RE:Definitions of use

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What does it mean to use *something from a design point of view? As an
alternative to role-based accounts of designers and users, this paper presents an
act-based account that centres on what it is we* do *rather than* who *we are. More
specifically, the paper analyses relations between design and use with focus on
how* open *a design (process) is with respect to* definitions of use through use;
*from well-defined influence from specific user tests on design decisions, via
extensive user participation in the design process, to open-ended design
processes that extends into what we otherwise understand as use. Thus, it
transforms the relation between design and use into a question not of who, but of
how.*

What follows can be considered a conceptual exercise. It is an exercise aimed at capturing some aspects central to User-Centred Design without accounting for the notion of the 'user'. To explore a different perspective than the role-based account of relations between designers and users — literally evident in notions such as User-Centred Design — this exercise aims to focus on what it is people *do* rather than *who* they are with respect to a design process.

Though the idea of discussing User-Centred Design without accounting for *users* might seems like a contradiction in terms, there are at least two reasons to do so. The first reason is certain problematics related to the notion of users in User-Centred Design (cf. Redström, 2006). In particular, referring to 'users' during design seem to assume that there already are users of things not yet designed, thus obscuring the complexity of what actually happens as someone starts using a thing, as someone *becomes* a user. The second reason relates to a range of emerging tendencies towards more open-ended design — for example, in design approaches focussing on notions such as appropriation, re-configurability, customisation, and forms of extensive user participation.

Another set of issues relate to how notions of form and form-giving are changing as a response to new technologies and materials. For example, as a result of increased interactivity, the form of a technical artefact reflects not only the

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work of the designer but also, increasingly, the actions of the user. The so-called *personal computer* is an interesting example: while the form of its casing may be largely identified as the work of a certain design team, its form in a wider sense — that which makes this particular artefact into what it is — also includes all the documents, images, music, software, and even hardware created or modified by the user herself, by open source communities, and so on. Although computers of a certain brand and model might be identical from the start, they become quite different and unique artefacts through use over time — not only in the sense of superficial wear and tear, but at deep structural levels within the artefact determining what it can do and how it behaves. Describing such complex processes that take place over time on basis of terms such as 'designer' and 'user' might not only be difficult, but potentially also misleading for design methodology.

This exercise, therefore, raises a discussion of such issues in order to better understand the relations between design and use — and between designers and users — that User-Centred Design (in a wide sense) deals with.

1 Distinctions

In philosophical and sociological studies of technology, it has been remarked many times that designing a technical object also typically entails designing, or prescribing, its use. Arguing that technical artefacts have a dual ontological nature, Kroes (2001, p. 1) states that:

[A]n essential aspect of any technical object is its function; think away from a technical object its function and what is left is just some kind of physical object. It is by virtue of its practical function that an object is a technical object. The function of technical objects, however, cannot be isolated from the context of intentional action (use). The function of an object, in the sense of being a means to an end, is grounded within that context. When we associate intentional action with the social world (in opposition to causal action with the physical world), the function can be said to be a social construction. So, a technical artefact is at the same time a physical construction as well as a social construction: it has a dual ontological nature.

Comparing design to rhetoric, Buchanan (1989, p. 95f) suggests that 'the designer, instead of simply making an object or a thing, is actually creating a persuasive argument that comes to life whenever a user considers or uses a product as a means to some end.' Commenting on the normativity of technology and the notion of proper functions, van de Poel and Kroes (2006, p. 2) state that: 'Those who argue in favour of some kind of moral agency consider technical artefacts to be inherently normative: technological artefacts are not taken to be simply inert, passive means to be used for realizing practical ends. In other words, technological artefacts are considered to be somehow 'value-laden' (or 'norm-laden'). These moral values and norms may be explicitly designed into these artefacts, or they may be acquired in (social) user practices.' It seems also quite clear that the transferral of intentions

about use from designer to user is not something that we should take for granted. Akrich (1992, p. 207f) observes: 'Designers thus define actors with specific tastes, competences, motives, aspirations, political prejudices, and the rest…To be sure, it may be that no actors will come forward to play the roles envisaged by the designer. Or users may define quite different roles of their own.' Thus, how the use of things actually turns out is a concern for a range of research areas ranging from science and technology studies and sociology to design theory and philosophy.

