

**LIFE NARRATIVES OF
CONTINUITY AND CHANGE:**

Action and Context

in Brazilian Medical Schools

Maria Cristina Briani

**A thesis submitted in partial fulfilment of the requirements of the
University of Brighton for the degree of Doctor of Philosophy**

October 2011

The University of Brighton

Abstract

The research in this thesis investigated an innovative experience in medical education history and its practice in two medical schools in Brazil. As a former member of a curriculum reform committee I examined the limits of recent curriculum reforms in Brazilian medical schools, namely in regard to the integration of subjects. The thesis describes how in the 1960s, Prof Sílvio Carvalhal (1917-2008) developed an innovative teaching method and promoted an effective integration of teaching into the main medical subject course, namely, Internal Medicine. As a graduate and then a teacher his medical career spanned 37 years, during which time he set out to implement his ‘method’ in two medical schools in the São Paulo state, at UNICAMP (state run) and PUCC (private).

The study aimed at locating the patterns of resistance and the sustainability of the method over time. The research examined the historical institutional context and the dynamics of political situations that ranged from dictatorship, to re-democratisation and the neo-liberalism of the 1980s. The fate of innovation was examined, as was the impact of teachers’ life cycles, personal factors and individual choices. I also examined the different subject traditions: the academic, the pedagogical and the utilitarian. A comparison sought to understand their influence on the paradigm of medical education. In the course of my analysis I examined individual experiences, individual concepts, generational viewpoints, changing contexts over time, the characteristics of change at specific periods and how these factors culminated in continuity or change.

The analysis looked at a convergence of factors that contributed to the decline in the practice of ‘method’ in both schools. To some extent at UNICAMP the innovation left its mark, but eventually it succumbed to the external and internal factors of university dynamics and a policy that favoured the development of an academic and scientific community that mirrored international standards. At PUCC, the effects of financial constraints; the curriculum reform and the major obstacles posed by internal dynamics within its group of supporters were major obstacles for continuity or rediscovery of the method.

Table of contents

| | |
|--|-------------|
| <i>Abstract</i> | ii |
| <i>Table of Contents</i> | iii |
| <i>List of Tables</i> | vii |
| <i>Personal introduction – or ‘the place from where I speak’</i> | viii |
| <i>Acknowledgments</i> | x |
| <i>Research Sponsorship</i> | xii |
| <i>Dedication</i> | xiii |
| <i>Declaration</i> | xiv |
| <i>List of Acronyms</i> | xv |
| <i>A route map</i> | xvi |
| | |
| <i>PART I – Introducing the Study</i> | 1 |
| Chapter 1 | |
| Background and Research Questions | 1 |
| 1.1 Thesis’s background..... | 1 |
| 1.2 Thesis project..... | 4 |
| 1.3 Thesis aims and objectives..... | 5 |
| 1.4 Research data..... | 5 |
| Chapter 2 | |
| Curriculum as a Field of Study and Theorising | 7 |
| 2.1 Origins..... | 7 |
| 2.2 The curriculum enquiries during the 1970s..... | 8 |
| 2.3 Historical studies of curriculum..... | 10 |
| 2.4 Coming into focus: the works of Ivor Goodson..... | 11 |
| 2.5 Other inspirational works..... | 14 |
| Chapter 3 | |
| The Search for Methods | 16 |
| 3.1 The choice of life stories as a method..... | 16 |
| 3.2 General procedures and interviews..... | 19 |
| 3.3 Making sense of life narratives..... | 20 |

| | |
|--|---------------|
| <i>PART II – Before Innovation</i> | 23 |
| Chapter 4 | |
| Universities in Brazil: a late advent | 25 |
| 4.1 The early institutions of higher education – 1808-1920..... | 25 |
| 4.2 Higher education during the First Republic – 1889-1930..... | 26 |
| 4.3 1930 – rupture and change..... | 28 |
| Chapter 5 | |
| The first medical schools in the São Paulo state | 32 |
| 5.1 The São Paulo Medical School..... | 32 |
| 5.2 The political background after 1930 and the creation of USP..... | 35 |
| 5.3 The Ribeirão Preto Medical School at USP (FMRP) – 1951..... | 38 |
| 5.4 The Campinas Medical School (FCM) – 1948-1963..... | 40 |
| 5.5 The State University of Campinas (UNICAMP) – 1966..... | 43 |
| 5.6 The re-creation of UNICAMP under Prof Vaz..... | 47 |
| 5.7 The FCM move to UNICAMP campus: the beginning of changes..... | 51 |
| 5.8 UNICAMP: an overview of the last decades..... | 54 |
| 5.9 Summary..... | 59 |
| <i>PART III – Life Narratives</i> | 61 |
| Chapter 6 | |
| Prof Sílvio dos Santos Carvalhal | 61 |
| 6.1 Family background, the medical course and influences..... | 63 |
| 6.2 Teaching semiology using anatomy-clinic integration – origins of the innovation..... | 67 |
| 6.3 Arrival at UNICAMP..... | 72 |
| Chapter 7 | |
| The institutional micro politics: material interests versus ideal | 76 |
| 7.1 The Head of the Pathology Department..... | 76 |
| 7.2 The autonomy of disciplines..... | 78 |
| 7.3 The students’ view..... | 80 |
| 7.4 The process of departmental organisation at FCM..... | 81 |

Chapter 8

| | |
|--|------------|
| The FCM group..... | 93 |
| 8.1 FCM former students..... | 93 |
| <i>Eros Antonio de Almeida.....</i> | <i>93</i> |
| <i>Maria Elena Guariento.....</i> | <i>103</i> |
| <i>Jamiro da Silva Wanderley.....</i> | <i>108</i> |
| <i>Sarah Monte Alegre.....</i> | <i>113</i> |
| 8.2 Another backgrounds..... | 124 |
| <i>Sandra Cecília Botelho Costa.....</i> | <i>124</i> |
| <i>José Antonio da Rocha Gontijo.....</i> | <i>131</i> |
| 8.3 A new generation..... | 138 |
| <i>Felipe Osório Costa.....</i> | <i>138</i> |
| 8.4 Building meanings through the narratives of FCM group..... | 142 |

Chapter 9

| | |
|---|------------|
| PUCC Teachers..... | 146 |
| <i>Maria Aparecida Barone.....</i> | <i>146</i> |
| <i>Carlos Oswaldo Teixeira.....</i> | <i>153</i> |
| <i>The new generation at PUCC: Patrícia Domingues, Andréa Baffa and Pompeu Campos</i> | <i>158</i> |
| 9.1 Creating meaning – the narratives of PUCC group..... | 164 |
| 9.2 Crossroads..... | 165 |
| 9.3 Summary..... | 170 |

Chapter 10

| | |
|--|------------|
| Complexities and conclusions..... | 171 |
| 10.1 The institutional history: 1990s and macro politics..... | 172 |
| 10.2 The life cycle of innovation..... | 181 |
| <i>The innovation in new institutions.....</i> | <i>181</i> |
| <i>Patterns of resistance – faculty, students and managers.....</i> | <i>182</i> |
| <i>Replicating the innovation.....</i> | <i>185</i> |
| 10.3. Interests versus material conditions: the impact of individual choices in the fate of innovation..... | 187 |
| <i>The impact of studying under the Prof Carvalho's method.....</i> | <i>187</i> |

| | |
|--|------------|
| <i>The end of dictatorship: the rise in democratic decision making within educational institutions</i> | 189 |
| 10.4. The shift to research-oriented teachers and the impact on curriculum..... | 191 |
| Final remarks..... | 195 |
| Bibliography and References | 198 |

List of Tables

| | |
|---|-----|
| Table 1. The stages of development of UNICAMP | 58 |
| Table 2. FCM (UNICAMP) and PUCC respondents' academic background, start of teaching career, supervision, and participation in research | 169 |
| Table 3. Events at international, national, state, UNICAMP and group level 1960s-1990s | 174 |
| Table 4. UNICAMP and FCM stages of development | 178 |
| Table 5. Key positions occupied at UNICAMP, FCM and FAPESP by FCM professors..... | 179 |

Personal introduction – or ‘the place from where I speak’

My professional interest in medical curriculum began in 1999 when I was an Administrative Assistant in the Curriculum Reform Commission (CRC) in the Medical School at Campinas State University (UNICAMP), Campinas, Brazil. Before that, however, I had a personal experience of medical curriculum. I had been married to a doctor since he was a third-year student and this enabled me to follow his training from graduation to residency, both of which he completed at UNICAMP. During those years, I met most of his teachers and attended medical parties and informal meetings; got to know the doctors’ vocabulary, attitudes and values as a whole. Therefore, when I started to examine medical education I was quite aware of the system and its main issues.

I had been working as an Administrative Assistant to the Medical Undergraduate Division (MD) at UNICAMP since 1998 and was in charge of organising and analysing the students’ opinion of the course. This work included reading around 1,200 qualitative questionnaires each term and trying to make sense of it. Despite the overall positivity of opinions, the majority of students reported a lack of integration in disciplines, poor teaching skills, detachment in subjects from medical reality, and a lack of attention to ethical issues.

In November 1998, MD organised a three-day forum to discuss the curriculum and classes were suspended to allow a broad participation by students and professors. The forum’s main conclusions recommended a reduction of hours, an introduction of optional subjects, and an integration of subjects. In addition, it recommended the following: initial training in primary and secondary care, student-centred teaching methodologies, incentives for dedicated undergraduate teachers, and an MD to be in charge of curriculum design and management. After the seminar, the Dean of school nominated a commission of professors, students and two administrative assistants (one of which was the author of this thesis) to propose a broad reform of the curriculum based on the seminar’s recommendations.

At the time the commission meetings started I decided to embark on a Master's Degree in Education and Curriculum Studies. Nevertheless, before beginning I had to understand the concepts of 'curriculum', 'teaching' and 'medical education' and these were admittedly unfamiliar concepts as my degree had been in Economics (also at UNICAMP). My Master's dissertation, which investigated the main curriculum changes in the medical school at UNICAMP, was completed in January 2003.

My research took place while I was at UNICAMP but it was not purely an autobiographic work, rather it both catalogues the events intertwined with my own life story and analyses those events. The personal views I brought to the study as an 'insider', were broadly counterbalanced by interviews and documental evidence; therefore, my own views have been embedded in the text only when supported by documentation and other testimonials.

Acknowledgments

I want first to thank ***Ivor Goodson***, who since our first contact by e-mail in a far July 2003 expressed his interest in supervising me. Fortunately, he was still interested and available after I had to postpone my coming to Brighton for three years. When we finally met during Ivor's visit to Brazil in October 2006, I knew I had found not only the right mentor, but a friend for life. I thank Ivor for the deep academic knowledge and experience he shared with me; he is representative of a rare combination of the best of academia, humanism, altruism and a genuine enjoyment of the company of others. The constant encouragement at every step of the research, the generous understanding of its purpose and wise reminders of the importance of seeing 'the bigger picture' – all of this has formed my results. Ivor was quite right when he reminded me many times that the thesis was not 'the whole story' – it was part of a story, starting with my journey here with Maria, making new friends, experiencing new things and returning home enriched in every way. It has been certainly one of the most beautiful and enriching experiences of human relationships that I have had in my life.

I thank enormously ***Darrell Evans*** from the Brighton and Sussex Medical School for accepting the challenge of co-supervising a thesis in Education. His suggestions were enlightening – his enthusiasm a great incentive.

This thesis could not be completed without the cooperation and generosity of the medical teachers at FCM and PUCC in Brazil who took part in the research.

A huge 'Thank You' to the group of academic and administrative staff at the Education Research Centre: ***Avril Loveless, Carol Robinson, David Stephens, Keith Turvey, Linda McVeigh, Suzanne Hyde, Sylvia Willis, Timothy Rudd***, and ***Yvonne Hillier***. Thank you all for the warm welcome, excellent working environment, great sense of humour, encouragement and guidance on practical issues. A very special thank to ***Elizabeth Briggs (Liz)*** for her generous friendship.

I would like to thank my examiners ***Ciaran Sugrue*** and ***Avril Loveless*** for the valuable feedback and comments which have significantly improved this thesis.

I would like to thank also the fantastic staff at the *One World Nursery* at the University of Brighton for the lovely way they looked after my daughter Maria – who was two years, four months old when we got here in September 2007. For a foreign student with no family nearby they represented the nearest thing to family and I was relieved to know that Maria was in a warm, loving and creative environment during my time at the university. I also thank *Greg Weinbaum* at the Students Services for his great help on renewing my visa.

I would like also to acknowledge the following people I met in UK for their friendship and incentive: *Ana Vitória Joly Hulshof, Adamantia Gkiouzeli (Dia), Angela Morley, Charlotte Morris, Christian Benvenuti, Eduardo Hulshof, Heloísa Candello, Jocelyn Pik Lin Choi, Kasia Kaczynska, Lolita Stein-Johnson (Lola), Lorraine Portelli, Niels Sandholm Larsen,* and *Yuzhen Xu*. A special thank to *Yve Hudson* – we two – as well as her lovely daughter Hannah and Maria, became best friends during the last year and her support was invaluable.

I want to make special mention to *Mary Goodson* for the loving way she always received Maria and I at the Goodsons' lovely cottage and for the wonderful trips through Sussex and Kent. I don't have enough words to truly acknowledge the friendship and emotional support Mary and Ivor dedicated to us during these four years in England. They will always be Maria's 'English grandparents' and we'll miss them deeply back home.

Certainly, this difficult journey would not have been possible if not for the essential support and love of my family and friends in Brazil. Sadly, my father *Álvaro Briani* will not be there for my return, but he was with me from the first to the last day. I dedicate this work to his loving memory.

To my children *Maurício* and *Marília* who stayed in Brazil I want to express my deep feeling of pure love (and apologies for my absence during difficult times) and my huge gratitude to them for supporting my dream from the very first day when it was just 'a crazy idea'. Words are not enough to thank Marília for 'hanging up' her life in Brazil for four months to come to UK and help me settling Maria at the nursery and a new house. To *Maria*, thank you for being such a lovely child and having accompanied me on every journey. This thesis is dedicated to the three of you too.

Research Sponsorship

The work in this thesis was made possible by a scholarship from CAPES (Coordenação de Pessoal de Nível Superior), an agency of the Ministry of Education in Brazil, whose support I acknowledge immensely.

In lovely memory of my father,

Álvaro Briani

(26.12.1926 – 01.08.2011)

I declare that the research contained in this thesis, unless otherwise indicated, 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

List of Acronyms

| | |
|----------------|--|
| ABEM | Brazilian Association of Medical Education |
| CAPES | Coordination of Improvement of Higher Education Personnel |
| CEE/SP | São Paulo State Education Council |
| CNPq | The National Council for Scientific and Technological Development |
| CONSU | University Council |
| CRC | Curriculum Reform Commission |
| DCM | Department of Clinical Medicine |
| EPM | Paulista Medical School |
| FCM | School of Medical Sciences at UNICAMP |
| FMRP | Medical School at USP / Ribeirão Preto site |
| FMUSP | Medical School at USP / São Paulo site |
| GECAC | Anatomy-Clinic Correlation Study Group |
| HC | Clinics Hospital |
| IMS | Internal Medicine & Semiology |
| MD | Medical Undergraduate Division |
| PD | Pathology Department |
| PUCC | Campinas Catholic University |
| QP | Quality Project |
| RF | Rockefeller Foundation |
| UDF | Federal District University |
| UnB | University of Brasília |
| UNICAMP | Campinas State University |
| UNESP | State University ‘Júlio de Mesquita Filho’ |
| UNIFESP | Federal University of São Paulo |
| USP | University of São Paulo |

A Route Map

Part I – Introducing the Study (Chapters 1-3)

Chapter 1 introduces my personal interest in education, medicine and the history of curriculum, in order to present the thesis background and research questions.

Chapter 2 presents the origin and subsequent development of the field of curriculum and studies about innovation in educational settings, in order to present the main theoretical assumptions which informed the study.

Chapter 3 summarises the research methods, derived from the theory and procedures taken at interviews.

Part II – Before Innovation (Chapters 4-5)

The second part of the thesis describes the circumstances that led to the expansion of higher education in the state of São Paulo, in order to set the scene for the creation and development of the medical school at UNICAMP, where the research is primarily located.

Chapter 4 presents the advent of higher education in Brazil against the backdrop of Portugal former colony, which in 1822 became independent and in 1889 became a Republic. The chapter presents the political context of the 1930s, considered the first ‘great rupture’ in Brazilian history, marked by the Revolution of 1930 and President Getúlio Vargas’ government.

Chapter 5 describes the medical schools created in São Paulo, which would influence the development of the medical school at UNICAMP.

Part III – Life Narratives (Chapters 6-10)

Part III introduces Prof Carvalho and the life narratives of UNICAMP and PUCC medical teachers.

Chapter 6 is dedicated to Prof Carvalho, focusing his training at EPM, ideas, pioneering work at UNICAMP, but also the opposing ideas that led him to retire and subsequent transfer to PUCC.

Chapter 7 presents the institutional history of the Department of Clinical Medicine, where Prof Carvalho was Head for almost twenty years, showing the micro politics in the university.

Chapter 8 presents the UNICAMP group formed by some of Prof Carvalho's former students and doctors trained at other institutions, which joined UNICAMP during the 1980s in the discipline Internal Medicine & Semiology.

Chapter 9 presents the group of teachers from PUCC, where Prof Carvalho ended his career, highlighting similarities and differences against the previous group with regard to his teaching methods and the struggle to sustain the innovation.

Chapter 10 discusses the data gathered in the thesis against the context at local, national and international level. A chart of events shows ruptures and continuities. A chart of events in individual life presents similarities and differences, patterns of resistance and change. The emerging themes from the interview are discussed against this background.

Part I

Introducing the Study

Chapter 1

Background and Research Questions

1.1 Thesis's background

This is a study about changes in educational settings, focusing an innovative medical curriculum in Brazil and its subsequent fate. To understand the history behind this innovation, the study details the long and short-term conditions that enabled the creation in the 1960s of an utterly new, modern, university (especially for the standards of the time) and ground breaking changes that occurred there then. At the same time, it follows the changes at the macro and micro-political level that initiated innovation and re-routed teachers' careers. This, therefore, is a study of 'an innovation within an innovation', so to speak, and how changes at local, national and international level transformed its original form.

The quality of medical education has been subject of inquiry of several organisations, such as: the World Federation for Medical Education, the World Health Organisation, the World Medical Association, and medical school conferences worldwide – all concerned with improving the technical and ethical standards of medical courses. In Brazil, it had been the subject of inquiries from government sectors, medical associations, teachers and students. Over the last few decades, the majority of medical schools in Brazil discussed and implemented curriculum reforms as highlighted in works of Donnangelo, 1975; Fraga Filho & Rosa, 1979; Paim, 1991; Comissão Interinstitucional Nacional de Avaliação do Ensino Médico, 1994; Congresso Brasileiro de Educação Médica, 1995, 1996; Andrade, 1995; Bonfim, 1996; Feuerwerker, 1998. Overall, the main problems discussed related to the extreme fragmentation of knowledge in the medical field, shown for example, by the high number of disciplines and teaching hours that lead to a lack of integration, particularly between the basic sciences and the clinical cycle (Briani, 2003). Students were reportedly overwhelmed by the size and complexity of facts and technical interventions within the learning environment that sought to promote competition.

Most recently, organisations like the Association of American Medical Colleges and the UK General Medical Council addressed the need to improve medical education, and the professional and caring skills of doctors (General Medical Council, 1993, 2003; Stephenson, et al, 2001).

The first studies in medical education in Latin America embracing analysis of Brazilian schools dated back to the late 1950s and the increasing interest continued in the following decades (Garcia, 1989; Feuerwerker, 1998). The pioneering studies analysed 'social medicine' and were initiated by meetings organised by the Pan American Health Organisation (PAHO) in 1955 in Viña Del Mar, Chile and 1956 in Tehuacan, Mexico. The increasing interest in the area, not to mention that which arose from other meetings, led to a series of studies on medical education and was coordinated by PAHO, the Rockefeller Foundation (RF) and the Kellogg Foundation. These institutions have had a significant impact on education policies for health professions in Latin America, particularly doctors (Briani, 2003). RF, for instance, had a significant impact on the creation of two of the most prominent medical schools in Brazil, both situated at the University of São Paulo (USP). Since then, the technological developments in medical care became linked with capital intensification in the sector initiated in the mid 1950s. The result was a development of medical specialties and its impact on the organisation of medical services is widely acknowledged (alongside the introduction of new curricular subjects) to the detriment of general education (Feuerwerker, 1998).

After decades of successive discussions and instigation of curricular reform the Brazilian medical schools entered the 1990s with issues of outcomes and teaching methods being raised. Themes discussed at medical education conferences returned to the usual consideration of dichotomies, between: theory and practice, basic and applied sciences, psychological and biological, individual and public health (Briani, 2003). Nevertheless, the curriculum structure and particularly teaching methods received little or no attention. The syllabus and the school's 'mission statement' (not unlike one encountered in the business world), introduced a series of 'competences and skills' to be achieved by students, but also kept intact the highly prescriptive medical curriculum. The main weaknesses of the pedagogical model have essentially

remained the same: excessive academic instruction, few practical activities or just activities limited to the final years of the course, an incoherent order and hierarchy of academic content (with no reference to the reality of the health system), fragmented and uncritical medical training, lack of commitment and alienation of the academic community to public health, and the marketisation of financial resources and use of modern technology without emphasis on basic health problems. Above all, the teacher's role in education is missing, in a profession where this should be central and where students should learn by practicing side by side with teachers, witnessing their performance and absorbing models.

As mentioned in my personal introduction, I took part in the Curriculum Reform Commission (CRC) of the medicine course at UNICAMP, while at the same time embarking on a Master's Degree. In retrospect, whilst the questions addressed by the CRC intended to solve the difficulty of 'promoting integration and/or cutting hours and avoiding making enemies', my questions at that time were: 'Why and how is the curriculum changing?' 'What constitutes curriculum reform and what should it be like?' 'Was the curriculum always like this?' 'What has been the history of curriculum?' Above all, I looked for clues, signs or footprints taking place over time in the formation of curriculum and its subsequent modifications.

During the course of my MA studies I became keenly aware and interested in several things: the early years of UNICAMP's medical course structure and issues of integration and other innovative experiences that occurred, such as students being encouraged to visit deprived neighbourhoods.

The professor behind the idea of integration was Sílvio dos Santos Carvalhal (1917-2008), Head of the Department of Clinical Medicine (DCM) at UNICAMP from 1967-1987. Before joining UNICAMP, he had previous teaching experience at the Paulista Medical School (EPM) [a private school that became the Federal University of São Paulo (UNIFESP)] where he graduated in 1940. After retiring from UNICAMP in 1987, he joined the medical school at the Campinas Catholic University (PUCC), a non-profit school where he had been collaborating since its beginnings in 1976.

Having taken part in the establishment of medical courses at UNICAMP and PUCC during the 1960s and 1970s, Prof Carvalho proposed a radical, integrated curriculum in the main discipline of the course – the latter being Internal Medicine & Semiology (IMS). His influence on the training of doctors and teachers was outstanding and unequivocal; most students who became teachers (some of them portrayed in this study) acknowledged that his character, supervision style and teaching methods were a significant influence on them. Nonetheless, despite his accomplishments at both institutions, his ideas and method lost ground in subsequent years.

Paradoxically, twenty years later, UNICAMP's faculty and medical students were pursuing an integrated curriculum in order to improve the doctors' training and their ability to solve efficiently general health problems and this had been the central drive right from the start. In some way, you could say that by reforming the curriculum the school was trying to recover its vast and lost treasure – but what had happened in the meantime? We knew, for instance, that there was a shift towards medical specialism and the use of technology, as pointed out before, that resulted in the loss of curriculum integration. Also, UNICAMP's rapid growth during the 1980s demanded an increase in undergraduate and postgraduate courses. At macro-political level, there was the move to neo-liberalism that reached Brazil during the re-democratisation years in the 1980s, bringing changes in the lives and careers of teachers during the economic, political and social changes that followed. This paradox was the starting point of my PhD project.

1.2 Thesis project

The thesis project set out to examine the history, subsequent development and the fate of an innovative curriculum by investigating changes in teachers' lives and careers and Prof Carvalho's life and work played a central role. In addition, the project was concerned with the transmission of teaching skills through generations of teachers that graduated and worked at UNICAMP and PUCC. By analysing their stories I had questions that needed answers: what conditions had contributed to the apparent abandonment of a radical approach in medical education? To what extent was a new generation of teachers successful in carrying on the ideals and making their own teaching methods reflect the concept of 'integration'? Was the innovation

sustainable or was it just an ideal emanating from the mind of a charismatic pioneer never to be replicated? On the other hand, the project concerned itself with the institutional record within the context of re-democratisation in Brazil and neoliberal policies – how did these changes reflect in the teachers' lives and careers?

1.3 Thesis aims and objectives

The main purpose of the study was to investigate the conditions of permanence or change of curriculum innovation; secondary aims and objectives can be summarised as the following:

- 1) How could biography and social perspective be linked to the educational process?
- 2) How did changes in professional experiences reflect in teachers' attitudes to their subjects?
- 3) How categories could be built to match: experiences, concepts and views between generations of teachers?
- 4) How could individual stories be contextualised within social restructuring processes and changes?
- 5) How could we recognize the changing contexts of innovation over time and characteristics of change embedded in specific historical periods?

1.4 Research data

The main research data came from a series of interviews conducted with medical teachers in Campinas, Brazil. Besides interviews with Prof Carvalhal and other teachers who worked in the Medical School at UNICAMP during the early years, further interviews took place with former students who had become teachers at both institutions. Other interviewees were teachers who graduated in other institutions that joined UNICAMP in the 1980's. The interviews were 'open life story conversations' between the researcher and interviewees.

An aspect of critical importance in the study was the history of the main schools of medicine that influenced the creation of the Medical School at UNICAMP – so, a large chapter is dedicated to the subject. Besides interviews, an extensive research in

the UNICAMP Archives provided additional data. The chapter on research methodology and methods further explores these procedures.

Chapter 2

Curriculum as a Field of Study and Theorising

2.1 Origins

Several authors agree that the curriculum as a field of study began with the intensification of mass education following the industrialisation and urbanisation processes in the US in early twentieth century (Goodson, 1995; Moreira, 1995; Silva, 2000). According to Apple (1990), the first curriculum theorists established the relationship between curriculum framework and community control; it was during a time when the values and beliefs of the middle class appeared to be under threat from corporate capitalists and an increasing immigrant working class.

In 1918, Bobbitt published 'The Curriculum', featuring the factory as a model for schools and Taylor's technical administration as theoretical framework. According to Bobbitt, the learning process resembled the concept of input and output in factories, aimed at goals, methods, procedures and results. This perspective addressed curriculum organisation as the first task and the curriculum development as the central concept; the establishment of standards was also necessary and was seen by Bobbitt as a 'moulding process' (Silva, 2000; Briani, 2003).

The launching of 'Basic Principles of Curriculum and Instruction' by Ralph Tyler in 1949 consolidated the Bobbitt's model that governed the curriculum area until late 1970s. The basic questions of curriculum looked at school objectives: how could educational experiences achieve them? How could learning be efficiently organised? And how could the implementation of objectives could be ensured? (Silva, 2000; Briani, 2003). Under influence of American theorists, the emphasis was on the introduction of practical and scientific forms of conceptualisation and curriculum implementation (Goodson, 1994). The technical and controlling aspect of curriculum permeated educationalist reforms in the US and later reached countries like Brazil; that is to say this constituted the transference and reproduction of models derived from the American context [although some authors questioned this approach as being naive (Moreira, 1995)]. In fact, there were adjustments that took place in Brazilian

curricular theory and from the 1980's on there was criticism on the reproduction theory, and even its denial.

2.2 The curriculum enquiries during the 1970s

From the 1970's, the curriculum concept was questioned by several authors especially: Althusser, Bourdieu, Passeron, Bernstein, Young and Apple, who formulated critical theories on the political aspects of curriculum. In Brazil, Freire was notable; however, because of his exile during the military regime, his works delayed dissemination in the country (Briani, 2003).

How have critical theories approached the basic concept of curriculum? It is reasonable to say that they inverted its foundation by questioning the underlying ideology of curriculum objectives. The traditionalists took the *status quo* as a reference point, an aim to achieve and were restricted to the technical concept of 'how to make' the curriculum work. Critical theorists questioned exactly where the curriculum began and considered the *status quo* as responsible for social inequities, criticising the schools for their implementation of curriculum (Silva, 2000).

Althusser's 1970 study 'Ideology and the Ideological State Apparatuses' settled the introduction of a Marxist analysis in education, showing the interaction between education and hegemonic ideology. This interaction upheld capitalist society, that is, the reproduction of economic order and ideological expression. According to Althusser the school is crucial to diffusing ideology – it achieved this with its curriculum: selecting appropriate subjects that match different social classes and presenting the existing social order as relevant and beneficial. Together with Bourdieu Althusser established the basis of a new radical attack on liberal education.

Apple, an author identified as neo-Marxist, questioned the traditional theories of curriculum and its ideological function. Beginning with the main elements of the Marxist analysis of society and the dynamics of capitalist society around class domination, Apple showed the connections between cultural reproduction and social reproduction, and the association of economic organisation and curriculum. These connections were not simplistic – Apple avoided a mechanical, determinist view of

the linkages between production and education. He argued that there existed not just ‘material property’, but also a ‘symbolic property’ which schools supported and distributed (Silva, 2000). He argued that the processes that exist and are produced actively in teachers’ training mediate the linkage between economic and social structures, and education and curriculum. This linkage is also mediated by human behaviour and not just a derivative of economic functioning. Apple utilised Gramsci’s concept of hegemony and quoted Raymond Williams’ work that highlighted ideological and cultural mediations between the influence of material and power in a class society, and the emergent individual conscience:

‘For hegemony supposes the existence of something which is truly total, which is not merely secondary or super-structural, like the weak sense of ideology, but which is lived at such a depth, which saturates the society to such an extent, and which, as Gramsci put it, even constitutes the limit of commonsense for most people under its sway, that it corresponds to the reality of social experience very much more clearly than any notions derived from the formula of base and superstructure.’ (Apple, 1990, pp.4-5)

The concept of hegemony helps us to examine this social struggle – how dominant groups perpetuate ideological coercion in order to maintain their position. It is precisely through persuasion that economic domination turns into ‘cultural hegemony’. The efficacy of this is greatest when it itself is seen as, felt to be, ‘commonsensical’ and ‘natural’. Apple makes this point clearly in the following quotation:

‘Thus, we can now begin to get a more thorough understanding of how institutions of cultural preservation and distribution like schools create and recreate forms of consciousness that enable social control to be maintained without the necessity of dominant groups having to resort to overt mechanisms of domination.’ (Apple, 1990, p.3)

The selection and organisation of curriculum content reflects the official school line’s representation of the ideology of dominant social. According to Apple, this is a conscious and unconscious social ideological option. In order to understand the school’s mediation in this process, it is essential to understand how daily teaching and apprenticeships produce these results – investigate the origins and historical conflicts which shaped the institutions as they are today. The political and economic

factors should be brought to the centre of educational research by exploring the process of cultural distribution of power and control from outside the school (Apple, 1990). An integral part is questioning curriculum form and unmasking its latent ideological content. Besides asking, ‘Whose knowledge is it? Who selected it? Why is it organised and taught in this way?’ it is also necessary to make linkages with, as Apple put it, ‘competing conceptions of social and economic power and of ideologies’. He continues, ‘In this way, one can begin to get a more concrete appraisal of the linkages between economic and political power and the knowledge *made available* (and *not* made available) to students’ (Apple, 1990, p.7, highlighted in original).

2.3 Historical studies of curriculum

Historical studies in curriculum connected to an early period of the New Sociology of Education (NSE) initiated in England by Michael F D Young and others. They were essential for the NSE theoretical scope whose studies intended to reveal the arbitrariness of the processes of selection and organisation of schooling and academic knowledge. The historical studies of curriculum looked at ‘organised knowledge’ in curriculum as an unfixed element – a social and historical construction, changing, in continuous flux. Also the historical analysis of curriculum understood it less as something constantly evolving and improving, but also a process with breaks, discontinuities and ruptures (Silva in Goodson, 1995). A historical perspective of curriculum is not a static description of the past, it explains how the curriculum has turned out the way it has; what social dynamics resulted in one form and not another one. This approach take us to the next point, that the process of social construction of curriculum is not neutral, exempt, disinterested, logical, but rather an area of dispute. As Silva reminds us, the curriculum is not just valid knowledge, but knowledge socially legitimated.

According to the historiography initiated by the ‘Annalistes School’¹ based on common people, the economically disadvantaged and the daily routines of people’s

¹ The name Annales School, later Annalistes, came from the journal ‘Annales d’histoire économique et sociale’ and is a historiography style created by French historians Lucien Febvre and Marc Bloch, followed by a second generation led by Fernand Braudel, Georges Duby and Jacques Le Goff, among others.

lives, a history of curriculum seeks for clues that can help to find out what kind of knowledge gave place to another one of higher prestige, power and social ‘feasibility’. This approach presents the ‘loser’ curriculum as valuable as the ‘successful’ one. Furthermore, a history of curriculum that intends to be a social history cannot ignore the fact that the curriculum carries influence over people. Therefore, it must include questions that represent and reflect the sociology of education in a larger temporal perspective (Silva, 2000).

Since different curricula produce different people – whose differences are social and not individual – and is also related to class, race and gender, ‘a history of the curriculum must focus not only on the curriculum itself, but also in the curriculum as a means of production of subjects of class, race and gender’ (Silva, in Goodson, 1995, p.10). This perspective views the curriculum as representing certain social interests, and also as producing certain social identities and subjectivities. ‘Curriculum not only represents; it produces, and it is necessary to recognise that the inclusion or exclusion in the curriculum has connections with inclusion or exclusion in society’ (Silva, in Goodson, 1995, p.10).

2.4 Coming into focus: the works of Ivor Goodson

Studying the nature of public education in England, Goodson pointed out the limits of re-constructing the details of curriculum using only the traditional sources of the history of education that is: official registration, reports, regulatory and legislative acts. The school’s organisation changes and the history of education realises this change but the experiences of individual patterns of class or gender remain unaltered. A more conventional historical approach has a limited reach, and clearly historical sources are necessary considerations when examining what is actually taught in schools. This is clear in the work of Goodson, for whom the archives on content and summaries of curriculum represent an authentic treasure for the researcher seeking to understand the objectives and agenda of schools, although partial:

‘Above all ‘curriculum’ designates a central mode by which external agencies from the state downwards have sought over time to penetrate and control the ‘license’ of the individual classroom. Historically, the written curriculum was partially modelled for this purpose as a result; it is a

valuable source for understanding certain external intentions and agendas as they impinge on schooling. If we are to broaden our study of state schooling it is partly through studying curriculum at this level that we might gain glimpses of the relationship between external structure and internal agency.’ (Goodson, 1988, p.6)

Some case studies presented by Goodson (1988) focus on the individual and then the group or collective, examining the life stories of individuals and how it allows the development of themes, then the assessment of structures and organisations. Goodson referred to these studies this way:

‘Above all, historical case studies of school subjects provide the ‘local detail’ of curriculum change and conflict. The identification of individuals and sub-groups actively at work within curriculum interest groups allows some examination and assessment of intention and motivation. Therefore, sociological theories attributing power over the curriculum to dominant interest groups can be scrutinized for their empirical potential.’

‘To concentrate attention at the micro-level of individual school subject groups is not to deny the crucial importance of macro-level economic changes or changes in intellectual ideas, dominant values or educational systems. But it is asserted that such macro-level changes may be actively reinterpreted at the micro-level. Changes in the macro-level are viewed as presenting a range of new choices to subject factions, associations and communities. To understand how subjects change over time, as well as histories of intellectual ideas, we need to understand how subject groups take up and promote new ideas and opportunities. It is not contended that subject groups are all-powerful in engineering curriculum change, but that their responses are a very important, as yet somewhat neglected, part of the overall picture.’ (Goodson, 1983, pp.3-4)

Goodson presented three different levels of historical studies (though not isolated from each other in practice) that help us to understand the practical, locating this within a comprehension of the contextual parameters of practice:

‘1. The individual life story. The process of change is continuous throughout a person’s life “both in episodic encounters and in longer-lasting socialisation processes over the life history”.

2. The group or collective level: professions, categories, subjects or disciplines, for instance, evolve as social movements over time. Likewise school and classroom develop pattern of stability and change.

3. The relational level, the various permutations of relations between individuals, between groups and between individuals and groups; and the way these relations change over time.’ (Goodson, 1988, p.95)

Goodson warned against a common neglect of social studies, particularly in education, namely, taking time for granted, producing a-historical accounts of the ‘history of education.’ Accordingly, the irony is the creation of studies of social change or educational change that ignores time and only explores ‘snapshot notions of social context and time’. A theory of context and change should be grounded instead in the rhetoric of change linked to global restructuring. Yet change should be understood in all its complexity; it is possible to re-define events in the long, medium or short-term (or to use the analogy of the ocean – the long-term is the ocean bottom, the medium-term the swells and tides and the short-term the waves and foam) and even try to combine them to long waves or cycles (Goodson, 2005a).

Apple (1985)’s view on the relationship between curriculum and ideology, as well as Goodson’s historical works on curriculum change showed that the selection of curriculum often reflects a form of social prioritisation in society. Historically, the legitimatisation of a certain knowledge in the curriculum, its promotion to a higher status coincided with the ‘devaluation’ of a knowledge of a different kind and also of its supporters and believers. In the quest for higher status, resources and legitimacy, scientific research and teaching communities act in their own interests; as Goodson (1995) argues, the curriculum reflects the way certain questions are seen as social ‘problems’ and is ‘the result of a complex process where pure epistemological considerations or rational deliberations on knowledge are maybe not even the most central and important’ (Silva, in Goodson, 1995, p.9). Also, both authors highlighted the role of the curriculum in the social structure in determining what is available to each social class.

Therefore, when investigating the fate of an innovative curriculum it is necessary to examine to what extent a process of underestimation of knowledge and leadership occurred. In order to understand these questions, my research investigates the context on two different levels. Firstly, the fate of the innovative curriculum linked to the life cycle of innovation and the life cycle of the teacher (Sikes, 1985). Secondly, the

major changes at macro-level and their impact on decisions at the micro-level – in other words, the micro-politics of an evolving scientific and teaching community.

This theoretical framework enables us to examine the curriculum as prescription and practice in medical courses. For example, the admission at Brazilian medical schools became extremely difficult for students from state schools and disadvantaged backgrounds. The style of entrance exams became more abstract, demanded academic skills usually provided by the best and most expensive private secondary schools and preparatory courses. Until the late 1960s, the state schools in Brazil used to have better educational results than the private ones, and students from state schools were often selected to go to the best universities. The impoverishment of state primary and secondary education changed this situation dramatically and this must be recognised to be a political, economical and social process that re-organised access to higher education. As a result, there is currently a system of state-funded universities accessible mainly to the elite while private colleges provide vocational courses for students from working class backgrounds.

2.5 Other inspirational works

The ‘anatomy of educational innovation: a mid to long-term re-study and reconstruction’ (Smith et al, 1986, 1987, 1988) is a comprehensive review of changes in educational settings that provided a positive framework within which to understand changes in education. After portraying the early years of the Kensington School in ‘Anatomy of Educational Innovation’ (1971) the authors revisited the school 15 years later in order to investigate the fate of the innovative curriculum. After interviewing the former Principal, Superintendent, and original faculty members, and researching extensively the Mildford District Board’s minutes they produced an accurate reconstruction of economic and social changes that sealed the fate of innovation. They analysed the school’s history against a backdrop of significant changes in social life, examined over the four principals’ terms. Particularly relevant to my research is the ‘longitudinal nested system model’ which presents an overlook of key events at international, national, state, local community, district school, school, classroom and individual/personal level within a timeline chart (Smith et al, 1987, p.269).

Hoffer (1951)'s concept of 'the true believer' – 'the man of fanatical faith who is ready to sacrifice his life for a holy cause' (Hoffer, 1951, p.5) lead the interviews that the authors did with former principals, superintendents and faculty members. Emerging themes from life stories concurred to set up the context of innovation and its subsequent decline. Based on emerging themes from the interviews, the authors presented the idea of 'the experiential funnel', a table analysing how 'chance, unconscious influences, purposive action, cumulative and major life experiences and trauma' evenly contribute to the 'origin, conservation and alteration of belief systems and subsequent educational actions, opportunities, but also constraints, leading to different ways in dealing with change' (Smith et al, 1986, p.181). In other words, it explored the concept of macro-level changes being actively reinterpreted at the micro-level, as I said before.

In a similarly structured analysis, Mork (2008)'s investigation into 'the ambiguities and complexities of school innovation' in a case study of a music college in Bergen, Norway, provided a fascinating framework to further studies on innovation in educational settings. Based on a life history strategy as a way of exploring curriculum history, Mork juxtaposed life stories with documentation and stories from a wider context – developing 'a story of action within a genealogy of context' (Mork, 2008). Just as with my study, he sought to understand changes in the conditions of professionals in order to deal with the curriculum in innovative ways, against a backcloth of socio-historical and general academic drift. The work explored in depth the sad fate of educational innovators, the early retirement and disillusionment of many 'old professionals' in the wake of the new 'managerialism'. In the same way, Goodson pointed out the loss of memory and mentoring with the replacement of 'old professionals' in various industries and services including education (Goodson, 2005b).

Having briefly introduced the main authors and works that influenced my work, in the next chapter I will focus on the methodology (I prefer to call this an 'exploratory journey') through life story and life history methods. These ideas, works and authors inspired and informed the research and subsequent conclusions.

Chapter 3

The Search for Methods

3.1 The Choice of Life Stories as a Method

*'Uh-uh! Grass!
 Long wavy grass.
 We can't go over it.
 We can't go under it.
 Oh no!
 We've got to go through it!'*
(Rosen & Oxenbury, We're Going on a Bear Hunt)

When I first read Michael Rosen and Helen Oxenbury's 'We're Going on a Bear Hunt' to my daughter, I happened on the similarity of the citation above to the research process, particularly the search for methods. The characters in the story repeats it as a mantra whenever they get 'a deep, cold river', 'a thick oozy mud', 'a big dark forest', 'a swirling whirling snowstorm', and finally 'a narrow, gloomy cave'. Similarly, as the research process evolves researchers face fresh and equally challenging problems they cannot solve by denial, shortcutting or taking shallow viewpoints. 'We've got to go through it' armed with personal beliefs and inner resources, but also recognising that other researchers made similar journeys before – from whom we can learn and benefit a great deal.

When researching curriculum changes, how they affect teachers' lives and are affected in return, qualitative methods were the natural selection – their main characteristic being the researcher's direct contact with the studied situation. The main characteristic of qualitative research is that the research is directly related to the situation. Qualitative research is essentially descriptive with the results usually containing quotations in order to emphasise or show the results. The researcher assumes that 'nothing is trivial; that everything has the potential of being a clue that might unlock a more comprehensive understanding of what is being studied' (Bogdan & Biklen, 2003, p.5). The purpose of qualitative research lies in the process rather than results. Therefore, data analysis in qualitative research is inductive, once usually there is no hypothesis beforehand to be proved by facts or evidence.

Current educational research has sought to utilise investigative approaches and procedures to remove and/or overcome the dichotomy between quantitative and qualitative methodologies. Several authors argued for the thesis of complementary paradigms in social sciences and education within the post-positivism epistemological backcloth. They believed that different research traditions are reasonable and not necessarily in conflict; accordingly, that they should be acknowledged considering the different aims of educational research – a single model could not be sufficient (Santos Filho, 1995).

Ginzburg (1990) had already pointed out to the silent emergence of an epistemological pattern in the scope of human sciences in late nineteenth century, what he called ‘the evidential paradigm’, based on the direct observation of signs, symptoms or signals. Widely operative, though not explicitly theorized, it could possibly ‘help us to break out the fruitless opposition between “rationalism” and “irrationalism”’ (Ginzburg, 1990, p.96; quotation marks in original). This wider understanding leads to a proposal that is more properly defined as reflexive on multiple levels of situational study. This investigative proposal uses a variety of resources to explore the research questions but it does not ‘frame’ itself with methodological devices – they are a guide.

When assessing different types of data collection, life stories and life history methods appeared to me the way forward to capturing different possibilities and viewpoints. As Goodson and Sikes (2001) argued, if we are to understand teachers’ choices of professional practice and also something as intensely personal as teaching, it is essential that we know who the teacher is. American anthropologists and sociologists made sense of life histories in the early twentieth century and its use was consolidated by sociological studies at the University of Chicago. For the authors committed to this method, ‘life stories were the data par excellence of the social scientist’ because it provided records and personal expression from within cultures and situations not known and alien to the researchers.

The use of interviews as a primary source brought attention to oral history methods and research procedures and the results could cover a series of accounts and facts not

registered by other forms of documentation. The analysis of data collected by oral history methods develops throughout the research process, encountering continual alterations and makes each and every interview singular – like no other. On the other hand, oral history does not just restrict itself to a single life story or report, but works with diverse set of individuals that can belong to the same collective, and this supplies the researcher with a social awareness and a structural and sociological history of given groups.

The matter of the reliability of oral history evidence and subjective bias of informants is one of the most controversial aspects regarding oral sources in educational research. On the question, ‘How reliable is the evidence oral history?’ Thompson (1988) quoted Marwick, to argue that the historian should relate the ‘accepted hierarchy’ of sources – and on examining them the following questions should be asked: ‘How did the document come into existence in the first place? Who exactly was the author, that is, apart from his name? What role in society did he play, what sort of person was he? What was his purpose in writing it?’ (Thompson, 1988, p.118). Furthermore, he argued that many questions of veracity, authorship, and purpose could be answered more reliably by oral evidence than by documents.

With the emphasis on a subjective bias, Thompson highlighted the difficulty in defining what could be interpreted as historical fact – to what extent could the interviewee’s accounts be viewed as a ‘reality’ and not just his/her opinion at that time? Thus, this is not only a matter of whether the interviewee is speaking the truth or is lying, but also to be taken into consideration is that she/he genuinely believed at the time of recounting that their narration of past events was a true version. Thus, oral history documents should be understood not only as a document about the past, but also and importantly as a document about the present.

