

## Designing the fabulous nightmare: when things around us start moving...



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### KEYWORDS

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Jamaica is a country with a considerable population of poor people. There are men with just one tool: a saw or a hammer; they wander around with that single tool in the tenacious hope that people will call out to them from the pleasant shadows of a veranda or from a gap in the endless wall of rusty corrugated iron to have them do a job. Their name at that moment is derived from the tool they carry with them: “Ey ‘ammerman, com ‘ere nuh?” of “Eeh! Sawman! Com an ‘elp me...” Arriving on the veranda it is perfectly possible that they will not need that particular tool to perform the task that has been set them but that is beside the point. The tool performs an important function: on the one hand it is an instrument that can be used by the man who is attached to it, on the other it is a nomadic billboard.<sup>1</sup>

### Use

In the current article I want to think about the curious metamorphosis that our relationship with our environment undergoes when the environment starts adapting itself to us, instead of the other way around. This essay forms part of my current research project into the ontology of use. Ontology is a discipline that questions the existence of a thing by attempting to describe it as a part of the world. The purpose of my research project is to describe the place that use assumes in the arena of our doing and thinking and to then mobilise this description in the construction of an aesthetics of use, the ultimate goal of which is a satisfactory attitude to design in architecture.

In order to make this more concrete we could take a (very) short detour to the aesthetics of functionalism, where, after all, the idea of use appears to take up a central place. Shards and fragments of this way of thinking are still traceable in the design studio. The interesting aspect of functionalism, the dogma in which function and particularly the functions of a building’s programme take pride of place in the configuration of design priorities, is that it can be said to have failed in a curious way.<sup>2</sup> It is a luxurious and happy failure that can boast such fantastic buildings. In that sense its failing has to be seen in a rather narrow and miserable light. Functionalism, as far as designers and

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<sup>1</sup> <http://www.voorthuis.net/Caribbean2/Name.htm>

<sup>2</sup> A lot has been written about functionalism, I do not want to repeat it all here. See for example: Horatio Greenough, *Form and Function: Remarks on art, Design and Architecture*, (1947) oorspronkelijk 1852; Frederick Kiesler, *Pseudo-Functionalism in Modern Architecture*, *Partisan Review* (July, 1949):32 Edward de Zurko, *Origins of the Functionalist Theory*, (1957); Reyner Banham, *Theory and Design in the First Machine Age* (1960); Theodor Adorno, “Functionalismus heute,” (1965) translated as “Functionalism today” in Neil Leach ed., *Rethinking Architecture* (1997); Peter Collins, *Changing Ideals in Modern Architecture 1750 - 1950* (1965); Peter Eisenman, “Post-Functionalism” in *Oppositions* (1976) nr. 6; Brent Brolin, *The Failure of Modern Architecture*, 1976; Peter Blake, *Form Follows Fiasco: Why Modern Architecture hasn’t worked*, (1977) Stan Anderson, “The Fiction of Function” in *Assemblage* (1987) nr. 2 pp. 18-31; Hilde Heynen, *Architecture and Modernity, A Critique*, (1999) “Het Functionalisme en zijn Schaduw”, in Hilde Heynen et.al., *Dat is Architectuur*, (2001) pp. 699 ff.

