between Western and Eastern design. The holistic philosophies of man and nature being inexorably linked, with an emphasis on inclusivity and sustainability inform Eastern design ideals. Such altruistic motives related to product design can easily be lost in the capitalist system with its strong desire to maximise profits.

Profit drives the market, which creates social division and huge differentials in the ability of people to purchase the products they need and want. However, this does not mean that societies should not strive for social responsibility in relation to the design and marketing of products. In Soviet Russia the purpose of central planning was to provide for the needs of the greatest of number of citizens. However the lack of market system led to poor quality of products and consumer dissatisfaction. Under capitalism consumers make choices based on their status and spending power, but this does not imply that products should not be designed to appeal to the greatest number of people. Inclusivity is very important for a contented society; the more people who feel excluded, the greater the feeling of alienation and discontentment. Democracy in design is a powerful tool for promoting a sense of belonging and of being a contributing member of society, and therefore has a huge impact on inclusivity.

## **B. Korean Design: Past, Present and Future**

### **History of Design in Korea**

Up until the 1980s Korean design in the 20<sup>th</sup> century was heavily affected by political and economic issues that occurred in three historical periods: Japanese imperialist influence (1910-1970s), the Cold War (1945-1980s), and rapid industrialisation (1962-1980s).

During the Japanese colonial period, Japan's cultural and educational policies made it difficult for Korea to retain its national identity, partly due to the concept of Doan influencing design. The Doan education process, as well as being an alien concept, did not lend itself to producing creative designers. South Korea



experienced limited democracy during the Cold War, and this lack of freedom was not conducive to creativity in design (in addition, there existed cultural restrictions on behavior and appearance). During the three decades of the 1960s, 1970s and 1980s, South Korea became rapidly industrialised. One of the reasons for this was the prevalence of an ideology that aimed to catch up economically with the West as quickly as possible. Korean industry therefore focused on OEM and imitative products in order to ensure quick profits. As a result the Korean design identity was mainly defined by the market rather than Korean culture, and Korean products were seen as providing a fair set of functions for a fair price. The late 1970s began to see a reawakening of Korean national identity, early signs of which were when Chaebols began to produce their own branded products that were designed by the companies themselves. The early 1980s continued this transformation as a number of industrial laws were passed in order to encourage Korean firms to produce their own original products and designs. Asian game

During the latter half of the 1980s and the early 1990s Korea experienced three events that fundamentally changed its society, culture and economy and firmly established a new national identity. In 1986 Asian Games took place in Seoul; in 1987 the nation achieved democracy; and in 1988 it hosted the Olympic Games. The Asian Games opened Korea to the rest of the Asian region. The establishment of democracy in 1987 brought about a new sense of freedom and optimism about the future. The hosting of the 1988 Olympics open Korea for the first time to the rest of the world. Following the Olympics the Korean government began encouraging designers to find innovative ways of introducing Korean culture to a global audience. Prior to this many designers who worked for SMEs followed their companies' targets for customer satisfaction, however the games brought the opportunity for designers to pursue their own originality and creativity. From 1993 onwards Korea embraced globalisation since it recognised this was the only way to remain economically competitive.

Since the early 1990s, Korean design has been striving to incorporate traditional elements into products with varying degrees of success. The Korean government has supported this by implementing the 7 Five-year Economic Development Plans between 1962 and 1996 which helped Korea to develop its economy. They also implemented 5 five-year design development plans between 1993 and 2017 in response to globalisation. These plans have ensured that the

Korean economy can survive in the globalised market. In the 1990s the Korean economy was mainly focused on improving product quality and competing on price, whereas in the 2000s a new Korean design identity emerged that concentrated on improving design quality. The success of Korea's 4 five year design development plans (which were embraced by local governments who then provided support for the development of local industries and cultures) has resulted in a great deal of both national and international attention on design and design policy in Korea. Today, Korean design is characterised by its ability to produce innovative designs in a short timeframe, and the country has proved a major global economic competitor through developing its own technology and design. Increasing numbers of design graduates have created something of a design boom in all areas of industry. In the last ten years or so, we have seen design become an integral part of Korean life.