As previously indicated in Chapter 1, when investigating the fate of an innovative curriculum two different levels of a theory of context can emerge. Firstly, the unique timeless life cycle of innovation – it has a certain period of influence and after that it becomes sustainable or decays naturally. The second level is the particular historical period of change, as Goodson (2005) argued:

‘The most interesting points for inquiry and investigation are when the different layers of historical time coincide; for it is at such points that inclinations towards and capacity for change and reform are strongest. Such co-incidences or conjunctures can be seen in key moments of educational history and change.’ (Goodson, 2005a, pp.107-8)

In order to determine the first stage of context, i.e., the life cycle of innovation, the analysis of interviews showed teacher’s lives against the backcloth of innovation. Through detailed analysis of emerging themes and accounts it was possible to assess the micro politics – a belief system under constraints and challenges. The individual stories also helped to illustrate ‘the experiential funnel’ (Smith, 1986) of each case, showing personal circumstances during the period studied in the research. On the other hand, this set of portrayals was examined against a table of events at local, regional, national and international level, in different periods of the life cycle of innovation. When juxtaposed and contrasted all these elements showed internal and external conjunctures contributing to the fate of the innovative curriculum and its supporters.

3.2 General procedures and interviews

The main criterion in the selection of respondents was their academic qualifications in internal medicine and semiology. Potential interviewees were invited by email when details of the thesis project and a complete Education Research Centre (University of Brighton) interviewee consent form were sent. They were also informed that the study would be investigating innovations in medical curriculum, connected to teachers’ lives. They were aware that the interview would be recorded, transcribed and that the transcription of interview would be sent back to them for their approval. Sixteen teachers from UNICAMP and PUCC were contacted; seven teachers of UNICAMP and five from PUCC confirmed. In addition, excerpts from interviews collected for a previous research project were used when appropriate and were properly quoted.

The names of interviewees were not omitted or changed in the text, but I adopted the standard of presenting the last name preceded by ‘Prof’ (Professor) in the case of those who achieved the doctorate degree and ‘Dr’ (Doctor) in the case of graduates with medical residency.

The interviews were collected from July to September 2008 and in November 2008. The interviews took place at the teachers' offices at UNICAMP and PUCC during work hours. On average the interviews lasted for one hour; one interview took place in a busy consulting room at the UNICAMP hospital school, which made it shorter than expected. I recorded the interviews in audio format (wave sound files) and made the transcriptions using Express Scribe 5.13.

3.3 Making sense of life narratives

As the story of Prof Carvalho at UNICAMP and PUCC was the guiding thread of the thesis, I took extra care in addressing his interviews. 'Finding out the truth', 'understanding without seeing', 'relating causes to signs', were key concepts in Prof Carvalho's speech, and he frequently used these concepts when explaining his teaching methods. His philosophy was not founded in books or articles (as he published a few) but on a number of unpublished articles and textbooks written during the 1990s that he used in courses at PUCC and gave me during an interview. Through these articles, textbooks, and interviews – along with accounts of other interviewees, I was able to communicate his thoughts and ideas. Even so, bringing his thoughts up to date and highlighting key ideas and beliefs remained a challenging task. The spoken word has power and strength but is hard to reproduce. I found it a dilemma – how best to express, translate and interpret his thoughts and ideas.

I asked myself several times how best to describe his life experiences and beliefs, whether his accounts and memories should be presented in a flowing text (as he had recounted them to me almost ten years ago) or in the form of a categorised report. After reading his interviews a number of times and linking key emergent themes I built up twenty different topics, but then realised that the list of topics, despite its comprehensiveness (and disconnectedness in view of the interviewed context) would not do justice to his life, beliefs, values and ideas that I had come to know. Therefore, I built the portrait in Part III from interviews interspersed with fragments of articles, memories of other interviewees, and when necessary, excerpts from documents. It is as close as possible to the person I had known, with the resources available.

When analysing the life stories of FCM and PUCC teachers, I was interested in understanding what the common thread was that linked Prof Carvalho's followers. Having found my link, I sought to contrast their backgrounds with those of the 'non-followers' (so to speak). I used the research questions as a point of reference, a framework for working with the stories. Nevertheless, the nature of the life history interview went far beyond my attempts to keep strictly to the research questions, in part because the interviewees had been invited to tell their life story without seeing the questions first. The research questions therefore were a guiding point, but they did not envisage much of what in the event was actually told – so much was unknown and unseen at the beginning and I had to be open to what the process would bring. For instance, the stories (told by the group that joined UNICAMP after Prof Carvalho had left for PUCC) provided a solid explanation of what happened to his method in the school. Thus, it was natural that those stories were set apart as a group as being narrated by interviewees whose involvement in, and influence on, the fate and future of UNICAMP medical school, was crucial.

The interviews of UNICAMP and PUCC teachers were extensively examined individually and then analysed together. Such analysis brought up emergent themes, not to mention 'saturated themes' (i.e., when no new information is emerging) (Strauss and Corbin, 1998). The emergent themes, ranging from: the choice of medicine; the early professional career; research; marriage (to mention a few) were then examined against the backcloth of the institutional history provided by: documentation, previous studies and/or my own life story. Just as I did with my analysis of Prof Carvalho's interviews, I did not create categories from the narratives; instead I allowed each narrative to provide a different angle on the story that otherwise might have been neglected.

This choice proved extremely useful when discovering both common features within the groups, and also details which would help to explain their choices in their personal and professional life. The portrait of one of the interviewees, for example, would have suffered had I left out her professed Catholic beliefs and background. These came up frequently in the interview; they were an integral part of her life story and enabled me to represent her faithfully. Thus, each narrative was carefully

analysed with the research questions in mind, but also crucially recalling the interviewees as people, located in historical and contextual settings. In other words, I scrutinised the interviews, looking for evidence that could fully grasp the fate of the innovation that most of them were acquainted with, and were a part of.

The portrayals in Part III - 'Life Narratives' were organised and shown in chronologic order, i.e., Prof Carvalho in chapters 6 and 7, followed by the FCM group in Chapter 8 and the PUCC group in Chapter 9. The FCM group was divided into 'former students' (who had close contact with Prof Carvalho and his method) and professionals from 'other backgrounds' (who joined UNICAMP during the 80s and were recent graduates just starting their teaching careers). The three sections cover a thirty-year period from the school's inception until the early 2000s.

The group of teachers at PUCC is smaller, has only two main characters and is presented in a fairly different manner. These narratives are followed by a section on the 'new generation' of teachers who are of about the same age and experience.

Part II

Before Innovation

The second part of this thesis, organised into two chapters, discusses the circumstances that gave rise to the expansion of higher education in the São Paulo state. These circumstances and antecedents are crucial for setting the scene of the creation and development of the FCM, the medical school at UNICAMP. Chapter 4 tells of the advent of higher education in Brazil against a backdrop of Portuguese colonialism. This ended in 1822 and Brazil became a Republic in 1889. The early institutions of higher education (shown in sections 4.1 and 4.2) dating from 1808 did not follow the French or German models. In the early days they merely provided the Portuguese Crown with professions such as doctors, lawyers and engineers. It was only in early twentieth century that the idea of a Brazilian university came to the forefront. At this point these institutions were both idealised as independent repositories of original knowledge, thinking and culture and also viewed as mere technical support for the development of late capitalism in Brazil².

Section 4.3 presents the political context of the 1930s – this period was considered the first ‘great rupture’ in Brazilian history, marked by the Revolution of 1930 and President Getúlio Vargas’ government. The Revolution of 1930 had a significant impact on São Paulo history, giving rise to the Insurrection of 1932 which was defeated by federal forces. Nevertheless, it also boosted the idea of creating a university which could represent São Paulo’s academic and political elite’s ideas and ideals, which culminated in the creation of the University of São Paulo (USP) in 1934 and the incorporation in it of the existing colleges of Law, Medicine and Polytechnic, amongst others.

² It refers to Mello, J.M.C.’s doctoral thesis ‘The Late Capitalism’ where he proposes an alternative timeline for the Brazilian economy. CEPAL (Economic Commission for Latin America and Caribbean) studies established the colonial period, the primary-exportable period between 1808 and 1930, and the import-substitute industrialisation years in two stages: light industry until the 1950s and durable and capital goods industry from 1955. Mello highlighted the end of slavery in 1888 as a turning point and proposed the following stages: colonial economy until 1808, national mercantile-slavish economy during 1808-1888 and from 1888 on a late-capitalist export economy in three stages: 1888-1933 – birth and consolidation of the ‘great industry’, 1933-1955 – restricted industrialisation, the generated industrialisation from 1955 (Pereira, 1983).

Chapter 5 describes the creation of medical schools in São Paulo, which decades later, would influence the evolution of the Campinas Medical School (FCM) at UNICAMP. Section 5.1 describes the São Paulo Medical School (FMSP), the first state funded medical school in São Paulo in 1913 which would join the USP in 1934. After searching for five years, the Rockefeller Foundation (RF) chose to financially support the FMSP in terms of departments, new buildings, and US scholarships. Nevertheless, the FMSP had already established a sound scientific and educational status prior to RF funding which years later would shape the development of medical schools in Ribeirão Preto and Campinas.

Section 5.2 introduces the background for the creation of the first state university in São Paulo, USP. Section 5.3 presents the second state medical school in São Paulo, the Ribeirão Preto Medical School at USP (FMRP), created in 1951. FMRP would also influence FCM in Campinas, providing the institutional and academic organisation. Section 5.4 focuses on the development of FCM after describing its antecedents. Campinas had been campaigning to create a medical school in the city – the second largest one in São Paulo and eventually, in 1953, the FCM was legally created as a single institution. The complex political context postponed the school's installation for ten years. Finally UNICAMP incorporated it into its institution in 1966, although the medicine course had already started in 1963.

The histories of the USP, FMRP and UNICAMP have their own individual stories and trajectories, but they share some figures. The leading character was Prof Zeferino Vaz (1908-1981), zoologist and doctor, who worked at three institutions and was key in the creation of the FMRP and UNICAMP. Therefore, a short portrait in Section 5.6 of Prof Vaz unifies the story primarily through his role in the creation and development of institutions of higher education in São Paulo, in particular UNICAMP.

The creation of UNICAMP is the subject of the remaining sections. Arguably one of the most innovative state universities in Brazil, it has benefited from the experience of some of its predecessors like the USP and the FMRP in terms of their institutional frameworks and teachers.

Chapter 4

Universities in Brazil: a late advent

4.1 The early institutions of higher education 1808-1920

In contrast to other Latin American countries which already had catholic universities in early sixteenth century, in Brazil this was limited to some seminars associated with the Jesuits. Latin American universities did have some common features – none of them were purposely-built for the needs of developing countries and indeed Boaventura (1988) argued for a greater generalisation of the Latin American university system. At this time the traditional European university model had not reached its Latin American counterparts – they were mainly concerned at that time with achieving the cultural and religious conversion of indigenous people and at this time only Coimbra, Montpellier and Edinburgh had medical courses (Meneghel, 1994).

The decamp of the Portuguese Crown to Brazil in 1808 under the threat of Napoleonic invasion accelerated the assimilation of the colony into court life, enabling the creation of institutions aimed at training doctors, engineers and lawyers. The first Brazilian medical schools date from 1808 in Salvador and Rio de Janeiro (Cunha, 1986). The French language was the only entry requirement; the course guidelines came from Portugal, but it was limited to the ability to provide basic cures like: bleeding, cupping glass and fracture treatment. In 1812, the Bom Será reform extended the duration of study period to five years and introduced the use of the English language. Two qualifications (Surgery and Surgical Cures) and Therapeutics, Obstetrics, Chemistry, and Pharmaceutics complemented the existing disciplines of Surgery and Anatomy. In 1820 new regulations changed the minimum age and entry requirements in the study of Portuguese, French and Logics (Edler and Fonseca, 2000).

In 1826, a law sanctioned the medical schools' the right to grant the titles of 'Surgeon', 'Trained Surgeon' and 'Doctor' to graduates. In 1828, the law changed to allow only graduate doctors the practice of medicine, cancelling the 'licensing letters' (Lampert, 2002). In 1832, Rio de Janeiro and Bahia academies became

colleges and a series of changes were introduced. The minimum age increased to sixteen; compulsory preliminary exams were established; compulsory education included: French, English, Latin, Philosophy, Arithmetic and Geometry; the duration of courses changed to six years – qualifying for Medicine, Pharmaceutics (three years) and Obstetrics (two years) (Edler and Fonseca, 2000; Lampert, 2002). The courses aimed at fulfilling the court's needs but there were demands as early as the middle 1800s for their quality of practice not just to benefit the court but society in general and this was realised at the end of the century. The debate initiated the Leôncio de Carvalho Reform in 1879 which created new laboratories, compulsory practical lectures, free courses and women's graduation. Although not immediately implemented, the law raised the need to improve medical training (Edler and Fonseca, 2000).

At the end of the century, except for Bahia, the map of existing Brazilian medicine schools showed only their existence in the South Eastern states of Rio de Janeiro, Minas Gerais, São Paulo and South states of Santa Catarina and Rio Grande do Sul; by 1930 it had reached the North and Northern regions (Edler and Fonseca, 2000; Gonçalves, 2000).

French influence in culture and education increased as Latin American countries became independent in early nineteenth century. As a result, there was linking up of isolated colleges into universities which reinforced professionalism and positivism. At this time universities had no influence in society and upon scientific development (Meneghel, 1994).

4.2 Higher education during the First Republic – 1889-1930

When Brazil became a Republican country in 1889 there were six higher education institutions but not a single university – around 2,300 students had been attending colleges training for the 'liberal' professions (Ribeiro, 1985). The elite supplied students and teachers throughout the periods of slavery, colonialism and oligarchy. Therefore, higher education merely reinforced the prior social status; few students were beneficiaries within the oligarchic economic and political system. Initiatives towards the discussion of university matters did not resonate since primary and

secondary education in Brazil was poor and it remained the case that most of the population was living in rural areas, a situation which would last until early 1960s. The Constitution of 1891 granted the creation of higher education institutions to other state / municipal organisations and private groups – these were still aimed primarily at the training of professionals, not researchers (Durham, 2004). However research activities, greatly influenced by French and German scientific development did develop in museums and other institutes, such as: the Campinas Agronomy Institute, the São Paulo Vaccinogenic Institute, the São Paulo Bacteriologic Institute, the Butantan Institute and the Manguinhos Institute (Schwartzman, 1979). From 1890 to 1929, higher education institutions in Brazil numbered sixty-four, and varied little in educational and organisational structure.

During the 1920s, a strong modernising movement started in the most developed regions, especially São Paulo – the urbanisation and economic changes brought about by industrialisation gave rise to a genuine cultural revolution and this affected education too³. One of its banners was free universal primary education and the enhancement of higher education, the combination of science and teaching and the promotion of ‘centres of impartial learning’ – not just ‘teaching establishments’. The model was similar to the German one with innovations inspired by the American model; independent colleges were to be replaced by broader ones which were able to develop the basic sciences and conduct research as well as provide professional training (Durham 2004, p.150).

Some authors claim that a battle between liberals and positivists postponed the creation of Brazilian universities (Cunha, 1986; Fávero, 2000). According to Cunha (1986), the liberal thinking associated the freedom and autonomy of education with the establishment of universities and this was opposed by the positivists (Cunha 1986, p.94). To the liberals, the aim of the university system in Brazil should be to develop and promote the education of a professional elite and cater for the public wishes (Cunha 1986, p.94). Liberals defended the idea of organisations dedicated to culture and knowledge for all and this was directly opposed to model of the existing

³ The Modern Art Week, in 1922, became a symbol of this period. It was an arts festival in São Paulo that marked the launch of the Brazilian Modernism.

professional schools. The creation of the University of Rio de Janeiro in 1920 did not mean, however, the triumph of liberal ideas – it merely marked the linking up of existing colleges of Medicine, Engineering and Law⁴. According to Fávero (1976), it was just a way of providing an Honorary Citizen Award to the King of Belgium, an award that could only emanate from a university and it happened without any debate or discussion. In 1927, the state of Minas Gerais followed suit combining the existing colleges of Engineering, Law, Medicine, Dentistry, and Pharmacy (Cunha, 1986; Fávero, 2000) into one university.

4.3 1930 – Rupture and Change

The decline of the rural oligarchy during the 1920s highlighted the need to modify the social responsibility of schooling – the growing industries demanded educational progress on all levels and there was a need for the then incipiently diversified economy to be supplied with qualified workers. On the political side, Brazil experienced its first serious crisis with the 1929 Great Depression and then another schism in 1964 when Brazil entered into 21 years of military dictatorship.

Ever since the establishment of a Republic in 1889 politicians from São Paulo and Minas Gerais took on the Presidency of Brazil. The two states were the wealthiest, the most populated, and respectively the largest producers of coffee and milk (then nicknamed ‘the coffee and milk policy’). Nevertheless, in 1930 the agreement broke when the then President Washington Luís and 17 states supported Júlio Prestes from São Paulo against Minas Gerais. As a result, governors of Minas Gerais, Paraíba, and Rio Grande do Sul launched the Liberal Alliance to support Rio Grande do Sul Governor Getúlio Vargas for President. His nomination was also supported by the São Paulo Democratic Party, some of the urban middle classes, and the ‘lieutenant’s movement’⁵. During the Great Depression of 1929, Júlio Prestes won the election by a large majority, but the Liberal Alliance military wing revolted and announced Vargas the Provisory Government Chief.

⁴ The university was re-organised in 1937 and in 1965 became UFRJ (Federal University of Rio de Janeiro).

⁵ The Lieutenant’s Movement was a military-political social movement held in the 1920s and 1930s involving mainly young army lieutenants. While having a conservative and authoritarian view, they advocated political and social reforms, political morality and fought against corruption.

In the early days of provisional government, President Vargas annulled the Constitution; nominated lieutenant interventionists in all states save Minas Gerais and cancelled the national, state and municipal congresses. This started a period of government interventionism both economically and politically. The key rupture, however, was the creation of a national state – previously this had been nothing more than a consortium of local government and economic elites. That was the most extreme change in Brazilian history – for the first time the state assumed responsibility for social rights and investments. It is evident that President Vargas's legacy caused controversy, but even to the present day it is undeniable that his government shaped major new policies: the initiation of workers' rights (new labour laws, the minimum wage), the professionalisation of civil servants, a new role for the state and the setting up of national companies (e.g. PETROBRÁS – the Brazilian oil company and CSN - the National Steel Company). This was clearly a time of huge change.

President Vargas' government spearheaded educational reforms while also initiating large-scale state intervention. The government launched highly detailed regulations – rulings included: the selection of teachers, the curriculum, duration of courses and disciplinary systems in schools. Moreover, he announced an agreement between the struggling conservative catholic elite and revolutionary forces. In terms of higher education, the reform of 1931 (also known as 'the Brazilian Universities Statutes') brought about an agreement between scientists, educationalists and the government on the role of education in the new economy and social order (Meneghel, 1994). Despite being highly interventionist the reforms did conversely introduce for the first time a clear idea of the university as an institution (Fávero, 1980).

The cathedra system⁶ was maintained and the establishment of the teaching career was avoided; the main purpose of the general guidelines was the establishment of a higher education system which provided technical training for the professional elite and the development of an ambience for 'disinterested vocations'. According to Durham (2004), the real innovation was the School of Philosophy, Sciences and Letters, provided degrees in various fields of exact, biological and human sciences –

⁶ Also known as 'chair', was the lifelong, highest post in the hierarchy of teaching at universities.

a basis for further professional training, one which mirrored the American college model. For various reasons, it was not possible to fully achieve this, but the school was the first agency to establish basic research in a few of the universities according to Durham (2004). The reform also defined the university's administrative model, creating: the Deanship, the University Board and the organisational structure of schools and faculties. On top of this, only the academic staff held directorship positions.

Durham (2004) pointed out that the conflictive character of the reform was notable in the first three universities created during this period – of the three the USP is the only university which still remains today. The first university was the National University of Rio de Janeiro and it mirrored the conservative nature of the President Vargas government. On the other side of the fence was the Federal District University (UDF) also created in Rio de Janeiro which was the brain child of Anísio Teixeira, the Brazilian educationalist pioneer and one of the leading intellectuals linked to the Brazilian Association of Education (ABE).

Teixeira visited Columbia University and met John Dewey and was profoundly influenced by him. Dewey represented the egalitarian tradition which opposed ABE liberal elitist thinking. As a result of this meeting Teixeira became Dewey's translator and began promoting his ideas in Brazil (Cunha, 1986). He was also the Federal District Educational Director and he introduced changes into the Rio de Janeiro schooling system. In 1935 he created the UDF which fought for university autonomy, held elections for the position of Vice-Chancellor and created a wider participation of students on the University Board.

The UDF promoted the autonomy of existing schools and institutes and for the first time there were various course options: administration and schooling orientation, medical assistantship, laboratory technician, diplomacy, statistics, social service, journalism and publicity, librarianship, archiving and museums, cinema and landscape architecture (Cunha, 1986). However, the UDF was short-lived as the Catholic groups and conservative forces viewed it as a centre of 'liberal anti-clericalism'. As part of the repression against the uprising of communist ideas, in

1935 the UDF was closed down (Durham 2004, p.152). Teixeira continued to be part of the Brazilian university history throughout the 1960s and he and Darcy Ribeiro founded the University of Brasília (UnB) becoming the Vice-Chancellor.

In 1934, the government of São Paulo created the USP and for the first time research became a primary component and benefitting from the aid of French, German and Italian visiting professors. Although it opposed President Vargas' government, it did not share Teixeira's egalitarian ideas – it had strong links with the São Paulo business and intellectual elite, as Section 5.2 of next chapter will highlight.

Chapter 5

The First Medicine Schools in the São Paulo State

5.1 The São Paulo Medical School

Marinho (1993)'s dissertation on the influence of Rockefeller Foundation (RF) in the development of medical education in Brazil during 1916-1931 is a key component of this chapter. During this fifteen year period the implementation of the RF objectives played a major part, i.e., the adoption of high standards in teaching and research. As a result, the São Paulo Medicine School (later incorporated into the USP in 1934) was a trail blazer, laying down the way for subsequent organisations and establishing rigorous standards in the early twentieth century. Also, some of the main historical players of UNICAMP graduated there, as did Prof Vaz.

The consolidation of São Paulo as the most powerful economic region in the country was a decisive factor in the decentralisation of higher education. Its dynamic economy was the result of the expansion of coffee exportation. In late nineteenth century, the social need for medical care went far beyond the individual to the social – sanitary conditions in the capital, the interior, the port of Santos and coffee producing centres experienced frequent epidemics of yellow fever, typhoid fever, scarlet fever, measles, smallpox, tuberculosis. Even in the economically vibrant and dynamic region of São Paulo it was self evident that the precarious health situation was sufficient to justify local elites' attempts to create medicine schools. In this context, the São Paulo Medicine School (FMSP) was created in 1913 as an isolated college.

FMSP history reinforces the role of community leadership in the development of educational institutions. In this case, the leader was Prof Arnaldo Vieira de Carvalho, nominated Dean of the FMSP in 1913. He has been Director of hospital Santa Casa de Misericórdia since 1894 (which later became a teaching institution) and Director of the São Paulo Vaccinogenic Institute since its establishment in 1892, where he helped overhaul public health practices by introducing compulsory vaccination and the installation of health centres in the capital and interior. From the beginning, Prof Vieira de Carvalho tried to provide an experimental scientific base in teaching at

FMSP with an emphasis on laboratory research. This contrasted with the prevailing model that favoured lectures and clinics, and which was consonant with his former position and dealings with the São Paulo scientific community. The new curriculum structure sought to balance practice in the classroom and laboratory, thereby opening up the opportunity to students to acquire further scientific education that was not just clinically based. According to Marinho (1993) this defined the faculty organisation by hiring some teachers from foreign universities from Turin, Paris and Nancy. In March 1914, the first group of 34 students started studying in provisional buildings, in the School of Commerce. A couple of years later, the fate of the FMSP dramatically changed when the RF voted it one of the medical schools in Latin America to receive financial aid.

In 1915, the RF sent a group to study the conditions of public health and medical education in Latin America in order to implement a comprehensive program to combat endemic diseases. Over the next year two groups established contacts for future operations in public health and medical education and began identifying future centres of medical education. Outside Brazil the committee visited Ecuador, Peru, Venezuela and Colombia (Marinho, 1993).

When the RF was establishing the first agreements with the FMSP in 1918, the state of São Paulo continued to prosper and promote its scientific and academic community. In 1915 the RF reported: 'the Brazilian tradition in bacteriological research, sanitation and schools was formed by Oswaldo Cruz in Rio de Janeiro, and Emilio Ribas and Adolpho Lutz in São Paulo' (Marinho 1993, p.58). The academic and scientific basis associated with Prof Vieira de Carvalho may have favoured the choice of FMSP as being a centre to be supported.

In 1917, RF Medical Department Director Richard Pearce and Prof Vieira de Carvalho met and established the first agreement between the RF and the FMSP, resulting in the organisation of the Hygiene Institute. The International Health Board (working alongside the RF) agreed to organise and maintain the Hygiene Institute for a five-year period and provide initial equipment at the estimated cost of \$10,000 and \$15,000 to \$20,000. The agreement also included two scholarships in the US in

hygiene and public health for Brazilian researchers. The board also agreed to appoint two scientists to direct the department and supervise assistants for five years. The school committed itself to the rental and renovations of buildings, providing no less than \$3,000 annually for operational expenses.

The contract was renewed for another two years when the Hygiene Institute became independent by law in 1926. In 1945 the institute became the College of Public Health. Whilst it was part of FMSP, the institute was the first institution of higher education in the country to establish a full time commitment to teaching, research and the role of researcher, which had been one of the RF requirements for support.

The contact with Richard Pearce resulted in the FMSP being included in the mailing list of foreign scientific institutions, enabling it to familiarize itself with international scientific publications and receive regular publications in: morphology, comparative neurology, anatomy, zoology, etc. The FMSP also supplied the newly School of Hygiene and Public Health at the John Hopkins University with its current scientific publication on tropical medicine.

In 1916, the government authorised the establishment of the FMSP buildings which had previously been in various different rented locations. From 1918 to 1925 four specialists stayed at the school and worked directly in the academic organisation, running disciplines, departments and institutes. In 1920, a new protocol established the Chair of Pathological Anatomy and Histology and the nomination of its president by the RF. From 1925 onwards new internal legislation was approved, adapted to RF requirements, namely: medical courses became full time (previously only found in the Hygiene Institute) and course vacancies were limited to 50.

Prof Vieira de Carvalho's death in 1920 resulted in an institutional crisis with successive changes in the FMSP Deanship – it impacted on the relationship with the RF as well. His centralised attitude, style and undeniable reputation had had unquestionable influence inside and outside the school⁷. In 1925, following on from RF recommendations, a committee visited 200 medicine schools and affiliated

⁷ Similarly, Prof Vaz's death in 1981 opened up an unexpected crisis at UNICAMP.

hospitals worldwide. The visits aimed at gathering data for the development of the FMSP buildings and infra-structure which was funded partially by the RF. The final project had to be adjusted due to excess costs and the building took longer than expected and this increased the tension in the relationship with the RF. The hospital, which was the government's commitment, was eventually finished in 1944, thirteen years after completing the school buildings, in 1931.

Thought not entirely conclusive, RF documentation, according to Marinho (1993) indicates the establishment of the medicine school as an integral part of its strategy of expansion. From 1921 onwards the Medical Education Director, Richard Pearce, became a leading figure in the relationship between the RF and the FMSP, producing a series of documents with recommendations to improve standards that became the directives the FMSP followed. The main recommendations were: full-time courses, maximum student enrolment numbers, departmental autonomy, emphasis on laboratory research, and the construction of an FMSP hospital alongside teaching laboratories.

Through partnership with the RF, the FMSP board clearly assumed the RF model, referring to the FMSP as a model to be widespread in South America. The group's identity, i.e., its concept and vision developed by the scientific and academic community was to a greater extent grounded in the 'model of excellence' introduced by the RF. Even after several decades, its basic tenets continued to be followed almost dogmatically by the FMSP board and passed on to schools and universities created subsequently.

5.2 The political background after 1930 and the creation of USP

The creation of the USP in 1934 was an initiative of the defeated group of the Constitutional Revolution of 1932 (also known as 'the Paulista Revolution')⁸. After the Revolution of 1930 the intervention in state issues and lack of a constitution spread discontentment among São Paulo politicians and residents. For them the essence of the Revolution of 1930 was a direct result of increasing resentment of other regions for São Paulo's achievements and economic growth. In early 1932, the

⁸ The word 'Paulista' means 'from São Paulo'.

two biggest São Paulo political parties organised massive protest marches. During a march in May President Vargas' supporters killed five students, fuelling anger amongst the population. An armed rebellion took place from July to October and the federal troops finally defeated São Paulo. Conversely the revolt of 1932 resulted in the acceleration of the democratic process in the country; in May 1933, the Constitution Assembly was elected, and the new Constitution of 1934 introduced innovations, such as: women's vote, labour rights, labour laws, and more state autonomy⁹.

In 1926, Júlio de Mesquita Filho, director of newspaper 'The State of São Paulo' commissioned the journalist Fernando de Azevedo to write a review on public education. Azevedo had long been a regular critic of public education and universities standards. In the final report he proposed the creation of the University of São Paulo and a new 'modern university spirit', integrating in a single and autonomous system: professional schools (Medicine, Engineering, Law), specialised institutes (Pharmacy, Dentistry) and higher education institutes (faculties of Philosophy and Letters, Natural Sciences and Mathematics, Education, Economic and Social Sciences)' (Cunha 1986, p.225).

In May 1933, intellectual leaders of the rebellion of 1932, concerned with the quality of education created the São Paulo Free School of Politics and Sociology. The school aimed at revising progress and business issues in line with the liberal elitist ideology. The following excerpt from the school's program demonstrates issues under discussion:

'Its founders, alarmed at the failure to reorganise the country's economic and political life, examined the several factors that had led to this. The conclusion was that it was due partly to an educational system that could not keep up with a rapidly changing society. It was insufficient to train professionals and specialists and unable to stimulate interest in the common welfare of people or train people to assume responsibilities for social

⁹ In 1937, three years after his election, President Vargas annulled the Constitution of 1934 and sanctioned one of his own, broadening the intervention in economy and politics; this period is known as 'The New State' (1937-1945). In previous years, subversion of public order had been subject to several laws, which finally suppressed the Communist Party. As a result, various attempts at rebellion happened, most of them linked to communism supporters, becoming the main reason for hardening the regime, supported by the Army and conservative forces.

welfare. From this conclusion was born the idea of a centre of research and studies mirroring the European and North American university institutes. The centre aimed: 1) to provide objective information on the origin, mission and needs of the milieu; 2) to inform a numerous elite to collaborate effectively and consciously to solve the fundamental problems of public and private management and to lead people and nation into the indispensable adjustment to the modern social balance.’ (Meneghel 1994, p.26)

Shortly after establishment of the São Paulo Free School of Politics and Sociology, Governor Armando Salles de Oliveira commissioned Mesquita Filho and Azevedo to organise the creation of a university in São Paulo (Cunha, 1986). Both had been supporters of the 1932 insurrection; both saw the university as a key to influencing the leading elite in the state. A common criticism of the Revolution of 1930 was the lack of experience and political education of lieutenants nominated by President Vargas. They were perceived as interventionists especially harmful to São Paulo, the most industrialised and increasingly complex economy in the country at the time. They perceived a lack of specialised knowledge in professional schools and wished to promote rather ‘a truly free and disinterested higher culture, developed at all levels, and able to contribute not only to the improvement of the national identity, but also the expansion of human knowledge as well’ (Meneghel, 1994, p.23). The group advocated a politicised university while keeping its elitist character.

‘Considering the increasing influence of science in the course of modern society and, also the increasing complexity of technical problems that governments face, we have see a ‘political function’ of institutions of higher culture, where our leading classes should be educated.’ (Meneghel, 1994, p.23)

In January 1934 the existing colleges of Medicine, Polytechnic and Law and other state funded research institutes were brought together to form the University of São Paulo (USP). Expert professors from France, Germany and Italy and other European countries were brought in. From the brief but lively experience of the São Paulo Free School of Politics and Sociology came the new School of Philosophy, Sciences and Letters. The three founding tenets of the USP were: secularism and impartiality, public education, and educative and administrative autonomy. The School of Philosophy, Sciences, and Letters incorporated different areas of expertise and were a focus for scientific investigation and research. Mirroring the American colleges,

students completed a basic course at the School of Philosophy and then studied in the professional schools – ensuring their education was both general and professional.

The creation of the USP had other effects. A comparison between the São Paulo constitutions of 1935 and 1947, for example, highlights the increasing importance given by political leaders to higher education as being both teaching and research based. The Constitution of 1935 defined the minimum investment in Education as 20% of the state tax income and 10% of municipality income. The investment was mainly in primary education (compulsory) and agricultural training; it did not mention higher education studies. On the other hand, the Constitution of 1947 broadened the educational system to include a section on universities, which supported research institutes and extended activities. The chief innovation was the creation of a state agency to fund scientific research¹⁰, and this was to be an annual budget of ‘no less than 0.5% of the state primary income’.

5.3 The Ribeirão Preto Medicine School at USP (FMRP) – 1951

From inception the Ribeirão Preto Medicine School (FMRP) at USP was different to other South American medicine schools in that it adopted modern American standards as proposed by the Flexner Report in 1910¹¹ and this had three axes: instruction, research and the employment of medical skills in society outside the university milieu. A report by the Commission to set up the FMRP highlighted the innovations in academic organisation and research as follows:

¹⁰ In 1962, the São Paulo State Research Foundation (FAPESP) was officially created; its budget increased to 1% of the state gross income from the main tax. Since then, the FAPESP has been one of the main funding institutions for scientific and technological research in the country, although operating only in São Paulo. From the 1980s on, 23 out of the 26 Brazilian states created funding institutions mirroring the successful FAPESP model, although the São Paulo university system comprising of the USP, UNICAMP and UNESP is still responsible for over 50% of the scientific research in Brazil.

¹¹ The Flexner Report commissioned by the Carnegie Foundation and published in the US in 1910, resulted from a comprehensive analysis of medical schools in the US and Canada. After its publication, more than half of the US medical schools were closed down. The main recommendations advocated a solid grounding in basic sciences, the creation of the basic cycle, teaching practice in hospitals; departmental organisation, full time clinical professors, the credit system. It is a mistake, however, to credit Abraham Flexner for creating this model; it was based on the successful model of Humboldt that integrated research and education and which had impressed Flexner during a trip to Germany (Flexner, 1972).

‘It is not sufficient to repeat that great leaders like Eisenhower and contemporary statesmen like Churchill were unanimous in stating that the last World War was won by universities. [...] The preparation of researchers in the medicine school is as important or even more than that of doctors.’ (Meneghel, 1994, p.120)

Prof Vaz, then USP Professor, founder member and FMRP Dean, did not hide that he had the framework of American universities in mind, as seen in this interview:

‘In the US the most influential city is not Washington, but Harvard, Wisconsin or Chicago, where the leading universities are located, from which American culture irradiates to the world. [...] Like the American universities, where studying is free of charge and students progress through the university as interns, the FMRP will operate initially a semi-internship program and meals will be paid for by the state. Later, it will introduce internship, as in the US, which is particularly beneficial not only socially, but scientifically.’ (Meneghel, 1994, p.121)

The very idea of a decentralized higher education system seemed to have originated from the US model. In the same interview, Prof Vaz argued that:

‘The USP University Council is looking at decentralising education. It is vital to Brazil development just as it has been for Germany and the US. The countryside lacks widely in terms of culture, even when there is economical development. There is a great need to respect countryside thinking in order to avoid, in this sense, giving it an inferior position to the capital city. The FMRP aims to create original thinking in medical science in the countryside. In Ribeirão Preto, there is a desire to do something different, promote medical education reform (which is at least twenty years behind the times) and build a high level scientific research center.’ (Meneghel, 1994, pp.120-123)

Compared to the existing medicine schools in Brazil at that time, the FMRP featured innovations in academic and administrative organisation:

- Departmental organisation
- Semester terms
- Reduced cathedras
- Compulsory full time teaching
- Compulsory research for faculty members
- A teaching career

- Admission of specialists in disciplines of the basic cycle¹²
- Creation or improvement of complementary teaching and research departments, in libraries, animal and other laboratories
- Interdisciplinary teaching with laboratories for basic disciplines
- The creation of new disciplines in the curriculum, such as: Medical Psychology, Preventive Medicine, Labor Medicine, Medical Genetics, and Biostatistics
- Fewer hours for disciplines such as: Parasitology, and Legal Medicine; increase in Paediatrics, Gynaecology, and Obstetrics.’ (Meneghel, 1994, p.122)

The RF also supported and influenced the FMRP early years through scholarships and training, contributing an estimated \$1 million during the first ten years (Marinho, 1993; Meneghel, 1994). Four years after its opening, the Brazilian Medical Association chose the FMRP as the location for its first national conference because of the institution’s innovative curriculum and organisation.

5.4 The Campinas Medical School (FCM) – 1948-1963

Until the late 1940s, the USP was the only state institution of higher education in São Paulo, with the main campus located in the city of São Paulo. As the higher education system expanded, the USP incorporated existing colleges, opened sites in Bauru, Piracicaba, Ribeirão Preto, and São Carlos. An official plan to launch higher education institutions in the state countryside appeared in 1948. Earlier in 1946, however, the chief-editor of Campinas newspaper ‘Diário do Povo’ Luso Ventura launched a campaign to create a medical school in Campinas, 98 km from the São Paulo capital. With intensive pressure from the press, organisations like the Campinas Medical and Surgery Society played an active role in the campaign – pressuring local politicians. The end result was that in 1953, a local deputy presented an amendment to the law creating a medicine school in the city. Even so, Campinas would have to wait another decade to fulfill its dream of having a medical school.

In November 1958 it created the Campinas Medical School (FCM)¹³ an autonomous, isolated institution of higher education with a strong academic structure. The

¹² The basic cycle is the first two years of the medicine course, comprising of the study of anatomy, physiology, biochemistry, among other disciplines.

¹³ Since the Campinas Medical School was renamed the School of Medical Sciences (Faculdade de Ciências Médicas – FCM) in 1971, for all purposes the current acronym will be used.

curriculum copied the FMRP, with disciplines and cathedras distributed throughout the departments and directed by professors. The FCM set up the following teaching positions: professor, adjunct-professor, assistant professor, assistant, and instructor (Law 4996/58, Article 16). The assistant professors, assistants, and instructors were nominated or appointed by the professors (articles 21 to 24), which demonstrates the power and authority conferred to cathedra professors at the time.

A USP medicine professor was nominated the FCM Temporary Dean. Nevertheless, the government did not provide necessary funds, postponing the FCM opening and increasing discontentment amongst the Campinas medical and political community. In 1959, Campinas representatives of the São Paulo Legislative Assembly pressured for the immediate opening of a medicine school. At the same time, São Paulo State Education Council (CEE/SP) nominated an advisory commission on the creation of alternative medical schools. One of its members was the USP professor and CEE/SP member Prof Zeferino Vaz, who had a considerable reputation as FMRP Dean.

Prof Vaz graduated in Medicine in 1932 at FMSP (later USP) and specialized in Parasitology, Parasitic Diseases, Biology, Genetics and Zoology. He started a teaching career in the Veterinary School at USP, where he was to be Dean from 1936 to 1947. In 1951, he was a founder member of the FMRP and Dean until 1964. In 1963, he was State Secretary of Health for a short period. In 1964, he shared CEE/SP membership with chancellorship at the University of Brasília (UnB).

Prof Vaz opposed opening a medical school in Campinas (his preference was Botucatu city) on the grounds of the need to decentralise medicine courses to cope with the increasing demand for doctors in the remote countryside. In his opinion, Campinas – 98 km from São Paulo, was too close to the capital compared to Botucatu, which was 235 km away. He also highlighted the case of a vacant hospital in Botucatu, which lacked funds to open and pointed out that Campinas would not provide conditions to replicate the success of the FMRP experience. Because of this, strong charges against him by the members of the Campinas Business Council started appearing in the Campinas press, naming Prof Vaz as ‘the Campinas public enemy number one’. Nevertheless, a decade later and right up to his death in

February 1981, Prof Vaz's life was inextricably intertwined with Campinas throughout UNICAMP history, as the next sections will show.

In May 1959, Prof Vaz resigned from the commission in an official letter to the Chairman where he replied to the attacks against him. The letter is a masterpiece, showing strong disagreements with the traditional, conservative local community, especially doctors, as the following excerpts illustrate. A pro-Campinas argument was the lack of corpses in interior towns like Botucatu, for this he argued:

‘(...) the corpse is not an essential part of medical education anymore, like those who did not understand the tremendous progresses in medical sciences during the last 30 years may still believe. It has taken a long time for us to conclude that doctors do not deal with corpses, and now it is the functional and dynamic morphology and biochemistry that constitutes the basis of an appropriate professional training.’ (Vaz, 1959, p.3)

On the school being located in Campinas, he argued that:

‘It is not possible to use private hospitals for medical training, even though there may be plenty. [...] The hospital must belong to school because teachers must have complete control in wards under their direction.’ (Vaz, 1959, p.4)

He also took the view that in spite of there being skilled professionals in the city, most of them worked in private clinics, arguing that ‘being a skilled professional is not enough to be an exemplary teacher. This is only possible if pursuing an academic career in teaching and scientific inquiry, not in private clinics’, emphasising the need to build modern laboratories for teaching and research (Vaz, 1959, p.5). In fact, his model was the USP and the FMRP, but the Campinas medical community and political elite seemed to not be acquainted with it.

Nonetheless, the beginning of Governor Carvalho Pinto mandate in January 1959 postponed once again the decision on the medical school. This would eventually take place when the more ambitious project – a university centre in Campinas – came up.

5.5 The State University of Campinas (UNICAMP) – 1966

In 1961 at the Governor's request, the USP Vice-Chancellor established a group to review and propose the creation of a university centre in Campinas. The Campinas Business Council assigned eleven commissions to mobilise the community, press and the mayors to pressure the government and the Legislative Assembly. In December 1962 a law eventually created the University of Campinas as state department, incorporating the FCM (created in 1953) and assigning 1963 as the beginning of the medicine course. The University of Campinas (later renamed the State University of Campinas – UNICAMP) applied USP rules and other legal rulings until it had its own (Governo do Estado de São Paulo, Lei 7655/62).

The call for the first entrance exam to FCM was published in the newspaper 'Diário do Povo' in 9 March 1963, announcing 50 places. A couple of days later the newspaper published another report that 1,592 candidates had applied (1,407 male and 185 female) (Diário do Povo, 1963). Of the 50 places filled, 46 were for male candidates and 4 for women.

The new course met a strong local demand, besides attracting candidates from other cities, and even those who had not chosen Campinas as their first option. Since it was a new medical school in São Paulo state the FCM entrance exams adhered to the official list of medical exams where candidates applied in order of their preferred schools¹⁴. Most respondents reported that FCM was their bottom choice, even for candidates from the countryside who chose the FMRP, as shown in the following statements from two former students of the first and fifth classes, respectively, who later became professors at FCM:

I took the exam in Ribeirão Preto (*FMRP*), I attended a preparatory course in Ribeirão, but didn't pass; there were only 80 places and there were a large number of candidates. Then it opened here (*FCM*) and I tried. Botucatu (*UNESP*) started the same year, Botucatu and Campinas were established at the same time. So, first I tried Botucatu, I passed and attended the course for a month. Then it opened here. I didn't want to leave Botucatu, it was great there, it had a terrific reputation, there were parties only for medical students with girls from town, no guys from town, and it was something....

¹⁴ UNICAMP launched its own entrance exams in 1987.

‘Gosh, it’s beautiful here!’ I didn’t want to leave, but then my dad said, ‘Look, Campinas is better, surely it will grow more, etc.’, and I ended up coming here. I took the entrance test and came. Then I wanted to stay here and work there, but eventually... I stayed here. Campinas was a extremely tedious town in the beginning, a closed-in town, although we had the prestige, a position that was... formal, but the city was not open to anyone from outside; for example, medicine students were not allowed to go to some parties, no invitation; the City Club was difficult, but then it turned into a student town, indeed a cosmopolitan city. At the beginning it had 200,000 residents and it was a city of snobs, snobby folks that we were not used to because my class came mostly from the interior and here they were snobs. Many became my friends afterwards, that was normal, it was a city not accessible to anybody; PUCC (*the Campinas Catholic University*), for example, was essentially people from Campinas.

The entrance exam was a general test, but you could opt for all medical schools in São Paulo state, I think there were six at the time, and even Dentistry, Biochemistry, so you had several options, and depending on your scores you were ranked accordingly. My dream was getting into Ribeirão Preto (*FMRP*) because I came from that region. I didn’t get Ribeirão Preto but I did get into Campinas; then I came. I came and stayed because... Campinas – this is another story, I think at that time it was even more... for example, my class had seven students from Campinas and the rest was from outside, then, on Friday, the students came to the classes with a backpack or suitcase, and after class they went home! I didn’t... so at weekends it was just me... and the seven ‘campineiros’¹⁵ (*laughs*). And from the entrance exam onwards I started working as a teaching assistant; I used to work over the weekend here on campus. So, UNICAMP became an entrenched part of my life from there on...

The deficiencies at FCM were strongly felt, especially the lack of teachers. As a result, the curriculum had to adapt to the given conditions, as recalled:

I was in FCM 5th class and graduated in 1972. Initially, FCM began like a single school, and I got the impression that the curriculum was set up within the limitations of what could be done at the time. The school lacked resources; they hired doctors from Campinas, brought some doctors from São Paulo who came to teach and then returned back. I don’t know whether the curriculum was planned or what was possible to be done. For example, the basic course in Biochemistry was in the second year along with Pharmacology, if I remember correctly. I mean, Biochemistry is much more basic, it should be in the first year! I think it was not in the first year perhaps because they were not able to hire a group of teachers for Biochemistry, you know what I mean? I remember Psychiatry, there was only a teacher and he didn’t know very well what to do with all those students. Then, suddenly

¹⁵ ‘Campineiro’ (male) means born in Campinas.

they hired a large group of psychiatrists who came here once a week. They were a complete nuisance, I think it lasted for one or two years, and I don't remember how Psychiatry was incorporated in the curriculum, but overall... I didn't learn. [...] So, I have doubts... in telling you whether the curriculum was a curriculum for the training a certain kind of doctor... or if it developed just as long as they were able to get teachers to teach.