Interestingly, there are also examples of how to think of this issue not as a problem that design needs to overcome, but as a design opportunity that could be explored. In relation to such tendencies in Human−Computer Inter-action (HCI), Sengers and Gaver (2006, p. 99) argue that 'the expansion of computing beyond the relatively circumscribed and controlled context of the workplace into most facets of everyday life suggests that the domain of HCI has become broader, more personal, more idiosyncratic, and therefore less accessible to, and appropriate for, designer control.' In response, they suggest (Sengers and Gaver, 2006, p. 102), 'If we take supporting multiple interpreta-tions as a central goal, design shifts from deciding on and communicating an interpretation to supporting and intervening in the processes of designer, sys-tem, user, and community meaning-making.'

Depending on which relations between objects, their proper functions, and actual use that we are interested in, there is a wealth of approaches and distinc-tions that might be applied. Below, I will use two quite simple ones. The first is meant to capture how designing an object also typically entails prescribing its use: that designers create not only shapes of things but also forms of use. The second aims to open the first one up in order to discuss the difference between intended and actual forms of use. It should be kept in mind that these distinc-tions are meant to be quite simple, and are not intended to cover all the con-siderations necessary in design practice. Rather than a complete description of a design situation, these distinctions are meant as tools to enable a certain perspective. It is in this sense that the following is to be considered a conceptual exercise.

1.1 Thing-design, use-design

Let us start with the idea that design is about both 'thing-design' and 'use-design'. Consider, for example, designing a chair: we design the chair as a phys-ical thing but, in doing so, we also design a particular act of 'sitting'. Sometimes thing-design is in focus, as we relate to some established notion of what it means to sit and how. But it might also be that use-design is the starting point. For instance, in ergonomic design, rather precise acts of sitting are often in focus, as exemplified by the *Balans* chairs by Mengshoel and Opsvik for Stokke, and by how the Swedish designer Bruno Mathsson is said to have come up with

the basic shape for one of his chairs by sitting down in the snow and then measuring the resulting imprint.

Important here is that the distinction between 'thing-design' and 'use-design' is not quite the same as the distinction between form and function. Both form and function refer to what the thing is, or does, when we use it. 'Use', however, refers to what *we* do when we use it, as in how I might express what *I* am doing by saying that 'I'm sitting down in this chair' (cf. Hallnäs, 2004; Hallnäs and Redström, 2006, cf. also the difference between the design of a user plan and of artefacts in Houkes et al., 2002). The chair might have the function to enable people to sit on it, but it is I, and not the chair, that actually 'sit'. So, referring to acts of 'sitting' is not a matter of the chair's functionality, but of specific acts of using an object.

1.2 Acts of defining use

The second basic distinction concerns what it is that eventually determines use. Though designers might prescribe certain forms of use through the form of an object, it is also clear that what actually happens during use is typically more complicated, since people might have their own ideas about what the use of things should be like. We can express this as a difference between acts of *defining use through design* and of *defining use through use*.

'Defining use through design' is, for instance, what one does when expressing a specific notion of what it is to sit through how a chair is designed. 'Defining use through use' is what one does when using the chair to sit — i.e., when someone defines what a given thing *is* by using it in a certain way (cf. also the development of use theories of meaning, e.g., by Wittgenstein (1958) and Ryle (1953), and also Ehn (1988) on design and language-games). These definitions of the chair's use might be very similar — as when someone sits down in it as its designer intended — but it might also differ, as when someone uses it for some other purpose or tries to sit on it in a (very) different way. Indeed, that sitting down in a chair is an act of defining what the object in question *is*, is perhaps more evident if we do something unintended with it, when we *re-*define what its use might be like.

We could also think of other words than define, or definition, here. For example, 'interpretation' (cf. Sengers and Gaver, 2006) might be suitable; or 'anticipation', when it comes to definition of use through design; or 'appropriation' or 'appreciation', when it comes to definition of use through use. Given the objective of the analysis presented here, a potential problem is that these notions also imply certain characteristics. For instance, the notion of interpretations seems to suggest a conscious, hermeneutical, and reflective process — which may not always be the case. Notions such as *affordances*, on the other hand, would suggest almost the opposite — that it is a matter of 'direct perception' (Gibson, 1979) — which would be reasonable in some cases but not in others. Depending on the perspective of our inquiry, we might want to

describe these processes in different, and not necessarily compatible, terms. Since such more specific accounts are not in focus here, such terminological issues and instantiations are left aside for now in order to focus more generally on acts of expressing what something is, i.e., basic acts of defining.

