

CTRL–ALT–DESIGN

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ABSTRACT

Now, more than ever, we need design to help find solutions to global problems. The field has changed: technology allows everyone to be a designer. Open design offers unprecedented possibilities for design to improve the world. Yet to retain its influence, the profession will have to give up control. This does not mean it is doomed: though the masses are equipped to solve their own problems, they will continue to need designers. The profession must shift its emphasis from to creating templates others can use to make and alter them. People can only take responsibility for solving their own problems if the devices and systems that cause them are open to their understanding. Placing the user at the centre of his own designs is an uncomfortable idea for designers. Yet though designers are no longer in the driver's seat, they haven't completely lost control. They must become metadesigners – creators of models and systems that allow others to solve problems. They will have to design for configurability. Configurable systems can be used to solve real problems. Giving up control is the last

taboo for the profession. Yet opening up the design process will make design a true force for positive change.

MAIN TEXT

“[T]he role of artworks is no longer to form imaginary and utopian realities, but to actually be ways of living and models of action within the existing real.” (Bourriaud 2002)

This comment made by Nicolas Bourriaud at the end of the last century is as applicable to design as is it is to art, and in our view, perhaps even more. In the last few decades, modernity has moved into cultural do-it-yourself practices and into the invention of the everyday. Design's importance, typically more than art's, depends on its relevance to daily life (Klaassen, Heerdink 2009). By the 1970s, the American designer Victor Papanek was arguing that design could not be separated from everyday life (Papanek 1972). In his view, designers should focus on what he preferred to call the real world, with its everyday problems faced by ordinary people. For designers, this starts with a thorough understanding of people, and for

the public, it starts with a certain degree of insight into the design process. By the beginning of this century, design certainly had become the innovative, creative, cross-disciplinary instrument Papanek anticipated it would. But did it really fulfill the true needs of human beings?

Projects like “D.Day, le design aujourd’hui”¹; “Design for the Other 90%”²; “Massive Change”³; and “What Design Can Do!”⁴ have been exploring the potential of design and its power to enhance the well-being of humanity. But despite Bruce Mau’s claim on the Massive Change website – “It’s not about the world of design, it’s about the design of the world” – designers still seem to be more engaged with the design world than the real world. We would like to argue that designers, rather than creating future scenarios inspired by good intentions, should address conditions in the everyday world by introducing intelligent inventions that take into account the problem-solving capacities of human beings. This will be necessary, because the global problems we face at the beginning of this new millennium are more challenging than ever. As yet, however, we have no univocal solution or customary methods for solving them. Of course, there is design thinking, but its methodology is largely based on 20th-century assumptions, and the learning process could be catastrophic as people search for

¹ See www.centrepompidou.fr/Pompidou/Manifs.nsf/0/058AFA6D79ED3988C1256F03005270B6?OpenDocument.

² See <http://other90.cooperhewitt.org/>.

³ See www.massivechange.com.

⁴ See www.whatdesigncando.nl/.

solutions within a system that has none for the problems at hand (Cornelis 1988). Today, digital technology and the Internet have irrevocably changed the design of the world and also the world of design. They have led to changes in the profession that have had great social significance. If the industrial era ushered in the design of products for the masses, in the digital era, the masses are seizing the chance to design, manufacture and distribute products.

We believe that open design offers unprecedented possibilities for the design of our surroundings, for design as a profession, and for designers, professional and amateur alike. For the design profession, paradoxically, gaining influence today means giving up control (Hagel, Brown and Davison 2010). Design is compelled to be(come) configurable. This involves risk. Yet design is about change, and today it must project itself into an unstable economic, social and political context, embracing amateurs in the process. Professional designers are losing control. In our view, this is a good thing, because the masses are wise and perfectly well-equipped to solve their own problems – but they do still need designers.