architects consciously pursued such an aesthetic was not at all loyal to its own premises and rules of engagement. In fact it couldn't be. No doubt most architects who felt a sympathy for functionalism, knew that the extraordinary force and cogency of the slogan "form follows function", coined by an inspired Louis Sullivan [Sullivan 1896] took up a rather curious place in their own design thinking. It formed part of the wild and Dionysian exploration of the enormous energy latent in a new language of form, a new attitude to modern materials, ornament, the social role of architecture and, most particularly, the fresh beauty of the healthy human body. This focus, however wide, was not inclusive. A number of traditional functions of architecture were consciously suppressed and deliberately left out of the picture. It was mobilised for a small and select number of the total number of possible functions of architecture; functions that were felt to be socially relevant at the time. From that perspective the famous slogan should really have sounded more like: "*form follows only those functions that I find important right now and only in the way that I want them to*" In this way a misplaced pseudo-objectivity would have been revealed for what it was and replaced by the responsibility and choice of the acting subject; admittedly, it sounds awful. No doubt they also knew that form is not very obedient. The functionalists heartily ignored the fact that a sentence such as *form follows function* gives a much too simplistic view of the causality it tries to make explicit. Form never follows function; or vice versa. The model of causality that lies at the basis of this slogan is simply bad philosophy.<sup>3</sup> The slogan was not so much a description of an existing relationship as a command for impossible things to be so. Functionalists were people who practiced a radical politics through their personal aesthetics. That, by itself, is hardly remarkable. In fact it is hard to do anything without an aesthetics of desirable goals and qualities prioritised into a political agenda. The only thing that stands out is the gap between the compelling nature of the slogan and its philosophical inadequacy. Form and function cannot in fact be seen as separate entities. Literature discovered this a long time ago. The form *is* the function and the other way around; *the medium is the message* [Marshall McLuhan 1964, Chapt. 1]. Form fits function, is philosophically more adequate. Much literature is so hard to translate because what happens is secondary to the way it is told. In terms of form and function in design we could think, for example, of a stick or a protein in the human body.<sup>4</sup> Without exactly *that* form, there is no function. Having said that, some functions allow a greater margin of variations in form and vice versa. Of course the stick or the protein may not be used, in which case the function is purely virtual. But it does not mean the function disappears, it merely means it is not actualised, or mobilised. A thing may thus carry an infinity of virtual functions without becoming any heavier to wield. Form encourages functions that were not intended by the user or by the thing itself. But all this still does not mean that they can be seen as separate. Form and function are ways of looking at a thing, ways of colonising it. Form and function are predicative aspects of a thing whereby we take possession of a thing both physically and psychologically. A thing has, from a practical point of view many different qualities. These are each bound to a particular scale and are extracted from or actualised in the object by the subject making use of them at that particular scale. Things are described at a specific scale as an intentional form, even though the intention may have been discovered by accident. This description does not come from the thing itself. It is *objectified* by describing one of its possible functions and the form it has at a particular scale. The stick has its own inscrutable *raison d'être*, and we do not know how it would describe itself. In that sense we have not gone very far beyond Kant. After all a stick speaks no known language, it does not even speak the language of its own possible uses. We describe it as long and hard as those are qualities that pertain to it as being useful to us, for hitting people, or building things. When we make use of something, that use should be seen in a peculiar way independent of the thing used. That is what an object is, a thing from which only its use is extracted, leaving the thing as a thing, cold, distant and unknowable. We objectify the stick by selecting its univocal use to us. We make the stick into an object and refuse it the right to be seen as a subject: that would after all be absurd, a stick does not live. But actually this refusal to subjectify the stick is crucial to the metaphysical blip we are subject to in approaching our

<sup>3</sup> That was pointed out in the 18<sup>th</sup> century by David Hume in his *Treatise of Human Nature* (1739)

<sup>4</sup> Mad cow disease was purported to be caused by a protein folding in the wrong way so that its destination couldn't receive it and thus kept calling for proteins to be produced while the place of production never stopped making badly folding proteins. This overabundance of uselessness eventually caused the madness.

world. When we speak of the function of a thing, we speak of what we do with it, we speak of the shape which is peculiarly suited to that kind of doing, but we leave, in conformance with Kant, the *ding an sich* out of the picture, we only take its relationship to us and *our world* seriously; we are exclusively concerned with the way the thing is directed to our attention. That is *natural*. And this also applies to the stick we were just discussing. I have been able to use that stick as an abstract machine without it even existing as a stick! This argument can also be applied to a work of art or architecture. As soon as we describe something, the description lays down the conditions of its use to us, no more, and no less: we *shape* it from its usefulness, at the scale at which we distinguish the thing as a thing. Thus we re-create the thing in our image, as a prosthesis of our body or at the very least a thing in an intimate dialogue with our body. That re-creation is the foundation of our use of the thing, even if we only use it as parable or abstract machine in our thinking. [c.f. Deleuze & Guattari, 1983]. Use begins at the moment we start wondering as to what we have here in front of us, it continues with each thought, and intensifies from the virtual to the actual with each action and ends with killing, manslaughter or murder.

