

# architecture and undecidability: THE UNDECIDABILITY OF HUMAN PURPOSE AND THE DIFFICULTY OF DESIGNING-FOR-OTHERS

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## INTRODUCTION

*The possibilities of virtuality have exposed architecture's lack of criteria and the possibility of designing architecture which varies over time prompts a reconsideration of architectural purpose. Cybernetics, existentialism and teleological ethics are areas of theory which explore different aspects of purpose and can be used to shed light on design although design itself has much to give to theory.*

Anything is now possible in architecture. The infinite possibilities of virtuality mean that traditional methodologies of form and function, the limits of materials and cost effectiveness no longer hold (Spiller, 2007, p. 4). A virtual architecture can be any one thing as easily as any other thing; this is a world with a discomfiting absence of criteria where, to echo Dostoevsky's *The Brothers Karamazov*, 'all things are lawful' (Dostoevsky, 1879). I believe that this lack of criteria exposed by the endless possibilities of virtuality – by the fact that when we can do anything we do not know what to do – is actually a fundamental characteristic of design, i.e. a general characteristic and not only applicable within the limitlessness of virtuality.

Of the several technological possibilities which challenge traditional architectural reasoning, the most challenging, and perhaps also the most modest, is the potential to design architecture that varies in some way with time. This means that a piece of architecture may be designed to relate to its use continually in real time – so that it no longer need be a compromise between different uses at different times – and that it may attempt to improve itself with reference to some designed goals. These possibilities call for a reconsideration of the role of purpose in architecture: the relation between the purpose of an object and the human purposes it is motivated by, and the possibility of an architecture which itself acts purposefully.

I will look at three quite different areas of theory related to the idea of purpose: (1) cybernetics, (2) existentialism and (3) teleological ethics. Cybernetics, and particularly second-order cybernetics (I will refer mainly to Heinz von Foerster), deals with purposeful behaviour. Existentialism (I will mainly refer to Jean-Paul Sartre) is an attempt to cope with our lack of externally validated purpose. 'Teleological ethics' (I am thinking particularly of Alasdair MacIntyre's neo-Aristotelianism) is an account of ethics based around the idea of human purpose. While it would not be correct to understand these three areas of theory as part of ethical philosophy, they do all have ethical implications, even if, in the case of cybernetics, this is that 'ethics cannot be articulated' (Foerster 1995, citing Wittgenstein) and, in the case of Sartrean existentialism, that ethics is 'both necessary and impossible' (Sartre, quoted by Cox, 2006, p. 87). I am not though proposing that these areas of theory are enough to frame some kind of order for us in which it will be easier for us to design. In fact I think that the activity of design has a great deal to give to theory in general and to ethics in particular.

## THE PROBLEM OF DECIDING WHAT TO DO

*In a world on competing authorities, the chooser must be his own authority. This situation is distinctly modern and is a source of crisis.*

There is a problem of deciding what to do in a world without definite criteria or constraints; without any one authoritative framework in which to make decisions we find that we can choose anything and must therefore choose for ourselves, taking responsibility for what we decide. There is in fact no shortage of would-be-authoritative ideologies, doctrines or philosophies, but their sheer multiplicity means that they are only authoritative if we choose to make them so. The theologian Paul Tillich describes this situation in a sermon entitled 'By What Authority?':

But if the authority is split in itself, which authority decides? Is not split authority the end of authority? Was not the split produced by the Reformation the end of the authority of the Church? Is not the split about the interpretation of the Bible the end of the Biblical authority? Is not the split between theologians and scientists the end of intellectual authority? Is not the split between father and mother the end of parental authority? Was not the split between the gods of polytheism the end of their divine authority? Is not the split in one's conscience the end of the authority of one's conscience? If one has to choose between different authorities, not *they* but *oneself* is ultimate authority for oneself, and this means: there is no authority for him.

This, however, creates the dreadful alternative of *our* historical period. If there is no authority, we must decide ourselves, each for himself. As finite beings we must act as if we were infinite, and since this is impossible, we are driven into complete insecurity, anxiety and despair. Or, unable to stand the loneliness of deciding for ourselves, we suppress the fact that there is a split authority. We subject ourselves to a definite authority and close our eyes against all other claims.

(Tillich, 1956, p. 86)

This is a distinctly modern phenomenon: as Terry Eagleton remarks, discussing Isaiah Berlin, '...what characterises the moral order of modernity is our failure to agree even on the most fundamental questions' (Eagleton, 2003, p. 229). The situation we find ourselves in today is what I, following Heinz von Foerster, term as undecidable – there is no way in which to decide what to do, so we have no choice other than to decide for ourselves.

