

ONTOLOGICALLY SHAPING OUR FUTURE: DESIGN EDUCATION AS REVELATION

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ABSTRACT

Using ontological pragmatics, and by learning that what they conserve in the present (making choices) leads to new innovative futures, students teach themselves how to deal with the uncertainties of our modern world. An argument for Maturana's method of changing semantic questions into structural ones is discussed, as well as Latour's notion of reassembling the social. An ethics of negotiation is argued next, and consequently we need to rethink our own selves, including issues of sustainable ethics, very much along the lines suggested by Whitbeck (1998), who believes that, for engineering, a design process analogy can help moral decision-making to escape the rational foundationalist approach.

Keywords: restructuring, learning process, association, ethics

1 INTRODUCTION

Where are the missing masses, and why should we talk about the sociology of a door? Bruno Latour [1] would have us questioning the role that design, as a social act, and designed objects, as 'non-human actors', play in our lives. The 'masses' – the ubiquitous, taken-for-granted and therefore almost 'invisible' designs – that surround us are 'missing' in the sense that we often do not think of them consciously, but nevertheless we interact with these 'non-human actors' in various ways, as if we were interacting with 'human actors.' These 'missing' designs can shape our future in ways we would normally not even be aware of, and one of the functions of design education is to highlight some of these very important issues around the creation, and the consequences of designed objects (and designed systems), and through this process design students can learn to deal with our contemporary and complex world.

As a consequence of this, in my design theory class we pay attention to the 'sociology of a door' – pay attention to what the door, as a device that closes the hole in the wall, says about design itself, and about users in particular. Sociology is the study of the viable, living structures that people create, how these are conceived and how they operate; but what about the sociology of an individual, how would students create and structure their own lives? Why is any of this necessary, especially in a design course? Not only does Latour make us aware of the symbiosis between human and non-human actors, but Giddens [2] regards our mediated experiences as central to the way we situate ourselves contextually in the modern world, with our appropriation of the information received from all manner of information systems as part of the reason we perceive and experience the world in a 'radically' changed way.

If we believe that design is a social activity and an instance of human communicative ability, and if we further believe that design, as a cognitive tool, can be used to realize

the appropriate means of articulation and shaped expression we need in order to cope with Latour's and Giddens' new world, we have to re-conceptualise our idea of design as a discipline and consequently how design is taught. A much more sense making and authentic practice is called for [3], thus design education needs to concentrate on the learning process itself, allowing students to construct their own learning capabilities, thus structuring their own modes of knowledge acquisition. "Instead of teaching in the traditional way, we should give the students tools, which provoke a new way of thinking" that will enable a design student to begin "the construction of one's own world" [4].

2 THE CURIOUS CASE OF PIGEONS AND GROOMS

That's all very well, but how are design educators to shape future designers if all they're good for is to hand out tools and provoke goodness knows what?

The trick to seeing design education in a new light seems to be to start asking different questions. Instead of asking the semantic question, *what can we learn about pigeons and grooms*, we should ask how the presence of pigeons and grooms effect who we think we are. This of course implies that you believe, as I do, that we construct our identities by interacting with everyone and everything in our environment, and learning about these actors (human and non-human) becomes a very important part of the process. But exactly how *do* we learn?

The Chilean biologist Humberto Maturana [5] wanted to know how pigeons observed form and colour. "After we realized that the mapping of the external world was an inadequate approach, we found that the very formulation of the question gave us a clue." Instead of asking how the pigeon could learn about form and colour, his team asked how the presence of form and colour could help structure the pigeon's 'ontology.' What Maturana teaches us is that a semantic question should be turned into a structural one, and instead of asking, *how can design students learn about form and colour*, learn about the external world of objects and events, we should ask, *how does the presence of objects help structure the users' (students') ontology?*, leading to the question, *how is it possible for designs students to acquire a structure enabling them to operate innovatively in a contemporary design environment?* These are hands-off types of question, because this ontological structure can only be acquired by the subjects themselves. Educators cannot shape future designers, since design students have to 'shape' or structure themselves by mapping their own internal worlds of understanding. As for how the groom got into the picture, according to Latour [1] a 'groom' is Frenglish for that device (non-human actor) that automatically and politely closes the door for you after you have opened it and passed through. *When* it works, of course. A notice on the (French) door Latour was about to pass through one cold February day said "The groom is on strike, for God's sake keep the door closed." Do we not often look upon our mechanical 'servants' as if they were people, these missing masses, non-human actors, and address them accordingly? We assign roles to these designed objects and too often do not realize what important roles they play in shaping our ontologies, the very existence we lead, who we think we are. We are not so much mapping the external world by 'talking' to grooms and doors, but mapping our own internal worlds according to how we choose to interact with the objects and events that 'people' our environment.

