

DESIGN THINKING USA WTF?

David WEIGHTMAN IDSA

University of Illinois Urbana-Champaign

ABSTRACT

There are two uses of the term **design thinking** in common parlance in the USA – to describe designers working outside the conventional definition of their field and to describe the use of designer-like thinking by people who have not specifically trained as designers but are actively involved in the product, service or experience creation process. Both uses embrace design management and innovation. Every issue, the pages of BusinessWeek, Fast Company and the Harvard Business Review celebrate the companies who attribute their success to their use of **design thinking**. And although Apple rarely uses either of the terms, the all-conquering iPod serves as a universally appreciated example of the power of design and by implication, design thinking. The promotion of design thinking within the business context is more evident in the USA currently than the socially orientated approaches alluded to in the conference theme.

The paper will describe the current interest in design thinking in the USA from a number of perspectives, whilst nimbly side-stepping the question of an exact definition.

Keywords: design thinking, design education, design in business

1 THE US CONTEXT

What is design thinking? And how does it differ from designing? Two good questions, with no simple answers. The author is part of a nomadic workshop funded by the National Science Foundation (NSF) to develop new curriculum in design at the graduate level. At our initial meeting, the group, which comprises engineering designers, industrial designers, architects and design managers, struggled to establish a definition of design which embraced the variety of approaches to design used by our diverse group. Whilst we could all agree that we all are designers, it really begs the question of what designing means. To help us in our deliberations, we were told about a previous Workshop with biologists, where the issue was to come up with an agreed definition of biology and the conclusion was that it was **what biologists do**.

In a similar way, design thinking is most easily described as **what designers do**. But this is misleading, as the diversity of design practice is very broad. Architects, urban planners, industrial designers, graphic designers, fashion designers, engineering designers, chemical engineers, civil engineers, product planners, policy formulators and politicians all engage in design activities, whether or not they identify themselves as designers. In reality design thinking means **what industrial designers do** as most of the thinking about design thinking practice has come from that branch of the design professions. Engineering designers steeped in quantitative analysis, optimization and six-sigma are not demonstrating design thinking in the generally understood meaning of the term, although they are clearly designing. Engineering professors often use the term design thinking to describe what their students are doing when they are considering the full range of user and market factors, as industrial designers do, to differentiate it from the simple act of designing which is, after all, what engineering designers do all the time.

Designers everywhere complain about lack of understanding and recognition, but there is more basis for that feeling in the USA. In the minds of the general public, design is associated predominantly with fashion and interior design. This association is frequently less than positive. In a context where design is either unknown or not considered to be an occupation for serious people, much of the potential conversation about the value of good design is subsumed into a slightly different conversation about the value of innovation. Advocacy of the benefits of design thinking seems less problematic than advocating

the value of design because it avoids the baggage of the older term. Talking about creativity also seems easier in the context of design thinking or innovation.

2 THE CURRENT STATE OF DESIGN THINKING IN THE USA

At the time of writing, (Nov 9, 2008) design thinking is hot. Not quite as hot as Barack Obama, but close. The pages of influential business publications like BusinessWeek, Harvard Review of Business, Fast Company and Inc are full of references to the value of design thinking. All over the country, designers are smacking their foreheads as senior management asks them to create the iPod for their Industry. And Apple never refers to design or design thinking as a reason for their success. In his masterly presentations of new products, Steve Jobs just says “Isn’t this cool?” and in his videos on the Apple website, Jonny Ives fixates on the details of manufacturing processes whilst emphasising that Apple is just trying to do a good job.

Designers are teaching CEOs and managers how to innovate... they pitch themselves to businesses as a resource to help with a broad array of issues that affect strategy and organization – creating new brands, defining customer experiences, understanding user needs, changing business practices.

Bruce Nussbaum, Redesigning American business, 2004

In the US, design thinking is commonly described as providing business advantages from user-centred innovation. The term is used to describe what designers do when they are considering things which are outside their normal field of operation and it is used to describe designerly thinking done by people who would not describe themselves as designers.