## UNDECIDABILITY

*There are decidable and undecidable decisions. Only undecidable decisions can be decided. The decidability of a decision is not fixed but is a property of the framework of the question.*

In 'Ethics and Second-Order Cybernetics', Heinz von Foerster distinguishes two kinds of decisions – those which are decidable and those which are undecidable (Foerster, 1995). Decidable decisions, such as a simple problem in arithmetic, are already decided by the framework in which they are asked. Undecidable decisions – von Foerster's example are metaphysical questions such as 'how did the world begin?' while I would like to also add evaluative questions such as 'what colour shirt is it best to wear?' - are those that do not imply their own answers and must therefore be decided.

Indeed, it is 'Only those questions that are in principle undecidable, we can decide' because 'the decidable questions are already decided by the choice of the framework in which they are asked, and by the choice of rules of how to connect what we call "the question" with what we may take for an "answer" ' (Foerster, 1995). An undecidable decision however is not decided already by the framework in which it is asked and we are therefore free to resolve it as we choose. As von Foerster writes '...we are under no compulsion, not even under that of logic, when we decide upon in principle undecidable questions. There is no external necessity that forces us to answer such questions one way or another. We are free!' (Foerster, 1995).

It is the framework within which a question is posed which determines its decidability. It follows therefore that some questions may be decidable or undecidable depending on where they are asked, and this is generally true of the evaluative ethical questions with which I am most concerned. An undecidable decision may be made decidable by deciding another undecidable decision or by some contingent piece of context. For instance the question of which colour shirt it is best to wear may be made decidable by the adoption of a dress code or by deciding which colour I prefer on Wednesdays. Likewise, a decidable decision may be suddenly made undecidable by the questioning of some previously unquestioned assumption. Even a simple problem in mathematics may be made undecidable by uncertainty over the axioms that we are working under.

## DECIDING WHERE TO START

*We can start ex nihil or in medias res or somewhere in between. We must choose where we start from.*

In a sense everything is undecidable if considered absolutely. Every piece of context or reason could be challenged and undermined until we start *ex nihil*. Every framework of a decidable decision that makes it decidable need not do so. The failure of the Enlightenment project (see MacIntyre, 1985, p. 51ff) to find a

rational basis for morality, some universally accessible first principle on which to base the rest of life, concludes with the subversion of all criteria to which we may appeal. This leads to the Existentialist position, which is, as Alasdair MacIntyre argues (MacIntyre, 1967), a kind of anti-image to the Enlightenment, where criteria must be invented arbitrarily. Linear rationality is exposed by the failure to find any justifiable place to begin from.

On the other hand any decision could be framed so as to be decidable and many in fact are already when they are presented to us. Instead of starting *ex nihil* we could start *in medias res*. In fact we must do this: life does not begin from scratch and we do not live in a vacuum. Every dilemma we are confronted with is framed already by our cultural and social situation and by our relationships. We do not approach life in an ordered rational way, we are always in the midst of it. Our lives are in fact packed full of criteria. Just because we cannot justify these criteria in some absolute manner does not mean they are not valid or valuable.

To start from scratch seems impossible and unhelpful, but to start just by accepting our present situation doesn't challenge our assumptions enough to be satisfying and seems unnecessarily arbitrary: in fact we must choose where to start.

This idea of our lives being full of existing criteria which may frame our decisions as decidable but which we could challenge if we so choose, is separate from a discussion of our facticity. It is of course the case that there are certain things that I am not free to choose, for instance that I cannot fly, that I have only this body and that I am not currently in Los Angeles. It is common that social or cultural protocols also limit our freedom. Certain societies may limit the freedom of people within them meaning that their choices will be decidable on matters that for those in more liberal cultures are undecidable. Let us note here that Sartre's argument that we cannot but be free applies not so much to our opportunities and possibility, which is limited by facticity, but to the meaning that we ascribe to our situation and the project which we pursue within our contingent context.