3 SO WHAT'S THE BIG IDEA THEN?

An internal restructuring that is triggered by elements in the external environment ...

Hold on! You're contradicting yourself with all this talk of, now here and then over there ... why not stay in one place?

Because that way no learning takes place, or *takes hold*, I should say. It may be true that we can only learn from within our own constructed 'worlds,' but the origins of these 'internal environments' must come from somewhere, and that happens to be the 'outside.' However, there is no *out there* out there, as John Wheeler of the Santa Fe Institute so provocatively stated [6]. We need not look for answers *out there*, and neither can we look for answers *in here*, since neither really exists.

You're crazy ...

Not really. Alexander Manu's [7] work helps us grasp the most comprehensive, contextually oriented 'big picture' we can manage. Manu believes in the Big Idea of Design, which tries to fathom the origins of any designed object, the reasons for its existence (its ontological coming-into-being) and how the role it has played has changed, or not. Manu's way of looking at design correlates with Latour's in that both designed object and user are seen in a contextualized environment, of *movement*. Something always happens, otherwise we stop noticing, hence the 'missing masses.'

You see, what we are talking about - design education, social life, business practices or an engineering discussion between designers and clients - these events take place in a *movement* and re-configuration of elements, where nothing is fixed until an agreement is reached for whatever reason, and even then the fixing is artificial and not 'real' in the sense that it can always be re-designed / re-thought. Design education happens in the virtual space between us, which is neither *in here* (in both our minds) nor *out there* (where, pray, did you think it was? In that textbook you're clutching to your breast like a magic spell?).

No one can 'shape' you as a future designer, since you must do the 'shaping,' while at the same time we have to admit that some form of 'shaping' is going on via all those mediated experiences, made possible by the objects and events we design, and place in the so-called 'outside' world. To find out how students can acquire a structure that allows them to operate in this external world, we simply have to begin 'at home,' begin *in here*, since that is all there is, and find out how those mediated, external experiences can trigger, not force, an internal change.

4 REASSEMBLING THE SELF IN AN 'EMPTY' SOCIAL WORLD

If the *out there* of an 'objective' world does not really exist, then so too this strange creature called *the social*. Latour [8] reminds us that 'the social' cannot be seen as a specific domain of reality, but that the associations we enter into, the connections we make and the consequent results specify anew each time what 'the social' can become: "I am going to define the social ... only as a very peculiar movement of re-association and reassembling." This reads very much like design itself, since design, as a social act, must be redefined, in a particular but peculiar (atypical) context, every time the process is started, anew. As for the sociology of the design student, this same argument is valid: *I am going to define the design student ... only as a very peculiar (atypical) coming-into-being (movement) of re-association and reassembling. We can be in two places at the same time: in here as well as out there (both being virtual), because our real existence, the reassembling of our real selves, happens during the communicative 'movements' we experience when in here and out there interact.*

This is communication, and 'we' can shape the future by means of these acts of meaning-making, these humanly moral actions that we know will impact on our and our children's lives. In asking the question, *how does design shape the future*, we are really

asking how the collaborative ‘we’ can acquire a structure that will allow us to deal with the contemporary, but also the future, sense-making, world. What cannot be forgotten, is that the so-called objective world only shows the traces of past decisions and actions, and it is very easy to fall into the trap of ‘that is how things are’ because of ‘that is what the system is like,’ instead of knowing that ‘the (social) system’ is in fact constituted *in the future*, while we speak and negotiate.

What cannot be allowed to be forgotten, is the power of language, and specifically the power of the subjunctive.

5 A NEW ETHICS OF NEGOTIATION

What if and *just imagine if* are expressions of the coming-into-being of the future. Eco [9] believes we are in danger of losing the use of the subjunctive, a verb form that refers to possible actions and not factual ones, and the conceptual tool that allows us to speak into the future. *What if* we were to lose this ability? Design education, the creation of a personal ontology – *not* a factual account of existence or the number crunching numbness of past achievements, but the coming-into-being of a new and possible other-self – is a negotiation between what you think you are now, the elements you choose to include in your ‘knowing’ environment, the people and knowledge you surround yourself with, plus this act of faith (in yourself), that your peculiar mix will result in a better future. Without the power of our language to project into the future, we would be stuck in the factual present, and not achieve what Krippendorff [10] calls the semantic turn, “a seed for design to redesign itself by means of its own discourse.” This ‘intrinsically motivating’ process helps people to get to know themselves, helps designers to validate the changing modes of contemporary being.