At that time they were trying to see what they could do, how many teachers they could hire and the shortcomings were enormous. For example, the hospital school was Santa Casa, the hygienic conditions in Santa Casa were..., for example, there was a cafe downstairs and urine used to drop from the top of the ward onto the counter, so it was a disaster. And some teachers only used the school just to be able to say they were university teachers. Have you ever heard the 'jabuticaba tree' story? We used to spend a lot of time under a 'jabuticaba tree' waiting for the teachers complete their clinical appointments, so sometimes the students had to wait from half past two to half past four, two hours under the tree, sitting, waiting. So I think the old curriculum was not very desirable; it was a terrible curriculum, lacking resources and competent staff that could devote to it.

A committee formed by representatives of the FCM and the newly created Institute of Morphology was in charge of academic and administrative decisions. Records of the committee meetings at the time show the early days of UNICAMP, without a glimpse of what it would become in the near future. The council had to cope with a series of duties, like hiring staff for teaching, technical and administrative positions; requesting additional funds from the Governor, and some years later, solving the difficult task of the location of the FCM. During the early years, the medical course was temporarily placed in the two unfinished floors of the Campinas Maternity Hospital, where the laboratories for histology training and other disciplines were (Briani, 2003). Minutes of the sixth meeting of the committee on 3 October 1963, for example, show discussions about the need to ideologically prepare the candidates for teaching positions.

Governor Barros in office since 1963 almost quit UNICAMP as he was not eager to invest in a project that had just been launched by his political rival, the former Governor Carvalho Pinto. Moreover, CEE/SP members were unhappy with the independent way in which the university administration had been working. Salaries of administrative assistants, for example, were higher than professors in other

institutions, and soon the Governor made clear his intention to turn the FCM into its previous incarnation of a single institution.

After a meeting in December, a CEE/SP counsellor wrote a report on the subject, pointing out irregularities in the functioning of the FCM and concluded that UNICAMP was illegal. According to federal law, the report claimed, universities should contain at least five colleges, which was not the case of UNICAMP since it had just incorporated the FCM. It was suggested the immediate termination of activities and re-establishment of the FCM as a single institution (Governo do Estado de São Paulo, CEE/SP, Parecer 90/63; Briani, 2003). The report had few effects, but it generated widespread discontentment at CEE/SP among Campinas politicians and the academic community. The FCM (and now UNICAMP) was once again a piece in a complex political chess game.

Nevertheless, 31 March 1964 interrupted everything – the coup took place in the government in Brazil and it gave birth to a 21-year-long military dictatorship, the longest in the country and second ‘greatest rupture’ in Brazilian history. Despite Governor Barros having been an active participant in the conspiracy that led to the coup, he faced charges of corruption, and was expected to be a target of the new federal government ‘moral cleansing’¹⁶. He needed to find an effective solution to UNICAMP as tensions were rising. In 12 April 1965, medicine students protested in a symbolic 24-hour strike against the facilities, temporary conditions and delays in the building of the university. That same month, CEE/SP established a specific committee to present an accurate analysis on the setting up of UNICAMP. However, the report concluded that UNICAMP was an unfeasible prospect at that time, suggesting delaying it and strengthening the FCM. In addition, the report recommended the nomination of a commission under the CEE/SP and chaired by ‘a professor of recognised experience in higher education administration’ to plan and organise the new university (Meneghel, 1994; Briani, 2003; Gomes, 2006).

In September 1965, Governor Barros set up the UNICAMP Organising Commission and nominated his political ally Prof Vaz as Chairman. This would mark the

¹⁶ In June 1966, the military regime eventually annulled his mandate.

beginning of a fundamental change in the fate of UNICAMP and the FCM. Moreover, the political and economic context was a key factor in the commission's success, as analysed next.

5.6 The re-creation of UNICAMP under Prof Vaz

According to Semeghini (1988), there were fundamental changes in the economic framework at national level during the 1960s and 1970s which quickly reached the Campinas region, with industrial decentralisation in São Paulo. Three factors crucial for the installation of those industries in Campinas were:

‘Firstly, a previously developed local productive base and urban structure, accessibility to the capital city, and a transport network attracting companies from various industrial sectors; secondly, the renewal and modernisation of agriculture in areas such as: agro-industries, raw materials, and equipment suppliers; thirdly, the role of State.’ (Semeghini, 1988, pp.100-102)

The 1960s consolidated Campinas and its surroundings as an industrial region and industry was the key feature for increasing the demand for qualified professionals, e.g., mechanical and electrical engineers (Lima, 1989). Prof Vaz was a pioneer in seeing the link between increasing industrialisation in the countryside and the need for varied qualified professionals. This was particularly relevant in the case of São Paulo which was responsible at the time for 40% of Brazilian manufacturing capacity and had 24% of the economically active population. Therefore, it was necessary to create a university focused on technological research with strong links with industrial and services sectors and training professionals for new market (Gomes, 2006). He understood that it was an extraordinary opportunity and soon came up with a picture of what UNICAMP should be: a university strongly connected to the country's industrial demands and growth – in short, a modern university, in line with the new regime's plans for the nation.

On the political side, the technological development was a strategical element for the nationalist group of the military regime which helped to promote and support UNICAMP. Prof Vaz had been pro the regime since its early days and had been nominated Vice-Chancellor at UnB in 1964 with a view to re-establishing control over protesting students and academic staff. This would allow relative autonomy at

UNICAMP where hiring scientists and technicians not necessarily pro-regime. His experience as FMRP Dean for 12 years, plus a four-month period as Vice-Chancellor at UnB added to an undeniable dynamism and personal charisma promoted the jump forward at UNICAMP.

Prof Vaz's knowledge and enthusiasm for higher education led him to seek and hire only professionals who shared the same ideals. Every school that started during this period had similar stories of these first teachers sharing Prof Vaz's views of teaching organisation being hired. This strategy had been successful at the FMRP when it was established 15 years previously, when reputedly he had 'stolen' teachers from USP/São Paulo to FMRP with promises of getting a house, having access to a sports club and being paid a relatively good salary.

A strategy in the construction of the university was bringing in prominent academic scholars from Brazil or abroad, as shown in excerpts from the interviews. One of his most famous quote was that 'a university is built on following factors: firstly, brains; secondly, brains; thirdly, brains; then libraries, buildings and equipment.' The following statement by a former FCM Dean and former Vice-Chancellor at UNICAMP is illustrative:

FCM is among the five leading medical schools in Brazil, without a doubt, and you don't explain something like that with a single fact, it's a convergence of factors. You can't forget that Zeferino (*Prof Vaz*), he was a man... he was a builder, and he had an enormous, a great respect, more than respect, he had almost an 'erotic' thing towards academy, towards quality. Then, what happened, he invited academically notable people. [...] and those people, like him, dreamed of a modern university. Secondly, this was a time when Brazil had funds; there was funding. Another thing, the salary was fairly attractive (...). Then, he succeeded in bringing people in from abroad, good people. He brought a dozen Latin American teachers of the highest level to the Gynaecology Department; some visitant professors also stayed here. The city of Campinas also helped a lot; nobody worried about living in Campinas, it was close to São Paulo; it brought a certain freedom in acting. (Briani, 2003)

The next excerpt is from a former student in the first class of the FCM in 1963. He was hired after his residency and thirty years later he became FCM Deputy-Dean. This was the way he recalled Prof Vaz and UNICAMP in those early years:

I remember once he hired a teacher for the School of Food Engineering; he was Hungarian. I know because I looked after this Hungarian man in the hospital and the guy was coming here. He was an important guy; he had been working in refrigeration [...] and the guy told Zeferino, -‘Look, for this salary, it’s not possible’. ‘Then, I’ll give you a car, keep the car’. ‘Yes, but look, I have a family’. ‘I can get you another job outside the university’. Then, he brought the guy in. And when doing this kind of thing he didn’t consult the CONSU (*The University Council*). Imagine nowadays if a Vice-Chancellor does something like that! He didn’t care; he just used to say, ‘I want that guy.’

With regards to FCM it was argued that Prof Vaz adopted a careful approach. Rather than focussing on the medical school his priority lay in developing the university’s organisation as a whole. The medical school at this time was at the hands of both the local community and scholars from FMSP and FMRP. Though the dominant conservative local medical community did not match the ideals he brought from USP and FMRP, Prof Vaz did not set out to alienate them. It was self evident that wrestling the medical school from their hands would be a long drawn out battle, as a former FMRP teacher who joined FCM in the 1980s demonstrated:

I think the medical school here (*at UNICAMP*) was a provincial initiative. Ribeirão Preto (*FMRP*), however, was a Prof Zeferino Vaz’s initiative. The setting up of a research centre in the countryside was a result of the decentralization of medical schools and improvements in research... prior to that courses and scientific research were all concentrated on the coast, in big cities, in the capital. In Ribeirão Preto it was not the local community that fought to create the medical course [...]. But at UNICAMP this was not the case - it was a local initiative, and there were local movements [...] who thought the medical school should be here. For a while Prof Zeferino Vaz was ‘persona non grata’ for the local Campinas community with its provincial viewpoint. In my view they had created a rather provincial looking medical school and it continued to be so. Though Prof Zeferino Vaz’s vision for the UNICAMP was so different he did in a way essentially leave the medical school as it was and focused more on creating schools... Physics, Engineering and others. There were many Brazilian researchers working successfully abroad in those areas, especially in Physics and they returned to work in the new university [...] and what he created was a university with a new mentality and vision. The medical school, however, retained its provincial outlook and the change happened slowly. [...] I think this was the correct strategy because it happened gradually, was part of the changes that were happening across the university as a whole [...] I think that if right at the start he’d focused all his attention on the medical school perhaps the local community would have rejected him outright... so in a way I think he was right. [...] You don’t see a portrait of Zeferino Vaz in the

medical school here... but there is one in Ribeirão Preto [...] That said here at the university we have a portrait of Zeferino – what does that tell you? (Briani, 2003)

Prof Vaz's legacy is somewhat controversial, as with other leaders, like Prof Arnaldo Vieira de Carvalho at FMSP. His long term deanship at FMRP, despite impressive initial achievements, for example, ended sadly because he was unable to organise the faculty board and just leave it at that. His increasingly authoritarian style collided with the scientific quarter, which ironically had been one of his most ardent supporters. History repeated itself at UNICAMP where he was Vice-Chancellor for 12 years – he was also unable to prepare and institutionalise the university for many years to come. After compulsory retirement in 1978, he founded the UNICAMP Development Foundation (FUNCAMP) and was its first President until his death of a heart attack in 1981.

Despite having been created and developed during the military dictatorship, UNICAMP never experienced military intervention, unlike UnB in 1965, 1968, and 1977 (which I witnessed), USP (in 1968), and the São Paulo Catholic University (1977), amongst others. It is commonly agreed that this fact confirmed Prof Vaz's close relationship with the military regime. Although the police had never been called into campus it is commonly known that he had a military advisor. For external consumption, he used to repeat that 'the only way to get into UNICAMP is the entrance exam', but at the first signs of political agitation he would ask 'opponents' to come to his office and explained that he had heard about illegal activities – usually linked with or with an affinity to the Communist Party that the police were currently investigating. Then, he would ensure there would be no problems at UNICAMP – his 'opponent' would remain free. 'I look after my communists' was another of his famous quotes (Gomes, 2006).

In fact, many researchers and teachers were hired in spite of their political views, although Prof Vaz would always stress that political activities were forbidden and students' ideological indoctrination would not be tolerated. A group of persecuted intellectuals found a safe workplace at UNICAMP, provided they stayed away from politics. Prof Vaz's criterion for hiring teachers was merit, an unusual thing for the

time and reportedly another proof of his intimate relations with the military regime. However, his liberality had limits and his own territory was a line not to be trespassed upon – that is to say to attack him or his autocratic style.

Thus, when the first complaints from the younger members of the University Council (CONSU) about teachers' contracts or his own succession began to spread, it was the first signs of his decline. Members of faculties were hired for a two year contract. He alleged that informality was indispensable to the early stage of university development. As for the succession, Prof Vaz left when he reached the compulsory retirement age and was succeeded by Prof Plínio Moraes, from the School of Dentistry in 1978.

5.7 The FCM's move to UNICAMP campus: the beginning of changes

In the middle 1970s UNICAMP started planning building the university hospital, which since 1969 had been subject of a FCM committee chaired by Prof Sílvio Carvalhal. In 1986, the hospital was officially inaugurated and all services, along with departments and the school administration were transferred from Hospital Santa Casa to the vast Clinics Hospital (HC) in the university campus¹⁷. FCM had then a hospital incomparably better to Santa Casa, but it had to integrate into the university campus (Briani, 2003). This integration had great impact at administrative, academic and medical care level, as recalled in the following statement:

The biggest struggle was the hospital move. I was a teacher representative in the university council, I was in the group that fought a great deal to have the medicine school integrating into the campus, to come to the campus and shut Santa Casa, which couldn't provide even the most minimal of changes.

The conditions were unsafe, there was a financial interest because UNICAMP was paying a high cost to rent the hospital, I don't know how much it would be in the current currency, but it was a kind of rent, it was a financial resource belonging to the university [...] to rent that area for us. We moved and then we stopped the care of the so called 'beggars', at that time they were beggars, they were not costumers yet, so little attention was given to the patient. Then, the biggest struggle was 'let's move because nothing is going to happen here.'

¹⁷ The Hospital 'Santa Casa de Misericórdia' is located near the Campinas City Hall in the centre of town. The UNICAMP campus is located in the Barão Geraldo District in the Northern region, 12 km from the centre.

The move had significant impact on the medical school faculty profile, the quality of medical care and the teaching conditions. The increased quality of medical care and the improvement in working conditions seemed to have been the main advantages of the move. Once the new hospital was equipped with modern medical equipment (although it was said that most was already outdated when the hospital was set up), the quality of medical care improved and the patient samples increased (Briani, 2003). The research being conducted was on a wider range of diseases, using bigger samples, as following statements confirm:

It was a tremendous improvement, fantastic, it's incomparable! [...] When we moved the work began to improve, we had a larger sample of patients we had much more routine cases [...]. The kind of patient diversified; not that we didn't have poor people anymore, our social function was still necessary, but before the move this was all we had. [...] We still have this kind of patient, but it broadened, the sample was from all social extracts; it represented different diseases, different approaches.

Decent rooms, an adequate infrastructure, more equipment, I mean, even the teacher's attitude changes in a decent hospital, in better conditions, modern. The patient also behaves differently, is treated with dignity. I think even the kind of care changed a bit, it's not ideal, but I'd say that it changed a lot; it was extremely important for all of us teachers; not just to recycle, but we could see ourselves better, the difference of working in two places and helping each other to truly understand the need to be more involved in the changes of teaching...

On the other hand, moving to UNICAMP campus also meant the need to adjust the faculty to academic demands and a mentality change. At this time there was a minority of teachers in full-time contracts, simultaneously keeping down jobs in private clinics, an irregular situation in terms of university rules. Representatives of other schools often reported this situation in CONSU meetings and it came under scrutiny in the Teachers' Union newsletters. This was a legacy from the early years, when the FCM hired local doctors with little or no interest in an academic career and medical care remained the school's principal activity. The move to the campus highlighted the need to adapt to rigorous academic rules which included a commitment to research and post-graduation, as explained in the following excerpt.

This change of mentality happened little by little and although it's not a turning point... I am talking about the move to the campus, to the new

hospital, this transition period... this correlated with the annexation of the FCM by UNICAMP, in terms of comprehension, of manner. Then we began talking about a process of synchronisation of mentality, of philosophy...

The FCM's main interest was teaching and medical care, not research, unlike other Institutes like Physics and Biology, which were research oriented from inception.

Since there was a massive demand, the FCM hired people not only for teaching, but also for medical care. Since the job was essentially providing a medical service, for a long time the FCM was not known for research, it was known for medical care from the start. [...] This was characteristic of the FCM. [...] We were considered second class scientists, but it was alright for us, we wanted a new hospital, we wanted to train doctors. It worked this way for a long time. We only improved after the move, then we had a decent library, many people went abroad, returned, learnt to research, but research and publishing in the beginning was almost all, practically all, based on medical care.

Curiously, it was argued that despite the lack of resources in Santa Casa, the quality of teaching seemed better – an indication of the extent of the role that the teacher-student relationship played in education and training.

The FCM had relatively few resources but perhaps because of the teachers' involvement, and the close relationship between teachers and students, the result was better, apparently, than the resources available. At Santa Casa we noted a certain disproportion between what should have been the quality of doctors and the available resources. [...] Another observation was that the FCM always had an intense relationship with the population; this was a feature, a big involvement.

The FCM 'medical care profile' of the Santa Casa years little by little gave way to a three pronged modus operandi of: teaching, research and care coherent with the university rules, new buildings, and better work conditions. In addition, the faculty had to adapt quickly to the requirements of the Quality Project (QP) launched in 1990 (to be seen in next section) – a minimum doctorate degree requirement, undertaking research and publishing, and graduate supervision.

It appears that the QP in the medical courses detached teachers from the general educative objective – graduate courses and research started to fill up the teacher's academic life. It is argued that during the 1980s, FCM and UNICAMP reached a

‘mature’ point in their development, a remarkable period for its complexity at all levels (Montagner, 2007). Nonetheless, in the case of the FCM it seemed to be also a period of deflation, of loss of individualisation which had been strongly linked to the school’s character, as argued in a reflexive comment confirming previous statements:

Well, eventually, moving to the university hospital was a tremendous upgrade. Unfortunately, it coincided with... it’s intriguing, because before the Clinics Hospital medicine in Campinas held more national weight than today. It was a matter of changing people, I don’t know why, but there was a drain, a certain drain of values in the university. Low salaries... one or another Vice-Chancellor misunderstood the university process, deans who didn’t know UNICAMP’s trajectory... I don’t know... something happened! But the fact is that at Santa Casa we had individuals who held greater weight than those of today. [...] Unfortunately, this is not what happens today. Then, we moved to a new ‘house’, but we had a drain in values. I don’t know how to explain this, I regret this, but it seems that there was shrinkage, a reduction in UNICAMP’s dream. A detachment... I think those people that lived together during UNICAMP’s early years had this in their souls. We, who were acquainted with Zeferino (*Prof Vaz*), we looked after UNICAMP as a great and wonderful thing and we brought in people of the same level, those we wished to continue with this. This is over...

5.8 UNICAMP: an overview of the last decades

This section introduces briefly the development of UNICAMP and the political changes following the death of Prof Vaz, in 1981. That same year UNICAMP faced its greatest crisis, known as ‘the intervention of 1981’, when eight deans (known as the ‘pro-democracy deans’) were dismissed by then Vice-Chancellor Moraes and were replaced by interventionists. Fourteen members of the university union were also dismissed. This fuelled discontent and the reaction was massive, with students, teachers and workers rallying to the streets of Campinas demonstrating against this interventionism in the academic community.

After the crisis ended, UNICAMP became immersed in debates about the Vice-Chancellor’s succession. This was a period of re-democratisation and party reorganisation in Brazil. There was an enormous task ahead of providing UNICAMP with its own institutional structure (in terms of statutes and teaching careers), institutional coherence and coordinated future planning. After a long and stressful

period of discussions, speculation and negotiations, the FCM professor José Pinotti was appointed the third Vice-Chancellor at UNICAMP.

The new leadership implemented a physical expansion of the campus and introduced an extensive process of institutionalisation and internal statute reform relating to USP statutes. Teachers, students and staff representatives participated in the reforms and formed a constituent assembly. The university obtained a loan to finish building the HC, which had long been the demand of the FCM.

In 1989, the three state universities of São Paulo became administratively and financially independent, receiving a percentage of the state primary tax. This change at UNICAMP occurred when it was in a better shape than the USP and the UNESP. The former, created in 1934, had at the time a vast group of teachers at retirement age and an old infrastructure. The latter, which was created by a combination of isolated colleges scattered around the state in a complex political arrangement, had to cope with different stages of development within each unit.

Following on from this new autonomy, the fifth Vice-Chancellor linguist Carlos Vogt launched a downsizing administrative reform cancelling the hiring of additional academic and administrative staff. The maximum number of faculty members in each school or institute was established but competitions to fill the remaining vacancies were postponed. On the other hand, FUNCAMP (a private foundation that manages UNICAMP projects and partnerships) was in charge of hiring staff at the request of the HC. In terms of this thesis, the most significant event at this time was however the Quality Project, which is summarised next.

In the mid 1980s requests for hiring teachers without a minimum doctoral degree led to discussions in the university on the policy of hiring. Arguments echoed debates on qualifications at faculty level and the quality of academic-scientific studies. Minutes of CONSU meetings show an increasing concern amongst some of the deans at the lack of an objective criterion for hiring teachers and disparities they had been observing in the qualifications of teachers. Some units like the Physics Institute, for example, were already advanced in the qualification process but for others this was

not the case. The FCM was the academic unit with the largest number of teachers hired as instructors or assistants, with more than a half of the faculty not having a doctorate. The introductory section of the QP proposal (obtained from UNICAMP Archives) mentioned studies in the 1970s that projected for the early 1990s three times more teachers holding a doctorate degree. Among the main reasons for adopting the proposal were:

The shortage of highly qualified human resources in peripheral countries prevents them from catching up with the developed ones [...] It is our responsibility to prevent the poor qualification of teachers inhibiting creativity [...] Without a thorough policy of systematic and periodic evaluation of aims, activities, results, products, each hiring becomes arbitrary.

In the CONSU members' opinion, teaching and research should be inseparable and a strategy for qualifying teachers would reinforce this bond, as the following excerpt highlights.

In order to meet fully the increasingly complex demands of society the University needs a faculty ever more qualified, where the academic degree is an essential requirement. It needs a system integrating education and research for teachers and students. Teaching should be seen as an effective, deliberate and a planned component of the researcher's training.

The project established a limit of five years for teachers to qualify and complete the doctorate with a penalty of termination or review of contract. In some cases teaching leave or a scholarship was granted. As a result, over the next year there was an increase of scholarships by 34% and an estimated 17% rise in the number of these. In March 1991 the percentage of teachers with doctorate degrees was 61%, reaching 77.2% in 1995 and 85% in 1998. In 2004 it reached 95%. On the other hand, as testimonies in Part III will reveal, the objective of strengthening teaching and research proved to be unrealistic. At FCM, for example, it was argued that the better qualifications led to increasing distancing from the undergraduate course – the latter became considered a less important activity, as the following excerpts show.

The fact that people qualified was remarkably good, I think it was essential. Our delay was so big, global, as institution... People were not qualified, but

they were skilled professionals, they had this quality, and once there was a minimal time limit set for graduation, they began, as teachers, to attend, as students, the graduate school [...], but besides this, I mean a large intellectual, scientific production. You don't do this in one or two years, and we had to do it in one or two years, detaching the teacher from undergraduate course, and after that they just wanted to teach in graduate schools and only valued post-graduation.

It qualified teachers and improved medical care and this was seriously needed in the countrywide, but not so in undergraduate teaching – on the contrary. As a result, there was differentiation... in the courses and teachers, in the teachers' profile in the General Ward, in Internal Medicine. They had exceptional qualities, they continued to have this, without a doubt, but as they produced their thesis and chose research areas, it was natural that they started being more attached to the graduate school and post doctoral studies abroad... that was the natural way of things. It happened – it reduced the working hours of teachers [...] and it was a change that happened; we have to realise that it happened and those people were not replaced.

Table 1 on next page shows UNICAMP's stages of development ranging from initial decades of installation and organisation to a period of maturity. Despite being successfully implemented in mid 1960s to 1970s the institutional framework had to wait another decade. The university had been able to discuss institutionalisation and statute reform in the 1980s, at a time when Brazil was starting re-democratisation. The institutional structure, the expansion of buildings, the creation of new courses and financial autonomy marked this period at UNICAMP and prepared it for the next jump – qualifying its teachers. The last period of 1990s and 2000s found the university focused on increasing its visibility and establishing international projects.

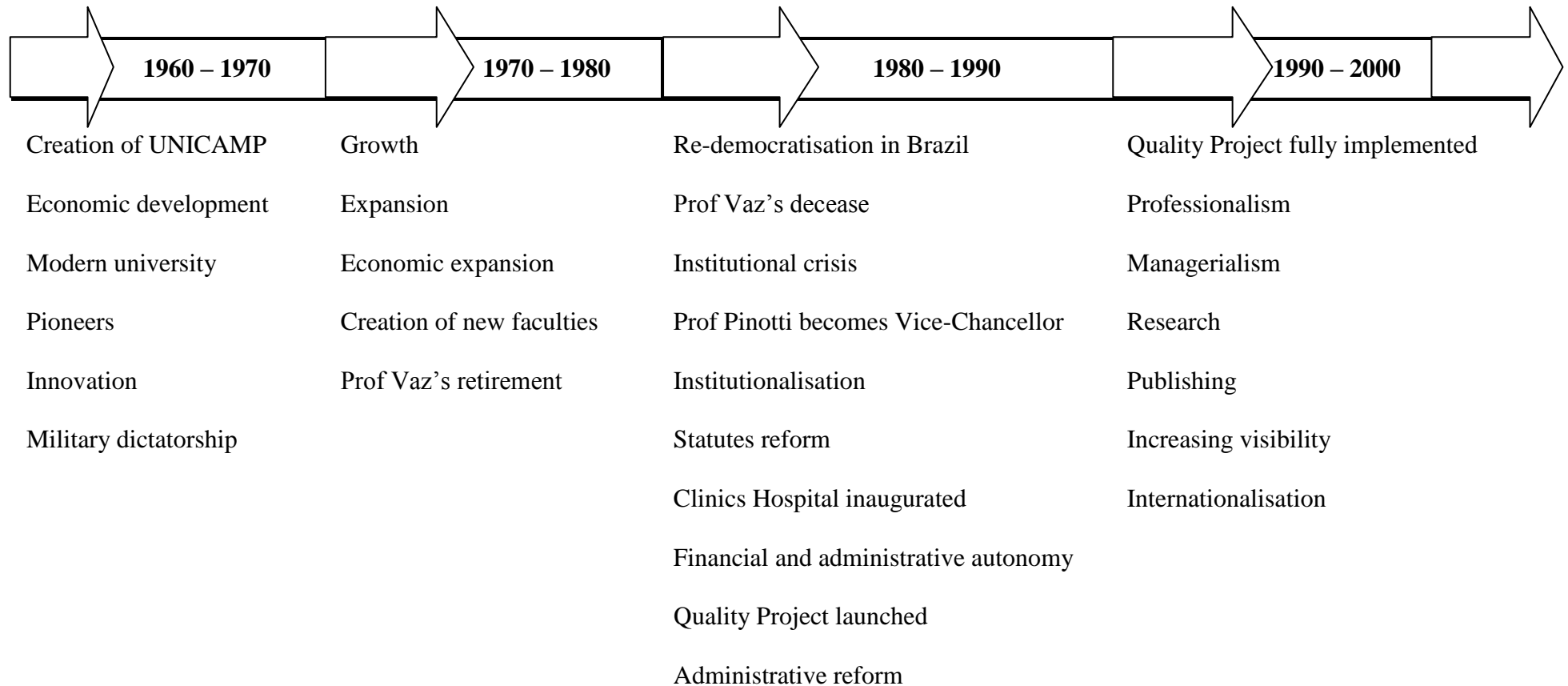


Table 1. The stages of development of UNICAMP.

5.9 Summary

Part II of this thesis introduced the late emergence of higher education institutions in Brazil as a result of the delayed economic and social development of the country. The creation of research institutions in the 1800s enabled a basis for the first state funded medical school in São Paulo. Between 1916 and 1931 the RF played a key role in organising the FMSP, scientifically and academically defining the teaching and research framework and that of its physical structure. The support of the RF enabled the FMSP to engage in international scientific publications and that led the academic community redesigning its identity, projecting its image of being an avant-garde school. This model would determine not only later medical schools, but the universities as well, like the USP in the 1930s. Strongly inspired by the Flexner Report in 1910, the RF's main recommendations included: maximum student enrolment, independent departments, full-time teachers and a strong focus on research.

The chapter also introduced UNICAMP, the second state university in São Paulo, founded two years after the uprising of the longest dictatorship in Brazil in history. It was shown that the UNICAMP creation ran parallel and benefited from the intense economic development of Campinas area and the high technological nationalistic projects. After campaigning for years to have a medical school in the city, Campinas was chosen to host a university¹⁸, although the medical course had already been set up in 1963.

The last sections of the chapter showed how UNICAMP and the FCM developed after Prof Vaz was nominated to chair a commission to organize the university and he became its Vice-Chancellor for the next twelve years. Also, the main changes at the FCM after moving from the hospital Santa Casa to HC were noted.

The main objective of Part II was to present the late creation of Brazilian universities and particularly the state universities of São Paulo. The creation of UNICAMP in the 60s and its further developments during a period of re-democratisation paves the way

¹⁸ UNESP, the third state funded university in São Paulo was created in 1976, and came about after the merging of isolated institutions located in different regions of the countryside.

for Part III which will focus on the FCM (the medical school at UNICAMP), looking for an understanding of the processes of changes shown in Part II – how the political atmosphere of the period coloured departmental and faculty operation at micro-politics level. This will be examined through the narratives of the research protagonists, beginning with the main character, Prof Sílvio dos Santos Carvalhal.

Part III

Life Narratives

Part III of the thesis introduces the teachers interviewed in my research. Chapter 6 focuses on the main character, Prof Sílvio dos Santos Carvalhal, his education at the Paulista Medicine School (EPM), his ideas and pioneering work at FCM in UNICAMP and also the reasons that led him to transfer to PUCC. Chapter 7 shows the micro-politics in the history of the Department of Clinical Medicine (DCM), which Prof Carvalhal headed for almost twenty years. Chapter 8 presents the group of teachers from the FCM, some of whom were Prof Carvalhal's former students, some were doctors trained in other institutions who joined the school during the 1980s in the same discipline – Internal Medicine & Semiology (IMS). The arrival of professionals from different institutions had an important impact on the profile of the IMS group. At the same time UNICAMP was implementing measures in order to promote a qualitative leap in research, such as the Quality Project highlighted in Section 5.8 of Chapter 5. Chapter 9 introduces the group from PUCC where Prof Carvalhal ended his career, and I highlight similarities and differences between this group and FCM.

Chapter 6

Prof Sílvio dos Santos Carvalhal

The first time I found a reference to Prof Sílvio dos Santos Carvalhal was when I was searching for documents in the UNICAMP Archives for my Master's Degree. As Medicine School Representative at the UNICAMP Curricular Chamber during the 1970s, he had been an active participant in every working group or commission examining and developing the curriculum and teaching skills and the minutes of the Curricular Chamber from the period mention him a number of times. When reading his proposals and speeches, I noticed that along with other teachers he had been an important person in the early years of the medical school and I thought perhaps he could give me valuable insights into medical curriculum, which was the main purpose of my study at that time. I made telephone contact and to my delight he agreed to be interviewed. He was then 83 years old and had retired from UNICAMP

in 1988 but was still working at PUCC. We met at the Anatomical-Clinical Correlation Study Group (GECAC) and it was here that two interviews took place in May 2001.

I was curious to meet him and when I did I found him to be a short man with bright blue eyes. His witty speech denoted an unusually sharp mind and it was evident he was truly a passionate believer in his work – namely the care of patients and medical education. It would be the first interview of the project, and (a bit anxiously) I raced through the prepared questionnaire, but as soon as he started to speak I quickly realised that the questions I was asking were not so important – he said he would prefer to tell the story rather than just quickly answering the questions I had prepared. I agreed – perhaps without realising it this was where my belief and commitment for oral history methods began. The first meeting took three hours; two weeks later a second one followed – in total the interviewing took six hours. The ample material of his interviews was little used at that time, as my Master's was an exploratory research into changes in the curriculum, but it has been fully explored in this thesis.

Prof Carvalhal did not talk about his family during the interviews, although other respondents provided some personal accounts of him. I guess the saddest story was when he witnessed his wife's death; she had a stroke in September 1999 and his assistants took care of her at the PUCC hospital where he was also present.

I also undertook further research into his father and grandfather, both politicians, to get an idea of the family history and his economic and social background. I found this information on websites about the history of Santos, the biggest coastal city in São Paulo state. This was where both his father and grandfather started their legislative career and where Prof Carvalhal was born.

After completing my Masters in January 2003, I started to collect data for my doctoral project. In May 2003, FCM celebrated its 40th Anniversary with a series of events, the first one an opening ceremony attended by former Deans. The organising committee publicised the events widely and a record number of alumni attended. We

met after the ceremony and I was amazed by the sheer numbers of former students in their fifties, eager to talk to their old master. They seemed glad to see him, as most had left Campinas and were not sure whether he was still alive or not. In a certain way, the idea to study his methods and try to understand the FCM story past and present started to take shape during this event. Later in 2004, we would meet twice more and then at a seminar at GECAC. The last time we met was in 2008, when I went to Brazil to obtain interviews for my doctoral project. I was then aware it would have to be just a quick visit as he was weak and in poor health, living with one of his daughters and being cared for by a nurse. The visit took place in September 2008, a couple of days before his 91st birthday. He passed away just a month after that on 20 October 2008.

6.1 Family background, the medicine course and influences

Prof Carvalho's grandfather, João Galeão Carvalho (1859-1924), was born in Salvador in Bahia and aged ten he moved to São Paulo to study. In 1880, he obtained a law degree and started a career as a federal prosecutor. After moving to Santos he dedicated himself to law and politics and embraced the abolitionist cause – joining the Republican Party. He became the Municipal Councillor, Mayor and President of the Board. According to the 1883 lists of the Santos City Authorities he was Public Sponsor, Sponsor of Chapels and Public Waste and Orphans' Curator. In 1897 he was elected to the Congress, was the Party's leader and also member of the Commission of Justice. In 1923, he was elected to the Senate and served as the State Secretary of Finance. He is considered to be one of the top political figures of the time at regional and national level. He worked dedicatedly with the health services during the yellow fever epidemic that struck Santos. He died in Santos in 1924, aged 66.

Prof Carvalho's father João Carvalho Filho (1884-1955) was born in Santos and graduated in law from Rio de Janeiro in 1904. He was town councillor twice and became President of Santos Legislative Assembly, taking part in the main prestigious events in the city, such as: the founding of the third Brazilian Rotary Club in 1927 and the creation of the first Law school in 1951. He became a state representative in 1925 and a congressman in 1930.

Prof Carvalho was born on the 3rd September 1917 in Santos and he was also brought up there. In 1930 when his father became a congressman and moved to Rio de Janeiro (then the country capital city) his mother went with him so he and his siblings were sent to a boarding school returning home only for the holidays. At the age of ten, he had ‘an immense curiosity about the internal structures of all things – especially animals’, which he used to dissect and study. He had five brothers and a sister who followed careers into law and commerce but he was the only one to pursue a medical degree. Although his great-grandfather had been a clinician in São Paulo, Prof Carvalho had never met him. His father used to tell him a fascinating story about his great-grandfather not liking money or being paid for his work so Prof Carvalho’s great-grandmother had to take on all money management.

Prof Carvalho graduated in 1940 aged 23 at EPM, a private medical school in São Paulo, founded in 1933 by a group of local doctors and former students from FMSP. The group organised meetings to discuss the bad state of medical education. There was widespread discontent that a huge surplus of students were qualifying for the course and that there were not enough vacancies (this had been limited to 50 on RF recommendation, as seen in Section 5.1). Assistants were also dissatisfied with the strict regulations they experienced when they started their teaching profession, due to the ‘cathedras’. Disenchanted they decided to launch a manifesto for the creation of an alternative medical school in São Paulo, EPM.

The new school was a non-profit, private institution funded by founders and student tuition fees. The school had immediate advantages compared with FMSP and students started their first year without the mandatory pre-medical course. There were also more course places available there (this was set at 100) and therefore there was less competition in the entrance exams (Silva, 2001). In 1956, the federal government took over the school and it became The Federal University of São Paulo (UNIFESP). Prof Carvalho recalled working in the evenings as a preparatory school teacher to pay his high tuition fees – ‘it was a lot of money’. ‘My salary working in the evening (every evening) was 300.000 Réis¹⁹ each month and out of that I had to

¹⁹ The Brazilian currency at the time was the Réis, not to be confused with the current currency, the Real.

pay the school fees of 200.000 Réis and then afford transportation, books, etc.’ As the EPM was founded in 1933 and he graduated in 1940 – this would have meant that he would have been in the very first or second classes of the new school.

Recalling the years in EPM he said how Prof Jairo de Almeida Ramos had been a big influence – he was someone he looked up to and wanted to emulate (and I would later hear the same thing said of him, from another interviewee – ‘everyone would like to be like Prof Carvalhal’). Prof Ramos (1900-1972) was a pioneering cardiologist who graduated from FMSP and later joined the faculty as an Assistant. Besides being EPM founder and Chair of Clinical Propaedeutics, Prof Ramos also laid the foundations for residency and post-graduation courses. He had a hand in the creation of the Brazilian Medical Association, the São Paulo Regional Medical Council, and was also the associate founder of The Brazilian Association of Medical Education (ABEM). In 1948, he launched the Brazilian Cardiology Archives and became its curator. The Archives were launched in the difficult post-war years when there was a transition to modern cardiology. These archives would be critical in promoting the dissemination of Brazilian cardiovascular scientific knowledge and its assimilation into daily practice (Mesquita, 2006). They would often attend ABEM annual meetings, where issues on medical education, curriculum and methodologies would be discussed.

At that time, the EPM was organised in cathedras – the departments were introduced only in 1968 through the governmental University Reform as a means of modernising universities. The end of cathedras took Brazilian universities into line with its worldwide counterparts; ensuring higher education institutions met demands for democracy. Nevertheless, Prof Carvalhal recalled the time of cathedra as being extremely productive – there was a feeling of assembly, unity, prestige and, above all, respect for the academic authority and the professor’s leadership. As a graduate and teaching assistant with all his training inside the cathedra, his commentaries suggest that the process of change in the departmental organisation was at odds with his background:

The cathedra was a ‘dominion’ of professors – everything was happening, going on around them... there were no councils or commission meetings. However it is true to say I never really had the cathedra spirit, though I lived and graduated in the cathedra and I do miss the reputation it had. I was lucky enough to enjoy being taught by Prof Jairo Ramos – one of the clinical professors... and I miss it... things changed so much! We had a system of teaching, care and research which was always guided by the professors; there was none of this current liberalness... creating departments... losing command. We all noticed the moment the professor arrived at the hospital and from that moment on he or she would guide our educational and health care work. All that has been lost today and now each subject is a demarcated territory taught by one expert who dominates that area and that area only.

In 1942, Prof Carvalhal was Assistant in the EPM Propaedeutics Medical Ward and was also in charge of the Death Verification Service where sometimes he personally performed up to fifty autopsies a week, including autopsies of patients that had died at the Propaedeutics Ward. The high number he performed was not due to a high mortality rate but to his desire to deepen his knowledge of pathology using autopsy results. He was sometimes criticised for doing so many but he would say he was gaining more pathological knowledge and soon the benefits of this would show in his training methods and education, as highlighted in the following statement:

I think that’s the main flaw in doctors’ training – not having enough knowledge! I started doing... we started this together... the anatomical-clinical correlation... but in the beginning the idea was just to check. One person says it’s a stick, another says it’s a stone, so I say it is neither stick nor stone, let’s see, because the autopsy will show us what it is. This was my intent at the beginning. After that we slowly adapted teaching to these beliefs, you know, the value of pathology to find out the truth... strengthening the clinical knowledge, and then there was another aspect – which was the study of the anatomical-clinical correlation in cases when autopsies were done. So (*sighs*) a lot of things came up, you know, including... the workings of heart valve demonstrations, you know, how the valve opens, how it closes. Not even the surgeons themselves were aware of this, because they had never seen it! We published this work with a grant from CAPES, I think it was CAPES²⁰.

With a mischievous smile, he told me that, ‘One day, Jairo asked me what I was doing and I said I was going to check if our diagnoses was correct or not. We did

²⁰ CAPES is the Coordination of Improvement of Higher Education Personnel, an agency of the Ministry of Education in Brazil.

have weekly meetings... with cases where I had carried out an autopsy to show... to check our clinical reasoning.’ At this time he started asking himself how he could combine the two subjects – using autopsy to teach semiology, checking the clinical diagnosis against the autopsy results and finding out the relationship (this was then called the ‘anatomical-clinical correlation’ method or ‘anatomical-clinical integration’). This was an idea that Prof Ramos supported and encouraged.

That evolved slowly, I had to give an explanation which I’m giving you... to several clinical teachers, and they... were reluctant, but in the area that Jairo Ramos was in charge he had a clear understanding and allowed me to fix this failing in medical education. Unfortunately, I didn’t have many people to help me... nor the time... because he ended up dying... they turned the cathedra into the clinical medicine department, divided it in parts, right, just as Ford did, each one tightens a nut without knowing what the neighbour is doing – eh? (*laughs*) Jairo realised it and said that medical education would become extremely problematic...

The following section details the anatomical-clinical integration method and its importance in the curriculum and in Internal Medicine & Semiology (IMS).

6.2 Teaching semiology using anatomical-clinical integration – origins of innovation

The anatomical-clinical integration was intended as a way of assessing the students’ knowledge of anatomy, histology and physiology (‘the basic cycle’ curriculum) in the IMS third year course. This is the point at which the students have their first contact with patients and learn techniques of conducting basic examinations. The anatomical-clinical integration was also a way of preparing for the clinical cycle – ergo: recycling anatomy, histology and physiology in order to demonstrate ‘the subject – which is the discoverer of things’, as Prof Carvalho used to say when referring to semiology. According to him, this concept of semiology as ‘the discoverer of things’ could be extended to every field of knowledge (penal law, administrative law, etc.) and it highlighted symptoms indicating main changes in the body. The students understood the logic of this – they saw that the traditional

teaching methods, i.e., the basic cycle was quite divorced from the pre-clinical and clinical rotation. Semiology however aimed at integrating the basic cycle²¹.

Throughout the history of medicine, clinical medicine and pathology had been separated. The key concept of the anatomical-clinical integration, via semiology, aimed at recovering this association. I asked Prof Carvalho to explain this idea for me, a ‘non-doctor’ interviewer. He detailed the origin of the word, its importance for medicine and explained the moment when there was a separation between clinical medicine and pathology. His eyes lit up as he started to give me a private lesson on the subject and I was amazed at the strength of his beliefs. What is a ‘signal’, what is truth? How can we be sure that a sign is a reflection of a fact? I wondered whether I could take those concepts and translate them into other social science fields, like education, sociology or politics.

Semiology is also named propaedeutics and comes from Greek *propaideuen*, which means ‘what comes before’; and semiology also comes from the Greek *semeion* which means ‘sign’. The study of signs... a sign is not a fact – it is merely a reflection of a reality [...] or a ‘symptom’. A symptom is something the patient reports to the clinician... (usually coming from an anatomical-pathological lesion). And what happened...? ‘Symptoms’ and ‘signs’ were separated from each and the doctors started to learn these two things separated – they learned about the ‘signs’ without any clue of what was the cause, which is the pathology.

This separation [...] might have happened around 1826 when the first chair of pathology was founded in Paris. This was a remarkable event. It turned out to be extremely clear that an anatomical-pathologist, who was not yet particularly familiarised in clinical training, would be in charge of pathology. The anatomical-pathologist’s learning deepened and pathology developed a lot, but they lost contact with patients as they were mainly dealing with cadavers or body parts. The clinicians however were doing both things...the clinicians were verifying the diagnosis hypothesis by also performing an autopsy. But they stopped doing the autopsies! What a mess and I think the majority of doctors didn’t even realise this was happening!

In an undated document entitled ‘The Organisation of General Semiology and Clinical-Pathological Integration in the Department of Clinical Medicine and Surgery’ this idea was further detailed:

²¹ In Brazilian medicinal schools, the basic cycle is usually taught by non-doctors in Biology departments.

(...) At this stage, two basic sets of methods should be used to teach General Semiology: lessons on the meaning and importance of physical symptoms, and practical work to demonstrate the method by which these symptoms and visible signs are witnessed. By teaching the method of obtaining the semiological signals the performance becomes above all, artistic, and this develops through the practice of the art of examination and an increasing attention to sensory qualities, especially those visual, tactile and auditory. Thus, the ability to see, feel and most certainly, to hear, is essential. This is certainly a characteristic of semiology, which is a science and an 'art'. You could say that the semiological script, the art of examining is essential to all doctors. The results are analysed and interpreted and it is the path that leads to the possibility of developing diagnosis.

To make his position clear, he argued that the search for signs enables the 'semiologist' to make his or her diagnosis and give it a name. But is it sufficient just to give it a name? In his words, 'discovering is finding out and recognising what is being sought. When something is found but not recognised we do not know for sure whether we have found what we have been looking for. False evidence can lead us to uncertainty or, even worse, to false conclusions.' According to him, the vast majority of students in the third year did not even realise that the main goal of semiology was to examine the pathology of corpses or anatomical pieces in the autopsy classrooms. Usually, the teachers taught how to 'examine, hit and touch', asking the students to listen to all sorts of noises and only mentioned the names of anatomical diagnoses. The physical indicators of illness were only studied in pathology classes, but even then, nothing was said about the clinical symptoms. 'Here you have an inconvenient separation of the two subjects. Yes in the third year, students continued to use clinical semiology to find pathologies but this practice did not reappear till the sixth year and even then it was seldom used in surgery. At this point students were sporadic and remote viewers of the operative field' (Carvalho, 1992).

In order to test his ideas, Prof Carvalho used to assess students, residents and even colleagues using non traditional methods. Although clinicians, radiologists, electro cardiographers, ultrasonographers, etc. knew how to interpret the clinical findings and name anatomical diagnoses, they were rarely able to identify in organs and tissues the appropriate anatomical substrates of the diagnoses they had just named. 'When faced with damaged organs, not mentioning the name of the anatomical

verdict or being asked to describe the correspondent clinical case, there will always be doubt and uncertainty', he argued, as the examples which follow show.

Invited as an external examiner of the entrance exams for post-graduates in cardiology at the famous Dante Pazzanezzi Institute in São Paulo he decided to question candidates in a non-traditional way. He projected a slide showing a faulty mitral valve closing and regurgitating water (which is a test usually performed in autopsies). Without mentioning any symptoms, he asked 'what are the clinical symptoms of what you are seeing?'