Further, notions of use are not necessarily bound to merely instrumental aspects (as the sitting example might seem to suggest). The definition of a thing that someone makes as he or she uses it — as this person brings the thing into his or her lifeworld — is existential: it is a definition of the object as a meaningful thing in this person's life. Thus, a definition of use through use typically relates to much more than practical purposes. The main concern in this paper, however, will be examples where it is more easy to identify relations between definitions of use through design, and through use, keeping in mind that there is more to the meaning of a chair than sitting in it. Perhaps it is also important to note that the word 'use' does not account for everything we do with an object. For instance, there is ordinarily a difference between saying that someone is 'using' and 'wearing' a piece of jewellery, or 'using' and 'playing' an instrument.

2 'User-Centred Design'

Given these two distinctions — between 'thing-design' and 'use-design', and between 'acts of defining use through design' and 'acts of defining use through use' — how might we characterise the objectives of User-Centred Design? Of course, there is not one single objective of this rather broad field. Indeed, there are also competing and conflicting views of what User-Centred Design should be. Nevertheless, if we try to capture some basic aspects, one suggestion might be that User-Centred Design aims at anticipating eventual use during the design process by engaging people, or information about people, who are considered to be potential future users. In some approaches and methods, this may be expressed as an ambition to understand more about how a given design is interpreted in order to make the intended interpretation into the one most likely to occur — as might be the case, for example, when *user tests* are conducted to find out if a given design is easy to understand, easy to use, etc. In other approaches, the objective might be to find out more about what eventual use *could* be like together with people representing the target use domain.

One (re-)interpretation of what 'User-Centred Design' aims to do would, therefore, be *to explore combinations of 'definition of use through design' and 'definition of use through use' within the design process*. We may also want to add something like the following: *…and where the two typically are done by different groups of people representing different domains of expertise (typically people representing the design domain and the domain of intended use)*

In such a (re-)interpretation, un-covering and investigating discrepancies between 'definitions of use through design' and 'definitions of use through

use' is central. There might, however, be different reasons for doing so. For instance, identifying discrepancies might be important if there is an overall ambition to minimise them. That is to say, minimising discrepancies might be a premise for enabling effective use, such that a user might quickly understand the intended use of an object and such that the most likely reading of the object by the user also is the one intended by its designer. However, discrepancies might also be interesting for other reasons. For instance, a design team might want to explore a diversity of such definitions of use as a way of revealing new design opportunities, which is often the case in Participatory Design. Further, expanding to include a wider set of perspectives on use might also be important if the ambition is to make design a more open and democratic activity (cf. Sanoff, 2007). Although there might be quite different motivations for identifying discrepancies between definitions of use through design and through use, taking an interest in such discrepancies seems characteristic to User-Centred Design.

2.1 Before use

In design processes, it is quite common to build prototypes or models in order to try out ideas, and to set up design experiments to better see things that otherwise cannot be seen (cf. Schön (1983) on 'reflective conversation with materials'). In User-Centred Design, this translates into an important role for prototypes, models, and other means for staging scenarios of use. Consider, for example, the importance of scale models in traditional design practice and how this has evolved in relation to new interactive technologies. In interaction design, there is often a need not only to model the shape of an object, but also what it is like to interact with and experience it over time. This has led to new kinds of prototyping methods such as 'experience prototyping' (Buchenau and Fulton Suri, 2000) and 'prototyping social action' (Kurvinen et al., 2007) (cf. also Ehn and Kyng, 1991).

Of interest here, however, is how an approach to design processes and design experiments might be brought about by different orientations towards discrepancies between various definitions of use. Consider this example from Brandt's (2005, p. 9) work on the use of mock-up prototypes in Participatory Design: *The amount of details and the manufacturing technique of the mock-up seem important as the communication is affected by different kinds of mock-ups. Simple mock-ups without many details seem to evoke a very varied span of comments with different content while mock-ups with more details and a higher degree of finishing focus the communication to a 'smaller span' around the model. By building more and more details into the design of both the object and the mock-up the design process seems to converge to the final design as the conversation becomes more and more focused during the workshops.*
On one hand, the object as such — the thing-design — appears to be less important in design centred on participation and collaboration, at least in terms of how finished it has to be as a designed thing. It seems that its primary