In recent years, Korean creative and popular culture has become well known both across Asia and the rest of the world, and is referred to as the 'Korean Wave'. Much of this 'Wave' reflects the emergence and formation of a new Korean spirit. This spirit is based on the country's experiences since the beginning of the twentieth century, which includes: imperialism, the Cold War, and rapid industrialisation and globalisation. These experiences had previously produced a national identity that was somewhat blurred and incoherent. However, it seems to me that the Korean Wave has the potential to unify and solidify the various strands of Korea's national identity, conveying an image of empathy, mutual compassion, and humanity. These attributes not only grew out of the difficulties experienced in the past century, but are also the result of a 'Confucian society' in which these values are important. Indeed, the historical experience embodied in the narratives of the Korean Wave often expresses an ethic of healing and inclusivity. A significant benefit of the Korean Wave is that Korea's future design identity can draw on the modified national identity that the Korean Wave has arguably effected.

### **Inclusiveness, Sustainability and Oullim Design**

Korean culture has always respected and attempted to preserve nature, partly due to the influence of Eastern religion and philosophy. In the 21<sup>st</sup> century there has been a worldwide trend of promoting technology that respects and preserves nature (e.g. switching from fossil fuels and petro-chemical materials to renewable

energies and bio-materials). Furthermore there is a desire amongst many to produce more inclusive products. Korea is ideally suited to embrace both sustainability and inclusivity since these values are inherent to Oullim, a concept entrenched within Korean society, and a key foundation of Korea's national identity. Oullim is a concept that should be applied not only to the external appearance of a product, but also its functionality. Functions may include specific applications, compatibility with other consumer items, and technical aspects such as speed, memory and power. Here we can see that the principles within traditional Eastern philosophies are no less relevant to the technical and function aspects of design than the visual.

Korean consumer products and businesses can better reflect Korea's national identity by taking account of sustainability and inclusivity not only in product design but also in business practices. Widespread production of such products and the adoption of related business practices will require changes to both taxation, and laws on inclusivity and sustainability. Modern Korean society is built on a Capitalist economic system which does little to regulate the Chaebols in this area. An economic system with stronger regulation of these large companies, as seen in some social democracies, could lead to more socially beneficial practices in the business sector.

From the mid-1980s until the mid-1990s I undertook extensive research for KIDP on the definition of Korea's design identity. This research contributed to the decision by representatives of the Korean design community to choose the concept of Oullim as the basis for future Korean design identity. They presented this idea to the world during two major design conferences, namely Icoграда 2000 and ICSID 2001. However, although some companies adopted the concept in theory, they did not know how to properly apply it, and instead simply continued to follow market trends. The KIDP still promotes research into the Oullim design concept. But the concept still remains an intellectual, rather than practice-based, idea. In order to create a distinct Korean identity, designers need not only to show innovation, but also to incorporate the Oullim concept into their designs. However, most Korean companies do not encourage this, preferring to maintain current practices.

Another issue essential to the future of Korean design is branding. Korean companies should aim to develop products that build globally recognised brands and reflect their cultural identity while still appealing to the global market. If Korean

companies designed easily identifiable, innovative products that reflected the concept of Oullim, then their product brands stand a good chance of being even more successful. Korean products should also be eco-friendly, a value which ties in with Oullim and is of increasing importance in building brand value to today's increasingly environment-conscious consumers. Utilising the spirit of crafts, which embodies many of the values associated with Oullim (such as simplicity, appeal to nature, and knowledge of materials and methods), is a possible way to develop ground breaking and distinctly-Korean designs that also clearly involve environmentally-friendly and sustainable materials and design practices. In addition, the sourcing of craft skills by Korean design can help increase creativity, bringing design closer to traditional cultural values, and further helping to establish a distinctive Korean design identity.