Well, look, those doctors, they were around 20, they ended up laughing because they never imagined that someone would challenge them in that way. The traditional question normally was, 'What is regurgitation in the mitral valve?' This is the traditional question, you see. Having been told the names of things, and they know this... but what it truly means, inside the body... they don't know, it's a disaster!

On another occasion at EPM, he tested a friend, an experienced radiologist. He showed a dissected stomach with an ulcer on the lesser curvature and asked, 'What is this?' His friend hesitated and finally said he did not know. Prof Carvalho then showed him an X-ray on a light box and his friend replied, 'Oh, it's a peptic ulcer!' He regarded this story as symbolic: 'In this case... the peptic ulcer in the radiography (I was showing this in the slide)... doing this was nothing more than demonstrating a manifestation of a reality – but he didn't get this.' His conclusion was that pathology, which is nothing more than the organic substrate of clinical manifestations, was virtually an unknown for doctors that were not pathologists, with rare exceptions. Furthermore, the majority of doctors were not achieving 'the full and proper meaning of clinical semiotics' and throughout his life he wondered to what extent this limited training of doctors was responsible for the high percentage of errors and missed diagnoses.

In 1960, Prof Carvalho was awarded a grant from the RF to study pathology in the US. He was convinced it was necessary he be trained in pathology the same way he had been in semiology. It was also an opportunity to learn about the issues that arose

in medical education in the US, but disappointedly, he noticed the same separation between clinical medicine and pathology in the teaching of semiology:

I remember once I was doing an autopsy and I always looked at the clinical observations before, like: electro, radiography, etc., to position myself and see what I'd need to check, and the American residents of pathology thought it really strange. I remember one of them... I told him, 'Look, look in the heart rear wall, the basal wall, there must have been a heart attack there.' He stared at me... 'How do you know?' I said, 'I know because I've seen this in the electrocardiogram', and he... 'Tsk, don't you understand these lines here?' (*Laughs*)

On this issue, he wrote an article acknowledging the importance of using pathology in his training as a clinician, through autopsy and surgical pathology. 'Over the years, the regular checking of clinical diagnosis in autopsy study progressively strengthened my convictions of the importance of clinical semiology in improving diagnoses, the importance of examining patients using good, rationally semiotic resources within our reach' (Carvalho, 1996).

Concerned with the level of errors in clinical diagnoses his group collected data over a 15 year period evaluating and comparing diagnoses revealed in autopsies and clinical examinations. It seemed to him that this systematic comparison showed the way of improving quality care control and teaching at the institution. The data was divided in three groups: a) clinical diagnoses through autopsy; b) clinical diagnoses not confirmed in the autopsy; c) diagnoses found during the autopsy but not during clinical/additional examinations. In short it examined: correct clinical diagnoses, incorrect clinical diagnoses and undetected clinical diagnoses. Even considering that the study was retrospective and did not follow a formal research design, i.e., with a predefined script where doctors would raise every clinical diagnosis found during the patient's examination in order to make an accurate comparison, the results were alarming. In 200 cases, the group found a) around 30% of the clinical diagnoses was correct b) 20% was incorrect and 50% was 'undetected diagnoses'.

According to him, there were several reasons for the high percentage of 'undetected diagnoses'. Firstly, the insufficient clinical approach to patient care – a result of technical incompetency, lack of knowledge, lack of time, poor technical resources

and bad working conditions. Secondly, the absence of coherent training and a mindset that people were already sick, even though no symptoms and clinical signs were visible. This reason is the one that most obscures and hinders further action towards early diagnosis. Besides which there is the doctor's perspective and work organisation – this only centres on the patient's complaint, not on the whole. This happens, for example, when patients are referred to specialists and are not previously or subsequently evaluated clinically. Also, there is the precarious medical care which discourages patients to seek medical help for small signs and even a lack of information given advising regular medical attention.

It was against this medical backdrop that Prof Carvalho left EPM after 37 years and joined a new medicine school created in the state of São Paulo at UNICAMP. This is the subject of the next section.

6.3 Arrival at UNICAMP

Before joining UNICAMP, Prof Carvalho had been collaborating informally since 1967 with the Dean of the medical school. He joined UNICAMP officially as Head of the DCM in 1977 after the resignation of the first and subsequent heads. The first head blamed his resignation on personal reasons. The second stayed for a year and a half and resigned after continuing problems with his dealings with the faculty members and students. The situation peaked when teachers resigned and second year students began a strike.

According to a former student of the first FCM class, the curriculum was similar to FMRP, where teachers were recruited in cytology, histology and physiology anatomy. Most teachers were already at the top end of their careers but did not quite have the position they wanted so a teaching position at UNICAMP was quite attractive. During the first years the curriculum taught the basic subjects and overall the students were satisfied – noticeable however, was the fact there were few teachers and the materials were not entirely satisfactory, as shown in Section 5.5.

Just when the clinical medical course was about to start its third year the position of Head of the DCM came up. Reportedly, the first incumbent just used the competition

to enhance his CV and then resigned. The second, Prof Luis Fonseca, hired junior doctors from Campinas who were looking for teaching positions.

However, Fonseca was a difficult person and soon he created intolerable working conditions. Then, students of the second class and part of the first began a strike until Zeferino Vaz dismissed him. The second class refused to attend his classes; they attended classes at EPM in São Paulo instead. The poor man is not even recognised as ever having been part of the school's history, since everyone says that Prof Sílvio Carvalhal was the first Head of the DCM!

The crisis was over when UNICAMP dismissed Fonseca and hired the third applicant, Prof Carvalhal. The students of the second class had met him during the strike when they went to EPM to attend the semiology course and soon word came to Vice-Chancellor Prof Vaz that he was perfect for the department. As Chapter 5 described, Prof Vaz wanted 'brains, brains and brains' at this university, so he went to EPM to meet Prof Carvalhal, who recalled this event and his beginnings at UNICAMP:

I'll tell you how I got to UNICAMP. I came from EPM where I graduated in 1940 and stayed for...37, 38 years, and EPM was always in a certain sense a pioneering teaching school, at least in clinical medicine, under Prof Jairo Ramos' leadership. During the time I was at EPM I also proposed some changes, not across the board, but in clinical medicine. This is important to understand because when I went to UNICAMP, a beginner school, I wanted to innovate there too, at least in my area.

Zeferino himself invited me – it had come to his attention I guess via my teacher that I had a real talent for teaching and that I proposed some changes at EPM. [...] Other colleagues were invited to work at UNICAMP for the same reason, for one reason only, for showing some success and on the recommendation of their teachers. And Zeferino decided everything. I remember that he went to EPM to talk to me, Jairo (*Prof Ramos*) was not head of the department anymore, and the Head was Horácio Cunha de Melo. Horácio opened the door and said, 'There is a person here who wants to talk to you,' and Zeferino came in. He invited me to bring to UNICAMP what I had learned about organisational and teaching skills at EPM. [...] Naturally, there was some competition... submission of CVs, titles, publication, etc. to support the choice.

So, I started in 1977 as head of the department, invited there by Zeferino, and he told me about the critical conditions that the course was facing, and I accepted, carrying in my mind to UNICAMP my mission, namely: the

education of doctors, particularly clinicians and surgeons and the integration of the clinical and pathology (Briani, 2003).

At UNICAMP Prof Carvalhal was also the medical representative in the Curricular Chamber where he often vocalised his ideas. According to the minutes of the 24th Curricular Chamber Meeting where he introduced the medical curriculum program for 1971, for example, he reported on the ABEM reunion, highlighting the great concern amongst people in charge of medical education to achieve better results. There was unhappiness with the way it contrasted with the foreign models, especially the American one, the notorious Western Reserve, which instituted significant changes in the US in 1952. On the other hand, the idea of bringing exotic models in was not the best solution for them; schools could be inspired by foreign models, but they should also adjust to local conditions. In his opinion, UnB had the first integrated medical curriculum in Brazil because there was a distinction between departments and the authorities in charge of organising the medicine course. He clearly argued for placing the course above departmental autonomy (Briani, 2003).

He often expressed interest in the lack of enthusiasm of students, something he blamed on the huge curriculum content and the lack of interaction between subjects. He cited assessments in the second year of the course in which he found that students had forgotten 50% to 80% of anatomy, which they had just studied in the first year. He also described the way a fourth year student once ran up to him claiming that his mind could not cope with the burden of information he was expected to learn (22 different disciplines in total). ‘Sir, how is it possible that we have to learn everything from each teacher, when none of them knows the other one’s subject?’ (Carvalhal, n.d.).

In 1974, Prof Carvalhal launched a consultancy dedicated to the care of patients with Chagas, a tropical parasitic disease contracted primarily in rural areas. This was a subject he had been interested for a long time. The consultancy later became the Group of Studies in Chagas Disease (GEDoCh) which focused on research. The consultancy and the group of studies still exist at FCM.

Even with support of Prof Vaz and Vaz's recognition of his ideas, Prof Carvalhal gradually began to see internal resistance to his position, which is the subject of the next chapter.

Chapter 7

The institutional micro politics: material interests versus ideals

The integration of subjects and the merger of departments proposed by Prof Carvalho during his passage at FCM faced resistance from various quarters. This chapter is dedicated to showing how his proposals clashed with the differing interests of departments, disciplines and students.

7.1 The Head of the Pathology Department

The early resistance at FCM against the idea of integrating clinical medicine and pathology came from the Head of the Pathology Department (PD), Prof José Lopes de Faria. Reportedly, before joining FCM Prof Carvalho had proposed the combining of the DCM and the PD, possibly merging them into one, without a loss to administrative functioning of heads and this Faria had agreed with. But when Prof Carvalho arrived he found Prof Faria now quite pitted against the idea. Although Prof Carvalho could use information from autopsies performed by the department's staff, the PD would to all intents and purposes be kept traditional.

Therefore, instead of performing the autopsies of clinical cases, Prof Carvalho and assistants were only allowed to view, take pictures and observe. When the autopsy was finished they collected the results and this went to create the DCM archives²². Even so, in the interviews he neither mentioned the prior agreement he had had with Faria nor complained about his 'cheating', although he did recognise the colleague had presented a barrier to his plans.

It was extremely difficult at the Pathology Department because of Lopes de Faria; he had German training, very categorical, and he said, 'No, Sílvio, I don't want this mess', (*laughs*) 'a clinician is a clinician and an anatomical-pathologist is an anatomical-pathologist and that is it!'

One interviewee attributed resistance to the concept of integration to the influence swayed by heads of departments:

²² When Prof Carvalho retired from UNICAMP in 1988, the archives, currently located at the DCM and still in use, had amounted to around 5,000 slides. The PD also has its Didactic Archive.

Integration was not accepted because in the end what there was, was ownership – knowledge has owners; surgery had an owner, clinical medicine had one, and pathology had one.... a great owner – that was Lopes de Faria.

In fact, Prof Faria had great expertise and leadership in the field of pathology and so his reaction was unsurprising. Both were experts in their respective fields and developed careers in parallel. Prof Faria graduated in medicine at the Federal University of Minas Gerais (UFMG) in 1941 (a year after Prof Carvalho), where he worked as a volunteer assistant for two years. Shortly afterwards he voluntarily attended the Service of Pathology at EPM – where Prof Carvalho graduated and worked until 1967. After volunteering at EPM, he was hired by the PD at FMSP as an assistant. In 1954, Prof Faria was invited to study under the supervision of Prof Franz Büchner at the Institute of Pathology at the University of Freiburg, Germany, in the field of experimental pathology and morphology. He joined UNICAMP in 1963 to create the PD at FCM.

Years later when both had retired, Prof Carvalho and Prof Faria had a better relationship, far away from old academic disputes. According to the interview, they attended with their respective wives, a Catholic weekend meeting. During this weekend Prof Faria recognised and regretted he had acted wrongly in the past in frustrating Prof Carvalho's expectations – he added that in truth they could have worked well together. Years later, Prof Faria edited a book and invited Prof Carvalho to write an article, and the latter remembered that event with the following remark:

We ended well, and I even liked him, he doesn't like me, but I was happy (*laughing*) when he invited me... to write an article in the book he published. He even told me, 'write the way you're used to do, comparing clinical medicine and pathology, because... because I think that's important'. And I wrote a short article and sent it to him.

They were the same age, and Prof Faria passed away three months after Prof Carvalho, on January 2009.

7.2 The autonomy of disciplines

Prof Carvalho saw integration as a way of preventing specialists teaching clinical medicine – he had observed this occurring at the majority of medical courses, including those at UNICAMP. However, the departmental organisation ruled that the disciplines in undergraduate courses should be taught by teachers qualified with doctoral degrees or those on track to achieve them. As a result, there was an increased demand for new curriculum disciplines to be taught by specialists. Post-graduate courses increased during this period, as did new ones and residency courses. Soon new teachers had to teach at undergraduate, post-graduate and residency level. Teachers hired shortly after completing residency courses had to attend post-graduation courses and achieve the minimum degree. This process reached its highest point at UNICAMP during the 1990s with the establishment of the QP, highlighted in Chapter 5.

As Head of Department, Prof Carvalho was in charge of supplying teachers to the disciplines, according to the rules. To his great disappointment the concept of integration started to lose ground. Demonstrating how specialists were not meeting the needs of a comprehensive curriculum and training he used the analogy of speaking different languages:

When I went to UNICAMP it was working according to the 1968 reform law²³. My idea was that firstly, we would modify the separation between basic and clinical cycles. Secondly, it seemed inevitable to me that I had to follow the rules. I sought to bring competent teachers into each discipline – there were at least 10 or 12 at the time: semiology, cardiology, gastroenterology, haematology, etc. Well, what disappointed me in a certain way was that while I was supplying each area with a teacher, I realised that each of them spoke a different language, and the group meetings ceased. Then there were meetings of gastroenterology, pneumology, cardiology, but it was not the event it used to be when each of us had been discussing in depth each other's area of expertise. (Briani, 2003)

²³ The university reform in Brazil in 1968 laid down the building bricks of departmental organisation; it extinguished the cathedra; implemented the teaching career; and established the tripod of teaching, research and external partnership as the university's main objective. It was part of the military regime's education reorganisation, focusing on efficiency, modernisation and rationalisation and mirroring the American model.

The departmental organisation, as recommended in the Flexner Report tried to improve the quality of medical schools emphasising research, but excluding an emphasis on integrated training which suited better the needs of profession. The purpose of the medical schools is strongly criticised in the following statement. Again, he used the analogy of languages to make his meaning clearer. In fact, he realised the paradox between training students to be general doctors – a statement embraced by every medical school at the time, and the organisation of teaching under university rules.

You may notice, for sure, that even today the medical schools state that they need ‘general doctors’. I think it’s a tall story! It’s a tall story because you can’t get ‘general doctors’ with the way teaching is currently organised... where each teacher emphasises his own specialism in the classroom [...] and I’ve always thought it is a mistake, the general field should be taught by someone general. (Briani, 2003)

Little by little the anatomical-clinical integration lost footing as the school created different disciplines to respond to the development and evolution of specialties in the medical labour force in Brazil because of private insurance. This process also happened in other departments and became part of the institutional growth and organisation of the FCM and UNICAMP. Moreover, the criterion for creating specialties in the DCM was quite varied as was the introduction of respective disciplines in the curriculum. He always disagreed with the lack of consistency in creating these areas within the department and proposed two levels of knowledge – general and specific.

At that time another issue I was concerned with was changing the concept of specialism, just look at what actually means:- special is something ‘less general’ denoting deeper knowledge, this detaches it from what we know as general, which is balanced knowledge spread over many areas. Then the concept was a bit confused because the criterion for organising areas within the DCM was extremely inconsistent from inception. Look at organ specialism which took in: cardiology, gastroenterology, pneumology, nephrology, etc., but look at the oddness of the grouping... it takes in both ‘infectious and contagious diseases’, rheumatology and geriatrics. At this point, in my opinion, it became a muddle; there was not even uniformity in area definition. My point was always this – we must comply to only one rule, which is knowledge that is general and the specific one.

In addition to the lack of uniformity in establishing the department's subject division, the disciplines became increasingly autonomous areas within the department; the same process happened in the second largest department, the Surgery Department. For Prof Carvalho, however, the main problem was the allocation of experts in the undergraduate course. According to him, the level of expertise of those teachers was totally divorced from the needs and objectives of the course.

7.3 The students' view

The discontentment among students over the emphasis on general training at the DCM seemed to be primarily due to the perceived higher status, reputation and development that specialists held; the students believed they were missing excellent opportunities for further development. The following statements by a former student of the first class of FCM examined this conflict between idealistic and materialistic interests that the students experienced when they reached the higher stages of their courses.

The basic curriculum was based on the philosophy of Dr Sílvia (*Prof Carvalho*) which was the following – the doctor must do everything but occasionally he requires the knowledge of an expert. Then the Clinical Medicine Ward was exclusively a general ward... there were no specialty wards. [...] The specialist was called just once in a while. [...] It generated an enormous discontentment because people worked hard; it was like students were not allowed to grow in specialism, they had to undergo general training in clinics and suddenly started to notice that a lot of talented specialists were missing! [...] The General Infirmary stagnated because nobody was willing to do a residency in clinics... you just worked and worked with the same people and you did not have access to technology. [...] People started to say 'we need specialists, because the call outside is for specialists, we are wasting time here.'

At the beginning the students accepted the situation but after a while as they began to develop, one by one, they went to different places. Medicine encompasses many things but if you embrace too many things people start to think of you as a kind of charlatan... 'this guy does everything!' [...] Sílvia (*Prof Carvalho*) was a fighter, well intentioned, but he certainly confused this issue ... he wanted something that only he wanted, and nobody else did. For quite a while people shared and agreed with his ideas, but it was just talk, they soon trampled off to other things.

Research into the UNICAMP Courses Catalogue showed that ‘Anatomical-Physiological-Semiology Integration’ (Prof Carvalho’s discipline) took place in the 4th semester of the course until 1976 and this was then replaced by an ‘Introduction to Medical Semiology’. The latter did not integrate the course into pathology (but kept the same code). The discipline was replaced again by ‘Semiology I’. Subsequent adjustments followed and after Prof Carvalho moved to PUCC the DCM made other changes and the discipline was divided into specialties. The discipline was changed some years later when the DCM felt that the IMS group should be reorganised and the FCM hired doctors who trained under his supervision.

7.4 The process of departmental organisation at FCM

The process of departmental organisation at FCM formally launched after approval of the University Reform in 1968 and finalised in 1971 was a source of conflict and resulted in major political friction for Prof Carvalho.

The oldest document found at the UNICAMP Archives regarding the teaching organisation of medicine course is dated 1st July 1963. Signed by the first Dean of FCM, ‘The University of Campinas, Rector, Grouped Subjects’ displays the program of disciplines of the newly established medical school divided into departments, each one with one or more chairs (cathedras). The departments, chairs and number of disciplines listed (in brackets) in the document are shown below. The PD had the biggest chairs: Internal Medicine (also called Clinical Medicine) and Surgery; these chairs held the highest number of disciplines. The criterion was heterogeneous as per Prof Carvalho’s comments highlighted earlier in the chapter.

- 1) Department of Morphology: chairs of Anatomy (4), Histology and Embryology (4), and Genetics and Statistics;
- 2) Department of Physiological Sciences: chairs of Physiology (3), Biochemistry (3), and Pharmacology (3);
- 3) Department of Pathobiology: chairs of Parasitology (3), Microbiology (4), and Pathology (4);
- 4) Department of Pathology: chairs of Internal Medicine (13), Pediatrics (3), Neurology (3), Surgery (11), Orthopedics (2), Ophthalmology (3), Otorhinolaryngology (4), Gynecology (3), and Psychiatry (2);
- 5) Department of Preventive Medicine: chairs of Hygiene and Preventive Medicine (4), and Forensic Medicine (5).

A note in the document reads that: ‘The Departments of Morphology, Physiological Sciences and Pathobiology form the Division of Basic Education. The Departments of Pathology and Preventive Medicine provide the Division of Professional Education. Within each department, disciplines will be gathered in chairs’²⁴.

Minutes of the Curators Council meeting of 24 August 1965 show initial debates on the draft regulations for the FCM, highlighting that the specialties should gravitate around departments with the purpose of integrating education. A member of the council suggested getting rid of departments, considering them ‘too broad’. Three years later, minutes of the first meeting of the FCM Technical Administrative Board in 15 October 1968 show a suggestion from Prof José Pinotti that a departmental organisation should be considered; the board, however, suggested waiting for the governmental university reform. The reform was sanctioned a month later and the Brazilian universities had to adjust their statutes to the new law. The reform, following advice of American technicians under the MEC/USAID agreements²⁵, aimed at increasing university efficiency and productivity and established: a departmental organisation, an end to cathedras, a unified entrance exam, a basic cycle, a credit system, discipline enrollment, teaching careers and the establishment of postgraduate courses.

In 1969, Prof Vaz appointed Prof Carvalhal as Dean of the FCM for a period of two years. During this period he proposed merging the departments of Clinical Medicine and Surgery in order to improve integration and teaching; the coordination would be shared amongst the heads of both departments. His proposal was based on his experiences in the US in 1960 when he had studied the biggest American clinics. The

²⁴ Once schools, faculties and institutes had been established at UNICAMP some departments were transferred from the Institute of Biology to the FCM, such as pathology and pharmacology. Over time, all chairs at the Pathology Department became independent departments and the department today is only in charge of teaching pathology at undergraduate, graduate and residency levels, in addition to the autopsy service in the HC. The discipline of anesthesiology also became an independent department in 1977. Nevertheless, this was not the case of other institutes created around the same time, like the Institute of Biology which has until today almost the same organisation as it did when it was founded in 1962, except for the establishment of departments directly related to the biology course, launched in 1971.

²⁵ MEC/USAID was a series of agreements between the Ministry of Education of Brazil (MEC) and the United States Agency for International Development (USAID) intended to establish technical and financial cooperation in Brazilian education. Twelve agreements were signed between June 1964 and January 1968, ranging from primary to higher education. The last agreement was signed in 1976.

main idea was that surgeons would take part in the patient's clinical and pre-surgical diagnosis while clinicians would follow the post-surgical prognostic. As with anatomical-clinic integration, the merger of departments was not intended to better academic careers or the departments' interests; it aimed at improving teaching methods and medical care. Similarly, it generated the expected resistance – even Prof Carvalho realised it might be difficult to sustain.

What happened was that [...] the clinician sent the patient to the surgeon after deciding in clinical discussions whether it was a surgical case or not – 'transfer him to the surgical ward'. The surgeon worked alone (without the clinician)... discharging the patient from the hospital... if the patient died the clinician might not even know about it. So I said, 'we are going to make just one department' [...]. Since I brought in a surgeon who was very keen on the idea, it was easy! [...] I said, 'we are going to do something that I think is pioneering and we are going to offer both – the clinicians will know a little more about surgery and the surgeons will discuss the diagnosis with us and recommend (or not) the surgery.' And it worked this way for some time.

It worked well and there were clinicians who were enthusiastic about surgery and who started to take part in surgeries and vice versa. It was an interesting experience. And I was aware that this might be difficult to sustain, but I said, 'let's try, it doesn't harm anyone... not the patients... on the contrary, it will benefit them because there will be a sector of clinicians that can do what surgeons in general don't do... the patient comes back to the ward, we re-discuss the case with the surgeon and the clinician.' At the beginning it worked very well.

[...] It was extended to the course... sometimes we had classes with two teachers, one from Clinical Medicine, who presented the diagnosis; the surgeon took part, and after that he demonstrated the surgical technique he had undertaken [...] But this was a novelty and an experience that we could not have foreseen... because the majority of surgeons don't know the patients very well, clinically. (Briani, 2003)

However, the merger of departments soon started having problems. During the period of the merger, the direction of the Department of Surgery was the responsibility of Dr Degni, and later, Dr Rosemberg; the latter had been invited by Prof Carvalho and was keen on the idea. However, Dr Rosemberg was also the personal doctor of Luís Carlos Prestes, the leader of the then forbidden Brazilian Communist Party. Because of his political links, Dr Rosemberg was compulsorily retired by the military government. Several teachers were invited to substitute him,

but nobody accepted. As a result, the departments' merger waned and resistance against it increased. Prof Carvalho recalled this period:

I remember inviting three or four and they did not accept. [...] there was the interest, UNICAMP was being acknowledged as a promising university, but even so they did not want to expose themselves. That which remained apparent to me was this – they did not want to expose themselves in clinical discussion with the clinician. [...] And then I realised that the idea would not go further because I couldn't find a solution to replace it and the group resisting the idea was increasing.

In view of the resistance and once his term as Dean ended the new Dean Prof Pinotti started to reverse to the previous arrangement. As research at the UNICAMP Archives showed, this merger of departments was at the center of a heated dispute between Prof Carvalho and Prof Pinotti²⁶.

By this time all schools and institutes at UNICAMP had to adapt academic and administrative structures according to the departmental organisation and had to submit the proposal to the University Board. In meeting of the FCM Faculty Board, Prof Carvalho argued that 'the creation of institutes at UNICAMP withdrew disciplines from the medicine school that could not be separated, geographically or administratively'. He added that before establishing the departmental structure it was necessary to establish minimum objectives, specification and criteria in the departments' constitution and also: education, research and timetabling, equipment, academic staff, the number of disciplines, the dedication of head's time, etc. He also suggested that the radiology service, the laboratory of clinical pathology and anesthesiology should be placed in the hospital, with the possibility of becoming disciplines or departments when they became eligible (FCM, minutes of the 13th Faculty Board meeting, 24/04/71).

The FCM Faculty Board approved all suggestions presented at this meeting. The main principles were: no duplication of resources to achieve the same ends, merger of related disciplines, abolition of cathedras, and accordance to the minimum requirements for the creation of departments. Also, it was understood that some

²⁶ Interestingly, Prof Carvalho (and to a lesser extent Prof Pinotti) preferred not to mention this dispute during their interviews to my Master's.

disciplines were services of the hospital and serving all departments. Therefore they were kept as services (FCM, official letter 303/71, Regulation 2663/70). The Faculty Board also supported the merger of the departments of Clinical Medicine and Surgery, highlighting that ‘the merger of Clinical Medicine and Surgery will be maintained experimentally.’

The criteria for creating departments followed the traditional division in other institutes and schools and respected legal conditions, such as a minimum number of full time teachers. Under these criteria the following departments were created: Clinical Medicine and Surgery; Maternal-Infantile; Pharmacology and Clinical Therapeutics; Preventive Medicine; Pathology; Neuropsychiatry; Ophthalmology and Otorhinolaryngology. Orthopedics was maintained as a discipline and the workload of the head was only 12 hours/week. The Laboratory of Clinical Pathology, the Radiology Service and the Blood Center were made services in the hospital but not to the detriment of teachers there (FCM, official letter 303/71; 13/05/71).

Despite the approval of the FCM Faculty Board, Prof Pinotti sent a modified version to the University Board, detailing the separation of the departments of Clinical Medicine and Surgery. Prof Carvalhal questioned unsuccessfully the Dean’s decision, but he was alone in this fight. As an interviewee once said about the integration, ‘it was something nobody wanted, but him.’ Minutes of a meeting of the Curricular Chamber show Prof Carvalhal asking the members to reconsider the FCM departmental organisation process, ‘that was proposed initially with the Department of Clinical Medicine and Surgery and was presented differently by the FCM Dean in absence of the Faculty Board and the Teaching Commission’ (Curricular Chamber, minutes of the 53rd meeting, 02/09/71).

Although praising Prof Carvalhal on his important role in improving teaching and enabling curriculum integration, Prof Pinotti did not hide in his interview the fact that they had been on opposing sides of the university micro politics; he even mentioned a conversation that both had with Prof Vaz on the subject:

Zeferino was the referee in all those matters [...]. I still remember one day when he spent three hours – how patient he was, mediating a discussion between me and Dr Sílvia (*Prof Carvalho*) [...] I remember that I won the discussion because perhaps I used a more intelligent strategy than Dr Sílvia, because I said that I totally accepted it, as in fact I did accept it now – the need for clinical-anatomy-pathological integration, and the need to integrate the different medical curriculum disciplines, but that could not justify the mix of all the disciplines in the same department. Specialism had to exist – specialism deepens research, post graduation, etc. Then, I used a more eclectic strategy and Zeferino agreed, then the departmental organisation was born. (Briani, 2003)

On the other hand, documents found at the UNICAMP Archives show that Prof Pinotti's proposal was not so easily accepted. The University Board appointed an Education Commission formed of deans to advise on Prof Pinotti's proposal of departmental organisation. The Commission, aware of the criticism that his proposal had been generating, asked Prof Pinotti to present a detailed clarification of his thoughts before the voting session. Apparently, the commission did not see any conflict of interest in the fact that Prof Pinotti, as FCM Dean and member of the commission acted as referee in the process. He did it with ease, discussing the creation of the FCM and masterfully presented a step by step vision of the school's future in the university, in an eight-page review – the main topics are presented in the following paragraphs.

Prof Pinotti began his document arguing that it was difficult to analyse the proposal as an isolated process so he located it against the backdrop of the transformation that the whole university was going through and then analysed it in isolation. He recalled that some events in the medical field differentiated in other areas – mainly a difference between individuals and the application of their knowledge. The creation of experts distanced them in such a way that often different specialists seemed to be occupying different occupations altogether. This was explained by the great progress of knowledge that prevented doctors deepening their knowledge while not narrowing their field of action, 'a reality that needs to be accepted, understood and needs to have its defects corrected but that cannot be fundamentally changed' (emphasis in original). Prof Pinotti made his position clearer in the following statement from the document:

Obviously, there are general levels of knowledge and application in medicine, but they always are branches; we could say even narrow branches when it comes to the application, because today it is totally impossible to have assistance in large areas. Education requires: experience in care, deep theoretical knowledge, a tradition of research in the field and some teaching experience. But it is always important to remember that every time you gain in breadth you lose in depth.

He argued that a traditional structure was adopted in the initial installation of school with the principle that the whole was constituted by the sum of its units, and, therefore, the individual conscience of teaching and research was enough for the establishment of a good medical school. The next step – which might have stemmed from his term as Dean, was consulting the school's intellectual forces to set objectives and disseminate them. Thus the majority of the faculty and student body was aware of the structural evolution that the school would inevitably go through. He named this 'the global process of transition'. Accordingly, the sub-processes of transition would be: the teaching structure, multi-professional training, interdisciplinary research, extension programs within the external community and services. Therefore, the department or the division into departments could not be characterised solely by some of its processes as 'it is a group of professionals that, despite participating in various processes of the institution, are dedicated to a particular area of expertise' (emphasis in the original).

Following on from this, he argued that if it was accepted that the curricular integration of research and care should exist as conceptual framework across all departments, there was no point in merging departments to improve integration, as it would end up merging all of them. An example cited was the Maternal-Infantile program that brought together the departments of Preventive Medicine, Gynecology and Pediatrics without merging them all together. Besides considering it unnecessary, the merging of different areas for the purpose of teaching posed a problem, that is, the difficulty of leadership due to the lack of adequate scope of control and unnecessary bureaucracy. According to the document, if a curricular commission were to be established with clear objectives and general policies for the course, each department would be called to contribute according the needs of these objectives.

The proposal was approved with two dissenting votes and one abstention; first of all, the proposal did not fit the criteria adopted at other institutes in the university. Secondly, upon recommendation of the commission, the University Board had approved the maximum number of departments in each faculty or institute to be five but the FCM proposal had 10 departments. The abstention voter declared that there were two proposals presented by two different groups and both seemed reasonable. Even voting in favor of the proposal, the first Dean of FCM and member of the commission declared reservations as the proposal was different to the one approved by the Faculty Board. The FCM Faculty Board decided unanimously to accept it and put it into practice. At that meeting it was also decided that any change should start with the Faculty Board, where it would be initially discussed.

Prof Carvalhal's reaction came almost one year after, in an official letter as Head of the DCM to Prof Vaz with a copy to Prof Pinotti. He started recalling his opposition to the Dean's proposal and the consequences for teaching and assistance which he foresaw and he regretted the consequences that were already taking place in such a short period. He described how he thought the departments of Clinical Medicine and Surgery had returned to the traditional separation with patients no longer benefitting from the care of both teams. This was due to the wards being distanced and timetables making difficult the meetings between teachers and residents in different areas. He regretted that the positive outcomes of the merger had not been analysed and 'only the imperfections had been tentatively emphasised by the Dean.' According to him none of the unquestionable advantages were highlighted, such as: the training of residents, solid semiology, knowledge regardless of if the patient was a clinical or surgical case or not, better management of resources like beds, better and more balanced diagnosis of patients, improved clinical knowledge of surgeons and, above all, improvements in the training of undergraduate students. He also claimed that regardless of the number of departments, once the proposal was approved, integration was lost; once the teaching commission proposed to coordinate the curriculum, the integration between departments would not function adequately. In an excerpt of the document he used harsh words to defend what should be the real debate:

To analyse, discuss and conclude to achieve the best result aside from vanity, arrogance and display of authority without reason, this is what I want to be done. A unique Department of Clinical Medicine and Surgery is something that no one has tried to achieve in the Brazilian medical school and for that reason we – the ones who were achieving it – could point out the advantages and disadvantages to be considered and judged.

Despite persuasive arguments and the rhetoric presented in his document to the commission, in his interview Prof Pinotti revealed – perhaps without realising it – what else lay behind the conflict: tradition, power, academic hierarchical positioning. This conflict occurred regardless of whether the experience of the merger was successful in terms of curriculum or student practice:

He (*Prof Carvalho*) wanted to reunite all departments, but it clashed against all the tradition of... the division in disciplines... After all, people came from São Paulo and other places where they were teachers and they wished to be full professors. Would they come to FCM and be a mere member of a unique department with clinical-anatomy-pathological integration? No one comprehended it well! [...] It worked in the curriculum, it worked in practice, but it clashed with a lot of people, including me on certain occasions, because he wanted to merge Gynaecology with Surgery and I really wanted to defend my piece, right?

According to his testimony, Prof Carvalho neither intended to merge the departments of Gynecology and Surgery nor wanted the clinicians to perform surgeries, as the statement of a former student below suggests. Nonetheless, this shows the extent to which misconceptions and misunderstandings also contributed to undermine his proposals.

In the early years there was a single department and he created a clinical-surgical discipline, and he also wanted to introduce pathology all together – that every doctor should be able to do diagnosis and surgery. He wanted to create this kind of doctor. But in time he realised it was impossible so he created a group which worked alongside him. Interestingly, he brought in some newly qualified doctors from EPM [...] they were clinicians, but everybody turned to be surgeons because what Dr Sílvia (*Prof Carvalho*) created was... it was impossible... He brought the guys in to be clinicians and to perform surgeries. They started to do surgery – they liked it, they became surgeons and they abandoned Dr Sílvia, because it is impossible to do everything!

Two decades later in an interview for a special edition for the FCM 30th Anniversary journal, a DCM teacher recalled that ‘the dream of a unique department had been ruined by the Dean, I will not say inelegantly, but let us say not in accordance with the university canons of the time’ (FCM, 1993, p.24). Nevertheless, it is largely acknowledged that, unlike Prof Carvalhal, Prof Pinotti was a political animal at heart and the range of positions he held during his life illustrate the extent to which their political ambitions differed. After graduating at FMSP in 1958 and specialising in mammary and gynaecological cancer in Firenze and Milan, Prof Pinotti joined the Department of Gynaecology at FCM in 1965 and ran a prestigious private clinic in Campinas. At UNICAMP he was FCM Dean twice and the third Vice-Chancellor, setting up the Women’s Health Care Centre. Other positions held were: São Paulo State Secretary of Education, São Paulo State Secretary of Health, São Paulo Municipal Secretary of Education and São Paulo State Secretary for Higher Education. At the time of his death from lung cancer in 2009 aged 74, he held a second term as Federal Congressman.

The excerpts which follow, despite recognising and praising Prof Carvalhal for bringing an integrated vision to the curriculum, highlight the kind of criticism he was subject to:

Sílvio Carvalhal had a very important role in changing the teaching at UNICAMP in part because he had this integrated vision... but he led it to a point that was... complicated. He was a clinician [...] and he had a very structured and anatomical-pathological view of things. He thought, thinks and continues to believe, that everything is explained by the anatomical-pathological. [...] But he led it to an extreme point, he was Dean of the school during a period, and led it to an extreme... this organic belief that he had... [...] The integration of clinical-anatomical-pathological – it didn’t work as a whole so we had to re-discuss, re-adjust the curriculum within the organisational departmental.

He wanted to create a general doctor, but it turned out to be unrealistic. He wanted a general doctor which studied pathology, understood paediatrics, was able to do autopsy, able to assess the results, announce the final diagnosis and who also studied surgery and clinical medicine. [...] Actually people wanted the previous model; Dr Silvio’s model did not fit to the wishes of the majority, although it did on the undergraduate course.

When Prof Carvalho reviewed his beliefs he did recognize that perhaps his proposals were problematical. After ten years directing the DCM, he started a slowdown of the move to the PUCC. The very fact that he retired from UNICAMP and transferred to PUCC attests to the difficulties he had fighting for his ideas. Again, he sought to work in a beginner school where he had been collaborating for a couple of years, in another attempt to implement his teaching methodology.

Look, you know, nowadays I consider myself a bit disastrous at doing things, at implementing things, because to implement something it is necessary to prepare people's ears and spirits otherwise when you innovate it is like banging away at the ramparts... there is some need for receptivity.

He often showed great disappointment in medical education because the inevitability of increasing specialisation seemed apparent. Despite his disappointment he was never bitter and rarely harangued his opponents during the interviews. He always acknowledged Prof Vaz and praised him for his views even though he did not support him against Prof Pinotti's proposal for the FCM departmental organisation: 'Everyone but Zeferino wanted to see me tucked away in the backroom. [...] He always supported me, and even somewhat perplexingly, he agreed with almost all my proposals.'

In interviews he frequently described himself as utopian, stubborn, awkward, exhausted, disappointed and unable to solve the complex issues of medical education. Talking about his life and work was not usual for him, and the experience of being interviewed brought up topics he might not have wanted to discuss. His banner – the integration of anatomy and clinics, had been carefully taken from EPM to UNICAMP, and then to PUCC, where the history repeated, as the narratives in next chapters will show. His followers at FCM and PUCC tried to sustain his innovative ideas in the context of the 1980s and 1990s amongst demands of two different universities, but they were facing enormous social, economic and political changes.

The next chapter will focus the FCM group. Some of them were Prof Carvalho's students who supported his ideas but there are also professionals who graduated from

other institutions who joined UNICAMP in the 1980s and who brought different views to the IMS group and to the institution as a whole.

Chapter 8

The FCM group

Chapter 8 looks at teachers working at FCM who were interviewed for the research. Except for one, all of them taught IMS – the discipline that Prof Carvalhal coordinated for almost 20 years. Section 8.1 introduces four teachers who graduated at FCM under Prof Carvalhal’s supervision during the undergraduate and residency course. Section 8.2 brings the stories of two teachers who graduated at other universities and who were hired during the 1980s and were part of FCM and HC expansion. The different backgrounds they brought to FCM matched the standards that UNICAMP was looking for and had a significant impact on the IMS teachers’ profile afterwards. The story of a newly teacher graduated in 2001 is presented in Section 8.3.

8.1 FCM former students

Eros Antonio de Almeida

(FCM Class of 1972, 57 years old)

‘I was chosen to be a doctor’ was Prof Almeida’s first phrase in the interview, and I was intrigued by it – but he was not joking or being sarcastic. Having a doctor in the family had been his parent’s dream and a decision that he accepted; the same way he was always opened to ideas and suggestions throughout his working life from teachers and colleagues, as his narrative showed. I first met him when I was working at the FCM Undergraduate Office, but our contact became more frequent during the CRC meetings where we both were members, and some years later, in the Residency Office, where I worked from June 2002 to September 2007.

He was a DCM representative in the CRC and IMS Residency Coordinator for four years. Despite being an experienced doctor and professor, he always seemed to me somewhat timid – a gentle and friendly person, shy and reserved – an impression confirmed by his conduct during the CRC meetings. He was respected by students – though not the most popular. On the other hand, when I first interviewed Prof Carvalhal he cited Prof Almeida as one of his best students and a reputed intellectual heir. In my experience and viewpoint this did not fit the puzzle. So, it was with great

curiosity that I approached him for the interview and here he told me his life story from childhood in a small town to going UNICAMP and the choice – this time his – of choosing a doctors’ teacher career. The interview took place in his office at DCM on September 2008 and we had another meeting one year later.

Prof Almeida was born on the 10th April 1951 in Franca, a medium sized city in the state of São Paulo, but the family lived in the small town of Delfinópolis, in the state of Minas Gerais (Northeast from São Paulo). He was the sixth of seven children; his father was a handy man, and his mother was a housewife. Medicine came into his life as a choice, but not his exactly:

I was chosen to be a doctor... The whole family, I mean, my father and mother wanted me to be a doctor... it was like ‘This one will be a doctor’ and I think it was because I’m the sixth of seven children, so... I think they thought, ‘Now that we’ve raised five, this one can be a doctor.’ I think the reason is that he (*father*) had real respect for Dr Lafayette, the town’s doctor, like a priest, the doctor used to look after the whole city... he never made an incorrect diagnosis. I met him when he was an old man, no longer working. But he was a doctor who did everything, so... he owned the town – he and the priest! I think because of that they wanted me to be a doctor.

The family supported the idea and after finishing secondary education in Franca, he moved to São Paulo to attend a one-year preparatory course for university entrance. His eldest brother, who lived in São Paulo, paid for accommodation and the course fees because his parents could not afford it. He passed the exam and started the medical course at FCM in 1972, aged 21.

I started in 1972 in the 10th class. I started a bit late, I was 21, there were only two other students older than me in the class, but I had a colleague who was 17, the age that students start today. I was a kind of late learner but not because I was negligent in my studies. I started late. I started primary education when I was 10 because I was the youngest in the family. I was a small child... I didn’t want to go to school, I was afraid, and my parents allowed me to be like this (*laughs*). But when I started, I enjoyed it and always was a good student. I never failed... even at undergraduate level I never failed.

Although admitting he was ‘chosen’ to be a doctor Prof Almeida enjoyed the medical course and could not imagine doing anything else throughout his life. Nevertheless,

he was not able to fulfil his parents' dream and returned to the small town of Delfinópolis to work like Dr Lafayette as the town's doctor.

Fortunately, I liked it – right? Because today, if you'd ask me if I would ever have been anything else if not a doctor... I've asked myself that and I think of all the professions requiring higher education I wouldn't have done anything else. If I had not been a doctor I would have been like my father, I'd do tap repairs, guttering, that's what he did... services, manufactured goods, delivering home services. I wanted to be a doctor like Dr Lafayette and return to Minas Gerais or any other place to look after patients, without any expectation of getting rich, that perhaps is a generational issue, 'peace and love' and all those things. But I adapted. I think I've settled more into the career of a doctor teacher, because I never went to a private clinic to look after patients like Dr Lafayette. [...] They wanted me to be a doctor like him, to return to town, they thought it would happen. For them, what I was doing here was not being a real doctor. They thought a doctor was someone who worked in a doctor's office, used a doctor's bag, these things. They thought I was only a medical teacher, but I was a doctor too.

A return to Delfinópolis did not happen for several reasons, among them Prof Carvalho, who was his teacher in the third year of the medical course, then mentor, supervisor and best friend until his death in 2008. Some people thought they were father and son. Prof Almeida somewhat resembled Prof Carvalho in height, eye colour and in the speed with which he talked. His own father lived for 96 years, like Prof Carvalho, who died at almost the same age.

I think Dr Sílvia influenced me at the beginning. At school you have prototypes, role models, isn't that the case? And the model I liked most was his, he was always at the patients' side discussing cases and after that performing the autopsy and autopsy is like an art, something manual, like surgery... a technique. So I guess I engineered a medical area that I liked. Right up to the sixth year I had a penchant for surgery. I worked in the anatomical-clinical but I was always in the operation room because of the technical part. Eventually, in the sixth year I realised that I wouldn't get to grips with just being a surgeon because you know, few talks, more action... and a lot of urgency, isn't?

In the fourth year of his medicine course, he became a Semiology Assistant, an event that introduced him to his future teaching career and it provided a monthly scholarship. In the fifth year, when he started to work on call he was able to be financially independent of his brother. As the medical course evolved he became

aware that a return to Minas Gerais would only occur after his residency, but after increasing participation in teaching and care the idea of returning to a 'pure' medical activity became increasingly distant. He decided to be medical teacher and Prof Carvalho was his role model.

In 1977, when Prof Almeida was in his sixth year, Prof Carvalho left FCM and moved to PUCC, where he had been helping organising the medical course since 1976. In the second year Prof Carvalho was preparing a team to start teaching IMS the next year. He invited his former assistants at FCM and Prof Almeida joined them (in his spare time) after class in the evenings when taught cardiac auscultation to PUCC first year students. The next year when the PUCC hospital was set up Prof Carvalho needed a bigger team. Prof Almeida recalled the conversation they had where the former practically showed him his future next steps. This advice he accepted, too.

At the end of my sixth year at FCM, PUCC set up the hospital. Then he said, 'What are you going to do? Are you applying to residency in clinical medicine, right?' I said, 'Yes.' 'And then would you like to go to PUCC?' 'Yes, I do.' So, when I finished the first year of residency (*at UNICAMP*), he said, 'Look, the next year we'll need the group assembled, because the students will start the third year and will require patients, so if you want to go...' So, I didn't have much doubt, I left residency because I'd swapped the residency title for a teaching career; because the PUCC was hiring a professor. So, I went at the end of the year, I talked to the Dean, and I started in March as a teacher at PUCC.

Over the next nine years, he worked with Prof Carvalho at PUCC, teaching IMS, looking after patients, working on the clinical ward in the mornings, doing autopsies in the afternoons, also performing: surgical pathology, teaching anatomical-clinic and semiology, performing autopsies on patients that had died, and using these cases in his teaching. But once PUCC evolved and hired additional teachers for the new departments and divisions, the disputes and patterns of resistance repeated itself.

