Chapter 6

Can crap design be inclusive? The case for deliberative design

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6.1 Introduction

At the Include 2009 conference, a conference chair observed that the inclusive design community has a tendency to focus on great design. Yet, in his view, also the worst of our design should be inclusive: "*I'd like to see the crap design being inclusive*." This statement triggered fierce reactions from the audience, such as: "*if crap design can be inclusive design, what does that mean for what we mean by inclusive design?*" According to the chairman, inclusive design is what we do, but the outcome may be different. Therefore, as a community, we are to think about what we mean by good design. This paper takes up the chairman's invitation and tries to shed more light on the issue by unravelling the more general questions underlying it. Can crap design be inclusive? Or, in other words, what is the link between inclusive design and good design? Reduced to its general form, this question is relevant to every activity that has a normative dimension: who is to decide the standards? Should the norms be decided by the best knower or by the people, however ignorant they might be? Applying this question to inclusive design leads to two other fundamental questions: what is there to know? And who is the best knower?

6.2 Inclusivity and Quality in Design

Inclusive design denotes "*a general approach to designing in which designers ensure that their products and services address the needs of the widest possible audience, irrespective of age or ability*" (Design Council 2009). Or, formulated slightly differently, "*design of mainstream products and/or services that are accessible to, and usable by, people with the widest range of abilities within the widest range of situations without the need for special adaptation or design*" (BS 7000-6 2005)

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In general, the term “crap” denotes what is worthless or inferior, what is no good at all. Crap design can thus be interpreted as the very opposite of good design. At first sight, this does not help us much further, as quality in design is a controversial issue. Dana Cuff (1991) defines it as a phenomenological entity perceived by individuals, not an inherent quality of the design. In her view, an excellent design is one perceived to be excellent by the consumers or the public at large, the participants in the design process, and the design profession. Her view is rather exceptional, though. In what is most commonly meant by quality in design, only the profession’s appreciation counts. In architecture, for instance, the profession attributes high quality to buildings that are published in nearly all major journals, and receive several awards, regardless of their appreciation by the designers or public (Cuff 1991).

The discussion at Include 2009 suggests that the link between inclusive design and crap design (or its opposite) can be confronted in different ways. One way exploits a restricted definition of good design (design preferred by the professionals) and so admits that this not necessarily converges with design meeting the needs of the widest possible audience. Indeed, journals that publish recent architectural work and award-winning projects rarely go beyond a visual description and analysis of buildings (Cuff 1991). This does not say much about their accessibility to and usability by people with the widest range of abilities in the widest ranges of situations. In this first sense, the norm of good design is in the professionals’ hands, say, and inclusivity plays no role in it: if a design turns out to be inclusive, then good and well; if not, that does not make any difference in the appreciation of its design quality. Here the contrast between inclusive and good design (and between an inclusive and non-inclusive idea of design) is in fact minimal, since there is no relationship between both; there is no real contrast, but just two different perspectives: a normative one that is interested in what is good design, and a non-normative that is interested in matching design features and user capabilities, even if this results in design that professionals consider worthless or inferior.

A second way to confront the link between inclusive and crap design, contests the idea that there is something objectively good that is recognized by the professionals. In this view, it makes no sense to say a design is good or bad outside the fact that it is preferred or repelled by some people: what is "good" is nothing but what people choose, so we cannot say that what people feel addresses their needs is crap, since there is no objective fact of the matter to decide the issue. To say it bluntly, inclusivity is the norm, not quality in any objective sense.

The link between inclusivity and quality in design can also be seen in a third way by trying to reconcile both, so that we do not need to choose in any of the senses mentioned above. Cuff's perspective on design quality can be seen as one attempt to do so. The next section will lead us to a different attempt.

6.3 The basic questions

The question whether or not crap design can be inclusive is a special case of a very basic issue raised by Plato’s view of government in the fifth book of the *Republic*.