In much of the industrialised world the gap between rich and poor is growing, and designers should ensure that those with diminished purchasing power are not frozen out of the marketplace, or 'designed out'. Designers could play a pivotal role in reversing the 'designed out' trend by re-emphasising sustainability and inclusivity. The principles of Oullim can be adapted to inform inclusive design concepts, since without genuine sympathy towards others, inclusive designers are less motivated, and therefore inclusive design is diminished. In fact, Oullim can provide the inspiration for inclusive design throughout the world. A recent IMF report suggests that Korea should invest in social spending in order to improve income equality and sustain growth. Korea has been one of the fastest growing countries in the world, but this rapid growth and emphasis on global expansion has resulted in a widening gap in both income equality and quality of life. Increased spending on social design will help boost Korea's productivity, and promote more inclusive and sustainable growth.

Focusing on sustainable and eco-friendly design can help ensure that short-term gains are not prioritised over long-term stability. Indeed, eco-friendly products are now highly sought after by consumers. It is commonly held that 90% of a product's environmental impact is fixed during the design stage. If we combine this with the prediction that in order to ensure future resource sustainability, the use of natural resources will need to be reduced by 90-95% within the next 40 years, we can see that there is an immediate need to focus on sustainable design. The Korean government should therefore invest in design sustainability, partly in order

to preserve Korea's competitiveness and market position. There is currently a considerable emphasis being placed on K-design, which is the government's latest attempt to redefine Korean design identity. However, it is important that this new concept is not just a soundbite designed to impress international markets, but rather is firmly based on the Oullim principles of sustainability. The concept of Oullim involves a focus on universal groupism, not just between humans, but also between humans and nature. With such foundations to its cultural identity, Korea has the potential to be at the forefront of social design in the future. While Western neo-liberalism holds that the individual shapes society, Confucian ideology views the world as an organic whole, emphasising inclusivity, mutual empathy and humanity. Harmony, collectivism and the principle of consideration for others may prove to be key aspects in the creation of Korean design identity, an identity that can drive inclusive and sustainable design to even greater heights.

### **Ideas for Future Design Policy and Practice**

Efforts to establish a distinct Korean design identity should involve greater interaction between design and craft. The splitting off of craft from design did much damage to Korean hopes of establishing a design identity. Craft is often regarded as a pursuit of the amateur, lacking the sophistication of design. However, if used in an ingenious way, craft methods can greatly increase the chances of producing award-winning designs. The use of craft concepts frequently involves the natural world and simplicity. A product's utility, as well as its beauty, can often be achieved most effectively via simple design concepts. The most popular and esteemed designs are frequently those that are deceptively simple, yet contain centuries of learning and artistic development drawn from the crafts.

Craft products can display an intimacy lacking in mass-produced items. Good design should ensure that mass-produced products replicate this intimacy to some extent. Such a movement has every chance of spreading to other parts of the design world, especially since people are beginning to advocate that design draw more heavily on crafts skills.<sup>1786</sup> In addition the sourcing of craft skills by Korean design can help increase design creativity and bring it closer to traditional Korean

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<sup>1786</sup> Craft knowledge in a way implicates the notion of sustainable and inclusive design, and this knowledge can help to increase the prevalence of products that are sustainable and inclusive.

cultural values. Crafted objects<sup>1787</sup> often display an authenticity and personality grounded in hands-on creative human endeavour. Ensuring that craft knowledge has an influence on Korean design, and thereby on Korean mass production, will lead to authentic 'Korean designs' that can be differentiated from their competitors.

In order to ensure that inclusive design remains popular, it should be taught on all design courses in Korea. Such a move could be enforced by national legislation. Korea should also focus on social design to ensure less affluent Korean citizens could benefit from design, both in public and private spaces.