## **HUMAN PURPOSES AND THE FRAMEWORK OF AN ARCHITECTURAL DECISION**

*The framework of an architectural decision is constituted by the human purposes which it in turn frames. Architecture is therefore undecidable because human purposes are undecidable. The decidability of human purposes is considered and extreme positions are discounted. The more moderate but contrasting positions of Sartre and MacIntyre are examined.*

Architecture is fundamentally human centred: the framework of an architectural decision is always constituted by the people to whom it relates and their purposes. Architecture is therefore intrinsically undecidable because these human purposes on which it is predicated are themselves undecidable: the attempt to design architecture will therefore always have an irresolvable gap at its centre that can only be met by design. Indeed it is always the undecidable parts of architectural dilemmas where design takes place. This does not mean that it would not be possible to frame an architectural decision so that it would be decidable, just that in doing so something fundamental to architecture is lost.

In the previous section I have asserted that human purposes are undecidable. I argued above that in the modern situation there are no criteria on which we can agree in order to make our decisions decidable and the responsibility therefore falls on us to decide. Even if we invoke an established framework which makes a decision decidable then we must choose to do so; we must, as I have argued, choose where to begin.

This is not however, as my argument itself implies, a universally agreed position. Indeed I actually want to argue for a broader position than I have established so far above.

We can consider that the question of whether human purposes are decidable has too extreme responses. Firstly, some may argue that life does indeed have a clear, unambiguous and determining purpose. This essentialist position may be justified, and has been so historically, by reference to God, to biology or to reason. Secondly, some may argue that we are free to choose whatever we like in the absence of any criteria except our own and that it really doesn't matter what we choose. This is a form of emotivism or post-modernism where there is no good other than my good, and that can be whatever I choose it to be; for a criticism of this kind of moral philosophy, see Anscombe's 'Modern Moral Philosophy' (Anscombe, 1958,).

I am interested in two more moderate, but still contrasting, positions, both of which may be characterised by opponents as one of the extremes above but which are in reality more subtle and complete.

The first is MacIntyre's neo-Aristotelean account of ethics, outlined in *After Virtue* (MacIntyre, 1985) and subsequent works, which is based on mankind's specific *telos* or purpose: *eudonomia*, which translates as human-flourishing or to flourish at being human. MacIntyre understands this flourishing as an engagement in social roles and practices. For MacIntyre we can only talk about being human in terms of an engagement in a specific society and culture and this society and culture will imply particular well formulated social practices and roles which can be performed. MacIntyre's account therefore places a great emphasis on how man does indeed have a given purpose and on the importance of society and tradition. But notice how the circularity and under-definition of the central idea of *eudonomia* leaves plenty of room for human freedom and undecidability. This is not an account of an essentialist human purpose or a determining human society but one that emphasises the importance of human relationships and the context of tradition and society over the excessive arbitrariness of modern emotivism.

The second is existentialism, which has often been criticised, by MacIntyre amongst others, for the arbitrariness of its account of choice (see for instance MacIntyre's discussion of Kierkegaard's *Either/Or* in *After Virtue*; MacIntyre, 1985, p. 40). Whilst I agree with MacIntyre that existentialism often over-dramatises the consequences of life's lack of given meaning (MacIntyre, 1967, p. 147), I think that Sartre's account of our responsibility for our choices, though arbitrary, is no less accurate for that. Sartre's position is that man is free to decide his own decisions and whatever reasons or criteria he appeals to he must himself choose to accept if they are to influence him. He is condemned to be free: he cannot not be free and he is therefore completely responsible for himself and his actions. He is however limited by his facticity, he can only choose between what he can choose between and in the situation he is in. There is therefore room in Sartre's account for society and circumstance, although it is fair to say that Sartre does not look on society or social roles positively.

## SOCIAL ROLES AND RELATIONSHIPS

*Social roles are discussed in order to contrast the positions of Sartre and MacIntyre and because this is where human purposes are at their most decidable. Sartre's pessimistic view of human relationships is then discussed and revised by the introduction of the second-order cybernetic account of the individual to give a more positive understanding of society which is then described by Eagleton's metaphor of the jazz band.*

Social roles can be seen to be where human purposes are at their most decidable. If I am a farmer or a sailor then the concepts of these roles embody ideas about being a good farmer or a good sailor in the same way that the idea of a watch embodies the idea of a good watch (MacIntyre, 1985, p. 58). Sartre and MacIntyre contrast particularly in their accounts of social roles and relationships but they are perhaps not as incompatible as MacIntyre, who notes that, for Sartre, to identify the self with its roles is to be in Bad Faith (MacIntyre, 1985, p. 32), suggests.