Design Thinking is Dead

Early this year, *BusinessWeek* editor Bruce Nussbaum declared that the decade of design thinking was over (Nussbaum 2011). Although he was originally a major advocate of design thinking, he argues that it has given the profession and society at large all the benefits it can, and that this

conceptual framework is now ossifying and actually causing harm. Despite its many successes, design thinking has known many more failures. Nussbaum argues that this is because companies have absorbed the process of design thinking too well. It offered the business world a completely new process for delivering and ensuring creativity. While companies profited overall from the efficiency of the design process, they also turned it into a linear, static, by-the-book methodology. By implementing the creative process as if it were a planning-and-control methodology, they doomed it to result in incremental change at best.

Step-by-step change – or what Nussbaum calls “N+1 innovation” – can also be explained within a broader context of cultural change (see De Mul 2004). Computer technology, when it is introduced, has major implications for the production, distribution and consumption of products and services. A digitisation of processes takes place at this stage. Although the method of production changes, the product itself may not, even when digitisation becomes a dominant element of the production process. Only when specific properties of the new technologies are taken as a starting point for the design of new processes will traditional forms of organisation be replaced and a second level of innovation reached. Otherwise, the new forms that arise will be different in degree, not in kind. Design thinking has stagnated at this first level because companies have tried to force the specific qualities of the creative process into business’s culture of rigid processes instead of changing those processes

themselves. Design thinking “was denuded of the mess, the conflict, failure, emotions, and looping circularity that is part and parcel of the creative process” (Brown 2011). This seems chiefly to be the result of dominant 20th-century ideas of controllability and steerability. Only in the few companies that accepted the uncontrollability of creativity-based processes did real innovation take place. In this sense, we can say the success of design thinking has been minimal.

This has been less of a loss for business or the design field than it has been for society as a whole. Companies and designers profited from a mutual interest in each other resulting from the hype around design thinking. For designers, it created new business, and for business, it created added value. Moreover, by spelling out the intrinsic qualities of design, design thinking helped to shift designers’ focus from things to thinking. On the other hand, one could argue that incorporating design into the spheres of marketing and management not only caused design to change business but also distracted designers from the main purpose of their work, namely change. Since most companies control design processes for immediate application and results, the benefits of design thinking in this context for them and for designers might not have been so great after all. Yet although design thinking can be seen as a failed experiment in the business world⁵, that does not mean it is doomed

⁵ This statement by Bruce Nussbaum has been criticised for lacking scholarly justification. For an interesting discussion see “Reform by Design”, www.reformbydesign.posterous.com/design-thinkingisnot-dead-but-some-cultures.

to failure to enhance the well-being of humanity. Design guru John Thackara refers to statistics indicating that 80 per cent of the environmental impact of the products, services and infrastructures around us is determined in the design process (Thackara 2010). In other words, the problems we face at present are, to a great extent, designed problems. If designers have created these problems, they could also solve them in the future. But they will not be able to do this in the way they have been used to.

Open Design⁶ Changes Everything

As Clay Shirky (2010) has pointed out, design in the digital era – like literacy after the printing press – is becoming too important to leave to a cloistered few. Shirky's statement implicitly questions the significance of the designer in terms of personal genius. Until computer technology penetrated design, and at the same time began making it possible for enthusiasts to design, it was primarily individual designers and the objects they introduced that dominated the profession. This elite status of the design professional might have created a false feeling of "territorial acquisition" (Bourriaud 2002) with regard to the real problems of society. In addition, it promoted a mandatory distance between the designer on one hand and, on the other, the users, the production and distribution processes, colleagues' work, and the

past (Zijlstra 2009). Nevertheless, the issue here is not so much the status or territory of the designer but his or her solitude. The days of the so-called solo designer are over (Thackara 2010), simply because today's problems are too complex to solve on one's own, no matter who you are or what you can do.