Korea is the only country in the world to have a 'design promotion' law that requires the government to fund design promotion. Since the middle of the 2000s several government departments have also been involved in design promotion, including the following: The Ministry of Knowledge Economy (which has been in charge of design promotion through KIDP from 1970); The Ministry of Land, Transport and Maritime Affairs (which also has responsibility for public design and architecture), and the MCST (which has many years of experience in charge of creative cultural development, particularly in relation to Korean pop culture). The reason for this proliferation in design promotion amongst government departments is the growing awareness of the importance of design in Korea's economic success. However, I feel these bodies (and RDCs) should be controlled by a further single body, namely a 'national design committee' funded by the central government. I feel that the design policies implemented by the various governmental ministries should be controlled by a single department, or alternatively by a committee (tentatively named the 'National Design Committee') under the control of the Prime Minister. In this way the deliberating and coordinating of design policy could be unified, which would in turn: eliminate waste by preventing the duplication of work; reduce government spending; and increase the focus on government targets.

In 2013 the 'Creative Economy Action Plan' (2013-2017) was introduced. The plan is organised and implemented by the new Ministry of 'Science, ICT, and Future Planning'. This decision has yet to yield great success, perhaps in principle because the new ministry does not possess the necessary knowledge or experience in product development. Therefore the ministry ought to receive help in

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<sup>1787</sup> However it should be noted that the term 'craft' does not just refer to the folk crafts (i.e. ceramics, woodwork etc.), but is a word that transcends disciplines, for example it can apply equally to aspects of both ceramics and architecture.

this area from other government departments that have the relevant expertise. This help could have been organized by the National Design Committee suggested above. Additionally, if the National Design Committee were created it could ensure Korea's continued competitive superiority by helping develop cutting edge technology. One phenomenon that has helped advance technology is engineers beginning to think more in terms of design, while at the same time designers have begun to improve their engineering skills. This should be encouraged and cultivated since wider perspectives such as these can dramatically improve the standard of R&D, and thereby Korea's ability to create new cutting-edge products.

Korea has become one of the world's leaders in design and technology, but in 2011 the MKE and the KIDP, wary of the potential for complacency, released two reports: The 'Industrial technology vision 2020', and the 'Design strategy 2020 report: Design, Meet the Future'. These reports emphasised the importance of fusion between different industries, and the 'promotion of strong small businesses'.<sup>1788</sup> In addition, these reports argued that the role of design had evolved from merely aesthetic considerations to an emphasis on what the product represents about the consumer's lifestyle and image. Though helpful, these reports did not contain practical suggestions on how to boost environmentally-friendly and inclusive design. Arguably, more effective green design strategies that involve green energy and waste reduction are required. Furthermore, with increased life expectancy and changes in the family unit, products need to meet the requirements of an increasingly diverse demographic. Legislation which requires companies producing certain goods to run their design prototypes through a program like HADRIAN could represent one way of meeting this challenge. Accordingly, certain sections of the population would be at a much lower risk of being 'designed out' of a product. Such legislation could only succeed, however, if more research and development is undertaken on inclusive design programmes.

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<sup>1788</sup> Around same time, in 2011, 'Design 2020' was published in the UK by the universities of Lancaster and Salford as part of the research project 'Designing for the 21<sup>st</sup> Century' (AHRC/EPSRC). This report suggested 20 main business models for the future. The universities selected 5 models among these which had substantial potential for the future, namely: the British Design Centre for the BRICs economies, specialized innovative service, design strategy, British exports and large-scale design co-operation. As we can see Korea and Britain have undertaken similar design strategies.