> *"Until philosophers are kings, or the kings and princes of this world have the spirit and power of philosophy, and political greatness and wisdom meet in one, and those commoner natures who pursue either to the exclusion of the other are compelled to stand aside, cities will never have rest from their evils, --nor the human race, as I believe, --and then only will this our State have a possibility of life and behold the light of day. Such was the thought, my dear Glaucon, which I would fain have uttered if it had not seemed too extravagant; for to be convinced that in no other State can there be happiness private or public is indeed a hard thing."* (Republic, V, 473c-473e)

Here Plato defends the aristocratic doctrine that political government is to be entrusted to those who have true knowledge of the good. That is, not surprisingly, philosophers. As noticed by Popper, among others, this seems to clash with any liberal view of politics and of course with the substance of democratic theory. Reduced to its general form, the discussion about the relationship between crap and inclusive design is thus relevant to every activity that has a normative dimension: who is to set the standards?

6.3.1 Who is to decide?

Should the norms of anything be set by the best knower, or by the people affected by the decision, no matter how ignorant they might be about the issue at stake? The first claim expresses an aristocratic, paternalistic attitude, but seems to guarantee reliable knowledge about the best standards to be used in a certain domain. The second looks more liberal and democratic in that it respects individuals' point of view as an expression of their freedom. But it makes the choice a practical, not a cognitive task, so that what is good is by definition what is chosen: there is no objective truth to know about, just different preferences and beliefs, and freedom to be respected (Rorty 1991).[2] Here the reason why the view of the "professional" best knower can be neglected is that there is properly nothing to see except what people *de facto* want or prefer.

If we look at the discussion from this point of view, some issues outlined above look spurious, e.g. the alternative between aesthetics (which design professionals are supposed to overvalue) and accessibility or usability (to which people are supposed to be attached). Professional designers may look at usability first, rather than focus on appearance. Vice versa, people may reject a design they find usable, for instance because it scores low on aesthetic quality. In fact, the very distinction between aesthetics and usability can be questioned, as people's point of view is relevant to assess the aesthetics of an artefact (a book, a picture, or a building): aesthetic quality just is usability of an admittedly special kind (Jauss 1982).

So it looks like the real issue here is not which value is better, but: who is to decide? Assumed that aesthetics, accessibility, usability can all be set as values to be pursued, the real problem is not the hierarchy between them—or better, this is a by-product of a prior problem: who is to set what is good or valuable, if anything? Who is to decide the priority of aesthetics, accessibility or usability as values is a

[2] The idea is not new, actually: a similar point was raised against Socrates by Trasimacus in *The Republic*, 358c-359b.

kind of second order question—a question about who is to decide the value of value.

One answer is that no one better than professionals are legitimate to decide, because they possess the best knowledge available in the domain—a layperson can arguably judge a car's usability worse than an engineer or a designer. Another answer is that no matter what professionals say, everyone should have what they feels meets their (perceived) needs, even if their judgements could be substantially wrong—assuming there is something to be wrong about here. On the side of the paternalists, there is an obvious argument: knowing better, one will more probably get nearer to the truth and get what is truly usable, accessible, or beautiful. On the side of the democrats, there is also a good argument: human cognition is fallible, so even the best knower can get it wrong (Mill 1859).[3] More radically, there may be no objective norms to know when it comes to aesthetics, usability, or accessibility; what we take to be normative does not reflect any objective fact, rather it expresses our deeper desires and concerns (Blackburn 1989); so the best policy would be to let people choose according to their desires and concerns. Last, but not least, experts may tend to build closed circles and take control of the profession and the market; so here the better you can have is to let people judge the judgers, and of course the results.[4]

6.3.2 What is there to know?

These arguments, however, are not all on the same side and the position they support may be accordingly differentiated. Underlying the paternalistic position is the assumption that there is something objective to be recognized. In some fields, human capabilities and sensitivities have no role to play in shaping the relevant facts. It is unlikely indeed that someone would assess, say, the truth of Pythagoras's theorem by polls, because geometrical truths are settled independently of what people think or desire. Hard sciences are then objective in the strong sense that human subjectivity does not enter in the picture: they do not represent the world as it looks from a certain point of view; rather they access the world as it would look, say, in a view from nowhere (Nagel 1989).