At the same time FCM started developing the graduate school. After the setting up of HC in 1986 and increased vacancies in the undergraduate course meant the FCM had to recruit additional teachers. At the same time the DCM wanted to recreate the IMS

group which have finished when Prof Carvalho moved to PUCC. Once again, Prof Almeida accepted his mentor's advice even though it was at odds with his own ideas:

Semiology, which is the basic part of medical training, was run by specialists. But a cardiologist is not confident enough to teach the semiology of the liver or neurology, for example. So it was really hard for them and they didn't know how to handle it. They decided to recreate a general ward and hired people at the end of their residency at FCM. They also invited people from PUCC like Elza, for example – we graduated in the same class [...]. And the group at PUCC had their minds set – they went to FCM and left us. They left the IMS PUCC. Eventually, I was invited too. Elza was Head of DCM, and they needed teachers and she asked me if I wanted to. I spoke to Dr Sílvio (*Prof Carvalho*) and said that I didn't want to go but he said something like, 'Look, I think you have to go because I can see the situation here is becoming increasingly difficult. The post-graduation is not starting soon and as for the FCM there is an increasing trend to establish as an outstanding medicine school. So, I think you should go. And you can do the same thing there that you do here.' So I returned to FCM. It was 1988 and I was back here. So, I was at PUCC for nine years, after one-year of residency at FCM. Now it's been 20 years that I've been here. I returned, finished my post-graduation training... my doctorate... and I stayed in the IMS group, which is where I have been right up to today.

The 'chosen to be a doctor' theme permeated Prof Almeida's narrative, suggesting some kind of passivity or lack of confidence, but also a considerable degree of adaptability to change as the statement above shows. Nevertheless on his return to FCM after almost 10 years he found it to be a remarkably different school. I asked him to tell me his feelings on his return to the school he had graduated from and whether he felt a sense of identity and belonging, of feeling at home even though the context had changed considerably. Firstly, there was the newly opened hospital-school in the campus and departments had been set up in new buildings, classrooms, laboratories and the medical library. There were rooms for individuals and some that could house at most two teachers. The medical course was in the 26th group and praised as one of the best courses in São Paulo. Above all, the focus had changed and UNICAMP was insisting that teachers qualify, be able to produce and disseminate research of the highest level. Signs of the change appeared when he met newly hired faculty from FMRP, as he recalled.

When my colleagues from the PUCC came to FCM... the IMS group was being formed again... also some teachers were being hired from Ribeirão

Preto. So a large group was formed... teaching IMS to a full medicine group is challenging ... so there has to be a large teaching pool available to cope with numbers – today, for example, we are 14 teachers, the same size of the Department of Orthopaedics! At that time the DCM was structured into specialties but the technological resources were not great. The IMS group could do almost all the same things as the experts but the specialists didn't see it that way 'How is it possible that these people who are not experts can do the same thing as us?' And we didn't agree with that because we were skilled... why couldn't we?! There were territorial disputes like, 'Look a cardiologist has to perform a stress test, it can't be you, you're a clinician, I'm the one who should do the stress test, I'm the expert, you're not.'

But I had no problem because the specialists that graduated at FCM were my friends and I'd been with them since the first year of residency, and I don't know whether it was because of Dr Sílvia or because all of them knew about my training... They knew me first as a former student, colleague, many teachers were my classmates, fellows... some attended residency one year after me or one year before me, right? We got along well, so I guess I didn't represent a... threat, right. Also, it was not my intention to compete with them because I didn't want to be a specialist; I wanted to be a clinician and do... the anatomical-clinical work. So, within the DCM I personally didn't feel any tensions.

It was within the IMS that I felt a little more the tension... the tension between those who considered themselves experts and researchers... they valued the kind of research you did – this is when we felt the tension more. Just to give you an idea, when I returned, a colleague introduced himself to me and we started chatting and the question he asked me was, in which journals I'd published. And we had been publishing in our 'Cardiology Archives'!! (*laughs*). At the time, I didn't realise what was behind his question and I replied, 'Oh, I publish in the Cardiology Archives,' and he, 'Oh, so you don't publish in English, you don't publish in journals in the US, in Europe?' 'No'. It was after a certain time that I realised that at that moment... I'd been... denigrated to a lower level... of personal ability, right?

When Prof Carvalho transferred to PUCC, the DCM changed the way IMS was taught. The teaching by specialties replaced the anatomical-clinical model and the general wards were fragmented accordingly. According to Prof Almeida, the Head of department that replaced Prof Carvalho announced that the general ward would be divided as well, for the benefit of speciality development: 'Those 40 beds will be made into 10 wards: four beds in gastroenterology, four beds in rheumatology, four in ... (*laughs*) and each area will start to develop.'

And then teaching changed. You could ask, 'But was the other model better?' I don't know whether it was better – it was different. For us (who

worked with this model) I think it was better, but... at the time, virtually nowhere else did it, because everyone, EPM, USP, FMRP, all of them had already turned to 'separation'. So, internal medicine would be specialties, and teaching was taught by specialists. So... it changed totally, there was this change.

Prof Almeida joined GEDoCh, the group that Prof Carvalho had created at FCM studying Chagas Disease. According to him, Prof Carvalho encouraged research, although not recognising himself as a researcher and not even being known for his research by others.

With respect to research, it was... you teach, you treat the patient, and then you have materials to explore scientifically and communicate to others. So he always encouraged research, but as an end, not a means. But nobody joined the group to be a researcher. Everybody came to be a doctor and medical teacher. And he used to say, 'Look, if you don't use it to disseminate knowledge you probably will not ever be remembered, you will only be remembered when the school is... 60, 70, 100 years old but... if you think that someone in Rio de Janeiro will remember you because of the work you are doing... they will not!' Then, if you read my CV it's extremely similar to his and others... there is the case, we describe the case, get the opinion, get the casuistry together, etc. but... meanwhile he was extremely curious about Chagas disease, we discussed everything from one symptom to the cell and he had many ideas about the disease's pathogenesis and the whole group was engrossed in the Chagas disease. And then one day he suggested assembling a group for the study of Chagas disease from the clinical and pathological standpoint and that was called GEDoCh – The Chagas Study Group. That was... 1974, 1975.

During the period Prof Almeida worked at PUCC, Prof Carvalho suggested the creation of a similar group, which resulted in the setting up of a consultancy room for Chagas treatment. This has since become Prof Almeida's research topic. On his return to FCM he re-joined the GEDoCh. Up till 1992, when Prof Almeida applied for a teaching position at FCM, Chagas disease was his only research topic.

Some years later, a cardiologist and professor from the remaining group of IMS, suggested Prof Almeida joined his research on atherosclerosis, which the latter accepted. 'I went there because it was quite a... a return to the technical part of it all... we did the aorta cannulation in rabbits, opened the chest, induced a heart attack, and then checked the anatomical-pathological part.' When he retired, Prof Almeida

substituted him as coordinator of the laboratory, although he still kept working on the Chagas disease at GEDoCh.

In May 1991, Prof Almeida completed his doctorate under Prof Carvalhal's guidance, studying the myocardial bridge analysis of 60 autopsies. After this he had executive positions like Chief of Area, Coordinator of the Semiology Course, IMS Coordinator, Head of the DCM, and other positions in the HC such as Ward Coordinator. By the time of the interview he was Head of Clinical Attention, a kind of intermediary between the DCM and unit care, or in his own words, 'fire fighting', as he represented the largest department (75 people who came from 10 different areas). It was a long way away from the small, fragile boy, from Delfinópolis to Associate Professor at UNICAMP, something his parents would never have imagined when they had just wanted him to be a doctor.

Three years ago I became Associate Professor and... I think that was the pinnacle of my career because next year I'll be able to retire. To become a full professor I think it's too late, because to take that next step in the career you have to extend your area which is hard work. So, from an academic standpoint I think it has to end with Associate Professorship. Now, from the standpoint of teacher and doctor in the institution there is no limit. The deadline is the necessary, you know, 70 years old and I don't want to retire. I don't have the intention of retiring unless I get sick sometime over the next ten years, you know. So I guess... the career is correct the way it is.

When asked about the capacity and performance of students who were not trained by Prof Carvalhal's method, he did not consider it worse, only different:

When the students leave school to take care of patients they're not bad at all, because as doctors they are still ok. Then, it's just a little... different. For example, can you drive a car well? Yes, you can. Do you know about the mechanics of the car? No, I mean... if the car breaks down you stand there waiting for a mechanic, don't you? And how can you fix the clinical part if you know nothing of its functioning? Sometimes you know about function but you don't identify parts. How one can be a good doctor without knowing pathology? But it represents 90%! And the opposite is true – doctors who are pathologists know nothing about clinics. This is the method that he proposed, which is a method that lasted from the beginning of the last century until the first decade of the twentieth century. All medical teaching was based on the anatomical-clinical correlation.

He pointed out that a return of the anatomical-clinical model would not happen because of several reasons. Firstly, the lack of an experienced group able to train others. Secondly, with regards to the use of imaging methods like tomography, ultrasonography, etc. to replace autopsy – the clinician able to train in the anatomical-clinical method is not trained in imaging methods. Thirdly, autopsies are expensive and laborious. He tried to encourage autopsies in the HC but the hospital superintendent told him that the SUS²⁷ would not pay for it. Lastly, performing autopsies is unpleasant and technically difficult.

I never enjoyed doing the autopsy. I think neither did Dr Sílvia (*Prof Carvalhal*). We preferred to do something else... just advise (*laughs*). But it has to be done. It's unpleasant from the moment you request one done. Because of our Latin origins we're not eager to deal with the body after death. We want a decent funeral, you know, to bury, and then suffer the loss. So, it's not easy to convince the family to authorise an autopsy and the problems start there.

As for the current curriculum at FCM Prof Almeida was rather pessimistic. We both took part in the CRC in 1999 (I left CRC in 2002), which was set up after a three-day seminar on curriculum reform experiences. At that time expectations were enormous, the then Dean Prof Saad nominated those who were seen as the most 'education-oriented' teachers in the school. The seminar recommendations were clear i.e., the FCM should focus on general medical education and training that would allow graduates to work as clinicians or specialise through residency courses. In order to achieve this, curriculum subjects would seek integration and students would take part in primary care projects, a successful experience that FCM had had in its early days.

The commission abolished the fixed disciplined structured curriculum, and replaced it by combined modules in the first three years. The negotiation of teaching hours was difficult and strenuous as the first two years of course had been run by the Institute of Biology and subjects had to be embedded into modules. Prof Almeida estimated that little had changed and in fact, the result still depends a great deal on the student. Apparently, some teachers still do not understand the concept of integrating modules and continue to teach in the same way as they did before.

²⁷ SUS – 'Sistema Único de Saúde' (Unified Health System) is the equivalent to the NHS in Brazil.

It changed the curriculum and I don't know... People in charge of evaluating noted that the student has changed. I think it has hardly changed. I think they continue to be... who is good is good, who is not... (*You mean the freshmen?*) No, at the end, after the passage of years... those that change. I don't know whether they changed much for the better. But I also think it has not changed for worse.... At the time of the CRC meetings, I told the chairman that the curriculum design should not be changed too much... between the basic and professional series but if you don't change people's mind the curriculum does not change... it doesn't improve much. Conclusion, the basic course remains two years long, the students take too long to get there (*the clinic cycle*), then when we assess to if they incorporated the content of the basic cycle, they did not. They failed to incorporate almost everything, just as it was in the old curriculum. So, I guess not much has changed; it still depends much on the student. You still find today colleagues that don't know what a module is. The disciplines ended, the modules were created to integrate the areas, but many in the faculty don't know about modules. They just know they are giving more lessons in the basic cycle... and the didactic load increased slightly. So, I guess that the committee must soon do a general reassessment, once the first class graduates, to see if it's necessary to change again, whether it's necessary to fix something. But I'm a bit out of the undergraduate committee, so... I'm just debating... the fate of the undergraduate course.

Maria Elena Guariento

(FCM Class of 1973, 53 years old)

Prof Guariento was born in São Paulo on the 24th April 1955 and was in the 11th class of FCM of 1973, one class after Prof Almeida's. We had not met before the interview, but I remembered Prof Carvalho mentioning that, along with Prof Almeida, she coordinated IMS after his final move to PUCC. She welcomed me into her office at FCM in August 2008 for a one-hour interview. She spoke about her training as doctor, the contact with Prof Carvalho, her professional achievements, and her views – highly critical of the medical course.

The desire to become a doctor came early in her life, at the age of five. She already showed this desire when asked what she would do when she grew up. Some of her relatives were doctors, although she specifically mentioned an uncle of whom she was fond of and with whom she had a close relationship during her childhood and youth until his death when she was 15. The family history may have contributed to the support she received in her decision to study medicine. Besides the support, the family provided her with good educational environment. Unlike most interviewees who attended state schools, she attended the 'Bandeirantes', a traditional private high school in the São Paulo capital, famous for its high level of education and training for universities entrance exams. As a result, she entered FCM without the need to attend a preparatory course. She also acknowledged previous teachers, her own intellectual curiosity and a penchant for biology as essential elements for succeeding in the university exams aged only 17.

University represented a challenge – moving from São Paulo to Campinas and adapting to the new life and experiencing 'a passion for discovering another world and another reality.' The first two years of the basic course were significant in that they provided a solid foundation. At the end of the second year she started to get a feel for the hospital environment though it was still far away from what would become her everyday life. The idea that she was heading for a working life was extremely attractive and compelling. She recalled meeting Prof Carvalho in the third year of the course.

When the third year started I came across a discipline called Semiology, where Prof Sílvia Carvalho was the coordinator. It was then that I had absolute confidence I was doing the right thing, that I was in the right place and doing the right thing. It amazed me the way Prof Sílvia introduced us to clinical reasoning and I was impressed by the others who were with him at the time, even some last-year students who were tutors for practical activities, for semiotechnics.

There were other assistants who were residents and others who were, in fact, teachers. Some of them went to PUCC – others left teaching. They were people who embraced Prof Sílvia's proposals, all clinicians and most continued to be clinicians and did not specialise. Even those who specialised still had a strong clinical training, in addition to a broader view and were able to integrate the pathological findings with functional changes, with the clinical expression and the interpretation of these changes – which is the famous clinical reasoning.

After graduating, Prof Guariento attended three years of residency in IMS. The last year was a stage coordinated by Prof Daniel Stork at the University Hospital of Strasbourg, France. She reported the stage abroad as being useful as she experienced a still more integrated approach to the subject. On August 1982, a couple of months after her return to Brazil and the end of residency, FCM hired her as a teacher and she started her Master's Degree. At the time, the growth of the FCM, the expansion of vacancies on the course and the opening of the new hospital-school provided the opportunity to continue working at the university, which was her desire.

My desire was to stay in the university, I have to admit that, especially with the internship I felt challenged to embark on a teaching career, because in my opinion it would reconcile some wishes, i.e., to gain knowledge, to assist patients, to stay in contact with research and teaching, in short, everything was attractive. Also, there was an awareness that I could help train other professionals while I was being trained. So this appealed to me too. Prof Pinotti was Vice-Chancellor at the time and there was a strategy of creating jobs to fill a demand for undergraduate education. There was an interval of four or five months between finishing residency and being hired.

At that time, the DCM was consolidating. It was a period when many teachers were being recruited. Many of us are more or less of the same generation, between the 1980s to mid 1990s the faculty and the department increased tremendously. Today, we are around 80 professors in the DCM... it is larger than many medical schools in Brazil. I was hired precisely during this period and was part of that expansion.

Besides working in the IMS, she also worked in GEDoCh, the Chagas disease consultancy that Prof Carvalho created in the 1970s, then under the coordination of Argentine Daniel Manigot. When Prof Manigot returned to Argentina, the IMS teachers took turns at coordinating the GEDoCh and the service increased significantly. At the time of the interview, she was coordinating both the GEDoCh consultancy and research group. Both her master's and doctoral thesis were studies into the association between Chagas disease and hypertension. From 1999 to 2001 she carried out postdoctoral studies in Philippines in Family Medicine which also allowed her a broader and more integrated approach in relation to other professional activities in health care.

In 2004, the IMS area created a geriatric service which she also coordinated at the time of the interview. At the same time she started teaching in the graduate program in Gerontology in the School of Education at UNICAMP. In 2007, the program was transferred to the FCM. The trajectory from the IMS to Family Medicine and Geriatrics seemed a natural way but that aside it showed a strong commitment to a matrix of medical education which started with Prof Carvalho. Despite acknowledging it, she also admitted that this was not the standard in the DCM; actually, it was the opposite, an approach that medicine schools have just begun to be aware of.

In my opinion, this path we have just started to take I think it started there in our contact with Prof Sílvia Carvalho at the patients' bedside. I did that, and I'm still able to, spend hours in a ward (in our case the General Adult Ward) visiting, accompanying students and residents, examining patients, chatting, collecting data, using the resources of anamnesis, which is an essential tool for the diagnosis. A good anamnesis, a data collection performed correctly, represents almost 70% of the way to the diagnosis. Also, examining using appropriate techniques of physical examination and knowing which additional tests to request. I lived it... that's how I was trained. I've sought to improve it in the internship and in the residency in internal medicine, because I saw myself as a clinician, although there were specialties to which I was attracted or had an affinity, for example cardiology, but I don't see myself as a specialist. Today I work in geriatrics... I'm part of a multi-disciplinary geriatric team, I've helped to build up the geriatric clinic, the graduate course in gerontology but still I don't see myself as a specialist. I keep seeing myself as a clinician with this trajectory, with all these references that I'd been fortunate to have that I have cultivated since my graduation.

When asked about the fate of Prof Carvalho's innovative teaching method she did not hesitate to state that after more than 20 years after his move to PUCP most people still had not discovered it yet or realised how advanced it was.

I think people have not discovered it yet. Prof Sílvia, like many others, is one of those enlightened people able to see far ahead of his time. His ideas and proposals of 30 years ago are only starting to be considered now. But certainly, we still need to take many steps to train the full doctor. He didn't have this vision of strict disciplines but rather areas of knowledge that have an interface and are integrated. Today, we talk about departmental reform... our Dean is proposing a departmental reform in a way that perhaps comes closer to the one proposed by Prof Sílvia. So we will have the cardiologist, the thoracic surgeon, the cardiac surgeon, the endocrinologist... they may constitute a division of care, research and production of knowledge. We know now that cardiology and endocrinology are extremely close. The cardiologist may have more sympathy with the heart surgeon, the chest surgeon, the vascular surgeon than with some areas of clinical medicine, such as dermatology so you can see that some of the ideas he proposed a long time ago are beginning to make sense only now.

She commented on the fact that the first generation of FCM teachers came from the classes in late 1960s and early 1970s and that this group would soon retire. The next generation – which would replace Prof Almeida and herself were not trained under Prof Carvalho's method, although a small group at IMS struggled to keep some of his principles alive. Also, there was a demand for market-oriented specialties, a trend in the entrance exams at FCM residency courses.

I'd say that the generations who graduated at FCM in the last ten years no longer have that vision... we are a kind of like the last bastion, but the circumstances don't help. Today, there's a great appeal for ultra-specialised training and a strong demand for advanced technologies. So, how can we carry on this integrated vision? We try, but it's hard. We try with students until the end of the third year, but afterwards they start to disperse.

It seems to me that we need a broader change. If governments, managers, administrators in the health area and the public in general, were convinced that 80% of the demands in health assistance could be answered at the primary care level, as is the case in Canada... if people were convinced of that I think that then Prof Sílvia's proposals would be redeemed. For this reason the historical memory is crucial... someday someone will take over and realise... 'Someone thought of this a long time ago.'

Nevertheless, she was aware that from the teachers' standpoint there is also a demand and a pressure for productivity, research, publishing, which altogether makes virtually unfeasible any 'teaching oriented' career and any change towards an integrated curriculum.

I think it will happen when the undergraduate course is really valued, because nowadays the focus is the graduate school. Overall the universities place value on the graduate courses. We must cultivate the undergraduate course. If we put more emphasis in the undergraduate course I think many of his proposals would prove useful. Placing emphasis on the undergraduate education means valuing the teacher, the professional who educates future professionals. The way the career is structured today means that this professional is not valued because the value is put on those who produce research, on those who produce scientific work. It has to do with funding as well and also with the requirement that teachers must be assessed by peers in regular reports. They need to show that they meet the standards in terms of their performance. So if we don't change this focus... nothing will change.

I believe that if we as medical school had valued this kind of view, perhaps the curriculum reform would have been different. [...] Today, we see professionals in medicine schools approach the patient with what I call 'the Frankenstein' approach in terms of diagnosis, treatment and advising on prevention. In other words, there's the risk of the doctor seeing patients in a fragmented way ... 'If we can sew this bit onto that bit... perhaps the monster will get up and walk.' Professionals can't integrate. This approach expresses what our health system is and this fragmentation is passed onto the public.

So, we are back to 2008, closing the book on this story... that began in childhood and with that desire. If you ask me, 'do you feel accomplished with what you do?' the answer is, 'yes, I love what I do.' In fact, at IMS teacher I'm asked to teach, do research, provide care. If I had to choose one of these areas I'd choose the practice of a clinician. Certainly, many people contributed to this... my family and this uncle... they were a kind of inspiration to me. That and Prof Silvio Carvalhal and others... [...] I owe much to these teachers who helped us and still help... they are an inspiration for us today. Unfortunately many of them have retired and we miss these precious people.

Jamiro da Silva Wanderley

(FCM Class of 1975, 52 years old)

In 1989, I was a member of the local Campinas Amnesty International group and we organised a street event demonstrating against the referendum bill on the death penalty in Brazil. The event featured a group of ‘commedia dell arte’, musical shows and a magician. Later, I learned that the magician’s name was Jamiro, and he was a medicine teacher at FCM. Ten years later when I was working at FCM I met him again – he was a keynote speaker talking about mental health and working conditions. His interest had been increasingly centred on projects to humanise hospitals, care units and companies. In August 2008 we met for an interview, although it was shorter than expected as it took place during an interval between clinical appointments in the IMS consultancy room in the HC at UNICAMP.

Prof Wanderley was born in São Paulo on the 12th March 1956. The decision to become a doctor did not come from having a doctor in the family. His parents had a small business – a shop that sold tools. His older sister is a psychologist in a state hospital in São Paulo. He came from a poor background and always attended state schools, helping in his parent’s shop while at high school. After attending a preparatory course he started the 13th class of FCM, in 1975. ‘When I was deciding what to do at the university there were three things I had in mind... which were teaching, medicine and anything related to art.’

From the start of the course Prof Wanderley realised that the first years would allow him to take part in other activities, in addition to the lessons. Instead of waiting for the next lesson he and some friends went to Santa Casa (the hospital-school) to talk to the in-patients. In the third year they created a group that performed theatre plays for the in-patients. He recalled that some of his friends became teachers after graduation – one was in the Department of Psychiatry and the other in the Department of Preventive Medicine.

We started performing plays and comedy sketches for in-patients. And there was an advantage because some in-patients came on a stretcher or in a wheel chair and they couldn’t leave before the end, because there was no

one to get them back to the ward! So we always had an audience! (*laughs*). After that I got very involved in the human element of medicine.

Prof Wanderley's teaching skills developed during the fourth year when he was an assistant to Prof Carvalho. He helped early year students examining and talking to patients. Prof Almeida was an assistant during this same period.

So, I started an assistantship in pathology and then in clinical medicine. I met Prof Sílvio (*Prof Carvalho*) and worked with students performing autopsies. It was interesting... I had a personal interaction with the students and in the fourth year I was teaching semiology to the second-year group... semiology is the subject that teaches how to examine and to do a little practice... along the way I got this bug... the bug for coordinating the semiology area... and it has stayed with me ever since...!

Prof Carvalho amongst others was his teaching model. Though the area of anatomical-clinic was not his personal choice he enjoyed Prof Carvalho's teaching and personal style, namely his affection, attention and respect for the patient.

My residency was in internal medicine and I was a student of Dr Sílvio Carvalho and others [...], for whom I have great respect [...] they are people who have dedicated themselves to training and not just the technical training... but educating people. That makes a big difference, doesn't it?

Dr Sílvio used to arrive at 7:30 in the morning and visited in-patients right up to the afternoon, standing, at the bedside, seeing patients. Nowadays, people arrive on time and get out quickly on time... no one goes the extra mile... with rare exceptions. Each day there is someone different evaluating the patient so, there isn't a model to mirror because there are so many different characters... you get training in books but that model of visiting patients, paying them attention and looking after them was lost to the technical. They are using the best remedy, the right antibiotic at the right time, collecting blood cultures correctly but who is there to hold the patient's hand, to talk to him or her, to ask if they are anxious because they didn't pay for insurance to cover being hospitalised? This kind of thing nobody does... they just send for social service. We fragmented the service, and the person doesn't feel cared for by anybody, that's how it is isn't it?

After finishing residency, Prof Wanderley was hired for a teaching position at the DCM. During residency it was difficult to keep his performing group together but luckily an in-patient owning a magician store taught him some magic tricks and he started to develop the magician's art.

I started doing magic tricks for in-patients in 1979, 1980... I started here in Campinas, in a small corner at the paediatric ward and one day the university press office found out what I was doing and published the story in the internal newsletter and it had some impact. Later, 'Globo'²⁸ ended up coming, and all that stuff, and eventually I was on the evening news and it all went on from there...

The news spread that a medical teacher at the prestigious UNICAMP was devoting himself to entertaining in-patients in spare time and this strengthened other groups who were doing the same thing. In 1991, Wellington Oliveira founded the group 'Doutores da Alegria'²⁹ in São Paulo. Oliveira is an actor who graduated in New York where he joined the cast of the Big Apple Circus Clown Care Unit – a pioneering program to bring trained clowns to visit children in hospitals. In 1999, a group of actors created the 'Hospitalhaços'³⁰ in Campinas and in the same year, a group of medicine students founded the 'Xô, Dodói'³¹, based in the HC paediatric and psychiatric wards.

I gave classes to disadvantaged communities in hygiene and health care and started a close relationship with the public... these voluntary activities I still do. I've been going to a village, which is a slum, nowadays... it's become a little more urban over 31 years, extra-FCM. I don't just perform as a magician in hospitals I also go to prisons... children's units. I lecture teachers in regular education then... last week, for example, I attended a seminar for teachers in Minas Gerais... everyone knew me for this my attention... attention, care... teaching with love... trying to do the best you can with the few resources you have... you know... inventing not big, sophisticated things but things you can... How can we improve this material, this human material, how can we improve our resources? I've been asked to raise these issues in other medical schools and even in education too.

Despite a great interest in comedy at hospitals, Prof Wanderley had always been involved in the curriculum reform from the start and he attested to the changes in the medical curriculum. What he said connected with some other's views in Chapter 5 about the differences in training in the early days:

²⁸ 'Rede Globo de Televisão' or just 'Globo', is the major broadcasting TV in Brazil.

²⁹ The Doctors of Joy.

³⁰ The word has no translation, but is a pun combining 'Hospital' and 'Clowns'.

³¹ The word 'dodói' is commonly used among young children in Brazil and means 'pain' ('dor', in Portuguese). 'Xô, Dodói' means 'Shoo, Pain'.

What is the difference between the old and new model? Firstly, getting into university today is much more difficult than it was 30 years ago. The competition is more intense, there are more candidates, and the selection is tougher. The exam today, at least here in Campinas, is much rigorous than it was before. It selects people who can think, perform, better than they did 30 years ago! The second aspect that's different is the audio-visual materials... they're much better today than 30 years ago! So, wait a minute, something's strange. If we have a harder selection process, if we have a multimedia materials available today with a lot of stuff much better than it was... why is the training model worse? Rightly so... it's a question of 'model'. Who taught us were dedicated teachers; we had excellent teachers who were there at the bedside, discussing the cases in the ward, in the ambulatory... there wasn't such a much demand for research. The research at that time was just starting, highly dispersed and the teachers were training people full time. Today, those outstanding teachers are still in the graduate school, publishing papers, in the research laboratory, and who is teaching? Contract doctors... they've got good will... technically good, but... they lack that certain 'élan'... they don't have the maturity, the experience... to show... the human part, to do something else. They present seminars, but that it's not in seminars that you learn... it's experiencing things... with examples. As with everything else in education, there is a written part, but the day to day part of experiencing is decaying, and deteriorating.

With the previous curriculum ... each specialty fragmented things, today there's a curriculum that's a little more detailed... students starting the clinical years have more information on the basic cycle... the technical part is getting better but what about the other skills... like the human bit...dealing with ill people?

Prof Wanderley completed his doctorate in December 1998 with a thesis on the medical-labour aspects with Chagasic patients. His supervisor was Prof Guariento and Prof Almeida co-supervised (both were portrayed previously). He wasn't interested in research, as is confirmed by the number of his projects, published papers and supervisions, recorded in the national database of university research groups (shown in Table 2 at the end of Part III). After his doctorate he took on additional activities and started work in a private clinic, reducing his contract at FCM to 24 hours week, the point where research is not mandatory.

There is also the bureaucratic part of research, we have to do it because it's a requirement, and I always thought the clinical research necessary, the contact with people... I think it's important to experiment with animals and everything else, but I always say to my colleagues that if one day they find me working with mice, giving injections, etc., they must hospitalise me

because I'll be seriously ill. (*laughs*) I prefer being in touch with people, chatting and talking.

So being a teacher, I like it a lot... as I said before, when I was choosing my options at university I had three things I liked to doing, or so I thought: teaching, medicine, and anything related to art. Then, over time I realised it was possible to integrate all these things, you know, so why not do something we like, and teach what we like? Why not make this with art and do it well? Why not also provide art to people... show how life can be different? So, this is the triad that ended up transforming my short career...

Sarah Monte Alegre

(FCM Class of 1978, 51 years old)

When I was an Administrative Assistant at the FCM Undergraduate Division one of my duties was to assist the Undergraduate Committee (UC) monthly meetings. The Committee is made up of representatives from all medical departments and is in charge of all sorts of academic and administrative decisions. Prof Alegre was then the DCM representative on the UC and years later was nominated for the CRC. I always admired her elegance and classical beauty, although sometimes I felt a bit intimidated by her seriousness. Nonetheless, in the interview I found out a strong woman who had overcome adverse in life through love – for her children, for medicine and God.

Prof Alegre was born in Monte Santo de Minas, Minas Gerais state in the 18th February 1957 and started medicine in the 16th class of the FCM in 1978. Her family had never shown any interest in medicine. Her father was determined that the sons followed a career and that the daughters would become teachers, which was the usual occupation for women. The family's attention, especially hers, turned to her older brother when he decided to study medicine. He left home between the age of 16 and 17 and went to Rio de Janeiro – a vast city compared to Monte Santo de Minas.

He left a city that was the size of an egg to go to Rio de Janeiro! He passed the exam on his first attempt and started the course. When he was at home for the holidays it was always exciting seeing how he was doing, the white clothes, the books. Everyone wanted to ask something: if he had seen a dead body, if he had been in surgery, and I was always gossiping with him, asking a lot of stuff. And then, seeing his books and talking and seeing his attitude – my brother is extremely quiet, very dedicated to the study – my interest increased and... I made my mind up... medicine was for me!

While on the course, she had contact with Prof Carvalho who gave theoretical lessons. Teaching assistants from the earlier groups, like Prof Wanderley (portrayed in last section) were in charge of the practical lessons where students learnt to examine, talk to the patients, study the whole case history and ran the anamnesis. Her interest in semiology increased, especially during the weekly anatomical-clinical sessions.

During the course there were lots of exciting things; one of them was the anatomical-clinical sessions that Dr Sílvio (*Prof Carvalho*) started. There was always a group of students who were terribly funny, they were called 'the Silvettes' (*laughs*), who were always with him, and met together in the late afternoon. Once a week this group met to discuss a case. If a patient died... the group of students was always attentive. The patient dies and goes to the autopsy. They watched the autopsy and assessed the patient's record, gathering data from the autopsy. During the autopsy, they could ask anything. Prof Sílvio was often present, supervising; showing how to take pictures, showing the correct incision, viewing the slides, and the case was thoroughly investigated and prepared for a meeting. I attended these meetings a lot, some with Prof Sílvio. When he left to PUCC, another teacher took on this group and continued these meetings.

Those who took part in the autopsy had to prepare the clinical case, the patient case history, passing on the records to the students. Everyone discussed the case and formed a diagnosis hypothesis, imagining what has been the cause of death, integrating the data, seeing the patient as a whole just as Prof Sílvio always instructed. He used to say, 'There's no use in seeing only the heart, only a piece of the organism, you have to see it in its entirety. Has everything in the file been checked in the autopsy?' Those meetings were extremely helpful, firstly, because they broadened our perspectives and the ability to integrate the data... and I was always fascinated by integration.

Despite being an extra-curricular activity, she participated actively in those meetings, especially during the fifth and sixth years. During these years she immersed herself in clinical integration and explaining the disease's prognostic to the patient. But an event in the sixth year made her think that perhaps clinical integration was not entirely how it should be. She had just started pneumology and the teacher was distributing patients amongst her group. She received a patient in the male ward.

It was a pneumology bed and I was talking insistently to the patient about coughing, expectoration, because he was in a pneumology section. I thought he had a problem with his lungs. When the teacher returned he looked at the patient, he said, 'Oh, you've got that bed? Damn, I forgot to warn you, this patient is not ours, he is Haematology's.' The patient had just told me a full hematologic story with all data, and I was ignoring it because it had 'Pneumology' written on his chart. I should have talked to the patient without any pre-formed idea and waited until he had told his story, put the facts together and finalised the diagnosis.... This is when I got concerned about integration.

She was so concerned with improving her knowledge of semiology that she decided to volunteer as a teaching assistant helping in the practical lessons and the patient analysis. She was undecided on the specialty in the residency and it took a while to decide. Her first thought was to be a surgeon like her brother but she changed her mind as she was interested in paediatrics and obstetrics. It was just after the clinical stage, especially after attending the General Ward, where she contacted clinicians like Prof Carvalho, Prof Guariento, Prof Wanderley, Prof Botelho amongst others that she decided on IMS. 'There would be no use going for a specialty that I wouldn't be happy in, it had to be Internal Medicine... and general!'

During the second year of residency she was in charge of the entire General Ward, male and female, with another resident. By this time Prof Carvalho was back from PUCC for a short period and he supervised them during visits. At the meetings Prof Carvalho was eager to discuss the case completely:

When he visited patients he always showed us the integration, discussing the entire case history of the patient. He discussed everything. 'Have you palpated this way, this way or that way?' I remember him asking us to examine the slides... asked us why the liver's consistency had increased... why the liver's edge was thick instead of thin. Then he showed an archived microscope slide from a similar case so we could compare and look at why the border was hard, why the surface was not smooth and full of ripples. For me, that was the ultimate... a climax of understanding and getting passionate about it!

In 1985, when the HC was almost finished and some departments were transferred to it from the hospital Santa Casa, a place as semiology teacher became available. The first unit to move to the new hospital was the General Ward although the consulting room remained at Santa Casa for some time. Moving to the new hospital also resulted in some changes in curriculum organisation, requiring additional staff assisting students in the ward and she was hired in 1985 in the third year of residency. It was electoral year and permanent contracts were not allowed so she and other residents were hired as didactic technicians, also engaged in teaching.

In the third year it was semiology, and in the fourth year internal medicine... working in the consultancy rooms, visiting with other residents... When I actually started teaching semiology I was terribly afraid,

you know, because it was a novelty and besides, semiology is complex, you know, difficult. It's a really complicated area. Teaching students in the third year you have to have a doctor's attitude; adopt the look, behave like a doctor in front of the patient, pay attention to ethics. When I started medicine and I started to teach too, we didn't study ethics, the students absorbed the attitudes of the teachers. Well, there came a certain point when I was first teaching that I was so nervous that I thought, 'I can't go on', I was so stressed. Eventually, the group of students cheered me up and made me carry on because I could see that they were enjoying themselves and learning. That was extraordinarily pleasant, it forced me to study hard, forced me to ask questions. Starting lecturing forced me to learn, to ask for help from more experienced teachers, you know... it was a terrific experience.

In 1992, she got a permanent contract as a teacher. She coordinated the fourth year courses and had additional responsibilities. After discussions with colleagues she decided to put into practice the 'integration meetings', sourcing Prof Carvalho's archives and conducting meetings in the same way as he did. She found these meetings brilliant and energising coordinating them for six years.

Her interest in research started just after finishing residency when she began to think more about her career development. It was a time when teachers from USP, FMRP and other institutions were being hired and research took off. Prof Mário Saad, who had graduated at the Triângulo Mineiro Federal University (UFMG) in Minas Gerais was hired around about the same time as he was finishing his doctorate in clinical medicine at USP. A great devotee of research, Prof Saad had several projects in mind and they began to work together. He became her supervisor in the master's degree in 1990 and doctorate in 1994, with a research on insulin secretion and G6PD (glucose-6-phosphate dehydrogenase) deficiency. In the meantime, she married and had two children.

When Prof Saad returned from a postdoctoral period in the US she was not able to join his group but still wanted to continue researching. She tried research with GEDoCh but found it a frustrating experience. In 1998 (when Prof Almeida was Head of Department), she was nominated to represent the DCM at the Medicine Undergraduate Division (MD). Two years later, he was re-elected and she had another term as representative. During this time she had contact with 'the other side

of teaching' in her words, i.e., course structuring and all sorts of administrative issues. In 1999, she was nominated for the CRC. From 2002 to 2008, she was Deputy Coordinator for the undergraduate course and Internship Coordinator.

The years as a course coordinator, MD representative, and internship coordinator shifted her focus towards teaching, learning, and assessment. She spoke about her interest in medical learning assessment as being another passion besides integration.

I was always disappointed at the way we assessed the students' learning. I also was concerned about the students' evaluation of the course. A concern I had since the first time I was discipline coordinator and was listening to the students. [...] I had been always thought that assessment should go both ways, evaluating the content of the course, if the subject had been absorbed, and also looking at the students' view of the course. When I became more interested in evaluation, it was more about assessing the cognitive part, the learning itself, and in that sense, I tried to read a little... evaluating a medical student is not the same as assessing a student in a maths class... it is totally different. You assess maths through exams; you assess the student's thinking in an exam. Medicine is different. I can judge how much the student knows in an exam. I can prepare a lot of questions and if he's read the book he'll put what he read in the test. In my view as a doctor this is a terribly flawed assessment, because I'm leaving aside the fundamental aspects of the doctor's education. I'm not assessing ethics and professionalism. I assess knowledge, but I don't assess attitudes, I don't evaluate ethics, I don't evaluate the relationship to the patient, the reasoning facing an unusual situation for him. One thing is ask, 'Talk about this problem'. They'll remember what they read and will answer the question but it's decidedly different if I get the same problem, for example, heart failure, and ask, 'Describe the signs and symptoms of heart failure.' It's hugely different because in theory they may know everything, but when they are in front of a patient with heart failure it matters a lot, whether they recognize the signs and symptoms to diagnose a heart failure. So, there is long distance between theory to practice and I was always passionate about this. It always caught my attention.

At the time she was teaching the semiology the course incorporated practical assessment. 'I never liked the tests we did, so in semiology I always said, "Let's do a practical test, our course is practical, there's no point in doing only a theoretical test.'" Thus when she was the internship coordinator she came up with the idea of a learning assessment research group. It was also a way to integrate research interest into her work in the UD with a view to publication. She proposed setting up a group and started assembling a team but it was frustrating as she felt her experience was not

being valued. Besides this, it revealed the extent to which micro-politics undermined her attempt to create a research linked to medical education. A couple of months later another professor took charge of a similar group – although she was invited to join as a member.

I was invited to join, but it's that thing... you know, whether to decide... hey, everybody has some experience, but... my experience has been always... less valued... it was discouraging... the initial idea was to get exactly where we are today, the practical test of course, it's going to have flaws too, because no test evaluates fully, but if you have a practical part, a theoretical part, you know, you pull it together, you have a complete assessment of the cognitive part. My idea at the time was a practical assessment, and I had experience in semiology, not comprehensive, but it was a valuable experience. We did practical tests, we did gymkhanas³² in semiology. So, I already had some experience, I needed to add to lapidary it and add content, which was what I was trying to do. But... at the time it hurt me, now... I believe in God, Cristina, I think... God... shows us the ways...

During this period, her three-year academic activities report was approved, but there was a comment that mentioned 'unsatisfactory scientific publishing' during the years she was the internship coordinator³³. It was an enormous disappointment as she had been always committed to her career and was an extremely dedicated teacher as students and residents testified to in feedback on her performance. She was often praised in yearly questionnaires as being one of the best teachers in the school. The students often added small notes – 'thank you very much, Dr Sarah, for showing us the art of examining and talking to patients' or 'semiology was the best course I've ever had so far because of Dr Sarah', etc. This all happened during a difficult period in private life. She had divorced, and the year after her ex-husband had a heart attack and died, leaving her with two children.

There was a lot of change... there was a split, and then... almost a year after I separated I became a widow. It was such a situation. The week that I was signing the separation papers he had a stroke and died... a massive heart

³² In Brazil, a gymkhana is a recreational competition to test physical or mental abilities of two or more teams. Unlike the UK, it is not related to equestrian abilities.

³³ At UNICAMP, the academic staff has to submit a comprehensive report on academic activities regarding teaching, researching, publishing, attendance in congresses and conferences, supervision of master's and doctorate students, participation in viva sessions, etc. The report is submitted three yearly but lately it changed to five years. The report is a key factor in staff assessment and it can support dismissal or hour load reduction providing if the teacher's production is considered below in relation to the number of hours contracted.

attack. At the time the boys were little; one was 12 and other nine. And... facing a divorce is... only those who go through it, you know, know what it is... [...] It was an extremely difficult part of my life, honestly, I don't know how I came to work because of the emotional upheaval... it was a steamroller. When he began to drink heavily, I often imagined, 'Is he drunk, is he going to drink and drive with the children in the car?' So, it was an extremely difficult period of my life, everyone looked at me and said, 'Wow, how serious you are, how angry!' I was not... it was sorrow! It was torment for the situation I was living in... I couldn't be laughing all the time, you know. I'd often hear criticisms, heavy, like, 'Change that long face, you're always sulky!'

Nevertheless, there is a saying that 'when one door closes, another opens.' Prof Elza Berardi, who had been Prof Carvalhal's student, Prof Almeida's colleague at PUCC, and FCM teacher, had returned from postdoctoral studies in Italy and created a laboratory for the study of metabolism. She invited Prof Alegre to join the lab but the timetable was incompatible with her position as internship coordinator. In 2003, Prof Berardi returned to Italy and asked her to manage the lab slowly. Prof Alegre agreed to take on some research students that were just about to complete their works and her workload doubled. When Prof Berardi retired she took over the former students. Meanwhile, she had a research project funded by FAPESP which resulted in a doctoral thesis and a paper accepted for publication. After 6 years, in March 2008, she left the internship coordination.

Then the metabolic unit door came up after Elza retired and I started to become increasingly involved and now there are at least two projects going on, another one that we're just started with other people from other departments. A new project... and you start to fall in love with that too and... the other passion is forgotten, it dies... I keep taking part, I take part in every practical test, I take part, and I do what is needed to do. If it's discussing the test, I'm ready, if it's to take part as evaluator, I want to participate. I don't refuse new things. I continue to participate, but now not like before. Now, I go, and I do my part... but I no longer have the commitment I had before.

The poignant statement above illustrates the extent to which the institutional project and micro politics constraints altered her primary focus and commitment. As the interview continued, her voice became lower, melancholic and resentful, as she justified the new emphasis on research and publishing.

Now, I turned towards my interest... the metabolic unit, keeping it functioning... it's an interest but also a necessity because I have to publish. I was there for five years (*at the UD*) and could not publish anything, not because of lack of interest or lack of material – there is a lot of data to be compiled and published on the curriculum reform, for example. But how many times I asked, 'Let's do it, let's write the history of reform.' It didn't happen, it didn't. Then, I gave up too... and it's over. I'm not stopping doing the undergraduate course, I will continue as a teacher... and researcher in the metabolic unit. I will continue as the DCM representative until the end of my term... there's no way I'll lose my toe hold in teaching. I'll devote more time to the course as a teacher and keep trying other partnerships in research because otherwise? If I don't publish the university will soon say, 'Hey, goodbye.' And I have to keep working... I need to keep working!

She bitterly criticised the academic environment and commented on the disappointment she felt during the years she was the internship coordinator and some colleagues that could not separate friendship and professionalism. Nevertheless, she also acknowledged her time then as valuable. She had learnt to survive shattered illusions and ideals. She had learnt to be more pragmatic in life.

What matters now is me and my interests... but it was all worthwhile, despite the suffering... Sometimes you see people that you idolise but when you get a little bit closer you just find out that they're not so brilliant, they make mistakes just like everybody else (*laughs*). But there is another side... I gained valuable friendships, but... lost some... not sure whether it was friendship... they went away... because of situations that happened and they didn't understand that when I was in charge of something, it was not me Sarah, it was the internship coordinator. People often look at the individual, and they don't see that you're in an institution, and you have to have a way of being, a responsibility and... eventually, they moved away...

It was exciting to be in the UD. I learned a lot in terms of administration. I saw areas in the school that otherwise I'd never have seen. I learned a lot. The meetings, for example, it was one thing to attend meetings with my peer group that I was with every day and another to be with people that I saw only sporadically... and people with quite different political views! So being on the committee was worth it. It also taught me a lot about relationships but I also suffered a lot there (*smiling*).

The only times she resented being an internship coordinator was when she felt she was giving above and beyond the call of duty at the expense of her health and her time with her children. She described the period as living in a whirl sometimes being stretched beyond her limit.

I had situations... unimaginable ones, but I learned. It was good, I suffered a lot, I was stressed... I even had 'herpes zoster'. When I saw the herpes in my arm, I said, 'That's enough, I've got to get out here.' That same week I asked the Dean for leave. Because while you're caught up in things and stressed you don't realise how caught up you are and how you're being swallowed alive by the situation, I could not cope with it. I worked just like a crazy, sometimes arrived at work at 7:30am, 8am, and worked until 9:30pm, 10pm. A lot of times I went home at 10 o'clock in the evening. I had to leave the children alone at home to go to meetings in São Paulo, and return at midnight. So... some of the situations that I went through...! Looking back I think, 'What madness! None of that was necessary.' But it was good, I've learned. I learned to say, 'No', as well (*laughs*). It was worthwhile to say, 'No' without feeling guilty, and not saying, 'No' (*speaking in a soft way*), but, 'No, absolutely not!' (*speaking firmly*).

During this time she found strength in God – a family's legacy and especially her father's. The family attended the Presbyterian Church and she was keen to attend the services when she was older. When she started university she also started reading and teaching the Bible to children at the church, going to parties and talking about God.