This is where open design comes in. As we have seen, in the last decade, design thinking has mainly produced incremental change so far. In our view, the problem doesn't lie in this conceptual framework – the more thinking, the better – but in its application. N+1 is the result of a serial, closed process confined within the boundaries of the design world. Restricting innovation to professionals will mean this will be as fast as it ever goes: step by step. But with millions of people somehow finding their way into design practice, the process of social innovation could speed up drastically. The development of technology, tools and materials has empowered the masses to create. We have gradually moved into an era in which innovation and creativity are becoming mass activities (Leadbeater 2008). One of the underlying forces of design is creativity, which is, if anything, an inclusive capacity. People share the ability to create in more or less equal degree. In the preface of "Open Design Now: Why Design Cannot Remain Exclusive" (Van Abel, Evers, Klaassen and Troxler 2011), we noted that creativity springs less from an individual's own ideas and originality than from a cultural structure around him or her that compels the production of new ideas. And such structures must always be

⁶ The Open Design Foundation describes open design, in brief, as design whose makers allow its free distribution and documentation and permit modifications and derivations of it. See www.opendesign.org/odd.html.

open to outside influence or they will be doomed to collapse. To again quote John Thackara, one of the book's contributors, "Openness is more than a commercial and cultural issue. It's a matter of survival" (Thackara in Van Abel, Evers, Klaassen and Troxler 2011).

At face value, this might look the same kind of promotional rhetoric that surrounds design thinking and the design consultancy businesses that sell it. The important difference, though, is that open design is necessarily an inclusive concept. It's about interacting with the world – not the world of design but the wider world. Open design favours strategies that are inclusive and reciprocal and involve others in design processes. These "orchestral manoeuvres in design", as Paul Atkinson calls them (Atkinson in Van Abel, Evers, Klaassen and Troxler 2011), will change everything for everyone – but most substantially for designers, because they are professionally involved. In our view this is an important development, because the profession is facing the consequences of the evolution of maker culture, which has been going on since the 1970s but developed massively with the rise of the Internet. Anyone using a computer nowadays can be a designer (Klaassen and Heerdink 2009). This has already had a profound impact on graphic design, web design, and music and video production, and product design has been the last to follow. With free, accessible software like Google SketchUp⁷, any individual can create a 3D design on his or her

⁷ Google SketchUp is arguably not an open platform, but it's accessible, easy and free to use.

computer, share it on platforms like Thingiverse, manufacture it through Shapeways and sell it on Etsy. On the one hand, the competition designers are facing is causing a process of so-called creative destruction.⁸ But it also means the profession's emphasis is moving from designing and producing actual things to creating templates others can use to tinker with and make things.

Losing Control

This fundamentally changes the relationship between the designer and the user. That relationship has to become more open, expanding from fixating on stuff and services to encompass support and sharing. And it also has to expand to the right kind of people: not primarily fellow professionals, marketers or organisations but actual end users. This is the ultimate consequence of user-centred design: placing the user at the centre of his or her own designs. This idea is particularly uncomfortable for designers, as amateurs begin to design things beyond their professional control. User-centred design was not aimed at liberating the consumer but at differentiating the consumer market. It was part of an effort to optimise marketing strategies by anticipating customers' individual preferences. Co-creation processes can be seen in the same light⁹. Like the image and music industries, the

⁸ This term was popularised and used by Joseph Schumpeter (1942) to describe the process of transformation that accompanies radical innovation. See www.en.wikipedia.org/wiki/Creative_destruction.

⁹ Wikipedia describes co-creation as "a form of market or business strategy that emphasizes the generation and ongoing realization of mutual firm-customer value". See <http://en.wikipedia.org/wiki/Co-creation>.

design industry did not foresee its clients becoming “prosumers” – professional, self-producing consumers. But amateur hour has arrived, and the audience is running the show (Keen 2007). The design of the world Bruce Mau refers to is now in the hands of the experts par excellence: the common people. People themselves are the specialists in their own lives. But they can’t take responsibility for their everyday problems if the devices and systems that cause them are closed to their understanding. “If you can’t open it, you don’t own it,” as Makezine’s Owner’s Manifesto puts it.¹⁰

Although in this sense designers are no longer in the driver’s seat, that doesn’t mean they’ve completely lost control. Their new position isn’t in the passenger seat but on the middle of the dashboard: they are the sat nav. A shift is under way from design for society to design with, and ultimately by, society (Fuad-Luke and Mazini in Oosterling 2009). Designers should not give up their role as designers or restrict themselves to the tradition of designing material or immaterial objects. According to Jos de Mul, the designer should become “a metadesigner who designs a multidimensional design space that provides a user-friendly interface, enabling the user to become a co-designer, even when this user has no designer experience or no time to gain such experience through trial and error. [...] The task of the metadesigner is to create a pathway through design space [...]” (De Mul in Van Abel, Evers,

¹⁰ For the full Maker’s Bill of Rights, see <http://makezine.com/04/ownyourown/>.