This carries a great responsibility, since a normative and ethical dimension is added. Herkert [11] speaks of the growing awareness of ethics as an educationally sensitive issue. As a design issue, certain commentators focus on the systemic activity that is the design process, and see ethical responsibility as “something much more than making wise choices ... Our moral obligations must ... include a willingness to engage others in the difficult work of defining the crucial choices that confront technological society” [11]. Furthermore, Dorst and Royackers [12] state that, when it comes to questions of ethical methodology, we seem to lack conviction that a workable answer can be found. Caroline Whitbeck, on the other hand, suggests a design analogy in her book *Ethics in Engineering Practice and Research*. Questions of ethics cannot be left to analytical foundations seeking prescriptive moral principles, since, thanks to the design analogy, we are forced to deal with ill-structured problem situations that conform to no solution recipe but admit of several outcome possibilities [12]. In this world of uncertainty filled with complex situations, addressing ethics directly makes no sense since we will fall back into the reductive approach Whitbeck warns us about. Instead, we could look for examples of systemic thinking, such as Spinoza’s belief that self-preservation, an understanding of one’s own circumstances, will lead to moral decisions [13].

This agrees with Wittgenstein’s viewpoint that morality, revealed through peoples’ actions, cannot be subjected to any reductive analysis [14]. Just as Heidegger’s *Being* will not let itself be expressed directly, so what we are pleased to call ethics cannot really be brought to light in direct everyday expression, except through human actions, and therefore through the consequences of the choices each individual makes. In that sense von Foerster [15] sees metaphysics as that which happens when we find ourselves making decisions about what he calls *in principle undecidable questions*. When we

decide to be what we can become and take full responsibility for that decision, we are making philosophical choices, ethical choices.

When designers take responsibility for a product's ontology, what it can become, and knowing the possible social consequences due to its non-human role-playing capacity, then *that* can be described as an ethical decision. The design process, spurred on by ill-structured problem environments that offer contradictory 'evidences,' can only find a solution *during* the process, and only by a method of inclusiveness that fully engages those other human as well as non-human actors that can have a bearing on the *social direction* the solution is taking on. For Whitbeck the design analogy works because, to wildly paraphrase Dorst and Royakkers [12], moral acting is that process that lets the moral problem unfold itself in company of the coming-into-being of new options, for becoming, for making a decision. This is so close to Heidegger's *Dasein* (everyday human existence) that should strive for *Being* (an ultimate and possible, better, mode of existence) that a design theorist can recognise the applicability of this type of phenomenological metaphysics, or, rather, recognise the switching that takes place between the two 'realities' of the worldly *here* and the virtual, conceptual, *there*. Designers can be in two places at the same time, because this is a normal human ontological coming-into-being process that uses all possible realities, including those of other people and the 'realities' of all the non-human actors we call designed objects.

6 CONCLUSION

Latour's 'missing masses' do play a crucial role in shaping our future, but we, designers and users, can decide to assign them only a walk-on instead of a lead role. The sociology of a student designer - the developing ontology of *who and what can I be* - can consciously be focused on, since ethically designing for other people is also a set of guidelines that can be used to reflectively allow the design student to work on that internal restructuring that is triggered by elements in the environment, in this case, the re-designed educational environment that encourages the self-growth of a (personal and professional) design ontology. Using such insights as the Latourian view of non-human actors, design student can learn how humans behave with and around designed objects. These same insights, because they *are* 'insights' of relational value, can be used by an individual on a personal level to 'design' him- or herself; once you succeed in designing ethically for others, you may as well afford yourself the same courtesy.

A concept of objects as seen through the eyes of a designed relationship of purpose, and keeping in mind that an object can be perceived as both a material *and* a conceptual entity, means the very existence of objects can be transformed because of this relationship (simply noticing something 'changes' it, *for you*), and the process of design "refines both the object under transformation, and the subject who is doing the transformative work has to go beyond him or herself to explore new ways of transforming nature" [17]. This makes design education an interpretivist social inquiry, and its understandings become the actual condition of that inquiry. Heidegger [18] made it clear how, in an ontological understanding, we can discover a 'truth' that can serve both human and non-human actors. In the very process of *understanding-towards*, we strive to uncover both the beingness and the structure of *Dasein* (subject, student), but, *in so doing* we create the conditions that can further uncover both the beingness and the structure of entities that are not-*Dasein*, i.e. non-human actors.

We need not look for answers *out there*, since "No preformed and complete structure pre-existed anywhere" [19], but the elements needed for a working, ontological

structure, as far as design education is concerned, are “present, but unexpressed, in [all] the constituents. The ... building of a structure is not a *creation*; it is a *revelation*.” Design teachers do not control those in their charge, instead, they *enable* students to ‘know’ their newly revealed selves through mapping their own interactional worlds.

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