I always enjoyed reading the Bible, this was one of my father's most valuable lessons; he was not perfect; nobody is perfect, but I always remember my father with a Bible in hand, reading, and when we complained about something, a fight with a brother, a problem at school, he used to say, 'Come here, let's read the Bible.' Whenever he had a passage in the Bible to clarify what was happening, and get a positive lesson. And I learned a lot and I kept... until I got married.

She met a man who was separated but not yet divorced and unfortunately there were no laws in Brazil that supported this at that time. The Presbyterian Church did not allow a wedding between a single and a separated person so they decided that until the divorce was regulated they would live as partners. As a result, to her sorrow she had to stop giving lessons to children in church. When she was pregnant with the first son, she decided to stop going to services too.

I had to stop that whole story with the children because I had to get away from it. So, it was a time I was extremely sad because it was something I loved to do, and could not keep doing, because of the laws there... of the church.

It was when I became pregnant with my first child, hoping to solve his divorce, and everything, and then... besides living with someone, I was expecting! Then, the looks at the church were kind of... you know, and it bothered me a little. As time went on you're thinking, 'Humm, I will look bad, the belly's bigger.' I pulled away from the church a little, stopped attending. I stopped going for about four years. But I still needed it in my life...I read the Bible at home but sometimes if I wanted to go back, I missed it and slowly I went back...

Her children were little when she returned to the services, and they enjoyed taking part in the 'lessons'. 'They used to ask me all the time, "Is today Sunday? Can we go to school?" – because they wanted to go to church.' There was a children's choir they attended up until the age of 12 where they performed at Easter and Christmas and they also went to the church theatre to hear stories from the Bible. Being part of the church helped Prof Alegre and her children to face the difficult times of separation and their father's death. It helped her commit to her career with the support of friendships and activities that the church could offer.

Even today they attend, they go along with me. They don't like skipping services and Sunday is sacred. They attend every event, everything, theatre, whatever, they take part, and this was an extremely important factor in my life, and that strengthened me. When I was separating, I guess I've told you, I didn't know how I could make it into work, God helped me and without God I think I would have given up.

On Sundays they are in church all day with a group of friends who they go to the movies with, go sightseeing, have lunch together, go to friends' houses. For me, that is real peace of mind because I know they are always there and you know, with a positive attitude... nearby. I think this is the highest point of... going through all this tribulation... and coming out in one piece, right? The boys are teenagers... you know what teenagers are like... the tantrums, the trouble, but with these friends there is peace, they are extremely quiet, thanks to God... you know, strong? At this point, I am at peace with them.

Her family never understood the reasons for divorce and in order to avoid conflict she moved away from them for a while. She clung even more to the boys and they to her and her closeness with the church played a decisive role, helped her change her behaviour and the way she felt about life.

It was a time when I clung to the boys and them to me, and the church was significant ... God helped me change my behaviour a lot. I began to behave differently. To this day I wake up early every day to read the Bible. I hardly leave home without reading the Bible. I wake up early, firstly because I like to get up early because I work better during the day. If I have an article to read or tests to correct, I get up a little earlier, but the first thing I do is read the Bible a little. It helped when my life was upside down, and I've kept to it. Even today, I woke up really early. I woke up at four o'clock in the morning to read... to read the Bible.

8.2 Another backgrounds

Sandra Cecília Botelho Costa

(FMRP Class of 1971, 50 years old)

I had sporadic contact with Prof Botelho before the interview but I had vague idea of her life story as her husband Prof Fernando Ferreira Costa was the FCM Dean when I began to work at the UD in FCM. After the end of his time as Dean he continued to hold senior management positions at the university, like Research Pro-Vice-Chancellor and Deputy Vice-Chancellor. She welcomed me in into her office at the DCM in July 2008 to talk about her life and professional story and we talked for over an hour. She was then Head of DCM and her husband was running for Vice-Chancellor. In April 2009 he was nominated having got the most votes the previous month at the university electoral college³⁴.

Prof Botelho was born in Franca, São Paulo state, on the 22nd November 1951. She was the eldest daughter of a primary teacher and a sales supervisor in a chocolate factory. Her sister studied nursing and her younger brother engineering. She was fond of studying, was a brilliant student, and attending state schools. The decision to study medicine may have been influenced by an uncle, a military doctor who also worked in a private clinic. She remembered his visits during the holidays, when the family gathered to hear stories.

On a visit, she spoke to him about studying medicine and he explained how much of a sacrifice it would be for her – he was trying to change her mind but it failed. She knew she could do it, she was a brilliant student, but as there was a serious competition for the best schools she decided to go to neighboring Ribeirão Preto to attend a preparatory course for admission to university. In Ribeirão Preto, she would also meet her future husband, in his third year as a medical student at FMRP and maths teacher in the preparatory course.

³⁴ The position of Vice-Chancellor at UNICAMP is the highest achievement in a professorial teaching career. The election is not balanced as the teachers' vote constitutes 60%, non academic staff 20%, and students 20%. The University Council draws up a list of three names to give to the Governor who usually endorses the first name on the list for a four-year period.

I moved alone to Ribeirão. At that time, street violence wasn't such a concern, I lived in an apartment there in a hostel near this preparatory course and I decided to attend the last year of high school along with the prep school to make things faster. So, I went to a state school in the evening and did the prep. I did well at the prep school and got top marks and people said, 'No worries, you'll get it, you'll get it.'

At the end of the year her whole family moved to Ribeirão Preto. It was her mother's idea, she wanted her other children studying there and wanted the family to be near to her daughter while she was studying.

When deciding which university to choose she was undecided between the FMSP in São Paulo or the FMRP in Ribeirão Preto, as FCM as an institution was just starting out. Due to the family move to Ribeirão Preto, the natural choice was the FMRP. Despite strong competition she passed the exam and scored enough to get into FMSP. She got married in her fifth year, and after a long time of deciding she settled on internal medicine.

I chose internal medicine but it was difficult to choose. At one point I liked dermatology... I also worked in the consultancy room, then I went elsewhere and liked that too. It's so hard, for some people it's not, you know... I didn't see myself doing a particular thing because I liked to see the patient as a whole. I can't see things like specialist does... you know ... I always liked to see the patient as a whole, trying to solve most problems, in detail. So, I had a hard time choosing what to do. So you could say I ended up doing this because I couldn't decide!

Her first child, Daniel, was born when she was in her first year of residency. Her account of this period highlighted the difficulties for female residents who had children when there was no maternity leave for students and residents and children support services in hospitals such as nurseries. She just had the standard holidays and had to return to the residency when Daniel was one month old.

My eldest son was born when I was R1 (*the first year of residency*) ... It was terrible because I was super dedicated, always was, did everything right... then, I had Daniel in May when I was studying Emergency Room stage. He was born in 1977, and I was not entitled to anything – only holidays. So, I was back to work just a month after he was born, and nursing extremely well, he was getting fatter, 50 grams a day. I loved to breastfeed, I knew the importance, it was fantastic, but I had to return to work

otherwise... I'd had to leave residency and it would be a huge hassle. So, I returned. I returned because my mother was retired and could help out... she was sorry for me because at that time there was no nursery in hospital, no milk bank.

The second child, Laura, was born two years later in 1979 during her third year of residency. This time everything was different – there were no night shifts and because of a teachers' strike various services were suspended. She managed to breastfeed her daughter for ten months, thanks to the support and understanding of her teachers.

R3 (*the third year of residency*) was calmer, it was 1979. When she was born, there was a strike, a teachers' strike, huge. It lasted for several months, I enjoyed this strike because the hospital has closed down to a greater extent, only emergency was still running and since I was R3, I had few shifts, I had few things. Also, my supervisor knew me, and he knew that if I was late it was because... not because I was, you know, being lazy, but because I was breastfeeding, and there was the strike and I breastfeed her for ten months.

At the end of the residency she decided to stop and look after her children. Her husband was doing his doctorate and she was just moving from an intense period in her life, which had involved moving, getting into university, getting married, having children and specialising. Nevertheless, a job offer changed her plans and led to even bigger changes.

I did three years of residency in internal medicine in a general ward. So it was a period of much learning. When I finished residency in February, the school here in Campinas (*FCM*) was looking for people with this training because they needed semiology teachers to begin in March. A teacher who knew me called... I wasn't looking for a job, in fact I wanted to take a break, I wanted to enjoy my children for a while. My daughter was ten months old, my son almost three years old, right? And I was okay with that. At this time, Fernando was at graduate school in Ribeirão Preto, finishing his doctorate, and in Campinas they were looking also someone to assemble a haematology group in the clinical pathology laboratory – and he is a haematologist. At the same time they needed someone in my area. So, I said, 'Wow, that's amazing, let's go to Campinas.'

Her husband had visited the hospital Santa Casa and warned her about it. 'Look, be prepared, it looks like a war hospital there, there is a large male clinical ward and a

separate female ward but the specialties are all mixed together so that sometimes you have a patient with leukemia next door to another with an infectious disease... it's madness.' On the other hand, new hospitals were opening on the FMRP campus and in the city center – both offering excellent working conditions. Even so she persevered and went to FCM, Santa Casa and met the IMS group in Campinas. At this point of the story, the mother figure emerged – the organiser of family life, seeing possibilities where apparently none exist.

I said, 'okay, let's go, let's see it.' I was excited because it was something that interested me too, you know, to work in an area that I knew. And I came here and loved everything. I loved Santa Casa, I loved everyone; I loved the group that was forming. [...] So I set it up; I found a house, I rented it, and we moved here. It was 1980, March 1980. I loved everything here; Campinas, everything was right for me... you know that I even found Santa Casa charming? Wow, I liked it. Also, I liked teaching semiology and with my training it was extremely easy for me to teach. I liked what I did, so things were going extraordinarily well.

Prof Botelho settled into her job but unfortunately her husband wasn't so happy in his and when an opening came up at FMRP he got a teaching position in the medicine school. She wanted to stay at Campinas and did not want to start her graduate studies so there was a decision to be made that could resolve their conflict of interests.

He started at FMRP and she remained in Campinas with the children and whenever possible either drove the two hours and a half between the two cities, which worked well at first. When he took on more responsibilities on the course and more graduate students, travelling to Campinas during the week became difficult. Another decision had to be made immediately. She decided to apply for the position of general doctor in Ribeirão Preto and got it, taking unpaid leave at FCM and returning to Ribeirão Preto. This was a difficult and painful decision for her because she liked Campinas, FCM, and the colleagues. UNICAMP had by this time inaugurated the HC in the campus leaving behind Santa Casa:

In 1986, the hospital moved to the campus and everything was all new and nice but personally everything was quite complicated... Fernando said, 'No... I can't stand this life. You need to ask for a leave.' So I applied for a

place at Ribeirão. I tried everything to fail but I passed and the work was in the general consultancy ward, they needed people, and they knew me, they wanted me there. I said, 'Well, okay, I'll go – my mother lives in Ribeirão, so... well, okay, okay, let's go there.' But it was so awful; it was so bad for me to go back to that situation. Because here I was teaching – there I was a doctor. It didn't work, you know. I found Ribeirão too hot, I missed Campinas, Campinas had more trees, the weather was milder and there, I thought... 'Wow! Everything is so difficult.'

A year later, in 1987, another move had to be made because her husband got a scholarship for a two year postdoctoral study in the US at the prestigious Yale University. Luckily she got put in contact with a professor in Yale who had spent six years in Brazil studying tropical viruses at the Evandro Chagas Institute, in Belém do Pará. Before contacting him, she attended an English course at the university for three months, three times a week. 'I understood a little English, but couldn't speak it but after having mixed with the postdoctoral students wives – all of them from different countries I caught up and started talking...'

Post contact he asked her to take part in a project and associated conferences and lectures – the research, focused on viruses and molecular biology. This was a rewarding experience and proved to be a starting point for her own research project on her return to Brazil. She was decided to attend the graduate school and start researching herpes viruses and cytomegalovirus.

After two years in the US it was time to return to Brazil and resolve the couple's professional future. Prof Botelho was determined to stay in Campinas as a teacher and post graduate. The professor who had referred her to Yale became her doctoral supervisor. She studied cytomegalovirus in transplant patients and completed in 1993, subsequently getting a research grant from UNICAMP. Her husband decided to leave FMRP after assembling a molecular biology laboratory and training the staff. In 1993 he applied for Associate Professor in Hematology at FCM and three years later he became a full professor.

When she returned to UNICAMP in 1990 the IMS group had been hiring ex-residents from the FCM and other schools, which fostered a renewal in the group:

I was pretty sure I wanted to stay in Campinas, the group was more consolidated, some people from FMRP came, some older members had left, and different people came. The current Dean Dr Gontijo came, the former Dean Dr Mário Saad also came to our discipline, and people who... had a different mind, you know. So, a generation had passed, and now the group was... different. And another thing, the Quality Project at UNICAMP was... you know, looking to change the profile of teachers.

Nonetheless, she had to satisfy the university's new requirements, adapt to the new rules, get funding, and attract new students to research activities:

Of course I wanted to stay in academia. I never ever worked at places where medicine was poorly performed... [...] You always have to do the best you can possibly do. Here at the university I felt ok because I was learning and the students inspired me, there was always something new, I loved all these activities. And then we changed our profile, I started to do research from 1993 on. After the doctorate, well, things changed a great deal, you know, you start to have a research line... then I consolidated that... my research into the cytomegalovirus identification risk for patients... we started to develop new projects.

Then the school began to give us more support, for example, you can have biologists in the laboratory to help you, to manage the lab. The school evolved, valuing your progress, your research, and your publications. The profile changed a lot. Some people adapted to this profile, some people not. Those who did not adapt are still a problem today because after the QP they required to present an activities report every three years. If you don't have a more or less balanced activity in assistance, teaching and research, it's hard. [...] So, it was a bit traumatic for some people, not for others. [...] Of course, it's not easy; you have to get funding, the students need scholarships, and there is a minimum requirement that you have to adhere to.

When asked whether she believed the changes had any impact on teaching, she argued that the focus on the student's first contact with the hospital was still extremely important for the group, and still remained so i.e., getting the patient's story, dealings with the patient and the doctor-patient relationship. This was essential – no matter how exhausting sometimes it might be. However, her opinions on the new curriculum were quite similar to Prof Almeida's. In fact, she was a bit reticent about changing anything when it came to the curriculum:

I think that right now they need to evaluate the reform, how the students are performing. I'm not saying they are incompetent, but I didn't think they were not good too. Of course, things get modernised, right? It had to

change, it had to integrate, but in our area I think the hours got cut shorter. [...] When they return for internship you realise that there are things they should have been already be skilled at and they aren't... things they should be better at. I think the way it was before was not bad – the students were ok. They had a decent education, they performed well, but, of course... it's all changing...

Nevertheless, her additional comments suggested that teaching at undergraduate level became secondary or even tertiary to the tripod of education, research and assistance that UNICAMP established as working conditions for medical teachers.

When we moved here the graduate school was progressing slowly, now you have to have a doctorate, and when you are hired the demands are high. You've got a load of worries, 'Oh my God, I need to get publish even if it is not much... because if I don't I'll not have students, I'll not be accredited, and my report will not be approved,' it's a hassle, it's stressful because from the moment you are hired everyone expects you to do those roles well. Now... you just can't have people that publish a lot and teach very well at the same time. Some people like one thing, some like other. You can't say, 'No, I don't like teaching, I'll just do research. No, I don't like doing research...' you can't. You're here, and you have to do a little of everything. [...] You have to try to find a balance, right. This is the problem. [...] The demand is enormous, you know, so you end up... if you don't have a research project well you have to join a highly structured group. You have to do something otherwise, you will not survive here.

When the interview finished, Prof Botelho commented that her children had also become doctors and she could not hide her immense pride for their achievements. Her son attended FMRP and after graduating went to Yale for a three-year residency in clinical medicine then spent three years in Oncology in Harvard where he was now employed. Her daughter had been an undergraduate and resident in Obstetrics at FCM, where she works part time in the Women's Health Centre.

José Antonio da Rocha Gontijo

(UnB Class of 1974, 52 years old)

Prof Gontijo was born on the 5th September 1956 in Piunhi, a small town in Minas Gerais state. His father worked as a civil engineer in hydroelectric plants which meant that the family moved every time he changed jobs. As a result, Prof Gontijo attended at least 17 different schools before starting the medicine course at the University of Brasília (UnB), in 1974. At first, he thought he might be an engineer like his father, but then one day reading a newspaper at a newsstand turned his mind to medicine:

I clearly remember the first time I thought about doing medicine... it was something that touched me so much. I was thrilled! I remember I was studying in Franca because my father had just moved to a city to work. I had to travel daily and there was the bus station... there was the bus station, there was a square, the mail, and I remember there was a newsstand. You know this habit of reading the news... and this time something captured my attention: 'The first heart transplant in Brazil.' There it was! 'The first heart transplant in Brazil', you know, 'wow, cool, perhaps that's it.' Before that, I had thought of doing engineering, perhaps because my father worked in the business, but that... it was something that touched me, I think that was it, 'Wow, cool, this is interesting stuff.' I think it was then that I thought about doing medicine... this was cool... it had a big impact.

Although very interested in medicine what sparked his interest was perhaps not the work of a doctor but really a desire to be in a career somehow linked to the appropriation and production of knowledge.

I honestly never thought about having a private clinic, it's funny. From the beginning, what attracted me to medicine was the knowledge. Of course, I like patients. I like to apply that knowledge, but the knowledge attracted me more than the application of knowledge. The knowledge of medicine, the content, do you know what I mean? I think maybe that was the reason for choosing a university career... It may seem a little... selfish – knowledge for its own sake – gaining knowledge. This is what attracted me the most... the application of knowledge, medicine has a purpose, doesn't it, of application, healing, etc.? But... what attracted me most was the knowledge. Maybe that's why I opted for this career because the goal was not to be a doctor and have a clinic... That's what attracted me from the start... I wanted to gain that knowledge.

Back in the 1970s the UnB was an innovative university where integration was central to both the physical structure and curriculum. All basic courses and departments were located at the ‘Instituto de Ciências Centrais’ (ICC-Institute of Central Sciences): ‘Inside the ICC was the true university spirit, I mean, you had all areas of humanities, sciences, biology, technology – all of them in the same building. And the curriculum and departments were integrated into a unified modular format.’ Another integrating factor was the compulsory attendance of optional courses in areas not related to the main course of study which were allocated credit points. ‘I had biostatistics, calculus, philosophy.’ In the third year of the course the medical students attended the hospital in the nearby town of Sobradinho. The hospital was small enough to be fully integrated in primary care and internship took place in a specialised hospital in Brasília.

UnB was an extremely attractive university and its curriculum was revolutionary. Unfortunately, at the time I went there this idea was already on the decline. But it was good – at that point. The student’s movement started again two years later, in 1976 and 1978 and again there were protests. Then, they started to send people away. At the start of the coup in 1964 the first batch of teachers was fired – almost all the faculty. This stopped after some pressure but in 1978, it started again. And that was it – it was destroying the course³⁵.

Since the UnB did not provide the career opportunity he was looking for, Prof Gontijo applied for residency at FMRP in 1981; the decision was based on the fact that the school had already established a tradition and reputation in research. He attended two years of residency in clinical medicine and a third in nephrology and started the Master’s degree.

At FMRP, you started residency in clinical medicine and after two years you chose a specialty. I chose nephrology and I chose it precisely because of the research. I liked nephrology regardless of it being profitable. In the first year I started the master’s. Nephrology is exceptionally difficult; it’s especially

³⁵ In May 1976, demonstrations around the country centred on ‘The National Day of Struggle against Arbitrary Imprisonment’. The UnB Vice-Chancellor (a navy captain) punished the students that took part in the protest and in turn, they responded with a student strike asking for his resignation and an end to the punishments. The strike lasted for four months and became one of the strongest political movements since 1968. The Vice-Chancellor asked military troops to occupy the campus and kill the strike by arresting students and teachers. Over thousand students were expelled, amongst them my ex-husband, then a third year medical student.

difficult because of the severity of patient health and the number of losses. Although I enjoyed the training, I said, ‘No, I did this to get a master’s and doctorate, not to suffer the way I’m suffering right now’ (*laughs*).

After applying to the graduate school at UNIFESP and FMRP he decided to attend at FMRP once it had established a solid foundation in research, a fact that was directly linked to the school origins, as highlighted in Part II. Aside from that, he had got married and his wife could not leave her job in Ribeirão Preto.

The FMRP was different to UnB and its innovative curriculum ... it was built on a solid basis, I mean, when Zeferino (*Prof Vaz*) created the FMRP he brought in young guys who graduated at USP – they were new staff, had been well-educated at USP and wanting a good career. He went to Argentina and brought talented people in. The university in Argentina was at the time being destroyed, the same way it had been destroyed since the 1950s, late 1950s, 1960s. Peron destroyed it and the university was quite chaotic – so he went there, got talented people. Also he brought in terrific people from Europe. He made a solid foundation and built upon it a very strong school – a school where the teachers had view very similar to mine. Perhaps this was the influencing factor... more than my marriage, this was what made me stay in FMRP because... the thinking there was very close to my own. I mean, in Ribeirão the staff had a career and they were radical, shall we say... they stayed there, got their first university job and stayed there.

In May 1986, he finished the master’s and started his doctorate at FMRP, but when Prof Botelho (portrayed in last section) asked for a sabbatical and went to the US with her husband, there was an opportunity to join the FCM in the IMS group. Although his doctorate was in nephrology he applied for the job on the basis of having had a strong training in clinical medicine at FMRP. In April 1987 he started working in Campinas and travelling to Ribeirão Preto once a week until finishing the doctorate in December 1990, with a thesis researching experimental studies of mice.

When Prof Gontijo was hired, Prof Carvalhal was still at FCM. He greatly respected the latter and regretted the fact that his methods were not commonly accepted in the school. For him, Prof Carvalhal challenged both traditions and the owners of knowledge:

Prof Carvalhal was still extremely active and he had an interesting viewpoint, that is the integration of knowledge. [...] This was never accepted here and I think that it was his greatest disappointment. Perhaps he might have even stayed longer here, but he left... and he found his ideas were not accepted elsewhere. They were not accepted at EPM so he left EPM... they were not accepted here... at the end of the day you have the owner of area – knowledge has owners; surgery has, clinic has, and in pathology they had a great owner – Lopes de Faria. So... he couldn't integrate it here. [...] I think this discouraged him. That said it was an extraordinarily rich experience and the discussions were really stimulating, a great experience, all the reasoning, diagnosis, clinical reasoning, clinical meetings, the case history, and then the autopsy to confirm the clinical exam and diagnose the disease with a pathological result... Dr Sílvio explored all these details with his students. He left about six months after I was hired and the group that worked with him carried on doing what he had taught but without his leadership... they lost their leader.

Prof Gontijo acknowledged that the QP implemented at UNICAMP from 1990 onwards was a huge change in the FCM. 45% of the teachers had a doctorate and in the Institutes of Physics or Chemistry this was as high as 100%.

QP had a great impact... it brought in new staff... qualifying them, broadening their vision of what a university teacher was. And it changed radically, i.e., from 1990 we went from 45% to almost 100% qualified doctors. The production increased proportionately during this period and in the graduate school the courses and research was exceptional. The FCM became the largest producer on campus, i.e., we had a significant change in profile, and for me, that was great, because I was part of it all.

When Prof Gontijo returned from postdoctoral studies in the US in 1994, this process was in full stream at the university and especially in the FCM where Prof Ferreira Costa was the Dean³⁶. Research was stimulated and Prof Ferreira Costa initiated a series of measures to encourage thesis completion and facilitate studies abroad. In the IMS group the teachers who qualified for supervision could take on more supervision. As a result teachers qualified to the minimum level required by the new rules of university and there was expansion at graduate level with increasing numbers of teachers able to take on new students. At the same time the teachers that had recently arrived from postdoctoral studies abroad were chosen for positions

³⁶ Prof Botelho's husband; see previous section.

linked to the graduate school or research (Prof Saad and Prof Gontijo). Prof Saad, for example, was the FCM Graduate School Coordinator and he went onto replace Prof Ferreira Costa as FCM Dean. Prof Gontijo was the Clinical Medicine Graduate Coordinator and when Prof Saad was Dean he was the FCM Graduate School Coordinator. In 2002, he was the FCM Deputy Dean and became FCM Dean in 2006. Nonetheless, he was not entirely happy with a managerial position for yet another term, calling it ‘this *mini* administrative-academic life’. To all intents and purposes he was relieved when his last year in office came.

When I was hired, I was... 30 years old, yes, 30 years old. We were all young people aged... 30, 35, everybody wanting to go overseas. It was cool... I did my first supervision without having a doctorate! Though I could not be the President of the Examining Board. But I supervised Elza Berardi; she did the master’s and I read her thesis, wrote an article, and had it published. But then it was cool because everybody had the same interests, we started going abroad and encouraged others to do a post-doc abroad. People went abroad because this post-doc activity is extremely beneficial. In the medical school, there is no longer anyone who doesn’t have a title. When I came here, I had a master’s degree and I think only Prof Saad had one too, only us, I think Prof Guariento had a master’s too, yes, it was only Mário, Maria Elena, and I. The others had nothing; then we started... I supervised three or four; Mário supervised three or four. [...] Now everybody has... everybody has a doctorate.

Even raising the qualification of teachers through doctorate, post-doc and research activities, Prof Gontijo argued that the school also encouraged teachers to work in general areas, regardless the research field. ‘Within education we encourage the doctor to perform in the most general area possible.’

On his return from the US he joined the FMRP because a place in nephrology had opened up. He had many doubts whether to stay in Campinas or return to Ribeirão Preto where he had strong academic and personal links. Eventually, he decided on the FCM and his reasons were not that different to Prof Botelho’s when she and her husband returned from the US – it was made on the grounds that everything had to be done at FCM – it sounded like a mission:

What attracted me to the FCM was not what it had; it was what it could have, because we felt that something was happening... that there was

something happening here. If I went back to Ribeirão I'd be just another one. So, I thought here I could give more and it was changing, the process was changing. In Ribeirão that wasn't the case, there each discipline had four teachers, and I would be another one. Of course, my life would be much easier, but what attracted me was the opportunity to grow together, and it was cool for me, as a person, it was rewarding to see the changes... not because of me... they happened because of the circumstance, I was just lucky to be part of it. At FCM the structure was still extremely poor, the hospital was in a stage of... not all wards were working and there was no research structure. We started with a motivated group of people, everybody wanting to create groups and research activities, we bought equipment, we settled into a small lab... it was motivating. It was mainly because of this, not because of UNICAMP... I think the main attraction were the possibilities, the anticipation of more to come. I could contribute here, much more than in FMRP, there I'd be just another number.

Despite not having participated directly in the commission on curriculum reform in 1999, Prof Gontijo became more engaged in issues relating to undergraduate education, perhaps because of the executive positions he had taken on in recent years or perhaps because his daughter had started medicine at PUCC. Like many others he believed that the hoped for module structure had not yet been addressed and the whole structure had to be changed. He did however point out the positive aspects, firstly, the central concept of a curriculum fostering continuous education integrated into modules; secondly, the establishment of a democratic process approving any changes to the curriculum; thirdly, a thematic longitudinal or cross-cutting, as is the case in medical ethics. Nonetheless, he reckoned that the curriculum is still developing, some modules need more change and the internship program has problems still to be addressed.

Additional issues include a need for not just internal but external integration, with the Institute of Biology, for example. Although having representatives in the reform commission, the institute had to endure changes in the basic cycle that they had taught since the beginnings of the FCM. According to him, there are a series of actions still to be taken, mainly to put in place evaluatory mechanisms. Curiously, he seemed to disagree with the view that the curriculum needed to change, the same opinion shared by Prof Botelho and Prof Almeida in the previous sections.

Regardless of curriculum reform, Prof Gontijo understands that the organisation of courses at UNICAMP and the geographic extension of the campus are limiting for medicine students and student university life. During the first years of course the students have some modules at the Institute of Biology located in the centre of the massive campus of UNICAMP and at the same time they start attending primary care centres in Campinas, outside the campus. From the third year on they spend most of their time in the HC or attend lessons in the FCM classrooms located on a hill far away from other institutes and schools. Prof Gontijo made the following comment on this situation: ‘it makes no difference whether the FCM is located over here behind the “Santander” branch or in Jaguariúna³⁷ or in São Paulo or on the coast – our students just don’t take part in the university life, we don’t have this integration.’ In fact, the course structure did not allow medical students to enroll in disciplines outside the medical curriculum and this was one of his greatest criticisms of the system. Other courses took up a disproportionate number of hours and there was a lack of integration with other health professionals:

There is not a sense of inter-correlation in the courses at UNICAMP and there are two things in relation to the new curriculum that concern me. One is the lack of inter-correlation, the possibility of interaction in other areas. The student... the doctor needs a strong medical education, but he must also develop on a personal level... they go to the university sometimes aged 16, 17 and he is still shaping his personality, character and needs to take this opportunity and experience into other areas of university life. Secondly, there is the heavy work load; I think a course with 9,000 hours is the craziest thing in the world! And the third issue of the new curriculum, it’s not just in medicine, but across the board in the whole school... there is no integration of courses. ‘Let’s integrate teams, let’s put a doctor working with a nurse, with a physiotherapist.’

³⁷ Jaguariúna is a town distant 32 km from Campinas.

8.3 A new generation

Felipe Osório Costa

(FCM Class of 1996, 32 years old)

Felipe Osório Costa and my son were classmates from the late 1980s to the early 1990s but I lost contact with him when they went to different universities. Therefore, I was surprised to meet him when I started working at the FCM UD in 2001. He was then finishing his undergraduate studies and preparing to apply for residency. In the years that followed we met occasionally when I worked at the Residency Office, however, it never occurred to me to interview him for my research. During a short period in Brazil in November 2008 I had time to interview further and decided to do this with a recently graduated doctor who was starting teaching at FCM – the new post 2000 generation – and to my amazement his name was recommended.

Dr Costa was born on the 28th July 1976 in Rio de Janeiro. His father is an engineer and his mother a social worker and he has a younger sister who is a doctor specialising in endoscopy and colonoscopy in São Paulo. After graduating in 2001 in the 33rd class of FCM, he attended two years of residency in clinical medicine and a third year in oncology. At the time of the interview he was employed at the HC as a doctor attending the graduate school and taking part in teaching activities at the FCM.

Dr Costa could not say what the reason for choosing medicine at university was. It was not because of a family member nor was it his favourite subject. At high school he liked physics and geography most. Although not having a favourite subject in mind, he had a clear idea of how his career should be, ‘Surely, there was always the desire to work in something that I could notice tangibly the results of my work.’ Working collectively was another passion he shared with friends. ‘I always liked the collective, and you know me, you know my friends, they are people that always enjoy socialising, right? Chatting; going to the theatre, team sports, collective leisure... always the collective.’

Then medicine emerged as something that embraced that. It provides a situation where you’re in direct contact with people and your action is immediately felt by the person with whom you’re talking to, you’re

identifying a problem, advising, solving a difficult situation. Then there was always the desire to have human contact, influence people's daily lives. I mean, a healthy person is able to enjoy life, whatever that might be... an interest, or a job. So, I don't know, I think enjoying human contact and health is something fundamental, essential... for some reason that's how it jumped into my mind.

During the medical course his main interest turned to the clinical area. For him, it was the most important part, that is, the consultation, talking, interviewing and identifying individual health problems. When Dr Costa talked about the doctor-patient relationship, he often used the word 'exchange' – the patient brings cultural, social and economic situations to the point of contact and the doctor has to deal with this information and provide the best advice possible in return. During the course he volunteered in a Campinas suburban school as part of external activities at the university. He and a group of friends also helped in a community centre tutoring children, fund raising and setting up a vegetable garden.

In his third year he met Prof Wilson Madruz who had a strong influence on his career. Prof Madruz used to promote extra weekly meetings and he introduced difficult cases into discussions with students, broadening their clinical reasoning. Dr Costa also acknowledged the influence of Prof José Barreto, a clinician and oncologist that was his mentor during residency and with whom he was working with when the interview took place.

At that time the desire to be a good doctor still prevailed. I was not sure yet that I was a good doctor. I wanted to be a good doctor and... offer something to the people, to the population... to be a person able to identify a problem, a difficulty, and propose an improvement. This was the focus of my training... the physiopathology of disease, how to add additional examinations and suggest treatment. After that, it was two years of residency in internal medicine, and then I started residency in oncology.

Oncology had roots in the same original purpose and it broadened his interests. 'Cancer is a disease that covers a broad spectrum... you get the chance to provide health advice, understand how hormones, diet, infections can affect it.' The next step to post-graduation seemed natural; he worked in Prof Barreto's molecular biology laboratory studying the physiopathology of cancer.

The prospect of teaching started during residency. Here he had daily contact with fourth year undergraduate students in the Oncology Ward. Sometimes he had the opportunity of exploring cases with them, especially when the teachers were working. He realised how rewarding it was talking to students, to pass on knowledge, and help shape their attitude. He recalled this event as another kind of ‘exchange’; this time, not only was he educating but also sharing his experiences as a former student. His teaching skills – a work in progress – started to emerge naturally during those momentary experiences. At this time a place in oncology, a 12 hour contract to work with residents and fifth year students emerged. Later, the hours increased with work in primary care centres with fourth year students. Dr Costa was excited about this new experience and the results.

And this has been... wonderful... it was not planned. At the end of residency in oncology in January, they asked me to join; I didn't know I would be working on this course. And then... it's pretty cool. This is what I enjoyed most. I think I always had a desire to be a good doctor, know how to provide good care. I'd love to be a clinician, but taking part in training human resources, to teach others... and I think you know... the first class that I worked with will graduate this year, which means that next year there will be students that were with me the whole year, working and offering services at various locations... They will be doctors because of them, of course, but you had some small participation. You think... I helped and that's pretty cool.

Dr Costa modelled his teaching style on that of Prof Madruz and Prof Barreto, his tutors on the undergraduate and residency course. When contrasting the experiences of teaching to fourth and fifth years he did not hesitate in saying that the time spent with the group was critical.

During the undergraduate course I didn't really have an objective, I didn't have a reference point; I mean, if you're encouraged to develop, you will do well. There were several important people, but... it was too many activities, many people sharing. Then, Wilson and José Barreto were role models. I had someone I met weekly in a small group of eight, ten, and this guy was more experienced. He was a role model for me. I thought he was an excellent doctor, you know that teacher stuff, ‘Gee, I want to get to where this guy is’... as it used to be in the old days, you like someone and you follow this guy! At the same time he was that kind of guy who asked every week, ‘how are you, how is the course, what did you see, did you see

anything different, what did you like, what did you assimilate from this?' It was hugely important when I was an undergraduate.

Today I work in two disciplines (*laughs*): oncology for the fifth year and in the fourth year, in primary care. They are two areas of interest, but the way the course is organised is that the fourth year is far more enjoyable because in the fifth year the student stays for one week, and next week another one comes. I mean, sometimes a guy comes on Monday and leaves on Friday so you can't assess whether he was able to perform reasonably that week. And if all is well he is off and you don't even know who the guy is and what he's thinking. And the course for the fourth year is different. There are six health centres and the course runs from February to October with a vacation month in July. [...] So, every two weeks I spent two afternoons with the same group of eight to ten students. I know the guy... It is extremely rewarding. You see a person's progress.

When Dr Costa briefly assessed the undergraduate course he was a bit critical of the extreme fragmentation and struggled to establish ties within the tight schedule of scattered areas and disciplines. In a sense, his comments echoed Prof Carvalhal's description of the problems faced by fourth year students. He hoped this issue would be addressed in the new curriculum:

We know that research and scientific advances help the doctors' training but the way assistance is organised and the fact that the medical knowledge is so broad, you feel you're teaching a little bit of everything. This stops students seeing the bigger picture... the care, the understanding of the problem, integrating and understanding what is essential for the patient, the diet at home, for example, sometimes you have to talk to the person who prepares the food... The way the curriculum is structured... at the end, you end up with a patchwork.

8.4 Building meaning – the narratives of the FCM group

The analysis of interviews of the FCM group raised emerging themes about the trajectory of the new university, the beginnings of teaching careers and the medical curriculum itself. The narratives observed a certain homogeneity in flow and similar factors that influenced their careers. Perhaps influenced by my thesis project (which was sent along with the invitation to take part in the research) most narratives centred on their professional life. None of those interviewed cited, for example, childhood stories or critical events that occurred before they went to university. Except for two respondents – Prof Alegre and Prof Botelho (not by chance two women) the other interviewees did not talk much about family, childhood or marriage.

The contact with Prof Carvalhal and his teaching model did influence the decisions of most of those starting a teaching career and there was a common theme in the group of teachers that studied under his supervision, portrayed in Section 8.1. Seeking to establish points in common in the thinking and trajectory of this group, the concept of integration emerged as a connecting theme. The integration of subjects in the curriculum was not just embedded in their teaching model, it seemed it was a main lesson learnt and incorporated into their personal life and life choices as well. What could be said about Prof Alegre's pursuit for recognition, both in her professional career and, ultimately in her search to find a balance between career, her role as mother and religious belief but itself a quest for integration? The same could be said about Prof Wanderley, who always sought for a career where he could integrate medicine, education and art and he ended up successfully combining his three passions in a balanced way.

When the individual interviews were analysed, looking for dominant themes or trends the result showed on the one hand, a tendency towards continuity, and on the other, openness for change. Some narratives seemed to contain within themselves rhythms and nuances that conveyed the notion of life on the move while others told scripted stories of permanence and continuity.

From the beginning, Prof Almeida's narrative displayed a less audacious trajectory – the 'chosen to be a doctor' narrative. However, that was consistent with his

personality and family background. I highlight his recollection of starting school when he was ten because he was a small child, too afraid to go and his parents allowed this. Also, there were several examples where his decisions seemed to have been guided (or chosen) by others, such as parents, the eldest brother, family, Prof Carvalho, and colleagues. These passages in his long interview pointed to how he would be in adult life as an FCM teacher.

Despite being one of the closest students to Prof Carvalho, Prof Almeida's career veered away from his master, who transferred at PUCC. Prof Almeida returned to his home institution because of better working conditions and at FCM his career continued as predicted, although his narrative showed a high degree of adaptability to institutional changes. The argument that 'he did not represent a threat and had no intention of competing' when he returned to FCM and met the Ribeirão Preto 'research oriented' group is emblematic and illustrative of a less ambitious mind. Years later, when I met Prof Almeida as a member of the CRC – the commission that reformed the medicine curriculum in 1999, despite having taken part in the innovative experience of anatomical-clinical integration and being considered Prof Carvalho's intellectual heir, he assumed a somewhat timid posture.

Another student in the group closest to Prof Carvalho, Prof Guariento's narrative displayed a great intellectual curiosity dating back to childhood and adolescence, which was supported by a favorable family and academic environment. This trend might have led to a career based on scientific research, but it was not to be the case. A strong background grounded in internal medicine and a critical view on medical education led her to be more oriented towards basic health care for adults and more recently, the elderly population.

An interesting counterpoint was offered by Prof Wanderley's narrative, another of Prof Carvalho students. Highly critical of the exaggerated value attributed to research at the university to the detriment of teaching vocation, he preferred to give up the status of full-time professor at FCM in order to devote his time to patients and amateur theater groups, and lecturing in mental health and the quality of life in the working environment.

The story of Prof Alegre brought about not only the issue of medical training and teaching career, but the daily life of a woman, mother of two, doctor, teacher, and former Internship Coordinator. In her lively and spontaneous narrative she was a courageous critic of the present and the past and even of her own choices. Through her story we became aware of the tortuous professional path of a woman, who recognising herself as a professor first and foremost, tried to build a research project connected to her own experience as a student and a teacher. Nonetheless, she was compelled to adapt herself to ‘the rules of the game’, disappointed by the internal struggles for power. We also became aware of the tribulations that a divorced female professional had to endure to develop a career at university. Before that, however, her story talked of an extreme disappointment with the church, when she had to give up children’s lessons in order to satisfy its strict rules – a poignant testimony of the power of institutions and the neglect of the needs of its members or followers.

The second group, portrayed in Section 8.2, showed two teachers graduating at other universities and hired at the FCM during a period of expansion in UNICAMP. Prof Botelho and Prof Gontijo’s narratives brought a vision from the outside. Neither of them studied under Prof Carvalhal and both were hired to teach IMS. Curiously, both justified their choice for staying at UNICAMP and FCM on the grounds that ‘everything had to be done’. The overriding objective was to help raise the standards of FCM teachers and establish it as an avant-garde medical school producing research at a high level. They went to FCM to help change the profile of the internal medicine group – it was as though there was something to be ‘fixed’ and in this sense their mission was fully accomplished. In the case of Prof Botelho, the proximity to the seats of power, being married to the current Vice-Chancellor was evident in her narrative. A few times in the interview she quoted policy issues such as pensions and contracts – reproducing the dominant discourse at UNICAMP, but as these issues were not part of my research scope, I did not include them in the text.

Prof Botelho and Prof Gontijo’s narratives have also a sense of life on the move, of experiencing changes and quickly adapting to them, of new life and career projects. Prof Gontijo himself spent his childhood and adolescence in the moving around because of his father’s job and did not find it difficult to move away from UnB (in

Brasília, the central region of the country) to FMRP (in the São Paulo interior), going to UNICAMP and then spending a post-doctoral period in the US. Prof Botelho's story is also illustrative of this. From the beginning of the interview she made specific mention of her husband, as it was not just her life story, but the couple's career built simultaneously, with concessions on both sides. There was a time when a temporary separation was necessary to enable career progression; another time, going abroad meant a shift away from medical practice and teaching for her, but also an opportunity to start research. Likewise the account of Prof Alegre, Prof Botelho's narrative is remarkably feminine in dealing with the birth of children, the concern of being able to breastfeed during residency, the trip to Campinas and establishing a family move and new life. Just as her mother did 30 years before, Prof Botelho brought into her narrative the role of being a woman and married life.

The views and experience of the new generation of teachers was brought into profile by Dr Costa – this was the generation born during the dictatorship that went to university 15 years after re-democratisation and at a time of both institutional and political maturity. The medical course, for example, was performed entirely on campus, once the move from Santa Casa was made. Another important factor differentiates him from previous generations of teachers – both parents had a degree in higher education and both worked. His narrative describing the decision to study medicine, for example, showed it was based on all available information in the world around him but did not follow any familiar pattern – it was embedded in the idea of working for the community and feeling the result of his actions in tangible ways, an idea also found in some of the young teachers at PUCC, to be seen in Chapter 9.

Even though acknowledging the role models that some professors played in his own performance, Dr Costa's narrative spoke of an absence at the FCM for the discussion of teaching vocation, models or training. In the absence of this framework, he is building his teaching skills modeled it on some teachers, but also on his recently complete degree and residency course. In a sense, he became very close to the students and developed a relationship of almost equals, and this plays an important part in the satisfaction he felt with his career.

Chapter 9

PUCC Teachers

Maria Aparecida Barone

(PUCC Class of 1976, 52 years old)

Prof Barone was born in São Paulo on the 12th October 1955 and is the daughter of an estate agent. Her brothers, one older and one younger than her, studied Education and Sports and Computing, respectively. The family lived in São Paulo in the Italian community of Moóca, but moved to Campinas in July 1976 when she entered the second class of the medical course at PUCC.

Choosing medicine was not based on any prior knowledge; she just came up with the idea. Although determined to be a doctor, her family tried to dissuade her after two unsuccessful attempts at entry exam level. After the second attempt, she spent one year not studying but helping her mother to care for a schizophrenic aunt whom she adored and who died a few days before her admission to the university.

When she started the medical course she was not aware that PUCC was a recent school. The disciplines of semiology and pathological anatomy were integrated; clinical medicine and pathology made up a single department under Prof Carvalho's direction who shared his time between UNICAMP and PUCC. Every Saturday he met teachers, fourth and sixth year students, and guest teachers for clinical case meetings. On Wednesdays the fourth year group attended anatomical-clinical meetings where Prof Carvalho evaluated them in his usual style, as she recalled:

There was an anatomical-clinical meeting on Wednesdays; the fourth year had to go too and he started looking at a heart or a lung and asking questions. I remember once he asked me, 'Cidinha³⁸, what is wrong with that heart?', and I said, 'It is a heart attack.' 'So, now describe the electrocardiogram of that heart, I want you to describe it.' And I began to describe this. The next thing I knew he began to push me, squeeze me, and I said something like, 'that's enough, I'm not doing anymore; I'm only in Year 4!' Then, everyone fell about laughing, right? And so, I think it was from that time I started to... to value... the method, to like it, but I didn't know any other way of teaching.

³⁸ Prof Barone is known as 'Cidinha', a nickname for her actual name 'Aparecida'.

After graduating in July 1982 she started residency in internal medicine. Along with Prof Carvalhal, she visited in-patients daily on the clinical ward, in the mornings, clinical consultancy in the afternoons, and autopsies of in-patients that had died. One day she felt lacking in confidence and thought about giving up internal medicine and starting paediatrics instead. However, she found a written note from Prof Carvalhal and Prof Modesto (another internal medicine professor); they wanted to talk to her and she wondered if she had done something wrong. They wanted to ask her to teach pathological anatomy. She was hired in 1983, enjoyed it, and started building her teaching skills:

And then... I liked it and... well, of course, I always say that today I'm more of a doctor than a teacher, but I... I didn't know that I had the gift of teaching too. I didn't know if I had the ability – they noticed it. If I had the skill or improved it, but the fact was that I never failed to attend the classes. So, I attended all Dr Sílvio's classes (*Prof Carvalhal*), Dr Modesto almost all, and other teachers that I watched to learn from, so I learned to teach well, once I realised it was something I liked.

She felt an immense sense of responsibility for teaching. She had not yet completed her residency but felt sure the teachers would back and help her. After two years as a Pathological Anatomy Assistant and then working in semiology they invited her to teach for the fourth year. Surprisingly, this time she refused the offer, saying she was not ready and needed more training. Her colleagues criticised the decision, saying she would not have another opportunity like that again, a fact she was well aware of but she insisted. In the end it was her devotion and responsibility that won out and another opportunity appeared.