## **North and South Korea**

After Korea's division due to the Cold War, both North and South Korea felt the effects of the war as well as experiencing modernisation at the same time. Today the issue of reunification is a widely-discussed problem in South Korea. In the 1960s South Korea embraced the dictum 'modernisation of the fatherland' (work and fight at the same time) since modernising was considered crucial for competing effectively with North Korea, which was superior to the South both in terms of its economy and military strength. Accordingly, South Korea became one of the countries most affected by the Cold War in the areas of politics, economy, society and culture. Although state identity may be very different in North and South Korea, they both share a common collective cultural memory. Such a shared culture makes any possible reunification much easier than in states that substantially differ. However, cultural identity can also change with time, and the values that neo-liberalism, democracy and rapid economic expansion brought to South Korea have meant that the Confucian underpinnings of South Korean identity have become increasingly loosened. As mentioned above, individualism has become a recognised cultural value that has challenged traditional Confucian groupism. South Korean identity has therefore evolved along a different path to that of the North. Nevertheless, joint design projects between the North and South could open the door to a new and improved Korean design identity that pools the strengths of both Koreas and yet remains anchored in the values of Confucianism project at the Kaesong Industrial Complex would improve the standard of North Korean design and thereby the importance of Kaesong to the North. Such a development could entrench ties between the two countries, making conflict less likely and unification in the future more likely.



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## **Appendices**

### **Autonomous**

Autonomous means that a building from human activities (e.g. global warming is understood to be anthropogenic, human-induced, resulting from human activities).

### **Biodegradable**

Biodegradable applies to any material that the natural world can absorb, if given times and the proper conditions, including sun, water and air. Active agents in this process include bacteria, fungi, unicellular organisms, insects and rodents.

### **Buddhism**

Buddhism, since its introduction to Korea in the 4<sup>th</sup> century, has been integral to Korean religious life, and has had widespread influence on Korean culture. The nation's invaluable Buddhist heritage can be seen in buildings, sculptures, paintings and handicraft.

### **Carbon**

Carbon is a chemical element, which bonds with oxygen to form carbon dioxide, a potent greenhouse gas. Carbon dioxide (CO<sub>2</sub>) is a by-product of the burning of fossil fuels. It is one of the six principal greenhouse gases that contribute to climate change.

### **Chaebol**

The Korean Chaebol is a form of business conglomerate which, beginning in the 1960s, comprises several dozen large family owned corporations. These are mostly global multinationals, for example Samsung and Hyundai (both companies have great economic and political power within the country). The Chaebols are similar in structure to the Japanese Zaibatsu, which were large and powerful cartels before WWII.

### **Chi**

Chi (sometimes referred to as Gi or Qi) is etymologically rooted in the words 'steam,' 'breath,' and 'wind,' and variously translated as 'material force,' 'vital energy,' 'psychological stuff.' Chi is the energy that sustains all life. The concept of Chi is important in both Daoism and Confucianism.

### **Confucianism**

Since the 3<sup>rd</sup> century Korea has been influenced by Confucianism, both in terms of societal customs, and the population's worldview. The 'Three Leading Rules and Five Constant Relations', which contain the cardinal virtues of Confucianism, have regulated human relationships and influenced the Korean way of life, even in contemporary Korean capitalist society.

### **Daoism**

The Daoist religion was introduced into Korea in the 7<sup>th</sup> century although the Korean version of Daoism namely Hanism has existed in Korea for 5000 years. The notion of geomancy (Fengshui), which governs the relationships between people and the environment, is an important part of Korean religion and is used in the building of houses, city planning, and in locating shrines and temples. The

Daoist principles of Yin and Yang (together with the notion of harmony between the individual, the group and the universe) have had a great effect on Korean society, politics and religion.

### **Doan**

Doan is derived from the world of motifs and patterns as opposed to painting or sketching. Before and after 20<sup>th</sup> century craftsmen use Doan techniques artistically, and as such were sometimes referred to as arts-craftsmen. Doan objects during this period were generally made individually and by hand. Graphic designers used Doan art was decorating objects and advertising on posters or packaging. In short, Doan kickstarted modern Japanese and Korean design.