concern is not with perfection of form and aesthetics, but rather with how it opens up for acts of defining use. On the other hand, however, the object itself is still quite central, since it is what enables us to explore various definitions of use through use. Therefore, as Brandt's example illustrates, notions of form and the finished-ness of the object do play an important role in setting the frame for acting. Jones (1984, p. 206) once suggested that 'The essential first step is to accept the roughness, the un-professional character, the reaction 'that's not design, anyone could do it' of improvised initiatives by users themselves, by us as we are as persons, unspecialised. Once this big jump is made then the way is open to becoming able to make this new life that is so rapidly coming into being as a result of our efforts, into something worth while in itself.' The expression of a thing might appear (by accident or careful intention) to be more improvised and unfinished, thus shifting primary focus towards 'users' and what they might do. However, while it might seem to diminish in importance, or even disappear from focus as a potential end-product, the object shifts back into attention as a 'boundary object' (Brandt, 2005) or prop setting the stage for action. In this sense, thing-design continues to be a central concern (cf. also Binder, 2002).

User-Centred Design methods can be said to present ideas about how to balance processes of defining use through design with processes of defining use through use. Participatory processes, in particular, can be seen as strengthening the influence of the latter within a design process − beyond checking whether a given design is right or not in a user test of some sort. Here, the process of defining use through use becomes a rather central basis for design exploration. Thus, there are important differences with respect to the roles and relative importance of definitions of use between, e.g., User-Centred Design based on user tests where the aim is to uncover and eventually minimise discrepancies by systematically testing and fitting actual use to intended use, and Participatory Design processes where discrepancies are integral to open up designing and decision-making (cf. Sanders, 2006). In terms of roles of designers or users, the former can be seen as maintaining a strong divide between 'designer' and 'user', whereas the latter can be seen, to some extent, as dissolving such roles. But this is not primarily a matter of the influence of designers and users over design decisions, but, more generally, a difference in the relation between, and relative importance of, 'definitions of use through design' and 'definitions of use through use' in the design process.

2.2 After design
It is important to understand that acts of defining use through use essentially happen after design. There must be something *to use* for actual use to happen. This is why the object itself is central for enabling and framing such acts − even if it is just a simple mock-up that participants in the design process more or less imagine being users of in use scenarios or design experiments − as this is a way to bring such

acts of defining use through use into the design process. Indeed, this might also be one reason why iterative prototyping is so important in User-Centred Design.

An alternative strategy would be to do things the other way around, i.e., to extend the design process into what is typically understood as the use that happens after design. Tonkinwise's (2005, p. 28) notion of 'unfinished things', which builds in part on Jones' (1984) ideas about 'continuous design and redesign', seems to point in this direction:

What is at issue is not whether designers are capable of designing nothings rather than things, that is to say, services rather than products, but rather whether designers are capable of designing things that are not finished. It is less a matter of designing a different sort of thing than a matter of a thoroughly different form of designing, one that is perhaps better described as form of 'continuous design' or 'redesigning'.

A related idea is 'tactical formlessness', e.g., as discussed by Hunt (2003, p. 58, p. 72):

The temporality of everyday practices has elicited a range of recent design work that challenges the hegemony of a static, permanent design 'product.' These works embrace ideas of formlessness, decay, impermanence, abuse, misuse, and confusion. They beg for connection and modification. They also refuse reduction to the typical categories of the beautiful or the useful. Rather then fetishizing the final product, these works engage design as process.

By evading fixed form, such work opens a productive dialogue with the user, prompting uncontrollable acts of creativity and disfiguration.

In some sense, this could be seen as extended design experiments — that is, experiments where things are built to better 'see' what they are, but where (re-)interpreting them also becomes a central part of what it means to eventually 'use' them (cf. Dunne 1999).

With respect to such issues, it is interesting to compare the situation with different scales of objects, e.g., in product design or architecture. To some extent a consequence of the expense involved in their creation, most buildings have a life far longer and far more varied than most products, which translates into rather complex relations between design and use. Rendell (1998, p. 232, 234f) states:

But we all know that architects are not the doers of architecture. Most obviously, architecture is physically made by builders, and long after the building has been made the non-architects continuously do architecture. When we, as non-architects occupy a space, when we start to use it, we start to 'do-it-ourselves'. But we do this in an already occupied territory, where the activity of doing architecture has been classified and claimed by architects. …Other people cannot do architecture, their activities can only be characterised as (un)doing or (over)doing it.

The doing, (un)doing, (over)doing of 'home', transgress architectural and social definitions of domestic space and time, implying blissful and dangerous

notions of disorder and impermanence …the spatial rhetorics of use in this house in which I once lived, challenged, through alternative forms of occupying territory, the ways architects do architecture. Here making space meant taking it apart, doing-it-yourself meant both undoing and overdoing it.