I said, 'I'm not prepared, I can't teach the fourth year yet. I need a little more training'. I was criticised at the time, not by Dr Sílvio (*Prof Carvalhal*) and Dr Modesto, but by the rest. Teaching for the fourth year means visiting wards. You need to make bedside visits, which require a knowledge of the diseases that is not just biological, but general. So I refused. And then, after two years the opportunity appeared again, and I accepted. It was... 1984, 1986. I taught a fourth year group in 1986. The next year I was teaching a sixth year group – Dr Sílvio and I, together. We did the rounds together; it was me and him with the sixth year group. It was very good.

In 1986, she married Carlos Oswaldo Teixeira, a doctor who had also graduated at PUCC. Dr Teixeira attended residency in internal medicine too and the couple work together at PUCC. They did not have children due to the consequences of an emergency appendicitis surgery she had had in 1976. They decided not to adopt a child in the context of responsibilities both had committed to the medical school.

In 1989, Prof Barone started teaching and doing a PhD at FCM in UNICAMP. In 1987, Prof Almeida, who was at the time at PUCC (portrayed in Chapter 8), had returned to FCM and Prof Barone was also invited for an interview. She had not got a Master's and was quite hesitant about a research project but finally she went for interview and presented a research project on sickle-cell anaemia. Three interviews and three months later she was hired, starting a period of six years of 'ups and downs' at FCM.

Firstly, she felt strange, since she had no access to pathology, which precluded her conducting anatomical-clinical classes in the way she had done at PUCC. Secondly, it was a period when there were rules and regulations at FCM in relation to teachers' qualification, research, and publishing. She resented the way some teachers created a deeply competitive environment. In her opinion, it was not conducive to the interests of the undergraduate course. On the other hand she liked the IMS group and its organisation.

I thought it strange because I had no access to pathological anatomy and at PUCC we were always integrated... the anatomical-clinical was part of the curriculum, we taught semiology and clinical medicine. So, I suffered a lot there because I couldn't separate one thing from another. So... it was... six hard years, in that sense.

I liked the IMS group. It was a group of people with a lot of commitment to the students, patients. Most were, although some were more so, committed to the laboratory, but I liked it because it was organised. So, if there was a meeting, everybody respected the agenda and nobody missed it. I liked the organisation... the mere idea, the commitment they had. One thing that was harmful was the unfair competition, which I thought existed. I don't know if it still exists, but yes, there were people who worried too much about their CV, about how they were going to maintain their CV or become Associate Professor or Full Professor, you know. I never cared about this, never, so I got along extremely well because people realised that I was not competing

with anyone, then they asked, ‘Cidinha, would you do this class...?’
Everyone else preferred to be in the laboratory.

At FCM, she taught the third and fourth year classes, attended the consulting room with residents, and took part in GEDoCh activities. Nevertheless, in her attempts to introduce an integrated approach to teaching she met the same constraints Prof Carvalho had faced ten years before. She became a friend with a pathology resident, with whom she had exciting talks about clinical medicine and pathology. However, one day her friend stopped talking to her. Later she told she was not allowed to discuss cases with her anymore. On other occasion she was not allowed to review a patient’s slide in the microscope at the Pathology Department and had a fight with a teacher. She recalled this in the following, illustrative statement.

I asked the receptionist some questions. After a while a teacher came to talk to me. ‘We don’t understand why you want to see the slide, who are you?’ I said, ‘I’m the Internal Medicine professor’. ‘Yes, but why do you want to see the slide?’ ‘Why, because I want to see it... I’m not going to criticise your report or even question it; I want to see because I want to learn. Can’t I see the electro... the X-ray?’ Then I said, ‘I’ll just explain where I’m coming from ... you don’t even know me and I’ve been here for two years already... I’m from PUCC. I’m the Internal Medicine professor and my supervisor was Dr Sílvio Carvalho – my thesis and life supervisor! I chose someone to follow, a school to follow, I follow his school.’ And I left... but she didn’t let me see the slide.

Prof Barone finished her PhD in November 1994. Prof Carvalho was the first supervisor and Prof Almeida co-supervised the work, a study on the relationship between the presence of Q wave in the electrocardiogram and the presence of myocardial necrosis, using 140 autopsy cases. Ten days after, Dr Teixeira told her that PUCC needed teachers for the fourth year – an offer she could not resist. Although she had befriended most teachers in the IMS group at FCM, she was sad and wanted a comeback to her academic origins at PUCC. Despite Prof Almeida and others’ attempts to dissuade her, she returned to PUCC in July 1995. According to Prof Almeida, she should take over the entire teaching of IMS, even Prof Carvalho tried to convince her to stay at FCM on the grounds of career stability.

I said, ‘Look how great the work is at FCM, you don’t need me here. I need to go and there’s the matter of ideals too... besides, I’ll do what I like, I can’t

do what I like in here!’ [...] Dr Sílvio (*Prof Carvalho*) spoke to me, ‘Are you sure what you’re doing? Because ...’ he said, ‘at FCM you have real stability... they’ve opened up an opportunity for you. You have stability here that you’ll never have that there.’ And I said, ‘So what? I’ll be unhappy for the rest of my life? Why can’t I do what I want to do?’ Then he was quiet... And then I decided... I decided to leave.

Back to PUCC, Prof Barone reorganised GECAC – the study group Prof Carvalho created to develop and prepare students in the anatomical-clinical integration. The group usually had ten assistants applying for the place, but when she returned there were 23 students – Prof Carvalho accepted everyone who was interested, despite the lack of resources. She had to convince herself it was impossible to provide a solid training in those conditions and reorganise the group, establishing a paid assistantship and linking the GECAC to course disciplines. Over the next few years GECAC developed and gained recognition in medical education conferences in Brazil and abroad. In 2000, she travelled to France with part of the group to present GECAC at the X International Conference of Catholic Medical Schools, in Lilly. In 2004, the group presented the method to 500 people in a three-day workshop at the ABEM annual conference. The group was also praised at non-academic institutions like INCOR (The Heart Institute), in São Paulo.

However, in recent years Prof Barone did notice a growing lack of commitment of students to GECAC. She desperately missed the time when students were all committed to the same activities, when there were strong bonds of friendship and camaraderie in the workplace, group trips and birthdays parties.

We were truly a family, we used to go out and travel together. In 2000, we went to France in Lilly. The school gave us R\$1.000 (equivalent to £200 at the time). We won awards, and you know why we won the award? We won because we were the only school that brought students and the students presented the paper! It was a success, we had five papers and it reverberated, except that... nobody congratulated us, nobody! I sent the report to the Dean because I had to justify the grant, but no one... nobody. [...] The group went to congress... we were committed and enthusiastic, staying up to three, four o’clock in the morning if necessary, studying and working.

One thing I’ve noticed in last three years is that the students’ profile changed a lot, and I haven’t changed... my goals, my philosophy, my

posture, commitment, are the same... the students are not as committed to GECAC. I had students who used to call each other, even on weekends, to come and watch an autopsy. A former GECAC student, for example, prepared the textbook of cases we use in the course, working hard on Prof Carvalhal's archives to select the most instructive cases; Caiá (*Dr Teixeira, her husband*) and I just had to review and adjust the data according to the level. Today, anything is an excuse to not attend the group's meetings. 'I can't make it today, I have a birthday party', or, 'I'm too tired, I need a break', 'I'm giving up, I can't manage internship and GECAC.' I ask myself all the time what it is I'm doing wrong?

Besides GECAC's problems, there was the curriculum reform and additional constraints for the few teachers still committed to Prof Carvalhal's method. In 1995, when Prof Barone returned to PUCC, the school started organisational change in the curriculum with teacher dismissals and a redistribution of workload. The Department of Pathology turned into a separate unit and put in charge of all autopsies, except for the clinical medical in-patients, which she managed to keep at GECAC. They had to create strategies of resistance to the drastic reduction of hours in anatomical-clinical integration. Nevertheless, her testimony revealed a situation that was far from pleasant, where daily battles took place over territory and power, with occasional betrayals.

Until 1999, it was two afternoons of practical semiology, one afternoon of theoretical semiology, and two evenings of anatomical-clinical integration. In the fourth year, there were integration exercises twice a week with the patients; it was called 'How I View the Patient.' So, the students had their patients, they had to bring their cases here and present them to Dr Sílvio, he examined, and they looked at the archive and said, 'I see my patient inside like this, the valve is like this, the liver is like this'. [...] And the reverse too, 'We are going to show the autopsy, now give us the clinical history of this patient, how the electro looked, the X-ray, what about the urine test, etc.' [...] In 2000, the curriculum reform came and then they withdrew this, they said it was... archaic, that it was driving teaching to failure. Dr Sílvio... he didn't have much power to fight; Caiá (*Dr Teixeira*) and I had serious fights with them, but it was ok; they withdrew it officially, but we kept it within the discipline! They gave us a number of hours within the discipline, and we re-distributed it. So, there was this 'Seminar B', they wanted to call it 'Seminar'. We made a textbook of clinical cases the students were studying in Neurology, Pathology, even Internal Medicine, in theoretical Semiology; we made a textbook with 15 clinical cases, 16, 14, 17, depending on the number of weeks, one case per week. On Fridays, Caiá opens the week with the theme, gives a theoretical-practical lecture and we considered the case, studying the textbook. It started in 2000, and we still do this today.

Besides the daily battle for the autopsy territory she had to face criticism because her seminars for the second year students were based solely on cases of patients who had died.

I don't understand... I mean can't they deal with death? We are showing them why the patient died and the symptom. And during these eight years of the new curriculum, few people, few students were upset by death. Everybody thinks that because we do autopsies we have no feelings, we are not human; it's quite the opposite! It's quite the opposite! We are the people who discuss death, right? And... this is another constraint we have to face!

At the end of interview she told me about her tiredness, her loneliness, and difficulties carrying on sometimes. Although her husband was by her side, he was more attached to his autopsy schedule and she had to perform a certain amount of autopsies to ensure training and quality of care. An autopsy would last for anything up to four hours; she has to make slides, which means two hours dissecting organs of the body into small formaldehyde fragments. The next step was taking pictures, cutting again, and again, if necessary. When the slides were finished (a job done by a technician) they discussed the anatomical-pathological result against the clinical. The group discussed the case, the anatomical-clinical correlations, questioning, for example: mistakes, omissions, the timing of prescriptions etc. In short, each autopsy is a research project in itself and at the end of it she is exhausted.

There were two teacher assistants in GECAC, Dr Campos and Dr Baffa, but the latter left the group and started a PhD in Education. Above all, Prof Barone missed Prof Almeida, and she made a poignant statement about him:

I always thought that Dr Eros (*Prof Almeida*) was Dr Sílvio's direct disciple, and I still think he is. I think he was... a very good person, people liked him and... they respected him, you know.

I miss Dr Eros, I miss him; I wish he was here. I've said that several times, I wanted him to be Head... I miss the hierarchy at PUCC... and I'm the oldest! Then... you know... where... where is Dr Eros? I'd like him to be here to exchange experiences...

I don't know if I have changed; Dr Sílvio has not changed. Someone told me once that, 'Dr Sílvio has not changed and there is only you now left.' And I replied, 'OK, then, there will be only me!'

Carlos Oswaldo Teixeira

(PUCC Class of 1978, 51 years old)

Carlos Oswaldo Teixeira, better known as Caiá, was born on the 31st October 1957 in the São Paulo capital and started the medical course at PUCC class of 1978. Becoming a doctor had been his dream since childhood and although he could not recall any particular event that made him chose it, he did mention he had always been aware of its high professional status. He started working when he was 15 to help the family and was able to attend a non profit catholic university with the help of an educational loan from the Ministry of Education.

His initial intention was to become a neurosurgeon after graduating. Later he thought about becoming a surgeon and spent an internship at the optional stage in the Surgical and Anaesthesiology departments. For some time, he considered paediatrics but discarded this idea when he witnessed a child's death. He enjoyed obstetrics but eventually applied for residency in internal medicine, a decision he credited to the teachers and residents he met during his internship in internal medicine, like Prof Carvalhal and Prof Barone. The latter would become his wife in 1986.

I wanted to do internal medicine and I started residency long before I became aware of the method (*the anatomical-clinical integration*). I wasn't seduced by the method, joining because of it... When I started I wasn't clear about what I was getting into but yes I knew the method, I was aware that pathology was important but I had not seen what it was yet. And when I got to know the people I wanted to learn more about integration. I got totally involved, I think there's no way of teaching medicine without thinking about it, you know... seeing the patient as a whole.

His residency in internal medicine was a stage called CAMI (Internal Medicine Update Course). Prof Carvalhal was in charge of it and candidates were selected by interview. CAMI was the beginning of GECAC and the course involved six months in pathology and six months in the clinical medicine, and work in the consultancy room. After finishing residency he heard about vacancies teaching in the undergraduate course and began what he considered was the biggest change in his life – a teaching career.

Until I started teaching, I had never thought of being one. And it changed my life entirely, you know, because now... I'm not a doctor, I'm a teacher. I have CRM (*medical registration*), I'm a doctor, but my capacity as a doctor is only present in the ward with in-patients and fourth year students around me. So, I don't have an office, I've done... duty, emergency room, intensive care, I've done a lot of stuff, but I stopped, and today all I have is an academic career, and I teach.

Dr Teixeira was extremely enthusiastic when talking about anatomical-clinical integration or 'the method'. He loved his position as a teacher – the only interviewee to say this really clearly – his explanation of the method was simple and convincing and worth mentioning, despite the length.

Semiology teaches the student to assess the patient and recognise the signs of disease. The disease modifies the physiology of the body and changes the organ's structure, and these changes in the body's physiology and anatomy cause alterations that may be found out by physical examination and consultations. This is semiology. Pathology studies how disease changes every organ in their physiology and anatomy. In the traditional schools pathologists talk about how the problem alters the body. Separate from this is the clinician who talks about how the problem modifies the patient. The pathologist says one thing; the clinician says another one. We talk about everything; only one person speaks both things, how the problem changes the organ, how the organ's alteration changes the patient; how the condition in the organ changes the way it functions, how this function leads to signs and symptoms. So, there it is, the difference is... simple. Everyone knows that you need to know pathology to teach semiology. The method trains people who understand both and deliver both. Now, why this is not the case in other schools, I honestly don't know. Maybe it's because... there had already been some fragmentation and divisions ... the pathologists fight us because they think we are clinicians wanting to learn pathology. And the clinicians say we criticise them.... so here we are on two different sides, but... I don't know, I can't explain why other schools don't do it... I have no doubt that the method teaches students to start thinking; there is nothing better than it. Other schools don't do it because they don't know.

In fact, Dr Teixeira knew why other schools did not follow the method and as he said in the interview, 'when you learn Prof Carvalho's history, it's easy to understand.' Dr Teixeira built his teaching skills on the method and it helped him assess his own work in a way that no other method could do.

I have no doubt there is no other way to teach medicine because it's extremely easy for the student to understand. Everyone says that a disease

does this, does that, just... the student normally looks in the book. With this method, we explain why a disease does what it does. So, I have no doubt that this differentiates the doctor that is looking inside the body from the one that does not. This feature of the method – of seeing inside, for example, when I'm talking to the patient I try to see what's happening, I'm trying to visualise. This 'seeing inside' feature generates questions for me – that others don't. It makes a real difference when making a diagnosis.

Everybody says exams are important. The more the exams, the greater the doctor's sense of security... so he thinks there is no need to check. But we have shown that even with modern methods there are diagnoses we get at autopsy that can't be found in the ward, and that bothers them, right? I keep doing autopsies, and I consider myself a decent doctor, I know I make mistakes, only I check my mistakes, most of them don't check for mistakes. Then, that's why the autopsy rates are falling ever further. The big fight with pathologists is that they don't want us performing the autopsies, but why is it so crucial for us? It's because we want to compare it to the clinical file and to the patient's symptoms. When we perform an autopsy it takes six, eight, ten hours; the pathologist does it in an hour and a half!

The resistance to the method was however mitigated by the students' respect and appreciation of the group; they would often choose Dr Teixeira or Prof Barone as honoured teachers at graduation ceremonies. There was widespread recognition at ABEM conferences, as highlighted in Section 9.1 and the number of applications to GECAC (on average of 80 applications each year) reflected its popularity with students. Nevertheless he could not testify to its future, the main limitation being the difficulty of training people up to take it to other places other than the PUCC. At the time of the interview, only one young teacher was performing autopsies besides Prof Barone and himself.

The problem with implementing this method is that you need people who have had the training we had... who have knowledge in pathology and clinical medicine and today the only ones who can perform this are the ones who met Dr Sílvia. So, this is the difficulty, and I think soon we will end up losing that because nowadays it's just Cidinha (*Prof Barone*) and I and some students backing us, but how many will continue? We demonstrate the method to the students, but then how will they continue on with it? And when they get out of here? We have the autopsy, we have our records, but what about when they leave, how will they do it? [...] Even in teaching hospitals that have pathology you start to have barriers, which are the same barriers Dr Sílvia faced. And the biggest is the opposition of pathologists. The students that go out and show interest in continuing the method also face doubts, suspicion, and resistance. It's not hard to understand, just look

back in history. This happened at EPM, happened at UNICAMP, and sooner or later will happen here. I just don't know where it will end up.

Dr Teixeira and Prof Barone's lives crossed when he was in the sixth year and she was doing her residency. He admitted that this might have influenced his decision to stay in the DCM at PUCC. The couple married after he finished residency in 1986 but they had no children. They were quite clearly the backbone of the remaining vanguard and he himself admitted that being partners in life facilitated their dedication to the cause.

Once we got married and lived together, we discuss all this and both already with certain... name in the institution. Despite starting teaching from nothing, that's 20 years of teaching and I've created a background... and this experience and history enabled us to carry on with the method.

He started his Master's at FCM when Prof Barone was working there, but he did not finish the thesis. His supervisor was Prof Guariento (portrayed in Chapter 8) and the project focused on Chagas disease and was published in congress. After passing the languages proficiency exams he applied to transfer to Doctorate, but UNICAMP changed the rules and required publication in an international journal to allow the transfer. Prof Guariento thought the project was too good and instead of submitting it to Master's she asked him to start another less comprehensive research and save the original project for a PhD. Somewhat disappointed, he decided to leave the graduate school. In the interview, he strongly criticised the purpose and structure of post-graduation.

This is one thing I regret. I should have completed the Master's, but there was the security of being at PUCC for a long time, it made me confident... I didn't want to go to another institution – I liked it here, I didn't want to leave but it didn't make me do a doctorate.

I think a doctorate is perfect for those who want a teaching career – provided that the didactics course is serious! We had a didactics course for a week. The teacher told me 'wow, your didactics are excellent, where did you learn?', and I said, 'I learned through life and by my own'... and that was the course! For example, the essays... talking about teaching is one thing, but 'looking at the effect of insulin in the rat's tail'... what does it bring? So, I look at PhDs today in Brazil... it's awful thing to say, but it's a farce... it doesn't prepare to teach and that should be the main aim!

He was critical of the idea of teaching and research being inseparable. In other words, in his view, it is not necessary to do research to be an excellent teacher and the opposite too – in his own words, ‘the university is full of good researchers with poor teaching skills.’

I think... of course, research develops knowledge, and it's essential to do it but... not just that! I do research, but I swear there are better scientists out there, better than me, and they were born to do research and me, I prefer to teach; I feel happy in the classroom. I feel better talking to students. It pleases me and that's why we're here today, earning what we earn. I used to say that there are two bad professions – doctors because they work too much, and teachers because they are underpaid. I am a doctor and a teacher!
(laughs)

Furthermore, Dr Teixeira was critical of the criteria for publishing in scientific journals. Case reports prepared at GECAC took time, research, and rationale, but, according to him, they were not valued. Asked how he felt after the changes in organisation and curriculum at PUCC, he said that, ‘First of all, it's a private school, it's catholic, so the view is quite different.’ According to him, it depends on who is directing, and the staff from the DCM lack direction, contrary to when Prof Carvalhal and the others were in charge. Also, the posts are nominated and not elected as they had been before.

For the young teachers it looks like a crisis. I don't think we have a crisis but of course we had reduced workload... some decisions were harmful and we had to fight for things, but let's put it this way... the older generation is used to fighting for things, so... What I have to say about the PUCC is that you stay here only if you want to... because it doesn't grant any privileges. Each day is... a hit at the tip of a knife, another punch at the tip of another knife, but... we always get a small space to try to... keep on going.

He puts constraints aside when recognising that at least they are still able to maintain their method in their classes.

I think I can't complain about the institution... it allows us to continue with the method. I don't actually think that things are so hard... we do have problems in the hospital, it loses money and sponsors want profit, but how do you make a profit in a hospital school? I suppose at the end of the day it really just depends on who is in charge. But I really can't complain.

The new generation at PUCC: Patrícia Domingues, Andréa Baffa and Pompeu Campos

(PUCC Classes of 1993, 1994 and 1995; 34 years old)

Patrícia Domingues, Andréa Baffa and Pompeu Campos graduated at PUCC in 1993, 1994 and 1995, respectively, and at the time of interview they were all 34 years old. The fact that they graduated more or less at the same time, had a similar social and economic background and professional situation made me decide to dedicate a section to them together collectively rather than individually. Thus, in this section their narratives and emergent themes represent a generation and the views of the young IMS teachers at PUCC.

Dr Domingues was born on the 5th January 1974 in São Paulo city. Her father worked as an administrator in a soft drinks factory. From childhood she wanted to pursue a profession where she could contribute to society. She always enjoyed dancing and caring for people or animals and was torn between choosing medicine or veterinary medicine. She admitted she was influenced by her gynaecologist, who was a family friend – a doctor and a humanist working in primary care and involved in the support of women's rights.

Dr Baffa was the oldest daughter of a mathematician and engineer who worked as auditor and had been teaching at university for almost 30 years. Her mother was a teacher specialising in teaching methodologies, teaching for 42 years. Dr Baffa was the only person in the family to pursue a career in healthcare and always knew from the beginning that at some point in life she was going to teach, like her parents.

Dr Campos was born in 4th June 1974. For some time he thought about following his father into law but after researching it a bit more he realised that he did not have the necessary characteristics. A friendship with his sister's boyfriend who was a medicine student eventually led him to the same career, although he admitted that at the time he had a romantic and glamorised view of the profession.

They met Prof Carvalhal in the third year and were GECAC students. Dr Campos became a GECAC Assistant. After graduating, their careers followed similar paths.

They took the PUCC residency exam and followed the anatomical-clinical method with a view to teaching.

Dr Campos was the only one who did not succeed residency at PUCC. His residency was in family medicine in another institution – an experience which caused him great disappointment. However, in 2005, two years after finishing his residency and resigned to the fact he would not working on the anatomical-clinical method, he received a call from Prof Barone letting him know that a teaching position was available at PUCC. By this time, Dr Domingues and Dr Baffa had been teaching since residency. All of them had built up their medical knowledge, patient care and teaching skills with Prof Carvalhal, Prof Barone and Dr Teixeira as models. Dr Domingues and Dr Baffa clearly expressed how this progressed:

In the fourth year we were daily in the clinical ward dealing with patients, with Cidinha (*Prof Barone*), Caiá (*Dr Teixeira*), Dr Sílvio (*Prof Carvalhal*) supervising. Dr Sílvio was still active and spent his visits with us. In he came, examined the patients, and listened to them. And it made a great impression on me because ... when you watch Dr Sílvio examining a patient, when you watch Cidinha, Caiá examining a patient; it is totally different to what you're used to, especially Dr Sílvio. He closed the door, went to the patient's side, it was like a courtship (*laughs*), went to the other side, took the patient's pulse, and looked them in the eye... it was almost a ritual. How the patient is examined really makes a clinical practitioner passionate, you know. [...] I like dealing with patients, but also it's when you deal with patients and then use that to teach or to learn, I guess you could say it is a pretty powerful experience. That's when I started aiming for a teaching career. (Dr Domingues)

I was fortunate to meet Dr Sílvio (*Prof Carvalhal*) in my second year in 1995 when he was busy remodeling the assistantship. Fresh out of the third year at the hospital, we were... we met Dr Sílvio, and he chose a group of about 15 students in my class to start semiology. Cidinha (*Prof Barone*) had just returned from UNICAMP... and the course was no longer an integral part of the curriculum... it was extra-curricular. I remember starting to do autopsies, filing cases, and in my fourth year teaching, you know, in the school. I had already given some classical piano lessons at the end of my senior year at high school and when I graduated I wanted to teach piano... anyway, let's say I had an obsession with teaching. I did other assistantships in addition to being in GECAC and always followed Dr Sílvio's method. (Dr Baffa)

According to them, the curricular reform of the medical course from 2001, along with the re-engineering of the hospital school put a stop to the work established by Prof Carvalho. The old departments no longer existed; new contracts were temporary and renegotiated every six months and several teachers were made redundant due the reduction in courses. Internal medicine lost its fixed beds in the general ward and the implications for education were deeply felt:

Clinical medicine... is the stumbling block in hospital administration because they say it's expensive... we deal with elderly patients and we therefore have the most complicated patient's load. [...] There was a move against us... a retaliation, I don't know if I can use that word... from the hospital, in the sense that... they didn't give us beds for us to intern... internal medicine had its own beds before. Before, if the surgeon wanted to intern a patient in one of our beds he had to ask us, this was the way it used to be when I was hired. Now I have to call the hospital reception and check if the hospital would provide a place for me to admit a patient. And it worked like this even in the student teaching rooms. For example, there are two bedrooms, eight beds and sometimes there are up to six specialties being working there. If it's a specialty, for example, rheumatology Lupus, I can't conduct the case, but I can take down the medical case history and do a physical examination for the students. But sometimes it's a broken femur in one bed, in the other bed it's a nasal plastic surgery... what possibly can internal medicine students learn from that type of patient? As a general practitioner I can't really visit a femur fracture! And still the school does not stop this happening – Cidinha (*Prof Barone*) brought this problem to their attention several times and still no reply, they don't care... orthopedics, surgery all in one place... it makes more money than internal medicine, their patients get admitted first... if any places remain we get those. I'm very sad. If it was a public hospital I think I'd understand, but it's not, we're a university hospital, a hospital school, and there's no concern. Because: 'the hospital is thinking profit.' (Dr Baffa)

The teaching methodology adopted in the PUCC curriculum reform was to be strongly criticised and the late 1990s there were debates in ABEM annual meetings over the medical curriculum – especially as a number of medicine schools had adopted Problem Based Learning (PBL). The adoption of PBL in Brazilian medical schools was heavily influenced by foreign courses and criticisms were multiple: it benefitted mainly private schools; there was a lack of proper training and structure (libraries); and the teacher's role had become relegated to a team of 'tutors'. Dr Baffa testified to this:

I was in the penultimate class of the old curriculum and in 2001 they instituted the so called ‘new curriculum’ which was a mixture – the old and PBL... there was a drastic reduction in workloads and the curriculum was fragmented. For instance, we used to have minimal contact with the hospital until the third year, now for instance you had a case of... say, cranial-encephalic trauma (*CET*) in the first year. Yes that was very interesting... but they did not prepare the faculty or the school structure for this. So for example a *CET* case... you had to study it anatomically, physiologically and from a histological point of view, to understand the case. So for example, rather than being a ‘tutor’ and guiding students with references they just came in and it was like, ‘Right, next week just bring me this case study’...with no guidance at all! So off the students went – seeking out a plethora of sources! (Dr Baffa)

What is evident is that in the last ten years Pucc went through a curriculum reform and a departmental reorganisation in order to adapt to financial difficulties and reposition itself in the educational market. Courses that were not in great demand were scrapped or reduced, especially in Humanities.

There has been a disbandment of teachers, they disbanded departments, we only have this staff room now... we have no more meetings... how can we teach students to work in team if we don’t have meetings? Teachers do not have time to see each other, no time to talk. In my discipline, believe it or not there are fourteen teachers. The stages used to last a month, now they last... 23, 24 days. Over a period of 23, 24 days the students have 14 different teachers! How can these teachers evaluate students when they don’t even know their names? The internship has always been, shall we say, Pucc’s flagship; all students trained here were praised for having a strong practical side. The curriculum reform tried to boost the theoretical side at Pucc, but without retaining the practical part that was good. They fragmented the practical part. Today, without doubt, our students have a bigger theoretical load, they do well in residency tests, they get into good residency courses, but... the character of the school is being lost – training doctors to have a general viewpoint, knowing how to act with great practical skill. (Dr Baffa)

When I was a student there were no private medical insurance appointments, today I have patients from private health insurance. There is a whole commercial side to the hospital that didn’t exist before. I used to go anywhere in the hospital, now the students are not allowed to step into blocks 3 or 4 – they are for private insurance. The operating room has changed and the emergency room which used to be for everyone is now just for medical insurance patients, SUS patients have to wait. So, yes there were some changes... in the hospital and that interferes, maybe even more, so with the students’ lives. (Dr Baffa)

The following statement illustrates well how managerial issues started to interfere with class routines, even though teachers like Dr Campos tried hard not to get ‘involved in administrative issues’:

Ever since I was a student I’ve been seeing Cidinha (*Prof Barone*) and Caiá (*Dr Teixeira*) questioning their views... but it seems to me things are worse now. We are living through a really difficult moment in the institution. I don’t know whether it is really worse or whether it is just an impression, a rather more pessimistic view of things... I really try not to get involved in administrative issues and be involved as much as possible with students. But it looks like the PUCC is increasingly concerned with how to manage things better, and so it seems it has lost a little of that commitment to teaching, the commitment to the student. (Dr Campos)

The impact of the reorganisation of the role of teachers seems to have affected involvement and commitment to the course and resulted in a lack of contact between teachers and students. A lot less time spent with students, establishing friendships and following their progress is clear. This was an issue also raised by Dr Costa in Section 8.3, when he assessed the different courses he was teaching and the identification the students felt for being taught by a recently graduate.

Now we are employees hired by temporary contract, as they call it, which you have to renew every six months, and you have to do all the competition, all over again. At the end of every six months there’s a new stress, because you never know what will happen, whether the post will be offered again or not. Ideally, in my opinion, we should be more and more involved with the school because the more involved, the more you will give. I would teach more subjects, I would be more involved with students and know them better. Like when I lectured for year one and they got back to me later and they already knew me – it was very good! It’s a different kind of relationship when you teach more than one subject, compared to... when they don’t even know who you are, and you teach only one subject and then the student gets out of your life. It’s good to be able to follow them and their progress, I think it’s cool seeing them grow. And it’s also important for the students to have some people they can identify with during the course. (Dr Rodrigues)

These teachers who graduated before the reform at PUCC showed a strong commitment to teaching, but some criticism of the students’ lack of commitment to the medical course and to the school is evident. This could be viewed as a

generational issue, a lack of maturity on the younger generation's part or even a global crisis of ethical values:

Now there are preparatory courses for residency, perhaps it's more important now to learn about book footnotes than how to examine a patient! It's so difficult to get a residency and the stress is so great that they can't even enjoy the stage they are experiencing. When teaching the sixth year I say that from September³⁹ onwards you can no longer teach them because they are all busy doing tests from the preparatory course textbook. So, they are more concerned with that than the stage. And in my time it was not like that, you know, we learned... in school! So, if you were in GECAC you learned through GECAC. We used the assistants and the stage to get the knowledge we needed. And now it seems it's all paper knowledge... they are so anxious to pass the tests not worrying about the patient, looking after the patient. And what are they going to do when they are totally responsible for patients? Because, when you leave here you won't have a test at hand, but you'll have a patient! (Dr Domingues)

The students are very passive. Unfortunately they are very immature at college, they can't read and interpret. Culturally they know how to play video games and nothing else, so... it's difficult. They don't engage because they're afraid of the grade the teacher may give – they are like a bunch of high school students! It takes a lot for them to understand that they'll be doctors, takes them a while to understand exactly what it means, but the maturity takes time to come. And there is that story... it is very simple, 'Ah, the previous class did nothing and passed, why should I push myself?' They are too passive, too passive – partly because of the teachers, partly through their own fault. (Dr Baffa)

Because GECAC is extra-curricular, it seems the students don't care much for it. I teach semiology for an entire morning, showing them patients in the ward, after that the assistants in GECAC show them other patients, but this only works if the student is interested in contacting the assistant and making an appointment. The assistants tell us they have only one or two appointments during the whole semester, because students are not really interested! (Dr Campos)

At the end of her interview, Dr Domingues made a poignant statement that, in a sense was reminiscent of Prof Alegre's. Though they both worked in different schools and under different circumstances, and with a generational gap between

³⁹ The academic year in Brazil is divided into semesters. The first semester starts in February and lasts until late June. The second semester starts in August after a month long winter holiday in July, and ends in late November. The residency entry exams normally take place in early December, shortly after the end of the undergraduate courses.

them, both felt betrayed by their respective institutions. They gave a lot and invested time and effort in the school, but were disappointed by macro and micro politics:

I have no illusions, because I see how PUCC treats teachers who have been here for so long. These teachers who practically founded this place are now treated badly. So I don't want this for me, I don't want to be in my fifties and saying, 'Oh boy, I... killed myself because of PUCC and PUCC did not recognise my worth'... I already know that PUCC will not recognise anything I do.

9.1 Creating meaning – the narratives of PUCC group

The narratives of PUCC teachers were quite similar, especially in the way they talked about choice of course, college entrance and teaching career start – just like the FCM narratives, there is almost no reference made to their personal life. In the few cases where this occurred it was mainly because I elicited this information with my line of questioning. Nevertheless, despite the distance of nearly 20 years between the two generations of teachers, there is still this missionary sense of carrying forward the methodology created by Prof Carvalho – still a sense of identification with his thoughts and methods.

Prof Barone's figure stands out with her fierce approach to first contact with Prof Carvalho, the years she spent at the FCM and the return to PUCC. Her narrative attests to the massive educational changes: departmental reorganisation, the growth of specialties, curriculum reform and mostly recently a university starting to be managed more like a company chasing funding sources.

Dr Teixeira's testimony, despite strong criticism of the lack of teacher training at doctorate level shows more optimism and an understanding of the medium to long-term cycles in the institution. His analysis makes it clear that the situation may change when there is new shift in direction in the institution. However, his analysis leaves aside the strongest aspect – that the PUCC shift towards the 'university-business' path was political and resulted from a shift to neoliberal policies which emphasize marketisation. Unfortunately, there is nothing to make us believe this can be reversed in the short or medium term.

The new generation represented by Dr Rodrigues, Dr Baffa and Dr Campos were caught by the big organisational and educational changes at PUCC just after graduating. They have to cope with the daily challenges of balancing ideals and material interests. Dr Campos is the only teacher who was still taking part in GECAC, as Dr Rodrigues and Dr Baffa started their Master's (in Education). Dr Rodrigues is also teaching in other medical school in the neighboring town of Jaguariúna, where she claimed the salary is very much better than PUCC's, although she does not want to leave her academic origins and is keeping both jobs.

9.2 Crossroads

The FCM and PUCC's life narratives approached a wide range of themes: the choice of university degree and residency course; contact with Prof Carvalho; the start of their teaching careers and taking on research, administrative or academic positions. Despite the fact that most were Prof Carvalho former students, accounts of his methodology and struggles appeared mainly in interviews from the PUCC – his last job before retiring. Overall, the interviewees talked mainly about their professional life stories apart from two female interviewees who gave personal accounts and talked about marriage and children (without being asked).

All interviewees began by talking about the reasons for wanting to study medicine. Three interviewees admitted having a doctor in the family (a brother or an uncle, no parents though). In one case, the family influenced their decision – they had in mind a doctor from the small city where the family lived (Prof Almeida). In another case, a close relationship with an older brother, recently graduated, changed the mind of one who had planned to be a primary school teacher (Prof Alegre). Two other testimonies told of an admiration for an uncle who was a doctor (Prof Guariento, Prof Botelho) though one of them also said she had wanted to be a doctor since the age of five (Prof Guariento). One interviewee reported being influenced by a friend of the family, a gynecologist concerned with women's rights and a humanistic approach to medicine (Dr Domingues). Another interviewee reported being influenced by a friend (Dr Campos).

Some of the youngest interviewees reported collective issues concerns (Dr Costa) and a desire to contribute in some way to society (Dr Costa, Dr Domingues). So, medicine appealed as a way of contacting people, solving health problems and seeing the tangible benefits of their work (Dr Costa). A romantic and idealized view of the profession, plus some glamour, was mentioned as well (Dr Campos).

Other interviewees reported being fond of medicine for no particular reason (Prof Barone, Dr Teixeira, Dr Baffa). Two interviewees liked medicine, but also wanted to teach (Prof Wanderley, Dr Baffa), maybe influenced by a family of teachers (Dr Baffa). The impact of reading the news on the first heart transplant in Brazil influenced one interviewee to start studying medicine (Prof Gontijo) although his interest was driven by his love of knowledge rather than its application.

Four of the seven FCM teachers met Prof Carvalhal as IMS teacher in the third year of medicine course during the 1970s. All PUCC interviewees met him but eight to 20 years later. Although some of the participants reported being fond of some specialties, by the time of residency most were committed to becoming general doctors and attended residency in internal medicine.

For most interviewees the opportunity to start a teaching career appeared just after the residency course due to a demand for academic staff at both universities. All participants were hired and started to give classes before their Masters or Doctorate degree (the latter not compulsory at that time). Some interviewees worked as teacher assistants during the medicine course and reported this experience as essential for building confidence and getting involvement in teaching. The assistants were paid a bursary and helped teachers organise the course, but during the 1990s this experience at UNICAMP was extinct and replaced by a program aimed at providing teaching experience for graduated students doing a Masters or Doctorate degree.

The discussion of the role of researcher appeared in almost all interviews, with some questioning as to whether it was really necessary for becoming a good teacher. Half of the interviewees thought the university and its accountability systems might have valued research to the detriment of teaching. Nevertheless, the FCM and PUCC

teachers had a different view point as research in the latter is still incipient and not compulsory.

Table 2 on page 169 shows the academic background, the start of the teaching career, supervision, and participation in research activities of all respondents. The source of information was the CNPq Lattes Platform⁴⁰ (the national data base on researchers and research groups in Brazil) and SIPEX (the UNICAMP data base of research activities), besides information from interviews. The CNPq Lattes Platform, which must be updated by the own researchers, is used compulsorily in applications for funding, scholarships and publishing.

The first half of the table displays the FCM (UNICAMP) group of respondents and the PUCC group is displayed in the second half; respondents are displayed in the order they appeared in the text. The first column displays the name and the age at the time of interview; the second column shows which level the respondent studied at (or not) under Prof Carvalhal; in the third column are the institutions and the period of attendance on the medical course; the fourth column shows the institution and the year of residency course completion; in the fifth column is the institution and the year they started teaching; the sixth column shows attendance or not of a master's degree and the year of conclusion; the seventh column shows attendance or not on a doctorate degree and the year of conclusion; the eighth column shows post-doctoral study and the year of conclusion; the ninth column displays the number of master's and doctorate supervisions; the tenth column shows the number or articles published in internationally refereed journals; the eleventh column shows the number of research projects (projects funded are in brackets). The information on supervision, articles and research projects is the most recent and was collected at the time this thesis was concluded. In the cases where the thesis supervisor was one of the respondents, his or her name is displayed in the legend below the table.

On average, the professors completed the doctorate 11 years after concluding residency. The doctorate that took the most time was Prof Wanderley's (16 years),

⁴⁰ CNPq is the National Council for Scientific and Technological Development, an agency of the Ministry of Science and Technology in Brazil.

while the shortest one was Prof Gontijo's (7 years) – which was followed by post-doctoral studies abroad.

The first information to be highlighted in the FCM group is relative to the number of supervisions for master's or doctorate degrees. If we take into account the year of completion of the doctorate as a starting point (because professors are registered as supervisors only from this level on) we have in some cases more than twice the number of supervisions when comparing individually Prof Almeida, Prof Guariento, Prof Alegre on one side, and Prof Botelho and Prof Gontijo on the other, especially considering the gap of one or two years in doctorate completion between some of them.

The information on research projects in progress reveals a similar situation with the same group of professors, but in this case of Prof Botelho and Prof Gontijo there are a high number of research projects receiving funds.

The great difference found in the number of supervisions and research projects could be explained by the research lines that the professors engaged. According to Prof Botelho's testimony, for example, the period when she was accompanying her husband in post-doctoral studies abroad allowed her access to cutting-edge research which she dedicated herself to after returning to Brazil. At the same time it shows a period when the funding agencies prioritized certain areas, especially in biomedical research and FCM itself started a period of investment in research infrastructure.

In relation to the number of articles published in internationally refereed journals, Prof Gontijo's number is substantial, bearing in mind that he held various administrative positions in FCM in the last 12 years. Prof Almeida and Prof Guariento's data is very similar, consistent with the fact that both participated in the same research groups. Data from PUCC are consistent with the lack of a structure in research and graduate studies at the institution, as revealed by the lack of supervision of postgraduate students. Notably there are a large number of articles by Prof Barone and Dr Teixeira and some of their research projects are still in progress.

| | Name and age at interview | Studied under Prof Carvalho | Undergrad Course ¹ | Residency ¹ | Start of Teaching Career ¹ | Masters Degree ¹ | Doctorate ¹ | Post Doctoral Studies ¹ | Supervision of M/D students ¹ | Articles in Acad/Scien Journals ^{1,2} | Research Projects ^{1,3} |
|---------------|---------------------------|-----------------------------|-------------------------------|------------------------|---------------------------------------|----------------------------------|---------------------------|------------------------------------|--|--|----------------------------------|
| FCM (UNICAMP) | Almeida 57 | Undergr & Residency | UNICAMP 1972-77 | UNICAMP 1978 | PUC 1979 | Not | UNICAMP 1991 ⁴ | Not | 11 | 54 | 10 (3) |
| | Guariento 53 | Undergr & Residency | UNICAMP 1973-78 | UNICAMP 1981 | UNICAMP 1982 | UNICAMP 1985 ⁴ | UNICAMP 1991 ⁵ | Philippines 2001 | 12 | 48 | 9 (4) |
| | Wanderley 52 | Undergr & Residency | UNICAMP 1975-80 | UNICAMP 1982 | UNICAMP 1983 | Not | UNICAMP 1998 ⁶ | Not | 0 | 12 | 2 (2) |
| | Alegre 51 | Residency | UNICAMP 1978-83 | UNICAMP 1986 | UNICAMP 1985 | UNICAMP 1990 | UNICAMP 1994 | Not | 3 | 16 | 5 (2) |
| | Botelho 50 | Not | FMRP 1971-76 | FMRP 1980 | UNICAMP 1980 | Not | UNICAMP 1993 | Not | 32 | 35 | 22 (16) |
| | Gontijo 52 | Not | UnB 1974-80 | FMRP 1983 | UNICAMP 1987 | FMRP 1986 | FMRP 1990 | US 1994 | 20 | 77 | 20 (13) |
| | Costa 32 | Not | UNICAMP 1996-01 | UNICAMP 2005 | UNICAMP 2005 | Not | UNICAMP In progress | Not | 0 | 2 | 1 (0) |
| PUCC | Barone 52 | Undergr & Residency | PUC 1976-81 | PUC 1984 | PUC 1983 | Not | UNICAMP 1994 ⁴ | Not | 0 | 31 | 5 |
| | Teixeira 51 | Undergr & Residency | PUC 1978-84 | PUC 1986 | PUC 1986 | UNICAMP Not finished | Not | Not | 0 | 18 | 2 |
| | Domingues 34 | Residency | PUC 1993-98 | PUC 2001 | PUC 2000 | UNICAMP In progress ⁷ | Not | Not | 0 | 0 | 0 |
| | Baffa 34 | Residency | PUC 1994-99 | PUC 2002 | PUC 2002 | PUC ⁷ 2008 | Not | Not | 0 | 3 | 2 |
| | Campos 34 | Not | PUC 1995-00 | Not informed 2003 | PUC 2005 | Not | Not | Not | 0 | 0 | 0 |

Table 2. FCM (UNICAMP) and PUCC respondents' academic background, start of teaching career, supervision, and participation in research.

1. Source: CNPq and UNICAMP/SIPEX.

2. Articles published in internationally refereed journals.

3. Research projects in progress (funded in brackets).

4. Supervised by Prof Carvalho.

5. Supervised by Prof Gontijo.

6. Supervised by Prof Guariento.

7. Masters Degree in Education.

9.3 Summary

Part III of the thesis introduced the medical teachers interviewed for the research, focusing firstly on the main character, Prof Carvalhal and then on the group of teachers from FCM and PUCC. It examined the resistance to ‘the Carvalhal method’ and the historical micro-politics at the DCM that eventually led to his transfer to PUCC.

The narratives of the FCM group showed how the input of professionals from different institutions impacted on the profile of the IMS group; this came at the same time that UNICAMP was implementing a special policy to promote a qualitative leap in research at the institution – the Quality Project highlighted in Chapter 5 in Part II. The narratives of the PUCC group highlight the dramatic differences in institutional projects and also the weaknesses that impeded the continuation of this innovation.

Chapter 10

Complexities and conclusions

In Part II of this thesis I described the emergence of UNICAMP in the 1960s and Prof Vaz's strategies for creating a university that could service a developing domestic industry and, at the same time, provide creative thinking and original research. One of the strategies was to attract the best talent in different fields of expertise to join a newly created university in the São Paulo interior, able to promote innovative thinking and methods. Prof Carvalho was one of the pioneers promoting these innovations and he went to FCM to implement changes in teaching that could fix the numerous faults he had been observing in the doctor's education and training.

One of the main faults was the lack of integration between the basic sciences and the clinical aspects of the course – a weakness which persists despite the curriculum reform that the majority of Brazilian medical schools went through the 1990s. And it is interesting to note that the main FCM curriculum reform recommendation in 1999 was precisely this – the promotion of integration across the curriculum.

Prof Carvalho's pioneering method, or 'innovation', proposed the use of autopsy findings as a means of integrating basic disciplines in the field of Internal Medicine & Semiology, the main undergraduate training subject. This innovation was based on fundamentals of medicine and proposed the use of the distinct sciences supporting the main subject⁴¹. Prof Carvalho's method gained enthusiasts amongst students, especially those with a penchant for teaching (many of them acknowledged having chosen a teaching career with his theoretical framework in mind) and especially his attention to the key aspects of the doctor-patient relationship, as the narratives in Part III show. Nevertheless, his proposals faced opposition amongst peers and students.

This innovative period was affected by internal and external factors at macro and micro level and can be grouped and linked to various aspects: history, context, social structure, personal life (Smith et al, 1987; Mork, 2008) and institutional structure

⁴¹ Canguilhem (1977) discusses extensively the concept of medicine not as a science, but an integrated application of different sciences.