If use narrow *things* to *objects* and if an *object* is not so much a *thing* as a *thing-narrowed-to-its-place-in-our-consciousness*, perhaps then it is necessary to look again at how the concept of use should be viewed in that process of toing and froing of thought and action we call design. That is not difficult. After all, use lies at the very foundation of all our thinking and doing. In using something we fit our body, (very literally) back into the environment after we have calibrated its relationship to us through consciousness. Using is a fitting. Consciousness, as it is described by Sartre, is where man creates a core of nothingness by stepping outside himself, to be able to look back at himself critically in his environment. In this sense, we have to claim our existential responsibility for our own prioritisation and the selection of functions that we find important. We must be aware and try to be explicit about the fact that we are always politically active when determining our priorities and making our selections, and we must try to become aware of what we are excluding from our attention. That is what makes design so exciting and so messy. Any form of systematisation in the design task bears the risk of *objectifying* the user. However, it is physically impossible to be very thorough or complete. That is after all what politics is about. Not everything is possible at the same time, that is what makes prioritisation in everything we do so essential. As I said, if the functionalists had simply acted not from a misguided and ultimately false sense of objectivity through which they offloaded their personal responsibility through words like *natural* and *organic* and other words like it, but had taken an honest Nietzschean stance, which declares its political attitude in terms of place and occasion, there would have been no philosophical issue, no “failure” but simply an existential choice. But this really only raises further questions: what is a good prioritisation of design issues? How do we arrive at such a good prioritisation? And how do we deal with what we consider less important, or what we know we are ignoring and all the stuff we can be sure we don’t know at all? This is where the issue of use becomes interesting.

### **Adaptable man**

Of course the “sawman” or the “hammerman” is much more than just a machine that can perform a trick. That fact is important, even crucial. He is also a man, with everything that this implies. In fact, he is a man caught in a network of social and natural relations. He is a *man-in-the-world*. To reduce him to his hammer or his saw, denies him his multiplicity, his manifold. That mistake has been made over and over again in the past and is still being made. It was made during slavery and before the full emancipation of the woman; social processes we are still struggling with.<sup>5</sup> Hammerman’s potential use takes priority over the rest of his many abilities and gives him his name as he walks there. But during the evening he is no doubt “lover-bwuoy” or even more glorious, “dancehall king” To achieve these names he has exchanged his hard-earned cash for some bling-bling attributes in order to be able to make the right impression. He *becomes* what he uses his body for, and this he communicates to the world and to himself through the relevant and most effective attributes. That these attributes do not

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<sup>5</sup> The Caribbean philosopher Frantz Fanon argued in 1956 that the truly awful aspect of slavery was that the slave owner objectified the slave-person to an object with a univocal use. [See Fanon, 1995]

always have the desired or intended effect makes the operative territory of use more interesting, less predictable, but no less fundamental to his being. Not only is he *adaptable* from his own perspective on the world around him, but also from the point of view of the network of relations that he is part of within his environment. The use of his body by him and by others, intentional or contingent, gives him his *substance* in the form of a direction, that is, his emergent being in terms of a name. It is important to emphasize that use is extremely unstable. Descriptions, such as names always narrow a thing and thereby give it a direction, just as a corridor suggests a clear direction by virtue of its narrowness. His body, as Deleuze and Guattari conceived it, is constantly being territorialized [Deleuze & Guattari, 1983, especially “The Process” and “The Territorial Machine; see also Deleuze & Guattari, 1987 esp. “1837, Of the Refrain”]. That is, it is constantly being de-territorialised by uses that have abandoned the body, or been abandoned by it and it is constantly reterritorialised by uses which it accepts or which are being forced on to it; uses which master his body. Many uses deploy themselves simultaneously, are master over the body in a coordinated way, other need to wait their turn for full effect. It is this multiplicity whereby man transcends the status of object to make him into a human being and determines the care we take in approaching him as a human being, observing the right codes of conduct.