Klaassen and Troxler 2011). In other words: designers should become navigators.

But why is metadesign a more useful concept than, for example, design thinking? Because instead of pursuing 20th-century one-dimensional cause-and-effect relations, it creates models or systems for enabling solutions that allow people to explore, invent, and resolve problems (Manzini and Jégou 2003). The designer designs both the system itself and the relevant design elements. In fact, this involves third-order meta-level innovation – innovation through devising a new creative method – and is particularly abstract for most people to deal with (De Mul 2011). At the designer’s level, it means second-order design, or, to put it differently, designing for configurability. Well-known examples include Freitag’s F-Cut Tool¹¹, Nike iD¹², Ikea’s “Design Your Own Life”¹³, and Droog “Design’s Do Create”¹⁴ project.

Better Than Design

These projects are examples of mainstream configurable design. But to return to our original question, does this kind of design really fulfil the true needs of human beings? It’s fun to choose your individual piece of recycled truck tarpaulin to make your own Freitag bag, create your own personalised Nikes, refurbish your interior, or

¹¹ See www.freitag.ch/shop/FREITAG/page/fcut_page/detail.jsf.

¹² See <http://nikeid.nike.com/nikeid/index.jsp>.

¹³ See www.ikea.com/ms/nl_NL/designyourownlife/home.html.

¹⁴ See www.droog.com/store/furniture/do-hit-chair/#slide0.

build yourself a co-designed one-off version of the expensive “Do Hit Chair”. If people enjoy a product, it’s meeting a particular demand. It’s as simple as that. But we might question whether these examples are merely the latest forms of mass customisation, refining the supply-and-demand model for commercial profit.¹⁵ But seen from a metadesign perspective, these examples are important for a different reason. Like design thinking, with the right application, they will become more relevant for solving real everyday problems. It will be a small step, and a matter of configuration, from customising sneakers to producing cheap prosthetic legs in developing countries¹⁶, building an open-source housing project in Ghana¹⁷, or making fires with Ikea housewares¹⁸. And that’s only the beginning.

Open design platforms like OpenIDEO¹⁹ are intended to serve as places where people can design better. OpenIDEO already hosts 2,224 concepts, 3,255 inspirations and 17,714 users. The website says typical users are “creative thinkers: the veteran designer and the new guy who just signed on, the critic and the MBA, the active participant and the curious lurker”²⁰. OpenIDEO is

dedicated to improving the design of the world around us through a collaborative process of connecting people’s good intentions with others’ smart inventions. For IDEO, one of the world’s largest design firms, involving others in its design process is risky. But there’s probably no other option: if we want design that changes things, we have to change design. There’s just one sticking point: to truly do that, we have to open up the design process. Despite its name, OpenIDEO is not open in every dimension: it “depends on participation – your inspirations, his comments, her concepts, [but] our design process”.²¹ This will be the last taboo for the design profession: giving up control over the process. By doing so, however, it will not only bring about better designs, it will make design into something better – open design.

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¹⁵ According to Wikipedia, mass customisation is “the use of flexible computer-aided manufacturing systems to produce custom output. Those systems combine the low unit costs of mass production processes with the flexibility of individual customisation.” See http://en.wikipedia.org/wiki/Mass_customization.

¹⁶ See the \$50 Prosthetic Leg project: <http://blog.waag.org/?p=2454>.

¹⁷ See the Open Source House project: www.os-house.org/?ac=CMS+Version%3A+os-house.

¹⁸ See FLÄMMA (A Basic Need) by Helmut Smits: <http://helmutsmits.nl/design/flamma>.

¹⁹ See www.openideo.com.

²⁰ See www.openideo.com/about-us.

²¹ Michel Bauwens distinguishes three dimensions of open design: the input, process and output side. See www.wemagazine.net/we-volume-02/the-emergence-of-open-design-and-open-manufacturing/.

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