The rejection of determinant social roles by the Sartrean individual is not necessarily an outright rejection of all social roles as MacIntyre fears (MacIntyre, 1988, p. 368). As Gary Cox points out, the waiter, the classic example of Bad Faith in *Being and Nothingness* (Sartre, 1958, p. 59), is not necessarily in Bad Faith (Cox, 2006, p. 103ff). In the usual interpretation (Spade, 1996, p. 138) the waiter is said to be in Bad Faith because he is trying to be a waiter in the mode of being what he is, in the sense that a rock is a rock, and this is something he can never be. In Cox's alternative interpretation he is being a waiter in the mode of not being a waiter. He is aware that he is not really a waiter, is playing at being one and is acting up his role: he has chosen to be a waiter. There is something that is common sense about Sartre's insistence that we have to actually be what we are and that we are therefore responsible for ourselves. It is difficult to see how MacIntyre's insistence on the importance of social roles is really weakened by the role-player being responsible for his role. There is an arbitrariness about social roles from Sartre's position, but this does not mean that they cannot be worthwhile or valuable, just that we must be responsible for playing them.

Sartre however does have an unnecessarily pessimistic view of human relationships: understanding them as always based in conflict (Spade, 1996, p. 220) which comes out in his discussion of being-for-others. When I see someone else in the park, as in one of Sartre's examples, it is a very different experience from when I see an inanimate object. The other is at first an object for me in the same way that a table or a chair is, but then something different happens: I perceive the other looking at me and that I am now an object for him. This creates an infinite regression: I perceive the other perceiving me perceiving him and so on. Thus for Sartre, being-for-others is always a matter of conflict because it is always an irresolvable battle of who will be an object for whose subject, of who will transcend the other. This comes out tragically in his discussion of love.

The lover wants to be an object for his beloved. He is concerned with her subjectivity and wants her to make an object of him. If she loves him as well then she too will be concerned with his subjectivity and will want to be an object for him. This creates a circularity where each is trying to be a subject for each other and neither is able to achieve it because the desires of each is that the other's desire be fulfilled. Thus love too, for Sartre, is a matter of conflict.

Sartre's pessimism here - that all human relationships are based in conflict - is both unnecessarily negative and an unjustified generalisation (Cox, 2006, p. 46). I believe this is caused by Sartre's sharp split between being an object and being a subject and that this could potentially be improved on by an understanding of circularity from second-order cybernetics. It is not hard to start to understand the relationships of being-for-others in terms of circularity; indeed Sartre himself calls them reciprocal relationships. The conceptual shift is to understand circularity positively. Circularity allows us to understand ourselves as being both subjects and objects at the same time. In a sense this is what happens in a conversation. Thus the infinite regress of whom is an object for who is resolved neatly into a circularity. This shift rescues Sartre's example of love from tragic conflict and, I think, leaves it as a possible paradigm for an attempt at ethical behaviour: to act for the other's subjectivity.

The reason underlying this positive account of the circularity of relationships is that the second-order cybernetic understanding of the individual is not the isolated individual of existentialism but the mutual individual. He has a particular viewpoint because he is inter-dependent with others and within the world rather than independent from it (Foerster, 1995). Solipsism and objectivism, from each end of the epistemological spectrum, are in fact very alike: they are both isolated god-like viewpoints. In solipsism or idealism the individual is inventing his own world and he can invent what he chooses. In realism or objectivism the observer is considered to be able to describe the real world without the properties of his observations entering his descriptions - he has no responsibility or impact on what he observes. These two extreme positions mirror the two extreme ethical positions of emotivism and essentialism noted above. The second-order cybernetic understanding of the individual is fundamentally different from these as it emphasises both the act of invention on behalf of the observer in constructing his idea of the world and the importance of his experiences in so doing. The observer is not inventing any world he likes but an understanding of the very world he is in and is experiencing. As von Foerster argues (Foerster, 1979), this understanding of observation leads via the act of description in language to an idea of the society created by the use of that language between different observers.

Sartre's epistemology is a mixture of realism and idealism and so he has something in common with the more worked out second-order cybernetic approach and indeed the two positions are often very similar although differently expressed.<sup>1</sup> For example, for both Sartre and von Foerster, observers are observing and experiencing the world but are completely responsible for structuring and ordering their observations to be meaningful.

Terry Eagleton, in his book *The Meaning of Life*, uses the metaphor of a jazz band to integrate to common candidates for life's purpose: love and happiness (Eagleton, 2007, p. 171ff). Love is here understood as the mutual, social counterpart to happiness. The band are improvising: there is no score, no conductor. Each member is freely improvising. But they are each in mutual reciprocal relationships with each other: one member's free musical expression is the ground and basis for each other's free musical expression.