What is equally important is that the body does not receive these functions passively. It is subject to evolution and involution. It reacts to uses. The gestures, movements and postures of the body change. A *hammerman* does not walk like a *dance-hall king*. In the long term the response can be even more radical. The body changes itself. It can change through involution, which essentially means that it learns to do something increasingly well, effectively and efficiently [c.f. Bergson, 2004].<sup>6</sup> And the body changes through evolution: the hand that began as a foot, or vice versa. What applies to the *body as object* also applies to every other kind of *object*: an object as distinguished from its background by our consciousness is much more than the narrowing it has undergone.

### **An aesthetics of generosity**

In order to avoid the problem of narrowing that objectification necessarily entails, we could take a look at what the word generosity could mean within a design situation. To be generous, means that, despite a clear prioritisation for which one is prepared to accept responsibility explicitly, one makes a conscious effort not to lose sight of the whole.<sup>7</sup> To be generous means that during the prioritisation of aesthetic, that is, desirable qualities, one does not go too far in pursuing an artificial seclusion and *cleansing* of values by treating them as exclusive. In fact the qualities that one is pursuing can only flourish in an inclusive context, in which they take up their position as priority and are not asked to subsist in an environment in which they appear vacuum-packed. This requires an undermining of the traditional subject-object dualism that still persists in practical philosophy. Every discourse between a body and its environment should be a negotiation between two subjects. To reduce something to an object is full of risk. To narrow its existence to a monocultural function, it narrows a thing down to our use of it at that moment, while every thing is so much more than that. In other words, without becoming silly and full of mystique, the discourse of design would benefit if it were to, somewhat in the spirit of Louis Kahn and Team 10, approach every *thing*, not as an object but as a subject. Essentially this entails treating the design task of say, a house, as the negative of the human beings that use it, in whatever way. In this way a house is approached as a subject.

### **Adaptable, adj.**

The word *adaptable* plays an important role here. The word not only means flexible, supple, pliable, and compliant but also adjustable. The word *adaptable* stands, from an evolutionary and involutionary point of view, for the success of man in his environment. Intelligence is after all another

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<sup>6</sup> Involution is the word that stands for the increasing sophistication of our movements as we grow, mature and practice our movements. The walk of a baby and the walk of a babe on the catwalk 18 years later is a fitting example.

<sup>7</sup> Compare the admirable definition of democracy which is a system of government which expressly avoids the temptation to become a dictatorship of the majority, as this would inevitably lead to an antidemocratic system, but pursues a form of government in which the power of the majority is explicitly geared to protecting the rights and duties of the minorities it is entrusted with. That is in fact the only condition in which a democracy is possible at all.

word for adaptable. Intelligent people see a situation, make a salient assessment of it and develop effective attitudes and strategies to deal with it. And if they do not, then they find other things more important. The attitudes, gestures, movement and communications *territorialise* the body for the purposes of use at that moment. They become whatever purpose they lend their body-mind for. What is so remarkable is that in evolutionary and involutory terms we always speak about *our* ability to adapt to our environment. Within that equation it would appear that the environment is seen as a given. The environment is where we find ourselves as mobile creatures. With current technological innovations, that is what is being changed around.