One approach to opening up the design process for acts of defining use through use might, therefore, be just to design 'things' and to leave their 'use' undetermined, as some architects encourage new programs to re-define existing buildings and environments. Redefining the use of objects is something we all do from time to time. For instance, I'm now using this laptop computer to write this text in a way most likely intended by its designers – but a few weeks ago I used it as a lamp to light up a room during a power outage.

It is, however, less clear what it would mean for design to reorient itself towards 'designing things that are not finished', as Tonkinwise (2005, p. 28) put it – or towards what Jones (1992, p. xxxv) refers to as 'pure design':

Although at first taken aback by the implications of 'art for art's sake' and 'uselessness', I have since found the term [pure design] helpful in revealing the possibility of a new kind of design that seems appropriate now: designing without purpose (or without a purpose that was fixed before the moment of use) …And I see a precedent in the astonishing way languages arise and develop, purpose (meaning) of a word changing slightly each time it is 'used', used. This, I feel, is the kind of metaphor which is appropriate to designing 'at the scale of life'.

Still, there must be some 'thing' to start with, as otherwise no definition of use *through* use will be possible. Consider the *Do!* series produced by Droog Design – the *Do Hit!* chair comes with a sledgehammer so that a user may shape the metal cube into a chair; the *Do Break!* vase gains a unique surface pattern as a user throws it on the floor. Are these 'unfinished things' – things where the difference between acts of defining use through use, and through design, has begun to dissolve? To some extent, one could think of using such things as also a matter of 'defining use through design', i.e., that one re-designs the object to reflect one's interpretation of what its use should be like. On the other hand, the way one would do so is in many ways scripted by how the object was designed, i.e., what happens when a person hammers the chair is very much a part of what the intended use of this thing is – though this is perhaps obscured by our normal understanding of what it is to use a chair. This is more easily seen if we consider how it differs from a situation when he or she used any hammer to re-shape any chair.

It is, however, also clear that approaches aiming at more indeterminate forms of use can be seen as attempts to redress the balance between the two kinds of definitions. As such unfinished objects incorporate notions of process and performance into their very form, designers begin to explore how form in

a very concrete sense could be something that is not fixed by design, but that evolves with use.

3 'Use-design'

As discussed, designing a thing is typically not only about creating an object — about 'thing-design' — but also about embodying, or inscribing, some notion of intended use — about 'use-design'. Given this, we might ask whether a 'definition of use through use' ever can become a new 'design'. Or, in other words, can some re-definition of use cast the object in such a new light that we no longer consider it to be the same — and would this be a new design?

Consider one example of a radical re-definition of intended use — the record player used as a musical instrument in hip-hop music. Using the record player as an instrument is quite different from using it simply to listen to music as originally intended. For instance, several new acts of use involving one or two turntables, such as 'scratching' or 'mixing', have been introduced by hip-hop DJs and, in response, hardware modifications have been made to improve the turntable's performance as a musical instrument (cf. White, 1996). In terms of acts of use, this *instrument* really is a different thing compared to the original device, and so we seem to have a situation where the 'thing-design' (at least initially) remains but where the 'use-design' is new.

Another set of examples comes from the domains of sports such as skateboarding, snowboarding and windsurfing, e.g., as described by Shah (2005, p. 4f):
Users generate and accumulate information based on product use in extreme or novel contexts, the creation of new (unintended) uses for the product or service, and accidental discovery — in addition to intended product use. In contrast, marketing teams at firms generally focus on understanding and improving the intended use(s) of a product. For example, until the handles of childrens' scooters accidentally fell off and children experimented with the resulting toy, it is unlikely that manufacturers would have identified skateboarding as a fun activity…

Functionally novel innovations will tend to be developed by users. These types of innovations allow users to do qualitatively different things that could not be done previously, that is, they create a new functional capability, e.g., adding footstraps to a windsurfing board so that 'jumping' is possible. The development of such innovations requires a great deal of information regarding user needs and use context — information that is held by the user; it makes little sense for manufacturers to 'guess' what novel functions users might want.
Often, these innovations eventually involve changes to the thing-design as well, such as the introduction of the cross-fader by the hip-hop DJs, DDJ the removal of the handle by the early skateboarders, or the addition of the footstrap in windsurfing — but the main innovation seems to be with respect to use, to use-design.