(Goodson and Anstead, 1993). Key factors at work included: the dynamics of new universities, the developing scientific community, the shift to marketisation and managerialism, the teachers' life cycle (and how they coped with institutional changes). And all of this took place during two decades when Brazil shifted from dictatorship to democracy.

In this last chapter I analyse the historical, institutional and personal factors that contributed to the lack of sustainability of Prof Carvalhal's method over time and the fate of innovation. Firstly, I will consider the institutional history and the historical dynamics associated with Brazil's move from dictatorship, to re-democratisation, to neo-liberalism. Secondly, the life cycle of innovation, where I address patterns of resistance and the feasibility of replicating it. Thirdly, I relate the personal factors, the influence of individual choices in career and life paths to the fate of innovation. Lastly but not least, I discuss the different subject traditions (academic, pedagogical and utilitarian) and the battle of subjects within the paradigm of medical education.

All these topics are interrelated; hence, they should be considered in an integrated manner, and as part of the same process. In other words, there is the lifecycle of innovation, a lifecycle in individual life and career paths, and a historical within which the innovation occurred.

10.1 The institutional history: 1990s macro and micro-politics

The Table 3 on page 174 displays the key events during the period 1960s-1990s which informed the broad context of the life cycle of innovation. The events are listed in four levels: the international, the Brazil/São Paulo state, the UNICAMP/medical school, and the group level (FCM and PUCC respondents).

From the 1960s onwards the Cold War reached South American countries, giving rise to military coups in the region that led to a 21 year military dictatorship in Brazil. While the US and Western European countries had and were experiencing years of cultural growth and turbulence, Brazil underwent press and arts censorship – there were thousands of arrests, disappearances and closures of the National

Congress. At the same time, the development of Campinas region intertwined with the ambitious technological project of the regime boosted the creation of UNICAMP.

The 1970s witnessed the hardening of the dictatorship. At the same time a period of economic growth – ‘the economic miracle’ – attracted foreign investments while keeping a low wage policy at every level. The oil crisis in 1973 brought an end to this growth and Brazil faced high inflation rates, high external debt and recession. UNICAMP continued to grow and the PUCC was created – it was during this period that the majority of respondents started their undergraduate courses.

In the next decade, the end of the Vietnam War, the fall of the Berlin Wall and the collapse of the USSR witnessed the emergence of neo-liberalism (or ‘the Washington Consensus’), with a dramatic reduction of the role of State; economic globalisation, and flexible labour rights. Also key was the digital revolution. It was also the re-democratisation years in Brazil, with a return of hundreds of opponents from exile, the creation of new political parties, direct elections at all levels and the opening up of the economy. After the death of Prof Vaz, UNICAMP went through the statutory reforms, planning and growth and it was in this period that increasing numbers of researchers were hired and started their teaching careers. FCM left Santa Casa and moved to the UNICAMP campus starting a process of changes in the academic profile and its adhesion to the new institutional project.

The shift to neo-liberalism during President Cardoso’s two terms, from 1998 onwards saw large scale of privatisations and the dismantling of social welfare. The lack of investment brought additional constraints for the universities, both in their governance and at private, individual levels. In the universities there was a process of early retirement of professors due to the federal reform of the pension’s scheme. The private institutions, although beneficiaries of the ‘marketisation’ of education and the creation of ‘university centres’ (universities dedicated to vocational courses where research is optional) came under the control of business; they adopted temporary contracts as the norm and got rid of courses for which there was a low demand, as seen with the PUCC group in Chapter 9.

| | 1960s | 1970s | 1980s | 1990s |
|----------------------------------|---|--|--|--|
| INTERNACIONAL | The Cold War Che Guevara is killed in Bolivia 1967 Students rallies in Paris 1968 America's counterculture movement Woodstock Festival 1969 | Four university students dead in Ohio 1970 Watergate 1973 Oil crisis 1973 Nixon's resignation 1974 End of the Vietnam War 1975 | Gorbachev's reforms 1985 Fall of the Berlin Wall 1989 Neo-liberal economic policies in US and UK World economic recession Digital revolution | URSS dissolved 1991 Market fundamentalism World Wide Web 1991 |
| BRAZIL / São Paulo | Military coup March 1964 Thousands imprisoned and disappear Press censorship National Congress is closed Prof Vaz Vice-Chancellor at the UnB USP working group set up to create a university centre in Campinas | Economic 'miracle' (1969-1973) Heavy industry Expansion of financial activities Oil crisis 1973 High inflation rates High external debt | Recession, stagflation End of dictatorship New Brazilian Constitution 1988 1st Presidential election since 1964 – Collor 1989 Economic opening up State universities in São Paulo financial and administrative autonomy 1989 | President Collor's resignation 1992 Plan 'Real' (new currency) 1993, inflation control Cardoso's election 1994 IMF bailouts, privatisation, neo-liberal policies National curriculum, national tests President Cardoso's re-election 1998 |
| UNICAMP / Medicine School | UNICAMP created by law; the Campinas Medicine School is incorporated 1962 First entry exam for the medicine school 1963 Santa Casa Hospital houses the medical course UNICAMP foundation 1966 1967: the Piracicaba Dentistry School joins UNICAMP; the Physics Institute is installed; the Chemic Institute and the Food Engineering School are founded; IBM 1130 computer is installed; the Worker's Association is founded 1968: the first building in the campus, housing the Biology Institute and the Administration 1969: the Engineering School is created | The Music Department is created 1971 The School of Education is created 1972 UNICAMP logo is registered 1976 The School of Languages is created 1976 The Teachers Association is founded 1977 UNICAMP building area increases Prof Vaz compulsory retirement 1978 The UNICAMP Development Foundation is created; Prof Vaz is the first President The Geosciences Institute is created 1979 | Prof Vaz dies aged 72 1981 Governor Maluf's intervention 1981 Prof Pinotti is elected Vice-Chancellor in 1982 Law reforms Expansion in courses, growth in material structure The Economics Institute, the School of Sports; the Food Engineering School, the Agriculture School The Clinics Hospital is founded 1986. The medical course is transferred to the main campus The first evening course begins in 1988 (Mathematics) IBM 3090 computer is installed for the first time in a Latin American university The Central Library is installed 1989 | The Quality Project 1990 Administrative reform UNICAMP building area increases 80,000 m2 50% Increase in PhDs compared to 1989 (1991) Eight new evening courses 1992 PhDs increases to 77% in 1995 and 85% 1998 7,202 students enrolled at postgraduate level 1995 The Clinical Hospital's 500th kidney transplant FCM Curriculum Reform Commission 1999 |
| FCM / PUC | Prof Carvalho starts at FCM 1967 | Prof Botelho graduation FMRP 1971-76 Prof Almeida graduation FCM 1972-77 Prof Guariento graduation FCM 1973-78 Prof Gontijo graduation UnB 1974-80 Prof Wanderley graduation FCM 1975-80 Prof Barone graduation PUC 1976-81 Prof Carvalho leaves FCM 1977 Prof Almeida leaves FCM 1979 | Prof Alegre graduation FCM 1978-83 Prof Teixeira graduation PUC 1978-84 Prof Almeida returns to FCM 1988 | Dr Domingues graduation PUC 1993-98 Dr Baffa graduation PUC 1994-99 Dr Campos graduation PUC 1995-00 Dr Costa graduation FCM 1996-01 FCM group doctorate degree PUC curriculum reform 1998 FCM curriculum reform 1999 |

Table 3. Key events at international, national, state, UNICAMP and group level 1960s-1990s.

As the research and analysis of interviews progressed it became apparent to me that the fate of Prof Carvalho's teaching methods was inevitably tethered to the fate of the university in which he served. When we look at UNICAMP history, for example, and contrast it with the list of events in Table 3 and the interviewee portrayals we can clearly see points of both disruption and continuity. The very nature of UNICAMP as a university primarily oriented towards research and technical development attracted a large contingent of foreign scientists and Brazilian researchers living abroad. Also, the circumstances of the FCM (it had remained separate from the university campus for nearly 20 years) had implications for its development – and this cannot be underestimated. As it was highlighted in Section 5.6 this was the strategy Prof Vaz had chosen. In order to dedicate himself to UNICAMP, and helped by distinguished professors from USP and FMRP, he left FCM to the attention of the local medical community. It was also notable at the time that the nucleus of FCM remained provincial and oriented towards local interests.

This situation started changing when the FCM moved into the university campus and occupied the enormous HC headquarters. The various accounts showed the need for a change in the faculty's mentality and culture; it was necessary considering the huge differences in the quality of care and research brought into the new hospital. What had only been medical assistance for a disadvantaged population delivered at Santa Casa – an old hospital lacking equipment and space – became a tertiary-level modern hospital, able to receive patients from across the Campinas metropolitan region. However, according some respondents, the overall results of the undergraduate course at Santa Casa seemed better because of the close relationship between teachers and students; noticeably there was a gap between the quality of teaching and the available resources. It was argued that the move to a 'bigger house' with improved resources also belittled ideas and values. For the school's faculty it was not just about occupying new physical areas and experiencing changes in the organisation of services. It went far beyond just occupying spaces; it meant having to reposition themselves in academic life.

QP was probably the turning point – it demanded that all university teachers had to have a doctoral degree. Most of those in the FCM did not even have a master's

degree. One interviewee also recorded in a striking statement that at the FCM getting qualified as a teacher took a very long time. As a result, the teachers felt alienated from the undergraduate course. Once graduated with a doctorate degree, they felt their status as researchers was comparable to that of colleagues historically associated with scientific research, such as was the case in the Biology Institute or the Institute of Physics. Nonetheless, the QP must be understood within the scope of the post-graduation government policies and the agenda of the 1990s, when governmental agencies adopted assessment policies at all levels of education in order to comply with policies emanated from international funding agencies – The World Bank, for example. With regard to the universities, CAPES, the funding agency of the Ministry of Education played the leading role in assessing postgraduate programmes at national level, establishing a triennial evaluation of the system⁴².

The interviews and the data displayed in Table 2 (p.169) showed that the FCM developed strategies in an attempt to catch up with other units at UNICAMP and they quickly reached the QP targets. It is notable that recently the school has become a leading unit in medical research. The data of this research, although limited to the IMS group in the DCM, corroborates a previous study by Montagner (2007) analysing the ‘habitus’ (according Bourdieu’s approach) that prevailed in a cohort of teachers from various departments at the FCM. In his study, Montagner found three different periods shaping the research at the school. The first, from 1963 to 1976, was named ‘initial’, ‘romantic’ or ‘of the founders’; it was also the result of a strong demand for medical services and the main concern was installing the course within the appropriate disciplines. The course was organised and deployed by local professionals that had developed or conformed to the existing infrastructure in a relatively autonomous way. The second period ran from 1976 to 1990, when the faculty established the first postgraduate courses and professionals developed strategies for conducting initial research. During this period, the training of adequate human resources, the establishment of graduate programs and well-structured research lines took place. Montagner named this period ‘institutionalisation’,

⁴² Despite the controversy this rating system generated in the beginning, eventually the agency established itself as the most important source of scholarships in the country and overseas, by facilitating new areas of research.

‘structuring’ or ‘sedimentation’. The third period, which the author called ‘the stage of excellence’ or ‘dedication to research and the faculty itself’, ran from 1990 to 2006. This period saw the establishment of strict standards of research, high levels of teacher recruitment and a significant increase in scientific publication.

A broad contextual picture emerges when the stages of development at UNICAMP in the last four decades (shown in Table 1, p.58) are juxtaposed with the three periods of development at FCM proposed by Montagner (2007). The contrast is shown in Table 4 (p.178) – here the waves of change can be examined. At the top of the table the stages of development at UNICAMP and the main events are displayed; at the bottom are the stages of development of the FCM, according Montagner (2007).

The initial years of the installation of UNICAMP, shortly after the establishment of the FCM and the medical course, allowed for some innovations and the emergence of pioneering leaders, like Prof Carvalhal. It was the 1960s-1970s, an idealistic and experimental period worldwide but in Brazil a time of military dictatorship. This period matches Montagner’s ‘romantic founder phase’ at FCM, until mid 1970s. The years that fall between mid 1970s and late 1980s have sealed, so to speak, the fate of innovation. This period is characterised by continuous growth in the university, although it also faced the economic recession. UNICAMP faced the statutes reform, the institutionalisation, financial autonomy and an administrative reform, which repositioned it in a new period of growth. FCM moved to campus and adapted to the academic career requirements, establishing postgraduate courses and the first forays into research. The re-democratisation in the country found UNICAMP seeking to reposition itself in the university milieu at national level (and years later, at international) and the FCM seeking to adhere to the new model of standards required for research. The last column in the table, showing the decade from 1990 to 2000, is the period when UNICAMP established a long term planning that included the Quality Project, increase in research and publishing, professionalisation of staff, internationalisation, coinciding with a period of ‘excellence and consecration to research’ at FCM.

| | 1960 – 1970 | 1970 – 1980 | 1980 – 1990 | 1990 – 2000 |
|----------------|--|---|--|---|
| UNICAMP | Creation of UNICAMP (1966) Modern university Pioneers Innovation University Reform (1968) | Expansion of courses Creation of new faculties Departmental organisation Vice-Chancellor Vaz retires | Institutional crisis Prof Pinotti Vice-Chancellor Statutes reform Clinics Hospital inaugurated Economic recession in Brazil Financial autonomy Administrative reform | Quality Project launched (1990) Research Publishing Professionalism Managerialism Increasing visibility Internationalisation |
| | 1963 – 1976 <i>Initial period, romantic, the founders*</i> | 1976 – 1990 <i>Institutionalisation, structuring or sedimentation*</i> | | 1990 – 2006 <i>Excellence / consecration of research*</i> |
| FCM | Demand for medical services and medical school Installation of the medicine course (1963) Local professionals hired to school Autonomous process in relation to UNICAMP | First postgraduate courses are established Strategies to conduct initial research Training of adequate human resources Creation of graduate programs Well-structured research lines established | | Setting of strict standards for research High levels of requirement for recruiting Great increase in scientific publication Monitoring and assessing |

*According to Montagner (2007).

Table 4. UNICAMP and FCM stages of development.

The input of professionals graduating from universities with a strong tradition in research and studies abroad who could supervise graduate students was a decisive factor in achieving the qualification of the FCM faculty, as Part III showed. This was the case of Prof Botelho, Prof Gontijo, Prof Ferreira Costa (Prof Botelho's husband), and Prof Saad (the latter two were not portrayed in the thesis). This policy was carried out in all departments, but it was precisely at the DCM that a cohesive, politically tuned in group emerged. In subsequent years this group occupied leading positions at FCM and UNICAMP, with branches in agencies outside the university, as was the case with FAPESP, as displayed in the table below.

| Prof Ferreira Costa | Prof Saad | Prof Gontijo |
|----------------------------------|--|--|
| Post-doctoral Yale 1989 | Post-doctoral Harvard 1992 | Post-doctoral Iowa 1994 |
| Dean FCM 1994-1998 | FCM Postgraduate Coordinator 1996-1998 | FCM Postgraduate Coordinator 1998-2002 |
| Dean of Research 2005-2009 | FCM Dean 1998-2002 | FCM Deputy Dean 2002-2006 |
| Deputy Vice-Chancellor 2005-2009 | FAPESP Deputy Coordinator 2005 | FCM Dean 2006-2010 |
| Vice-Chancellor 2009-2013 | FCM Dean 2010-2014 | |

Table 5. Key positions occupied at UNICAMP, FCM and FAPESP by FCM professors.

Further changes at UNICAMP from the 1990s on, towards a rationalisation of resources, modernisation, productivity and research coincided with Montagner's period of 'dedication to research' at FCM. During this period, the UNICAMP administration was noted for its pursuit of professionalism and achieving a positive impact on society. When financial autonomy was granted to the three state universities in São Paulo in 1989 (seen in Section 5.6), criticisms were raised that they were unproductive and consumed valuable resources which should have been dedicated to basic education. In order to fit the new budgetary policy and be more socially responsive, UNICAMP underwent an extensive administrative reform, creating new courses and increasing students' enrolment (without increasing the

number of teachers). Ambitious targets of internationally refereed publication were set and, most recently it was launched its internationalisation project. FCM spearheaded this phase and was one of the units that stood out during this period. Prof Ferreira and Prof Saad, for instance, published over 200 papers in international journals, both with high index citation. The term ‘dedication to research’ certainly applies to two different news items highlighted in the university web page; the first dated 11 November 2007, and the second a couple of years later dated 25 January 2010, whose excerpts follow⁴³.

[08/11/2007] World ranking of 200 universities includes USP and UNICAMP.

The University of São Paulo (USP) and the State University of Campinas (UNICAMP) were included in the ranking of the top 200 higher education institutions in the world published by *The Times Higher Education Supplement*. USP occupies the 175th place, tied with the University of Massachusetts, Amherst. UNICAMP was in 177th place, tied with University College Dublin. UNICAMP inclusion in the list represented a big leap. In 2006, the university was in 448th place in the ranking.

[25/01/2010] UNICAMP has been invited to submit candidates for the Nobel Prize in Physiology or Medicine 2010.

This unprecedented invitation was received by the Faculty of Medical Sciences (FCM) and it puts UNICAMP on an equal footing with internationally renowned educational institutions such as Cambridge, Oxford, Massachusetts Institute of Technology (MIT) and Harvard that participate regularly of the indication of names in different areas of expertise for the award. ‘For UNICAMP to be seen as an accredited institution in the nomination for the Nobel Prize is a sign of recognition of the work of our researchers, particularly at FCM. This is a matter of pride,’ commented the Dean of Research at UNICAMP, Pilli Ronaldo. According to the Dean of FCM, José Antônio Rocha Gontijo⁴⁴ one of the reasons for the faculty entering was the international impact of its research. From 2004 to 2008, FCM published 4,318 articles and abstracts in international journals and over 5,000 in national journals, in addition to books and patents. In 2009, UNICAMP’s medical department gained two Centres of Science and Technology, one for diabetes and the other focusing on blood studies.

These are just some of the historical elements that help to explain how educational institutions can be shaped by external forces and how institutions respond to them. Let us proceed with the remaining topics.

⁴³ Translation to English by the author.

⁴⁴ Portrayed in the thesis (p.131).

10.2 The life cycle of innovation

Innovation in new institutions

The life cycle of Prof Carvalho's unique method connects to the institutions he worked for or collaborated on from the beginning. The first was EPM, where he graduated in early classes and worked for almost 37 years. At EPM, he developed a new teaching method supported by his mentor, Prof Ramos. Nevertheless, when Prof Ramos retired, EPM were increasing the size of departments and related disciplines and Prof Carvalho began to experience resistance. During the 1960s when the state of São Paulo created UNICAMP and Prof Vaz looked for 'brains, brains and brains', i.e., pioneers and innovators for his university, Prof Carvalho joined the organisation brandishing his flag of 'subject integration' with a view to correct the flaws in medical education.

At FCM, he faced strong resistance from the beginning and despite the extensive academic reputation he had achieved among students and colleagues, he was not able to fulfil his plan, except in Internal Medicine & Semiology which he was coordinating at the time. In addition, as Head of the DCM, Prof Carvalho realised while he was supplying teachers that the integration waned when they began to focus on their own expertise and skills.

When Prof Carvalho moved to PUCC, a private, non-profit Catholic university, he had positive expectations of finally being able to lead a single department of Clinical Medicine and Pathology. Nevertheless, it was not long before he came to the conclusion that his proposals had fitted the institution's early years but everything had changed as soon as the new school was ten or 15 years old, post establishment and institutionalisation. Therefore, the first feature of the life cycle of innovation was that it worked in the early years of the institutions, when they were establishing themselves and experiencing some innovation in curriculum and organisation.

Patterns of resistance – faculty, students and managers

In 1968, the University Reform made the organisation of universities in Brazil similar to the American model. The discipline became the smallest teaching unit within the departments; the institutes and faculties were formed of specialised departments; the credit enrolment system was created; the cathedras were abolished, and every course had a minimum curriculum in terms of numbers of hours and disciplines. The rapid growth of UNICAMP as an alternative to USP in the São Paulo interior challenged its leaders to consolidate teaching and research within academic departments, laboratories and the administrative framework.

At FCM the response meant following the USP matrix and its subsidiary FMRP (both shaped under RF's influence, as seen in Chapter 5), where the first professors came from. The curriculum organisers sought to copy what the best medical schools had been doing at the time. The departmental organisation showed no sign of innovation and creativity, but rather that of homogenisation. As pointed out in Section 7.4 by an interviewee, nobody supported the idea that a place at FCM meant membership of a single, integrated department, as proposed by Prof Carvalho during his Deanship. People wanted to join UNICAMP and become a professor linked to a specialised department or area. Prof Carvalho inadvertently challenged these boundaries and the power attached to them – but wherever he was located he was likely to face an inflexible wall of defence.

The increase of clinical and surgical specialties in the labor market was greatly influenced by the growth of private medical insurance, the pharmaceutical and medical equipment industries. Furthermore, the creation of medical societies and professional associations brought to the curriculum field an array of participants, with varied interests. As Section 7.4 showed, the departmental organisation at FCM fitted career interests, academic status and funding rather than the intended 'general doctor education and training'. The same process happened at PUCC, according interviewees. Little by little anatomical-clinical integration lost out to specialties in the department and respective curriculum disciplines. This happened in other medical departments too, once they too were part of the newly established university's institutional process of growth and organisation. This process of subject autonomy,

academic prestige and allocation of resources was theorised by Goodson and Dowbiggin (1994)'s analysis of the history of Psychiatry and Geography and Sciences in the English secondary courses. According to the authors,

‘[...] the evidence suggests that the tendency to a more academic qualification is animated by the professional desire to acquire the mystique of specialisation, which assures a monopoly of power, resources and prerogatives in a specific sphere of occupational practice.’ (Goodson & Dowbiggin, 1994, p.50)

With regard to Psychiatry, the authors highlighted the existence of a ‘widening gap between the changing form and content of professional knowledge and the needs and interests of the clients/patients/pupils whom professionals were originally committed to serve’ (Goodson & Dowbiggin, 1994, p.46). Such a hypothesis was the case in the curriculum and departmental organisation of the FCM and PUCC.

The faculty (pathologists and clinical specialists) opposed Prof Carvalhal’s ideas. Curiously, some of the opposition was not centred on the value of his methods – on the contrary. All respondents, even those opposing, agreed that his method helped promote integration and facilitated teaching in various ways. The main factor for resistance was centred on competition for subject territories in curriculum and the related institutional forms, i.e., departments or related disciplines in the academic and administrative framework. The reasons for resistance may therefore be viewed as variations of the main pattern, offset by a range of factors: the struggle for power, financial resources and subject status, adhesion to differing paradigms, namely at departmental or school micro-political level, and of course career policies.

Several factors contributed to the students’ resistance of Prof Carvalhal’s general education proposal and it is clear that it was viewed by some interviewees as a matter of tradition and authority. The disciplines depended highly on the professor’s influence so that those holding political links were decisive and powerful and negotiated higher hours with the corresponding materials and human resources. While being praised on the undergraduate course there were also suggestions that Prof Carvalhal was fairly extreme. The students’ short-term interests and expectations about the future and the impact of the labour market seemed to be most

important to them. They felt they were missing valuable skills while others were succeeding in specialist careers outside the university. The aura of glamour, status and wealth that some medical specialties exerted should not be underestimated – in the context of the 1960s-1970s the status of specialists was a key factor in occupational choice (Becker, Geer, Hughes and Strauss, 1961 and Nunes, 1976).

It did not take long before specialists began to enjoy the high status inside and outside the medicine school associated with financial success – a situation which would shape the trends toward residency course application at national level. This slowly started to change over the last decades when Brazil's state health system reinforced primary care, creating, for example, a residency in family medicine and funding for the Family Medicine Program. Nonetheless, specialties valued by industry and market continued to be the main trend in residency exams, to the detriment of the actual needs of society and the government health policies⁴⁵.

Despite PUC's promising start and Prof Carvalhal's creation of a single Department of Pathology and Clinical Medicine, territorial subject wars started as the school grew. In the private, non-profit Catholic school the innovation also suffered administrative and financial reorganisation setbacks from the late 1990s on as human and material resources were streamlined and the university repositioned itself in the competitive educational market. Thus, PUC fired the teachers with historical ties to the medical school; temporary contracts became the norm and hospital beds reserved for training purposes were given to private insurance. In addition, curriculum reform adopted a student-centred learning methodology (though for an alienated student body as highlighted by an interviewee in Part III) and this proved effective only in that it reduced costs and made ends meet.

⁴⁵ According to the FCM website, for example, the specialties with highest ratio of applicants per vacancy in the 2011 Residency exams were the following (with the place in rank in 2010 and 2009 in brackets): Neurosurgery (4-2); Ophthalmology (5-5); Radiology (2-1); Neurology (3-7); Clinical Medicine (compulsory for a subsequent specialisation) (7-6); and Otorhinolaryngology (9-4). For specialties requiring prior residency in Clinical Medicine or Surgery the results were Endocrinology (1-1); Plastic Surgery (1-1); Urology (2-2); and Gastroenterology (2-3). On the other way, Clinical Medicine shared the lowest ranks along with Preventive Medicine, Pathology, Geriatrics, Family Medicine, and Paediatrics (Faculdade de Ciências Médicas, 2011). This trend mirrors studies in US, where the proportion of graduates of medical schools choosing generalist residency training decreased from 50% in 1998 to less than 40% in 2004 (Schwartz, Basco, Grey, Elmore and Rubenstein, 2005; Newton and Grayson, 2003).

Replicating the innovation

At PUCC, Prof Carvalho founded the GECAC, the group of studies based on anatomical-clinical integration. Initially, it was a course aiming at graduates; later, it became a group of studies that offered extra-curricular activities and assistantship to fourth-year students interested in broadening their knowledge of pathology and semiology and also the possibility of a teaching career. Nevertheless, as the narratives show, ‘the method’ and the GECAC faced resistance and as a result its practice became increasingly restricted to the group.

On my first visit to GECAC, a glimpse of its physical spaciousness spoke for itself – the offices were a combination of iconographic museum and working area – the walls were dotted with Prof Carvalho’s diplomas and photos from the US. Next to the massive archive of autopsy slides old and solid shelves were filled with well used, heavy books; there was a large conference table, a refrigerator, a telephone line and a single computer. He could be found in this room when not visiting patients in the clinical ward or supervising autopsies. It was in this room that Prof Barone and Dr Teixeira had their lessons with few aides who remained faithful to the idea. GECAC could be called Prof Carvalho’s headquarters, and it had the air being a hive of industrious knowledge production – this was evident to me when I was allowed to attend the group seminars. It was then that I really understood the method and its impact, watching Prof Carvalho asking the students about their findings and drawing attention to the relationship between data and symptoms. However, I also became aware of the difficulties ahead for the method’s survival, beyond the confines of the GECAC.

As noted in statements from the PUCC teachers, there were several factors restricting the GECAC’s continuing training of teachers in the method and the lack of student was striking. The GECAC graduates – a highly skilled group, enjoyed the same status of teachers. Nevertheless, when the novice students had to engage in various overlapping disciplinary tasks on the undergraduate course, the enthusiasm and commitment tended to wane. For most of them, the GECAC was an extra-curricular activity that they took part in, in order to enhance their final undergraduate years and to pass the residency exams – it was not a passion – as it had been for Dr Domingues,

Dr Baffa or Dr Campos. For these old ‘Gecacians’, the group complemented, if not was vital to, the undergraduate course. It was a place for study, research and deepening the anatomical-clinical correlation method; a place where they built teaching skills and above all, a group that shared strong friendship ties.

The feasibility of attracting new students to the GECAC has been seriously jeopardised in recent years. Sustaining the survival of the group became restricted to a handful of enthusiastic supporters of the method and they were unable to attract and establish future generations. The group confined itself to the four walls of GECAC’s room and in a certain way it became a ‘ghetto’ – an island of academic excellence, unable to appeal to new learners.

Another aspect contributing decisively to the method’s poor dissemination was that it became restricted to the ABEM annual meeting and the like, and this was because it is not a regular graduate course (there is no postgraduate degree in medicine at PUCC). There is only one professor who holds a doctorate degree and is qualified to supervise masters or doctorate degrees in the group. The figures shown in Table 2 (p.169) expose the situation dramatically. The comparison between FCM and PUCC’s teachers’ academic achievements shows a quite quixotic scenario, a bit along the lines of ‘the last of Mohicans’ or ‘the amazing Brancaleone army’ (although ‘ghetto’, seems more than realistic). In fact, idealism, determination and selflessness were essential characteristics of the group, as symbolised in the characters of Don Quixote and Brancaleone.

Thus, after a shining start at new institutions, the innovation lost its strength and succumbed to internal resistance (other subjects, various student bodies, micro politics) and external resistance (allocation of financial resources, career policies). However, the difficulties inherent to the very innovation in terms of its dissemination have also played an important role in the life cycle of innovation and its fate.

10.3 Interests versus material conditions: the impact of individual choices in the fate of innovation

The impact of studying under Prof Carvalho's method

There is no doubt about Prof Carvalho's outstanding expertise and exceptional teaching skills – he affected greatly the students, even those who became specialists and not teachers. They learned Internal Medicine & Semiology in a different way; related anatomical disciplines, physiology, pathology were linked to signs and symptoms. But it is true to say that few of them – the true followers – fully adopted anatomical-clinical integration as a conceptual framework for examining patients, developing teaching skills, and even researching. As one of his followers explained in a striking statement, she did not even know there was a different way of learning medicine. In this sense, it could be argued that his conceptual framework formed a competing paradigm in medical education, to use Kuhn (1970)'s theory.

Nevertheless, the stories in chapters 8 and 9 showed significant differences in narratives to those who studied under Prof Carvalho on the undergraduate course or residency. The impact of studying under his supervision ranged from having a mentor gifted with knowledge and skills well above average, to watching a doctor dealing with patient in a very detailed and careful fashion, witnessing the real religious zeal and profound moral concern of a devotee. For who shared his views, he was a model doctor and teacher and they were loyal followers. Not surprisingly, Prof Carvalho's closest students were known as 'the Carvalhetes' or 'the Silvetes' (referring to his first name, Silvio). As one of them said, 'Everyone wanted to be like him.' However, even amongst his true followers, only the PUCC group remained faithful to his method, resisting bravely all sorts of constraints.

Changes in lifestyle and career perspectives are particularly relevant to understanding the fate of innovation and its followers. In other words, the individual situation – personal quests were backdrops to the innovation. The way individuals perceived macro-level changes and translated them into micro-level agency demonstrated innovation in the local trajectory. Thus, events like marriage, children, living away from the parental family are examples of situations where making personal choices are most likely to be less risky. For instance, according to Prof

Barone, Prof Almeida's decision to return to FCM was expected because PUCC did not provide the stability of a permanent contract at a period of life when he was married and had small children. Thus he left PUCC and his master behind – aware that he was not going to work with the method at FCM. However, in Prof Almeida's case, personal factors and personality intertwined; personal features such as shyness and lack of boldness led to his taking few risks, preferring instead to follow the set script. Similarly, if we look at Prof Barone the fact that she got married to a colleague and had no children may have contributed decisively to her full commitment to Prof Carvalhal and the method regardless of status, scientific recognition or income, especially. By contrast young PUCC teachers like Dr Domingues, for example (despite her ardent enthusiasm and commitment to the method), she had to cope with the constraints of daily life, particularly financial ones. So when she got married and had her first child she left GECAC for a second job and started teaching in another school in order to balance her personal life with her work as a doctor, teacher and postgraduate student.

The mid 1980s was a period of accelerated growth for UNICAMP and for FCM it culminated in the building of the hospital school and moving to campus. The university recruited the majority of faculty members from those who completed their undergraduate degree or residency (now, many of them have reached the retirement age and some have died), like my interviewees. Nevertheless, it was also a period when Brazil was going through one of its worst economic recessions, with high inflation, steep unemployment rates, a sharp drop in investment and unbearable external debt, as shown in Table 3 (p.174). The university was building the massive HC and an employment contract at that time must have represented an extraordinary opportunity and safe start for many of new doctors, regardless of vocation or teaching profile. At that time, it was no longer the case of Prof Vaz looking for 'brains' but the university and hospital expanding and selecting students who wished to stay. This was confirmed by data showing the two periods when former students recently graduated remained at FCM (Montagner, 2007). The first was 1976 and 1977, with rates of 10.7% and 8%, respectively. The second period covers 1981 to 1984, with consecutive years of fixation rates of 9.3%, 6.7%, 12% and 6.7%, respectively, in groups of 90 students on average.

It was also in early 1980s that my story with UNICAMP began, when I moved to Campinas and started to work at CODETEC – a technology project company based at the university campus. My then husband took over the medical course that had been shut down in Brasília in 1978. Like my interviewees, many of the young researchers working at CODETEC also started a teaching career right after graduation. Others had started graduate school, encouraged by the chance of getting a state scholarship. During a period of scarce jobs, staying at the university was a safe alternative and in certain cases the only way possible. Despite the fact that none of the interviewees mentioned the economic context of the period when they were hired, we must bear this context in mind and understand that some choices may not have been made through idealism, but for convenience or survival sake. They must have been asking themselves whether it was a good idea to follow a teaching career in a state university at that time when the wages were bad and chances for social mobility in the medical profession were limited.

The end of dictatorship: the rise in democratic decision making within educational institutions

Although the military dictatorship was barely mentioned by interviewees, its impact cannot be overlooked or underestimated. Reportedly, the fact that UNICAMP was kept away from police raids during those years had more to do with Prof Vaz's political alliances than the lack of opposing forces in the university. Accordingly, it could be said that UNICAMP had its own general and could dispense with the police. I myself witnessed in 1976 the brutal military raids at the halls of residence at UnB. But Prof Vaz used to say that he looked after 'his Communists' at UNICAMP. However, it did not mean his power was not challenged at times as it was in the case of a philosophy professor and the founding group of the Department of Preventive and Social Medicine. In both cases, he used the authority granted to him and summarily dismissed his opponents.

Brazil started a slow transition to democracy from 1978⁴⁶ onwards, although the universities were already going through internal changes that promoted a more

⁴⁶ The military dictatorship abolished the multiparty system; instead there were only two parties, the party supporting the regime and a weak opposing one. In 1978, the opposition defeated the ruling

democratic decision-making process, for example the increasing the number of teachers, students and non-academic staff representatives in higher decision boards. The crisis in 1981 at UNICAMP, for example, showed the enormous capacity to mobilize the university in defence of democratic values against the interventionist Governor of São Paulo, Paulo Maluf (seen in Section 5.8). Nevertheless, for many years UNICAMP still held a centralised structure that was to be only slowly dismantled.

During this process of internal democratisation the early professors brought in by Prof Vaz eventually were replaced by another generation occupying a decentralised system. Leading professors and pioneers like Prof Carvalho were the political targets of a rather emotional and distorted kind. In the case of Prof Carvalho, he preferred to leave the institution behind when the political climate became unbearable and he could no longer carry on with his teaching method. Above all for him it was a matter of belief and ideals against material and micro political interests. His background did not help either; having studied and lived his whole medical training within the austere cathedra system. And it is evident that at various times during the interviews he recognised personal difficulties with the new decentralised academic environment. Whilst recognising the importance of creating new areas to deepen knowledge he could not stand the loss of control and the apparent lack of respect.

Therefore, it could be said that with the process of re-democratisation in Brazil there was a corresponding decline of charismatic leaders in universities. The advent of new political parties in the Brazilian political scene affected the university political climate, creating strong internal divisions and power struggles. However, the dictatorial years left a wasteland in terms of political education and political leaders. The return of direct elections at all levels to a population that had been subjected to censorship and political control for 21 years had its failures. In the 1990s, for

party in elections to the House of Representatives, showing the extent of public anger. In 1979, the last military President signed the Amnesty Law allowing the return of hundreds of opposition figures and artists in exile; in the same year another act approved the return to multi-party politics. In the early 1980s, a massive public campaign took to the streets demanding the adoption of a bill returning direct elections for the Presidency. The bill was not approved, but in the next Electoral College both candidates were civilians; the winner was an opposition candidate. It was the end of the dictatorial period after 21 years.

example, it was extremely popular for people to call for the return of the military regime whenever an institutional crisis erupted, in an attempt to resolve the politician's ethical flaws. In this sense, the appointment of charismatic leaders like former President Lula showed that, in the case of Brazil's history and culture, this process may be cyclical.

10.4 The shift to research-oriented teachers and the impact on curriculum

Professor Carvalho's life story showed his concern for the quality of medical courses, and this in turn led him to develop the method of anatomical-clinical integration and a patient-centred approach. The importance and timeliness of his method is undeniable as it represented a critical school of thinking. In this sense, his thinking and legacy represented a pedagogical approach to medical knowledge – a concern for knowledge and the way it is taught to maximise the students' interests and understandings.

Prof Carvalho's history and the resistance he and his followers faced could be seen as representative of a different tradition within the subject, as theorised by Goodson (1997). The latter argued that every discipline or subject is a coalition of three kinds of traditions: the academic, the utilitarian and the pedagogic. The utilitarian relates to the qualities of what a person is going to become (for example, a doctor in the world), though Goodson avoided using the term 'vocation'. The pedagogic concerns itself with the way knowledge is taught and is accessed and with being a teacher. Once the pedagogic group sees itself primarily as teachers, their main concern is not about knowledge, but how to communicate and get knowledge across.

These findings also match a sociological approach. Bucher and Strauss (1976), while analysing the various identities, values and interests within the professions also claimed the emergence and development of opposing coalitions – these they called 'segments'. Focussing on the example of physicians, the authors argued that these segments did not share the same values and were actually in conflict over, for example, the sense of mission, work activities, methodologies and techniques, clients and collegiality (Bucher and Strauss, 1976, p.19).

Examining the narratives of Prof Carvalhal and the teachers portrayed in this research it is reasonable to assume that these traditions are present in their stories and that each of them is identified and is devoted to a particular tradition. Nevertheless, as the narratives showed, eventually it was the academic view that prevailed in the establishment and development of the medical course at FCM. This tradition or view could be seen as the ownership of knowledge and its dissemination in accordance to internal and external demands, aimed at the production of science at a high level in a developing country. Interestingly, most respondents supported a comprehensive view of the patient – no one advocated the discipline model, but rather expertise in a discipline. However, identification with the pedagogical tradition was more prevalent in the group from PUCC.

The utilitarian and pedagogic tradition represented by Prof Carvalhal was displaced and priority was given to scientific research. In a non visible form of hierarchy, the academic tradition prevailed over others and was blessed with differentiated status. The groundwork of educating and training human resources was almost taken for granted, even in a field such as medicine – an area held in high repute and status. Within this context, it is not difficult to understand the difficulties some interviewees faced in their professional trajectory, such as Prof Alegre and Prof Wanderley.

Prof Alegre, a gifted teacher who was clearly interested in developing a research project on learning assessment resigned herself to laboratorial research in order to meet the career minimum requirements. Prof Wanderley, who was probably the last teacher in the IMS group to complete doctorate degree (his thesis was presented in December 1998), went for a part-time contract, because amongst other reasons, he wanted to concentrate on lectures about humanisation health care rather than researching. Prof Almeida is another example, as demonstrated when he recalled a talk where he felt looked down on because he had not published in English – this clearly highlights the personal effect that ‘academic racing’ has on quantifiable, personal outcomes. Though outstanding achievements in the development of scientific research have been achieved in Brazil, it is true to say that it has done little to improve teaching in undergraduate courses.

The unexpected result of the Quality Project at UNICAMP was that it helped to detach teachers from undergraduate courses, as pointed out by various interviewees. Basic activities and lessons were taken on by doctors working under contracts and residents from the last series. Students in late 1990s experienced the same thing and the yearly course evaluation questionnaires that I was responsible for demonstrated this. The most frequent complaint came from the intern students (fifth and sixth year) who noted that they were often taught by doctors and first and second year residents instead of professors. Although the former were reputed to be good professionals, teaching was not their role. The same situation was often reported by first year residents who often attested to supervision being done by doctors and residents of higher years instead of professors.

On the other hand, we can consider the PUCC group as mainly a pedagogic tradition and it was not surprising that it remained faithful to Prof Carvalhal's ideas and methods. Prof Barone, for example, having had the opportunity of a permanent contract at FCM, chose to return to PUCC despite the shortcomings of its being a small, private school. She did this so that she could follow her 'thesis and life supervisor.' Dr Teixeira declared himself as primarily being a teacher and then a doctor. He certainly expressed his disbelief and disdain for the idea that to be a good medicine teacher was necessary for research. Even the young teachers preferred to continue graduate studies in education, like Dr Domingues and Dr Baffa. The latter, for example, after finishing residency and securing a place to start her doctorate in the renowned Heart Institute in São Paulo, she ended up dropping out after concluding that it was not making her a better teacher or doctor. It seems that indeed at the PUCC, the pedagogic and utilitarian traditions prevailed.

The testimonials in my research showed that the pedagogical tradition was unlikely to make alliances with power, unlike the academic and the utilitarian, which frequently served it and was served by it, securing the blessings of a differentiated status, social visibility, hegemonic positions in instances of decision making, and above all, the power to dictate and legitimize the curriculum. The research data coupled with narratives suggest that the structures of political power in universities (with links and branches in funding agencies) prioritized a project that could bring

political gains, control, and also put the university on the lists of economic agents (within the neoliberal logic) by incentive to research of immediate economic interest.

The life cycle of innovation, as seen previously, cannot be looked upon as something autonomous, determined only by macro economical and social factors. It was in the juxtaposition between the macro economic, social factors and individual decision making (when material interests and ideals often collided) that the changes defining the sustainability of educational innovation happened.

Seen in this way, it broadens the scope of factors influencing changes in education. The life cycle of innovation played an important role but it was intertwined with material interests, the individual belief system, the macro economical factors, and the traditions in which the individuals found themselves.

So, ultimately, it returned to the individual decision – the life politics, the moral choices, where the aforementioned factors were contrasted to the individual belief system. This cycle, along with other individuals, resulted in a collective response and action – for or against the sustainability of change.

When re-examined, the narratives presented in the thesis within the broader context against the theoretical framework seen in Chapter 2, it followed that the educational changes come with cycles of changes of broader scope, whose *raison d'être* is often connected to economic power. This, however, does not mean a direct relation of determination. In fact – and the narratives of this thesis have shown, is the individual decision which becomes collective in response to the immediate institutional structure, that mediates actions within these immediate structures and between the latter and the macro structures above it.

Final remarks

This research sought to analyse the relationship between the individual and society in the educational process, focusing on medical teachers in two Brazilian schools – examining the fate of the innovative teaching model. I decided at the time that there was a need for extensive research into this and my method would be a close analysis of the narratives of individuals who had participated in, and experienced, the setting up and establishment of new universities in the state of São Paulo.

Alongside that I also wanted to further my understanding of the curriculum making process, look beyond curriculum as a prescribed process for training professionals and see how it shapes people's minds and also their attitudes towards their social and professional positions – this too would come through the interviews with participants.

The decision to embark on this research came when I was working on a curriculum reform commission at a Brazilian medical school. Here I came into contact with the work of Prof Carvalhal's and the school's innovative methods into Clinical Medicine. I was both fascinated and intrigued – I wanted to understand why this innovation, designed to integrate early disciplines in the clinical years, didn't survive at UNICAMP. Why for example, was it the case that for so many years a lack of integration was the main complaint of students?

Prof Carvalhal's method was original, innovative and improved drastically the way medicine was taught but why was it not enough to change the paradigm of medicine and medical education? The innovation served well at the inception of UNICAMP, but as soon as the institution stabilized and long term projects were set up, the cycle of the innovation followed the life cycle of the institution and was 'no longer innovative'.

These were questions that were forming the basis of my thesis; my method for achieving this was to undertake a series of life history interviews. The most effective way to understand the process was to pay witness to the life stories of those who were present, and involved in, Prof Carvalhal's innovative curriculum.

Through my analysis of the interviews I hoped to understand the trajectory of Prof Carvalho's innovative methods, its rise and fall – witness this process against the backcloth of the political and social context – perhaps supplying some answers through both, the individual personal choices or 'micro' and the bigger 'macro' picture.

Firstly, I had to go back in history and present an overview of the development of higher education in Brazil with its social, political and historical influences, particularly in terms of the medical schools in São Paulo.

Secondly, through the analysis of a whole set of individual interviews I could see patterns of responses at 'micro level'. They seemed to be following two paths: both continuity and change. The PUCC group – the true followers of the method proposed by Prof Carvalho represented continuity and a dedication to his innovation – 'the true followers'. The group of teachers from the FCM, though some holding strong ties with Prof Carvalho, had their intellectual profile driven by a hegemonic institutional project, historical context, the current scientific paradigm and goals set by higher education institutions. They had to quickly adapt to the requirements of an institutional project that prioritized research over teaching skills and we could say that the fate of the innovation at FCM was then sealed.

Thirdly, I aimed to uncover what kind of university indeed thwarted the innovative change? An excellent descriptor of this was the late Brazilian geographer and professor at USP Milton Santos. In a striking interview with the newspaper '*O Tempo*' in 1997 he reflected upon a process of endogeny he had been observing at the universities in Brazil – I share his view and I believe the findings of this thesis corroborate his criticisms. He warned that a network of commitments and 'back scratching' among permanent partners reduced considerably the vitality of academic life. In his view, the selfish desire for power in the pursuit of maintaining the status quo was not altruistic, or socially beneficial. According to him, 'the university endogeny wore its mantle at the expense of promoting criticism as part of the intellectual work.' In this way, the intellectual mission of innovation was hampered.

Finally, some remarks about the experience of working with life history as a research approach and method.

When I sent my respondents an invitation and a temporary title of my research, it was very apparent in the interviews that they mostly wanted to focus on their own personal careers – with only two exceptions. Secondly, though I worked with my research questions as my guide, it quickly became apparent that the sum total of my narratives would be naturally and thankfully extraordinarily extensive

As a researcher I also could see how entering into the process as a single researcher worked well – researching using life histories was actually better focused – more ‘open conversations’ would have required a bigger team.

Lastly in terms of the history of research in Brazil it was of interest hearing the narratives confirm how the cultural value and respect afforded to research (as opposed to teaching) has changed. The increased value attached is now accepted as a norm in Brazilian state universities – this was not always the case – and confirming this observation myself through the stories of those who lived through this change was interesting and a privileged viewpoint to have.

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