### **Adaptable, noun.**

For this reason we have to shift our attention from the adjective to the noun. *The* adaptable is not just a thing, an object, it is a machine that produces a quality, a quality we find desirable. But in contrast to a simple machine which can be switched on or off during or after the production process, the adaptable is more complex. It does not just serve, like an object does, it has acquired a character. With this I mean that it is capable of movements whereby it is able to switch between various uses, or is able to serve the user of the adaptable under varying circumstances with respect to the same set of functions. It *adapts* itself to us. But that is not all. When things adapt themselves to us, we do not remain passive. This makes the complexity of our relationship with the adaptable grow exponentially and creates a conflict. In that conflict something happens which looks like magic. To illustrate this we merely need to replace the adaptable with a person. After all, what is a person sitting opposite you, other than a machine whose predictability causes you to proceed with care? The person you deal with *is* an adaptable and dealing with things that *live* require strategies of human intercourse: two machines (of which one is your body-mind) constantly adapting themselves to each other, opposite each other, or rather, as extensions of each other... The adaptable is a first step (actually there are prior steps, but we will leave them out for the moment) in the necessary personalisation or subjectification of the environment. The intersubjective is not just a privilege that should be accorded to other people, but, if we want to interact with our environment at the level of complexity we seem to be steering at, the subjectification of the environment is a strategy that makes that complexity manageable. The complexity that emerges in the confrontation between two adaptables, can only be managed if we begin to see and approach the adaptable environment as living [Dennet, 1994]. Living means to be an adaptable: partially predictable, with an own will and useable as well as interesting. As soon as two adaptables meet and begin negotiations, the strategy of man is to treat the *other* as a subject. He endows it with a virtual life in order to make negotiations easier. Only the passive can remain an object and be *used* as an object.

All the *adaptables* designed by students I have helped supervise are concerned with redefining the role of *man-in-his-environment*. This is done in such a radical way that the conventional attitudes with regard to life and death, living and non-living can no longer be taken for granted.

### **Two representative examples**

Karel Kamman began from the following premise: Cities are filling up, there is far less space that we can claim for ourselves. What a shame that so much of the space available in any one house is used so little during the course of a normal day. Described like this it has a similar point of departure as the magisterial "Drive-in House project" by Michael Webb of Archigram.<sup>8</sup> But after this he goes his own way. 'What if we were to reduce the absolute useable surface area of a house plan to just a little more than a serviceable living room and then install walls that can move, so that, when we wish to sleep, the bedroom can claim most space and when we go to the kitchen, the kitchen unfolds itself, etc. etc?' In this way he has managed to separate the useable surface area of a house from the absolute surface area, keeping the latter relatively small and increasing the former by no less than 40%. But the real

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<sup>8</sup> Michael Webb, Drive-in House project, 1963. The idea was that you should see your house and your car as a combinatorial whole, whereby the car could unfold into a house and be combined with other house-cars so that people could easily adopt a nomadic life and create large or small spaces as the occasion demanded, thus reducing the permanent space consumption of cities.



challenge in the project was not so much the simple mechanics of movement; it was rather finding answers to the urgent problems that then arise: How do we deal with walls that move? What happens to the usual collection of things lying around on the floor? What happens with pictures and posters? What happens when two people want to be in different spaces? Is he designing a nightmare? The solution can only be found in one particular place. We shall have to re-centre ourselves with respect to a building that has taken over our evolutionary capacity for adaptation. But things are not quite as simple as that. The building's ability to adapt to us will not mean that we can sit back and become lazy. In fact it will demand an agility on our part: We in turn will have to invoke an *extra* adaptive capacity in order to deal with the adaptive capacity of the house. Adaptability on the part of our environment will demand more adaptability from us: a layered adaptability. The question as to what this will yield is the challenge that a project such as this will need to accept. The emblem of Cedric Price's Generator offers itself.<sup>9</sup> The building is in a position to show subversive behaviour. It will begin to live and will demand from us that we approach it as a living being. Philips is in fact experimenting within the area of domotica with a house as a personality, the particular one I have in mind is called "Dimmy" (nomen est omen) who behaves like a good servant and regulates the light and various other electronic functions in the house. In this example we can still communicate with our machines as if they are slaves, but that will start to change, live beings, with an ability to adapt are more than slaves. And, peculiar as it may sound, most of us don't want slaves around the house.