### **Emptiness**

A Daoist and Buddhist concept roughly meaning the absence of self. Sometimes personified in the character of the 'wise sage' who understands everything but is attached to nothing. Emptiness is a state of being in which you act from a place of inner knowledge or divine guidance rather than from reason or emotion. In short, it describes a shedding of the Ego.

### **Energy efficiency**

Energy efficiency is the ability to use less energy to provide the same level of output.

It is achieved by using more efficient technology which helps to control emissions of greenhouse gases. e.g. insulation, LED lighting.

### **Giri**

A sense of obligation and duty towards people perceived as having higher social status.

### **Greenhouse gas (GHG)**

GHG is any gas that, once emitted in the atmosphere, contributes to the warming of the Earth (e.g. CO<sub>2</sub>, ozone or methane). The greenhouse effect is the process by which greenhouse gases allow incoming solar radiation to pass through the Earth's atmosphere, but prevent part of the outgoing heat from escaping, thus increasing temperatures.

### **Hanism**

Hanism conveys the idea of harmony between the worlds of heaven (Chun), earth (Ji) and humanity (In). It has a secular emphasis that advocates people helping and loving each other in order to develop communities and foster harmony (this is in line with the belief that an earthly paradise can be created).

### **Hongikingan**

Hongikingan is the official motto of South Korea, and translates roughly to 'Live and work for the benefit Broadly the Human World.'

### **Honne**

What a person actually feels and thinks in specific contexts as opposed to what is expected in terms of individual and collective behaviour.

## **HTC**

High-technology corridors are geographically pre-determined sites of interaction between sources of research and commercial exploitation that aim to drive a sub-regional knowledge economy.

## **le**

Originally describing a feudal merchant house, the term also connotes 'family' and 'the company as family'.

## **Japan Craze**

During the 1870s a growing demand from Westerners for Japanese goods led to what became known as the 'Japan Craze'. International expositions fed the demand and Japanese exports to the West increased significantly.

## **Jiriki**

Self-power (the practitioner's own power), as opposed to *Tariki*

## **JIT Production**

Just-in-time (JIT) refers to the production and supply of the required number of parts at the right time, just as required, in order to minimise work-in-process inventory.

## **Keiretsu**

Post-WWII industrial networks of vertically and horizontally integrated companies, banks and trading or distribution companies.

## **Knowledge Economy**

The term used to describe a broad family of policies linking economic growth to a skilled workforce and their intellectual resources for wealth creation. The term 'knowledge society' also appears in policy documents, but it is associated with a focus on social networks and has a less instrumental emphasis.

## **Kyoto Protocol**

Kyoto Protocol is an international agreement that was signed in Japan in 1997 and commits most industrialised countries to reducing their emissions by 6-8 percent below 1990 levels by 2012. It was signed by 175 nations; however, some of the world's largest contributors of CO<sub>2</sub> emissions (for instance, the US and China) have not ratified the Kyoto Protocol and are not bound by these targets.

## **Li**

Li can be translated as principle, pattern order, meaning, or essence. Li is the rational order that underlies all organic nature, including sentient beings. In standard Confucianism Li is associated with rituals, rites, etiquette and customs. Li involves not only loyalty to superiors, but also superiors treating their inferiors with respect.

## **Life Cycle Assessment (LCA)**

LCA is a method of measuring the environmental impact of a product by analysing inputs (i.e. raw materials, energy etc.) and outputs (emissions, waste etc.) relating to things such as manufacture, maintenance and disposal.

**Low impact resources**

Low impact resources (materials) are building materials that use fewer resources and produce less pollution over their life cycle compared with conventional building materials.

**Manga**

Enormously popular Japanese-style comic book and artwork form covering topics as wide-ranging as pornography, politics and management.

**Mixed-use**

Mixed-use describes a development that combines residential and commercial use: either layered vertically in a single building, or horizontally in adjacent buildings.