In other fields, however, assessing what is the case requires exercising some human capability and/or sensitivity, because there is no such thing as facts that obtain independently of what humans feel, think or desire. There would be no piece of art in the world if we were to subtract our capacity to judge things from the point of view of the impact they have on us according to certain cognitive capacities and cultural background (see McDowell 1985). The same could be said of moral facts: arguably, nothing can count as right or wrong independently of the human capacity to suffer and sympathize.[5] Here the point of view of the subject affected or concerned is essential to shape the relevant facts. This is probably valid

[3] In the 1960s, these ideals of participating democracy, where collective decision-making is strongly decentralized throughout all sectors of society, inspired the design community to engage in participatory design, that is to involve non-designers (occupants, users) in the design process (Sanoff 2007).

[4] Feyerabend (1978) argues for this position concerning science in general.

[5] See Smith (1759) for this analogy between moral and aesthetic judgements.

for design as well, since it responds to human needs, including a need for aesthetic pleasure.

This does not mean that the judgement cannot strive for objectivity. The fact that something is ontologically subjective does not imply that it cannot be epistemically objective, that is, that the relevant facts cannot be assessed objectively (Searle 1995). But it may imply that the judgment should be "inclusive" in order to be objective: objectivity here means universal recognition rather than correspondence with a realm of independent facts (Kant 1790). We take into account the victims' point of view in judging what is wrong about wars, we assume universal sympathy and expect that this would be anyone's predicament. Similarly, when we assess how good the design of a bike is, we do have a person in mind—we will not design a bicycle for Martians[6] without knowing how many tentacles they have, as we do not design bicycles for fishes. So it may turn out that the contraposition between quality design and inclusive design in the discussion referred to above, is artificial: all design needs to be inclusive in a way, because it is commensurate to people's needs, but the inclusion is to be regarded carefully; it does mean that there is no objective fact or standard to be acknowledged: Michelangelo's work cannot be assessed by polls.

On one hand, this seems to support the priority of the professionals' judgement, since they probably know better how to make up the right kind of artefact. On the other hand the professionals' judgement is constrained by the prospect of usability, since it has to be tested on the people who will use it. Symmetrically, people's perspective contributes to define the target, but it is not the case that any randomly chosen perspective is relevant. In fact you may not want a bunch of hooligans to decide on the design of your apartment. What is relevant is the perspective of an ideally informed, attentive, possibly competent user.[7]

At a very abstract level, then, it can be said that it makes no sense to design something without a user in mind: the user perspective is shaping the very idea of "good" design. A can opener no one can use to open cans is no (good) can opener. Moreover, it can be argued that it is the user's perspective that is crucial for establishing an artefact's function (Dennett 1990). But this does not mean that there is no fact of the matter here and it is just the people who have to judge what is good or bad design, what is quality or crap design.

6.3.3 Who is the best knower?

Another assumption seems to be that professionals possess the best possible knowledge, in other words, are the best knowers. Yet, in relation to inclusive design—design for accessibility to, and usability by, people with the widest range

[6] Any intelligent extraterrestrial beings totally different from us.

[7] The notion of 'user' is being criticized in design research. Focussing on just the 'users'of a product may ignore the needs of others affected by its design (Bowen 2009). Moreover, the term 'user' reflects a tendency to objectify people as 'test subjects' rather than human beings with a context, lifestyle and desires that go beyond their physical representation (Donahue & Gheerawo 2009). Aware of this critique, this paper uses the term 'users' as a shorthand for 'people for whom designers design'.

of abilities within the widest range of situations—it may be problematic to state that the people are ignorant (as opposed to the knowledgeable professional); they may lack the designer's professional knowledge, but they are likely to have other kinds of knowledge, *c.q.* expertise gained by experience. Consider, for instance, persons who are blind; through their daily interaction with space, they are able to identify obstacles and appreciate qualities in the environment that designers are not always aware of (Heylighen et al. 2009).

In this context, we can distinguish between *know how* and *know that*, corresponding roughly to tacit and explicit knowledge: I can ride a bike although I hardly have a clue of how it works—the relevant laws of physics and physiology just escape my knowledge. So I am unable to design a good bike. But professionals may develop a better bike by exploiting the know how bikers collected about what it is like to ride a bike, for example, in certain conditions. Here the user's tacit knowledge guides the project, whereas the professional is in charge of transforming the know how in explicit knowledge that can inform the design.