Alex Suma is trying to design a facade which can billow, heave and undulate like the impressive thighs of a skating athlete. That is, it will be able to move as the muscular tissue and skeletal structure under our skin can move. His product will result in a designed pavilion that will not attract us through sexy pictures and colourful advertisements projected onto its facade, but rather through a convincing simulation of the ease and elegance of intentional human movement [c.f. Bergson 2001]. For this he has done research into the working of human tissue, and on the basis of a convincing analogy designed a system which conjures up the possibility of a building in direct competition with an attractive man or woman. Imagine James Bond walking through the street and meeting a lady and a building simultaneously as two equal arguments.<sup>10</sup> Who will he favour with his winning backward glance? The answer is no longer quite so predictable. In a fantastic novel set in Jamaica the protagonist is the "crazy" Aloysius who in a scene remarkable for its passion and resonance makes love to mother earth [Winkler, 1987]. It is beyond all dispute: man desires more life around him and his ability to distinguish between machine and man is being tested. He has already become a cyborg, a creature in which technology and biology are finely enmeshed. He fights his loneliness and his boredom on every front. In the name of Apollonian order and science he creates with Dionysian rapture. Alberti saw ornament as the first step in the great chain of being of matter spiritualising itself into mind, ornament as the first step towards character, a concept implying life [Alberti 1485, e.g. the preface and book 6, chapt 2 and book 9, chapt. 5]. Now man has proceeded further still and is in a position to make buildings move and talk. Use creeps where it will and creates, wildly. Use always lays at the basis of our actions. Not because we know what we are doing or what we want, but because we don't: we dole through this world like naive children as if it is still able to perform miracles. And it can. And as our environment becomes livelier, it will be useful to us to enter into discourse with it as if it were a subject. Generous architecture will no longer be a metaphorical epithet. Manners and behaviour in buildings will become in an absurd way, essential to our dialogue with our creatures.

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<sup>9</sup> Cedric Price, *The Generator*, a project dating from 1976 in which people could program a computer to implement temporary changes to their house in a small development in Florida. However, if people did not make use of the computer sufficiently, it would "wake them up" by "thinking" of alterations itself and take revenge for its neglect as a possibility. These alterations would be made when the inhabitants would be at work and would surprise them on their return.

<sup>10</sup> For the image of two equal arguments I am indebted to the great futurist Marinetti

References

- Alberti, L.B., *de re aedificatoria* (1485) see for example the preface, Book 6, chapter 2 and book 9 chapter 5. Especially the 1991 translation *On the Art of Building in Ten Books*, transl. Joseph Rykwert, Neil Leach & Robert Tavernor, MIT press,
- Bergson, H., 2004, *Time and Free Will: An essay on the immediate data of Consciousness*, Routledge.
- Deleuze, G. & Guattari, F., 1983, *Anti-oedipus, capitalism and schizophrenia*, Univ. of Minnesota Press.
- Deleuze, G. & Guattari, F., 1987, *A Thousand Plateaus, Capitalism and Schizophrenia*, Univ. of Minnesota Press.
- Dennet, D., 1994, *Consciousness Explained*, Gardners Books
- Fanon, F., 1995 “Racism and Culture” in Fred Lee Hord et.al., ed. *I Am Because We Are, readings in Black Philosophy*, Univ. of Massachusetts
- McLuhan, M., 1994, *Understanding Media, the extensions of man*, reprint of 1964 edition, MIT Press
- Sullivan, L., 1896, “The Tall Building Artitically Considered” in Robert Twombly ed. 1988, *Louis Sullivan, The Public Papers*, New York, Norton & Co.
- Winkler, A., 1987, *The Lunatic*, LMH Publishing