**Multinational Enterprise (MNE)**

An MNE is a company that manufactures and sells its products in a country or countries other than its own. MNEs are also referred to as Multinational Corporations (MNCs) or Transnational Corporations (TNCs), but for this thesis I will use only MNE.

**Neo-Confucianism**

Neo-Confucianism was a new form of Confucianism that attempted to be more rational and secular than its predecessor. Neo-Confucianism jettisoned the superstitious and mystical parts of Confucianism - these parts often had their roots in Daoism and Buddhism principles. However Neo-Confucianism was influenced to some extent by Daoism and Buddhism. Nevertheless there existed a metaphysical divide between Neo-Confucianism and these two religions, with Neo-Confucianists using metaphysics to create a rationalist ethical philosophy as opposed to using it as a way to seek spiritual enlightenment.

**Nihon**

'Japan' and means literally 'sun-origin' or the 'land of the rising sun'.

**Nihonjinron**

Academic term denoting texts relating to the study of Japanese people and the alleged 'uniqueness' of Japanese culture.

**OEM**

An OEM company is generally one that makes a product, or parts of a product, for another company whose brand name is used to market the product.

**Recycling**

Recycling means a cyclic process of respecting the ecological integrity of all products and materials, by extending their use or form, so that their useful material cycle does not end in landfill or incineration.

**Renewability**

Renewability (Renewable energy sources) are any sources of energy that can be used without depleting natural reserves. They include: wind, geothermal, water/hydro/wave/tidal, biofuels, biomass, solar and solar water heating.

**Sabi**

Aesthetic term for elegant simplicity; loneliness, used also in conjunction with *wabi* in the expression *wabi-sabi*, indicating an aesthetic sense characterised by loneliness and elegance

**Shin Buddhism**

Generally believed to be the branch of Buddhism with the most adherents in Japan (20% of the population consider themselves as belonging to this sect of Buddhism). The branch places an emphasis on the concept of *Tariki*, which refers to the act of surrendering to a higher power.

**Statistical Quality Control (SQC)**

SQC refers to a set of statistical tools used by quality control professionals to improve efficiency and quality in the work place.

**Sustainable**

Sustainable is derived from the Latin verb 'sustinere' (to support) and describes relations that can be maintained for a very long time, or indefinitely. It is based on the concept of balanced environmental planning.

**Tariki**

Other-power, refers to the power of a Buddha or a bodhisattva, in particular Amida Buddha, as opposed to *Jiriki*

**Tatemae**

The sense of what is publicly expected in terms of individual and collective behavior.

**Typology**

Typology is the building classification system, which, in architecture and urban design, could include the range of common identity, plan geometry, spatial pattern and functional programmes.

**Uruguay Round**

The Uruguay Round was part of the GATT negotiations that took place between 1986 and 1994, and included 123 nations. The Round aimed to implement GATT trade rules in previous exempt areas such as intellectual property rights. The Round therefore focused on a number of objectives including: reducing agricultural subsidies; implementing open trade in financial service industries such as banking; and removing restrictions on foreign investment.

**Wa**

Absence of open conflict, often translated as 'harmony'.

**Wabi**

Aesthetic term for sober refinement, used also in conjunction with *sabi* in the expression *wabi*, indicating an aesthetic sense characterised by loneliness and elegance

**Zaibatsu**

Family-based industrial and commercial networks, dismantled during the US Occupation of Japan after WWII and subsequently reformed as *Keiretsu* industrial networks.

**Zen Buddhism**

A less popular form of Buddhism in Japan (when compared to Shin Buddhism) Zen Buddhism places an emphasis on the concept of 'Jiriki' (as opposed to *Tariki*) or self power.

**Zero waste**

Zero waste is a concept that aims to ensure that no waste involved in a product's whole lifecycle goes to landfill, and also that any organic waste associated with the lifecycle gets returned to the soil. Zero waste also considers a products supply chains and asks if these fulfill the same criteria. As such the employing of the Zero waste concept leads to efficient and environmentally sustainable use of materials.