What people's expertise gained by experience amounts to be is in this sense a kind of know how. It could also be called "embodied knowledge" to stress the role of bodily abilities and capacities that are relevant to the topic: this knowledge is enacted practically rather than represented theoretically. So the way of experiencing space and interacting with things may escape professionals' technical language. In the context of our discussion, we would like to stress, first, that this knowledge is different in kind from the professional knowledge actually used to design, and, second, that it may be considered a source of information that is not at the designer's disposal in other ways than by involving people: being "enacted" rather than represented, it may escape the designer's capacity to think about objects or spaces from the relevant point of view.[8] The questions that arise in this contexts are subtle. First, the very distinction can be contested, but this is not relevant here.[9] Second, it may not be clear how to transform know how into know that. The former is radically tacit, contextual, and subjective, first personal knowledge. The latter is objective and descriptive. So we cannot assume that the user's competence is easy to be taken as a guide to the professional. Moreover, we may ask how people's subjective knowledge can be made the most of. A physician and an engineer may know better how the body works on a bike, so they may be less prone to over- or undervalue some relevant design issue. They need to use all possible knowledge with the prospect of making the best possible bike for certain bikers, and this knowledge includes relevant knowledge about the biker's needs, capacities, etc. But the biker is not necessarily in the best position to judge the design, since she can go astray about the interpretation of what her needs and capacities imply for the prospect of designing an optimal bike.[10] There is however

[8] This insight that people's "tacit knowledge" can contribute to more insightful and more powerful design decisions, was another motivation to engage in participatory design in the 1960s (Sanoff 2007), and more recently inspired designers to involve locals in designing places (Day 2003).

[9] see Crane (2001), pp. 94-95, Stanley, Williamson (2001) for a discussion

[10] The point here is that the subjective view is necessary as source of information, but it is not necessarily the best point of view for interpreting this information in relation to the target: I can feel uncomfortable by riding a certain bike and can think this is because I

a way to make sense of the user's point of view: first it can be used to test the design, an approach adopted since many years in certain design domains (Cross 1971). Some people can be trained to serve quasi professionally as a tester in this sense. For instance, several initiatives exist to train persons living with a disability to work as consultants in building projects (e.g. Ringaert 2001). Second, the information collected, filtered by the objective knowledge at disposal, can also be used in an indirect way. The professionals may compare it with their objective knowledge, double checking every step on both sides, and using one kind of knowledge to interpret the other: people's expertise can shed light on the best way to address a design task by informing the designer about the condition in which a certain artefact will factually work; moreover to place that expertise in the framework of the designer's professional knowledge can help to make sense of it for the aim to pursue.

6.4 Discussion

How is this supposed to apply to our discussion of the relationship between good and inclusive design? Two questions seem to be relevant.

One is mentioned above: how is it possible to translate the relevant know how or expertise gained by experience in an explicit know that, which can be used by designers in their practice to address the needs of the widest possible audience? On the one hand, in fact, we assume that without this information designers may not be able to articulate the problems involved in designing a product or service that takes into account the point of view of people with the widest range of abilities in the widest range of situations. On the other hand this information needs to be expressed in a way that is sufficiently general to be grasped by designers who do not share the specific abilities that make people subjectively acquainted with it "from within". To spell it bluntly, since people are not conceptualizing the experience, but "living" in it, the information may be available to them in a "practical" format that is hard to communicate to others, if they do not share the relevant inner experiences. To illustrate the point, Thomas Nagel (1974) exploited the intuitive difficulty we find to put ourselves in the shoes of creatures that do not share our perceptual system: so one can be sceptical about the possibility to grasp what is like to be a bat, who uses a sonar system in order to represent spatial forms.

We do not need to draw sceptical conclusions from that, however. The question of integrating this kind of knowledge may rather call for interdisciplinary cooperation between psychology, neuroscience and design. We may need the help of a physiologist to grasp the way certain bodily feelings—which are subjective in nature—correspond to the actual physical functioning of the body, so that the information they provide can be used to plan a design that reflects the relevant characteristics of people's experience and may so respond to their needs.[11] Also, it

cannot sit well on it, but in fact the problem lies elsewhere and my bad sitting position is a distant effect of this or also depends on my insufficient biking technique.

