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Conversation, Design and Ethics: The Cybernetics of Ranulph Glanville[1]

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Abstract: One of the major themes of Ranulph Glanville's work has been the intimate connection between cybernetics and design, the two principle disciplines that he has worked in and contributed to. In this paper I review the significance of the analogy that he proposes between the two and its connection to his concerns with, firstly, the cybernetic practice of cybernetics and, secondly, the relation between cybernetics and ethics. I propose that by putting the cybernetics-design analogy together with the idea that in cybernetics epistemological and ethical questions coincide, we can understand design as not just a form of cybernetic practice but also one in which ethical questions are implicit.

Running header: Conversation, Design and Ethics
Keywords: Cybernetics, Design, Ethics, Conversation Theory

Introduction

One of the major themes of Ranulph Glanville's research, and especially so in the period I have known him (from 2005 onwards), has been the intimate relation between cybernetics and design, the two principle disciplines that he has worked in and contributed to. The close analogy he developed between the two (Glanville, 2006a, 2006b, 2007c, 2009b), in terms of their conversational circularity, is notable not just for brining the two disciplines to bear upon each other but also for unifying these two major strands of his own research.

In this paper I focus on this analogy and its significance. As well as noting some of the ways in which each discipline has the potential to inform the other, I emphasise connections with two of Ranulph's other major concerns within cybernetics: (1) with answering Margaret Mead's (1968) challenge that we practice cybernetics in accordance with its ideas; and (2) with the relation between cybernetics and ethics, on which Ranulph has written in this journal as well as elsewhere (Glanville, 2005, 2004/2009), and with which I was concerned in my PhD research as Ranulph's student (Sweeting, 2014).

Cybernetics and Design

I worked as research assistant to Ranulph when he guest-edited the *Cybernetics and Design* special double issue of *Kybernetes* (Glanville, 2007a) which set out to build bridges between the two disciplines.[3] In this intention, the issue followed on from many earlier examples of crossovers and influence. In architecture, my own field, the most notable

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examples centre on the work of Gordon Pask, Ranulph's mentor.[4] During the 1960s and 1970s Pask collaborated with the architect Cedric Price and theatre director Joan Littlewood on the Fun Palace project and with Nicholas Negroponte's Architecture Machine Group at MIT, while his Musicolour installation was a key influence on John and Julia Frazer's contribution to Price's Generator project.[5] Since that period the relation between the two fields had become obscured and, while the increasing possibilities of technology have led to a reawakening of interest in cybernetics amongst designers, this has often been, as Ranulph (2007c) notes, in rather "ancient" (p. 1177) cybernetics rather than an up to date understanding of the field. In organising this collection, and especially in his own contribution, Ranulph attempted to reconnect each field to the other, introducing cyberneticians to design and designers to cybernetics.[6]

If one of the motivations for the journal issue as a whole was with (re-)establishing the potential relevance of each field to the other, in the second half of his paper Ranulph proposed seeing them not just as being related but as closely paralleling each other, to the extent that "cybernetics is the theory of design and design is the action of cybernetics" (2007c, p. 1178). This claim rests on a close analogy between the sort of conversational circularity with which cybernetics is concerned, as explored especially in Pask's (1976) conversation theory, and the distinctive way in which designers work, as is particularly evident in characteristic methods such as sketching as well as more generally in modelling and drawing. Indeed, the way designers work is often understood as a conversation that they hold with themselves and others, such as, for instance, in the account given by Donald Schön (1983/1991), who characterises design as a "reflective conversation with the situation" (p. 76).[7]

The activities of conversation and sketching both share a circular form. In sketching, this circularity is created by our shifting perspective between looking and drawing in a way that parallels the turning around between listening and speaking in a conversation.[8] This enables evaluations of previous actions to influence present ones in a classic example of cybernetic feedback. The significance of this structure, however, goes beyond a cycle of iterations in pursuit of some goal. Just as a conversation, because of its interactive structure, tends to lead somewhere we could not have predicted in advance, so too the conversational interactivity of designers' drawing and modelling is one way in which they create novelty[9] and is what allows them to work in the complex situations which they commonly encounter.[10]

This tendency towards the new in a conversation follows from the way that meanings are not transferred between participants but, rather, participants construct their own understanding of the understanding of others, with the process taking the recursive form of "what I think of what you think I think, etc." (Glanville, 1993, p. 217). For instance, if, in a simple two person conversation, I begin by presenting some idea, the other participant does not simply have this transferred to them but builds their own understanding of what it is that I mean. They then present what they have understood back to me and, again, I construct my own understanding of their presentation. I can then compare this understanding (what I

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[4] Pask held a consultant post at the Architectural Association and it was here that he introduced Ranulph to cybernetics.