Perhaps ideas such as Jones' 'pure design' are just that, ideas, or ideals, and not really practical design strategies. Nevertheless, there are some practical examples of design 'without purpose'. One such example is materials. Consider, for instance, the many layers of design and use present in the domain of textile materials. One may *use* some kind of fibre to *design* a certain textile, a textile that, in turn, may be *used* in the *design* of, say, a certain piece of clothing, and so on. Or, one may *use* a set of electronic components to *design* a circuit, that, in turn, will be *used* in the *design* of some computational appliance, etc. (cf. also Fischer and Scharff's (2000) notion of 'meta-design' in interactive systems development).

Can the DJ's re-definition of the record player or skater's of their boards, be understood as a matter of dis- or un-covering new possibilities in a material originally intended for other applications — not entirely unlike how new applications for materials have been discovered in areas outside their intended use (e.g., as in textiles, in architecture, in information technology)? That is, 'using' as in how we talk about 'using materials', rather than as in how we typically speak of 'using things'? What seems to be an act of 'design' from one perspective, from another seems to be a matter of 'using' something. What from one perspective is the design outcome, is, from another, the basic material used to create something else.

To explore this idea further, let us turn back to the canonical example of an interactive artefact — the personal computer. The many layers of design and use are evident: the computer itself is built using circuits and components developed and produced in many places of the world and then assembled by the manufacturer; the software is perhaps developed in some object-oriented programming language where a range of already available libraries and other resources are (re)used; users subsequently install and modify software and hardware, customise appearance, and, over time, fill the computer with their own texts, images, music, etc. Now, who is the designer of this particular object (the *personal* computer), who is responsible for giving it its current form?

With respect to the specific form of this object (as in how the material is formed to produce a particular thing), its user clearly has given it its final finish in terms of both functionality and appearance. Yet, it is just as easy to give a quite different account of the situation: as in how the notion of a 'user interface' originally denoted yet another interface between components of a system developed to optimise the efficiency and production capacities of the man—machine system. It seems that the user might be seen as both the human 'material' used in the design of a larger system and the 'designer' who uses the computer as basic material. Taken to its extreme, a 'user' might be understood as somehow existing between the alienated worker performing actions the machine eventually will perform on its own, and the skilled craftsman shaping the object with his hands as in Deleuze and Guattari's (1988, p. 329) description of how the craft of the blacksmith 'is not a question of imposing form upon matter, but of elaborating an increasingly rich and consistent material.'

Is this, then, another way to understand 'interactivity': as an existence in between acts of design and acts of use? That is to say, between how we, from one perspective, seem to build new form over time using technology as material, and how we, from another, ourselves seem to be the material of a larger object or system? As Bourriaud (2002, p. 29) comments on 'relational form' and interactivity in contemporary art: 'The artwork is thus no longer presented to be consumed within a 'monumental' time frame and open for a universal public; rather it elapses within factual time, for an audience *summoned by* the artist. In a nutshell, the work prompts meetings and invites appointments, managing its own temporal structure... The spectator is thus prompted to move in order to observe a work, which only exists as an artwork by virtue of this observation.'

Indeed, the distinctions between designers and users can be exposed and even made to break down in many ways, as can distinctions between design and use.

4 'Use' before use, 'design' after design

With respect to acts of design and acts of use − acts of defining what a thing *is* − the approaches discussed here represent a spectrum of ideas and ideals. At one end is the by now classic ambition of User-Centred Design to test and try out 'use' during the design process and in advance of actual use − what we might call a *'use' before use* approach. At the other end are accounts where definitions of use through design are meant to be in-/un-determinate, as an attempt to create a larger space of possibilities for acts of defining use through use − what we might call a *'design' after design* approach.

While certainly different in many ways, there are also important similarities that bind these together − similarities stemming from a common interest in capitalising upon discrepancies between definitions of use through design and through use, respectively. Thus, to simplify this spectrum, it could be thought of in terms of how acts of defining use through use are meant to influence definitions of use by design, i.e., how *open* the design (and the design *process*) is with respect to 'definitions of use through use'; ranging from the controlled influence of specific user tests on design decisions, to more extensive user participation in the design process, to the open-ended design process that extends into what we otherwise understand as 'use'.

To conclude, it is central to this exercise here that such questions are seen primarily as a matter of the relations between different acts of defining use and, thus, not necessary as a matter of designers' and users' 'roles'. Even User-Centred Design − despite its name − becomes a question not of who, but of *how*.

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