[11] An example of how interdisciplinary methods can bridge the gap between the subjective character of first personal reports and the objective character of scientific explanation of mental phenomena can be found in Dennett (1991, part 1)

may turn out that we need to appeal to the experience of particularly attentive people in order to extract the relevant information from their experience: the average guy might just not be able to spell it in a sufficiently articulated way, whereas that can be at least facilitated by asking a report to people who know roughly how designers work.

The second question is a possible way out from our dilemma. The dilemma was created by the impression that either you confer some kind of absolute authority to the professionals in judging what is good design, or you abandon the idea of a normative standard to which design can be submitted: it looked like one could have good design at the expense of inclusion, or inclusive design at the expense of good design. It is not necessarily so. The fact that we need to take into account the information provided by people with the widest range of abilities and to integrate it in the design process does not imply that people *tout court* should decide what is good or bad design. On the contrary, it seems that putting the question in such opposing way as "designers' paternalism versus democratic freedom" is a perfect way to miss the issue. Taking into account the views exposed in the previous paragraph, a better prospect may well be to reformulate the very idea of the professional competence designers must develop to deal with this kind of issues, so that the relevant expertise or know how is incorporated into what it is properly to be conceived as "objectively" good design. People's role here is not that of a judge, but of a co-operator in the enterprise of getting the best possible solution, since they are in the best position to collect the relevant information.

To resort to our political metaphor, a reason to sustain democracy is not really freedom of choice, but the fact that the people affected by political decisions are in the best position to collect information about the issue at stake, both in case of normative conflicts and in case the problem is how to apply recognized norms. The information needed is objective, and so is the judgement. But people's participation to the deliberation is crucial for providing the point(s) of view from which the judgment is to be assessed. Interestingly this seems to call for a "dialogic" or "deliberative" idea of democracy where the value of inclusion is cognitive rather than practical: democracy is not just a way to collect preferences and let the most widespread to take over, but the way to know what is just (Habermas 1996, Goodin 2003, Sen 1999).

This may be the case for inclusive design as well. At least, it could be a way to escape the paradoxes raised by the opposition from which we started. This would amount to formulate the idea of a dialogic or deliberative conception of design according to which there is no need to install designers as the "philosopher kings" in the field, nor to collapse design standards into a random list of subjective preferences spelled out by the widest possible audience, irrespective of age or ability. In fact, you can have both good design and inclusion by conceiving the deliberation about what is good design as a dialogic enterprise that involves the designer as well as the user. In this sense, the primacy of competence and the inclusion of the users' point of view are essentially connected *within* the very idea of "good" design. So you may have both good and inclusive design. Moreover, it may turn out that you cannot split the issue in two: designers' competence is blank, if it is not informed by the aims to be pursued, and the users' inclusion will be blind

without being articulated in some kind of explicit knowledge. A designer will feel lost without some information about what the artefact to be designed is supposed to be used for. Correspondently, people's need will be nothing but subjective feelings without being interpreted in a way that makes them suitable to be responded to. So not only there is no contrast between inclusive design and good design: it may well be that one cannot have one without the other. You cannot have real good design without it being inclusive and you cannot have real inclusive design without it being good.

6.5 Conclusion

If crap design can be inclusive, what does that mean for what we mean by inclusive design? Starting from this question, raised at Include 2009, we have tried to reveal and set straight the basic questions underneath. Reduced to their general form, these questions are relevant to every activity that has a normative dimension. In case of inclusive design, these basic questions make clear that the definitions we adopt are underdetermined: "designers *ensure* that their products address the needs" or "are accessible to people with the widest range of abilities". In the first one it is unclear *how* they ensure this—in a "paternalistic", "radical democratic" or "deliberative/dialogic" way? Neither is it clear how needs are defined—objectively or subjectively. The second, very generic, definition at best gives an idea of the aim, but says little about how to achieve it—are the professionals in charge of this? Or the people? Or do they need to discuss it together? Just to mention needs and abilities does not decide the issue about the link—or the missing link—between inclusion and good design.