[5] As John Frazer himself notes (Furtado Cardoso Lopes, 2008, p. 58).

[6] It strikes me now, in writing this, that Ranulph was deeply concerned with making introductions, both in this sense and between people.

[7] See also the accounts of Cross (2007), Gedenryd (1998) and Goldschmidt (1991). Ranulph also notes a number of other parallels, such as a shared attitude towards error as neither good nor bad but endemic and a mutual concern with constructing the new, but these can each be traced back to the conversational analogy.

[8] The etymology of conversation reflects this, to converse being "to turn about with".

[9] The importance of novelty to designers follows from their concern with transforming existing situations into new ones. Ranulph also associates novelty with "delight", one of the key characteristics which architects try to achieve in their designs, dating back to Vitruvius' *Ten Books on Architecture* (I.iii.2, trans. 1624).

[10] On design as an approach to complexity, see Glanville (2007b; 2007c, pp. 1195-1196; 2011a).

understand of what they understood) to what I originally meant to communicate (see the diagram given in Glanville, 2009b, p. 432).

While we can repeat this process in an attempt to align these separately constructed understandings, it is not just (and often not even[11]) a way to reach agreement about existing ideas but, and more significantly in terms of the parallel with design, a way to generate new ones. Given that the difference between what participants understand is maintained throughout, we construct new understandings at every turn. We learn from the ideas that others present to us and from their comments on and criticisms of our own thoughts. We also often learn through misunderstanding, where we see a worthwhile idea in what someone says that was not intended. Perhaps most simply, we learn what is implied by our own ideas by seeing how they are interpreted and understood by others. This also occurs in conversations we hold with ourselves, as for instance in sketching.[12] When sketching, the designer simultaneously plays the roles of speaker (drawing) and listener (looking), switching roles between the two. Looking at what they have drawn they see some new possibility not previously intended and which can be developed further (Glanville, 2007c, p. 1189). In this sense designers' drawing is an integral part of their thinking, not a representation of ideas constructed previously.

While in one sense the feedback process of sketching allows designers to pursue some idea, as with conversation, this idea is not fixed at the outset but is developed through the process.[13] As Denys Lasdun (1965) put it, in remarks which are often quoted (not least by Ranulph), the architect's "job is to give the client, on time and on cost, *not* what he wants, but what he never dreamed he wanted and when he gets it, he recognizes it as something he wanted all the time" (p. 185). While this is sometimes read as a paternalistic claim to genius or expertise, it is better thought of as indicating the way that, in trying to achieve some idea, we revise not just the attempt to fulfill it but also the idea itself, having learnt more about it and the situation just as a conversation changes course through our participation in it.[14] Indeed, Lasdun's remark can be extended to apply as much to designers as to their clients, with new possibilities created as part of the process which designers could not have anticipated in advance.

From cybernetics to design and design to cybernetics

The point that Ranulph makes with this analogy concerns what is special and distinctive about design. As such, bringing cybernetics and design together is not about changing what designers do but, rather, about recognising the value in what is already being done and supporting it. In this it is different to many of the encounters that design has had with theory, where the task of theory is taken as correcting or reforming design in new ways. This is especially the case with architecture, which has a tendency to import theories external to itself in an attempt at reinvention or justification, often with the consequence of distorting the questions at hand.[15] In contrast, rather than cybernetic theory being something to be applied to design, the analogy with conversation positions cybernetics and design as

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[11] While we can try to reach agreement we will often abandon the attempt either through frustration or, alternatively, through the agreement to disagree (Pask, 1988, p. 85).

[12] In Pask's conversation theory, the psychological-individuals, the participants in a conversation, are not in one-to-one relationship with the mechanical-individuals in which they are embodied. One may therefore have a conversation with oneself (as in sketching) taking different points of view in turn, while a group or organisation may act as one participant.

[13] That is, the conversational circularity of cybernetics is not optimisation, which, as Negroponte (1975) has noted, is something "extremely antagonistic to the nature of architecture" (p. 189).

[14] In the same article, Lasdun also notes that the "worst work our office has ever produced" is the "competition work where there is a programme which is half-baked and there is no exchange of ideas" (p. 195); that is, where there is no client with which to converse (see also Cross, 2007, p. 52; Glanville, 2009b, p. 427).

[15] This is most notably the case with the misguided attempt of the Design Methods Movement to scientise the deign process; see Gedenryd (1998). See also Glanville (2004).

coinciding with each other, a point that is reinforced by the designerly nature of much cybernetic research, such as that of Pask, where ideas are explored performatively through the construction of experimental devices (a quality which has been emphasised by Pickering, 2010). This reinforces design's disciplinary foundations, articulating its implicit epistemology (Glanville, 2006a, 2006b) and helping us see the sometimes contested relation between design and research in designerly terms (Glanville, 1981, 1999).