This example, which embodies cybernetic ideas of circularity, neatly combines the existentialist insistence on freedom with a positive emphasis on social relationships. Returning to our question of the decidability of human purposes, we can see that on this account there is no decidable score to play but that we are not free to play anything if we want to be part of the band. Human purposes can therefore be seen to be undecidable but that is not to say that there are no valuable criteria to decide them by. In fact the world is full of such criteria if we choose to interpret it as being so and that is why the question of purpose is undecidable.

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<sup>1</sup> I think there are many things which second-order cybernetics and existentialism have in common and that both could potentially enrich each other. Both emphasise that the observer/subject is in the world and that he understands the world from a distinct viewpoint. Both emphasise individual responsibility for actions and both Sartre and von Foerster refuse to give an ethical theory for more or less the same reason. Most fundamentally, Sartre's *for-itself* which is paradoxically defined as *not being not what it is* and *being what it is not* makes a lot of sense in the world of second-order cybernetics with its love of self reference, paradox and self-referentiality. Second-order cybernetics potentially deals with many of criticisms that are levelled against existentialism while dialogue with existentialism could help extend second-order cybernetics into the ethical.

## DESIGNING-FOR-OTHERS

*Designing-for-others is introduced as the idea of designing for others to design. Extreme approaches, which mirror Sartre's modes of being-for-others and likewise end in conflict, are discussed and criticised. It is argued that designers behave quite differently enjoying the circularity which we recognise from the jazz band metaphor.*

There are two modes of designing: (1) design as living and (2) designing-for-others. The first case is my fundamental relation to the world both in terms of knowing (Glanville, 2006) and in terms of my purposes and intentions (Sartre talks about human beings as projects rather than as having projects; Spade, 1996, p. 177). The second case, designing-for-others, is designing in support of the first case. Here again we can see the root of architecture's undecidability. If architecture is designing for others to design in, it will be irresolvable because it must leave room for unpredictable, undecidable design to occur subsequently.

There are different approaches to designing-for-others. The two extremes follow Sartre's description of love/masochism and hate/sadism as modes of being-for-others. The first is the extreme of designer-knows-best, which mirrors Sartre's description of hate/sadism in that it treats the other as an object, rather than as a person. This mode of designing-for-others implies an objective, independent viewpoint from where it is possible to determine what it is best to do. In the absence of this impossible god-like vantage point this is a neglect of the designed-for. The opposing extreme is client-knows-best, which mirrors Sartre's description of love/masochism in that the designer attempts to abandon his own subjectivity (and responsibility) in favour of that of the designed-for. This attempt to give people what they want neglects the responsibility of the designer to act for the designed-for, in this case the designer needn't really be there. Both result in conflict as per Sartre's examples because both understand design relationships as being linear.

Fortunately the majority of designers do not behave in either of these two ways. Designers, whether they are conscious of it or not, are used to working in terms of circularity (Glanville, 2007, p. 1178). Designers use drawings to form conversations between the designer and the designed-for, as well as to have conversations with themselves about what they are doing. Designers use this circularity as a response to the undecidability of designing-for-others. It is very difficult to achieve circularity between designer and designed-for in architecture. Architecture is generally big, slow and unresponsive, but there are some sophisticated methods of doing this including participatory design, which involves the designed-for in designing, and interactive architecture, which can prompt the designed-for to act as a designer of his environment in real time. The basic principles of circularity and of reciprocal relationships, which we saw in the jazz band metaphor, are fundamental to designing-for-others.

## INTERACTION AND PROVOCATION

*Pask's Musicolour is described as a possible paradigm for one way of designing-for-others.*

Gordon Pask designed a device called Musicolour (Pangaro, 1993) for a jazz band, which given the prominence of Eagleton's jazz band metaphor in my argument seems like an appropriate place to conclude. Musicolour was a coloured light show that accompanied a jazz band when playing improvisational live music. The lights would respond to the rhythm and frequencies of the music being played creating a light show corresponding to the improvising musicians. Musicolour would also pick out improvisations, highlighting variations in temp or pitch to signal them to the musicians to encourage them to vary what they were doing. But Musicolour also had the capacity to become bored: if the musicians did not vary their music for a long period it would stop responding to those frequencies or to that rhythm. This would provoke the musicians to improvise in order to provoke Musicolour again. Thus Musicolour created a stimulating, provocative environment which encourages the musicians to design for themselves. This seems like an excellent approach to the undecidable task of designing-for-others.

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