In analysing how this link can be confronted, we have provided strong arguments for design as a deliberative enterprise involving both designers *and* the people they design for. We have pointed out that inclusivity and normative objectivity—two prima facie opposed ideals—can be reconciled, by defining the norm of good design in terms of a deliberative cooperation between designers and people. Cuff defines design quality as being approved by designers, consumers, and participants. Yet, our point is that designers themselves cannot—at least not always—judge for themselves what is good without taking into account people's point of view—designers have no autonomy in this respect; on the other side the people's point of view should not be arbitrary and so can be questioned in respect of its appropriateness—people can go wrong in interpreting their response. What is relevant here is that the competence about what is good design is not an exclusive and inquestionable possession of anyone, but arises by deliberative cooperation of designers and people about the issues at stake. Thus, unlike in Cuff's definition, we view design quality not simply as a matter of convergence of different perspectives, but as a matter of cooperative integraton: a design is excellent, not when it is appreciated by both the designer and the consumer, but when it is produced by exploiting the information and competences at disposal of the designer and the people s/he designs for in qualified circumstances.

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6.7 References

Blackburn S (1978) Ruling passions, Oxford University Press, Oxford, UK

Bowen SJ (2009) A Critical Artefact Methodology, PhD diss., Sheffield Hallam University, Sheffield, UK

BS 7000-6 (2005) Design Management Systems. Managing Inclusive Design. Guide. British Standards Institution, 54 p. Cited by Helen Hamlyn Centre, Inclusive Design, http://www.hhc.rca.ac.uk/204/all/1/inclusive_design.aspx (accessed on 12 November 2009)

Crane T (2001) Elements of mind, Oxford University Press, Oxford, UK

Cross N (1971) Design Participation. In: Proceedings of the 1st Design Research Society's Conference, Manchester, UK

Cuff D (1991) Architecture: The Story of Practice, The MIT Press, London, UK

Day C (2003) Consensus Design, Architectural Press, Oxford, UK

Dennett D (1990) The interpretation of texts, people and other artifacts, Philosophy and Phenomenological Research, 50 (supplement): 177-104

Dennett D (1991) Consciousness Explained, Penguin, NY, USA

Design Council (2009) Inclusive design education resource. http://www.designcouncil.info/inclusivedesignresource/ (accessed on 12 November 2009)

Donahue S, Gheerawo R (2009) Inclusive Design 2.0 - evolving the approach and meeting new challenges. In: Proceedings of the International Conference on Inclusive Design and Communications (INCLUDE 2009), London, UK

Feyerabend P (1978) Science in a free society, New Left Books, London, UK

Goodin R (2003) Reflective democracy, Oxford University Press, Oxford, UK

Habermas J (1996) Three normative models of democracy. In: Benhabib S (ed.), Democracy and difference, Princeton University Press, NJ, USA

Heylighen A, Devlieger P, Strickfaden M (2009) Design Expertise as Disability. In: Proceedings of Communicating (by) Design, International Conference on Research and Design, Brussels, Belgium

Jauss HR (1982) Toward an aesthetic of reception, Minnesota University Press, MN, USA

Kant I (1790) The critique of judgement. Meredith JC (1952) (tr.) Oxford University Press, Oxford, UK

McDowell J (1985) Values as secondary qualities, Honderich T (ed.), Morality and objectivity, Routledge, London, UK

Mill JS (1859) On liberty and the subjection of women. Ryan A (2007) (ed.), Penguin Classics, NY, USA

Nagel T (1986) The view from nowhere, Oxford University Press, Oxford, UK

Nagel T (1974) What is it like to be a bat?, The Philosophical Review LXXXIII, 4:435-50

Plato, *The Republic* In: Shorey P (1930) (tr) Plato: Replublic, Books 1-5. Harvard University Press, MA, USA

Ringaert L (2001) User/Expert Involvement in Universal Design, Preiser WFE, Ostroff E.(eds), Universal Design Handbook, McGraw Hill Professional, NY, USA

Rorty R (1991) The priority of democracy to philosophy, Id., Objectivity, relativism, and truth, Cambridge University Press, Cambridge, UK
Sanoff H (2007) Editorial, Design Studies 28(3): 213-215
Searle J (1995) The construction of social reality, Penguin, NY, USA
Sen A (1999) Development as freedom, Oxford University Press, Oxford, UK
Smith A (1759) The theory of moral sentiments. In: Baird RM, Rosenbaum SE (2000) (eds.) Prometheus Book, NY, USA
Stanley J, Williamson T (2001) Knowing how, The Journal of Philosophy, 98: 411-444