The nature of this analogy means that, as well as bringing cybernetics to bear on design, design can also contribute to cybernetics, thus informing theory from practice as well as practice from theory (Glanville, 2014). While there are many ways in which ideas from design practice are relevant to cybernetic questions, perhaps the most significant of these is in answering the challenge Mead (1968) set the American Society for Cybernetics (ASC) at its inaugural conference, that of applying cybernetic ideas to cybernetic practice. This was of increasing importance to Ranulph in recent years, in his role as president of the ASC, where he proposed alternative conversational conference formats as well as running a competition in response to Mead's question, won by Mick Ashby (Glanville, 2011b; 2012, pp. 197-210). While the most obvious legacy of Mead's challenge was the epistemological concerns of second-order cybernetics, as developed by Heinz von Foerster and others, in Ranulph's interpretation this question was more about the value of cybernetic performance, similar to that he sees in the way designers work. If we understand cybernetics and design as the theory and practice of each other, then the cybernetic practice of cybernetics must look very like design, as indeed do many of the examples that Pickering (2010) discusses. The significance of this parallel is heightened by the way that design is at home in often complex, ill-defined and ethically charged circumstances, demonstrating how we can act cybernetically in situations where such a suggestion might otherwise seem overly optimistic.

Cybernetics, Design and Ethics

Towards the end of his contribution to the special issue, Ranulph connects his cybernetics-design analogy to his earlier reflections on the relationship between cybernetics and ethics (2007c, p. 1197-1198). In his (2004/2009) article "Desirable Ethics", Ranulph argues that the central mechanisms of cybernetics—such as the black box (another longstanding concern of Ranulph's cybernetics; see Glanville, 1982, 2007/2009, 2009a) and conversation amongst others—depend on qualities that are commonly taken to be ethically desirable: generosity, honesty, learning, mutuality, open-mindedness, respect, responsibility, selflessness, sharing and trusting. The structure of this argument reflects that of von Foerster (1974/2003), who understood ethical considerations as coinciding with cybernetics. This is what underlies Ranulph's deep concern with both Mead's challenge and design practice: to act cybernetically, as Mead proposes and as designers do, is to act out these ethical qualities.

Ranulph's careful framing of this argument is worth noting. He avoids going beyond a descriptive account of ethics, referring to values that are seen as desirable rather than to what "is" ethical. In so doing he avoids the way that, as von Foerster (1992, p. 12) points out, speaking explicitly about ethics can lead to moralisation. What von Foerster proposes in response to this is that we keep ethical considerations implicit in our acting, avoiding articulating them explicitly. In particular he emphasises two points, both of which build on the inclusion of the observer in second-order cybernetics: taking complete personal responsibility and participating in dialogue with others (pp. 13-18). While von Foerster's account associates dialogue directly with language, we can also understand it in terms of design, as per Ranulph's analogy between design and conversation. In this way, putting the relationships between cybernetics and design and cybernetics and ethics together, it is possible to see design *via cybernetics* as an activity in which ethical considerations are implicit and, therefore, as a way of responding to the challenges which von Foerster raises (see Sweeting, 2014).

Conversation is, in words which von Foerster (1991) credited to Victor Frankl, a thinking "through the eyes of the other". Similarly, design, because of its conversational

structure, involves the consideration of others.[16] While this is partly in its explicit attempts at participation, such as consultation with stakeholders etc., it is also, implicitly, in the conversations that designers hold with themselves. When drawing, architects "walk through" their plans in order to imagine how what they have drawn would be experienced, putting themselves in the place of absent others, many of whom (passers-by, future users) they will not be able to meet (Kenniff & Sweeting, 2014; Sweeting, 2014, pp. 106-110). Whereas ethical considerations are often thought of as external to or even as in conflict with design, this consideration of others is indispensible to what designers do. This is not to say that the way designers act is necessarily "ethically good" but that it is, at least potentially, ethical in the sense of involving ethical considerations within it (that is, in the sense that an ethical question is a question concerned with ethics rather than an "ethically good" question). In this way, design provides us with an example not just of cybernetic practice but also of a way of acting, applicable in complex circumstances, where ethical considerations are implicit.

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[16] As well as our relationship to others, which I focus on here, this argument can be extended to personal responsibility (design having no right answers, we are ultimately responsible for what we decide) and the pursuit of goods (goals) internal to action (which is enabled by design's circularity).

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