The work of IDEO embodies both approaches. The company promotes an approach to designing which centres around observation, ideation, prototyping and narrative in the design of products, services and experiences. The creation of the “Keep the change” program for the Bank of America is a good example. The design of American cheques does not easily allow for the indication of cents in the cheque amount so most people just round up to the nearest dollar amount. “Keep the change” takes the difference between the charge and the rounding-up, allocating it to a Savings account, painlessly encouraging saving. The extension of their design practice in the area of service and experience design characterises the IDEO approach. Their practice is invariably highly collaborative, both within the consultancy and with people from their client companies. Collaborative workshops with clients and users are an intrinsic part of their process, having both a functional and educational role. That educational mission is also expressed in the writings of Tom Kelley (Kelley and Litman 2005, Kelley, Litman, Peters and Peters 2001). IDEO are particularly good at succinctly encapsulating a comprehensive approach to design. **Feasible, viable, desirable** is their terminology to describe the intersection of technology, business and design respectively in the creation of successful products and services. Designers have conventionally been reluctant to talk about their process for fear the magic would evaporate and their services might no longer be required. The clarity and forthrightness of the IDEO approach is refreshing.

Some commentators extend this approach to advocate the adoption of the design workshop model to become mainstream in business operations. Roger Martin, Dean of the Rotman School of Management at the University of Toronto is one of the leading exponents of this.

Martin asserts that traditional companies reward two types of logic: inductive (proving that something actually operates) and deductive (proving that something must be). Designers combine inductive and deductive reasoning to create a fresh approach – abductive thinking – which Martin defines as suggesting that something may be and reaching out to explore it. Instead of acting on what is certain, designers bet on what is probable. Companies like Apple act like design (work)shops by saying, if everything must be proven, we’ll never make the likes of an iPod.

Bill Breen, The business of design, Fast company April 2005

It has to be pointed out that Martin did not invent abductive thinking – that is credited to Charles

Saunders Pierce, the great logician and originator of semiotics (1839-1914). Martin now advocates the benefits of Integrative thinking in his recent writings (Martin 2007) Based on the results of interviewing business leaders with reputations for successful innovations, Martin describes the process of constructing mental models to solve business problems, emphasizing those cases where opposing models applied to the same situation are in tension. Rather than choosing between these competing models, integrative thinkers build new models which transcend the conflicts with results that are better than either of the previous sets. In other writings, Martin also addresses the problems of people working together in multi-disciplinary teams, characterizing business and technical people as being motivated by concerns to maximise reliability and manage risk, whilst designers are motivated by concerns to maximize validity and meaning (Martin 2006)

It's not about what designers can do for you, but what you can do if you think like them
Roger Martin, in conversation with the author, Chicago, 2008

This approach sits in sharp contrast to that of the UK Design Council, promoting the value to business of employing designers, and is one salient difference between the two situations. Designers can become design thinkers by broadening their outlook and reach, but you don't have to be a designer to be a design thinker. In the US, the designer advocacy role is taken by the professional bodies, IDSA and AIGA. Some designers have an unfortunate tendency to divide the world into designers and non-designers, whilst establishing the role of design-thinkers straddles and transcends that false divide. This makes the design process more inclusive, involving more people inside organizations in the process of design management, product development and service creation, providing a means by which bright people from a variety of different backgrounds can get involved in the creative process leading to innovative products, services and experiences. Steve Jobs is an interesting role model. Whilst not claiming to be a designer, although he was once a software geek at Atari, Jobs clearly plays a major role in the shaping of Apple products, somehow intuiting user needs and delight potential without going through a process of asking or observing them (Kahney 2008) In UK terms we would call him a design manager, but that is a term without much currency in the US. The halls of the Googleplex and other innovation hotspots are full of ethnographers, strategists, redeployed astronomers, ergonomists and many others, attracted by the company's approach to innovation.

3 DESIGN THINKING IN THE SOCIAL REALM

Design thinking in the social realm is less developed in the US than elsewhere, although this is set to change. The academic centres for design thinking have always imagined a wider role for the practice and this is now being adopted by design consultancies. IDEO has a Social impact initiative, led by Jocelyn Wyatt, reaching out to a receptive audience of social entrepreneurs and NGOs, eager to embrace human-centred design practice that chimes well with the participatory nature of current development practice.

Ryan Jacoby and Diego Rodriguez from IDEO wrote a really great piece on Innovation called Innovation, Growth and Getting to where you want to go. In it, they note that "we believe that anyone pursuing innovation, given the right training and mindset, can think of him or herself as a designer" So I think that one of the biggest design challenges facing the non-profit world today is how to share with the social sector the tools and methods of human-centred design, to embed that practice in their organization and to think of innovation as an intentional process in partnership with the communities they serve,
Contributor to Design for social impact blog, August 2008

In a recent article in Fast Company, Alice Rawsthorne described the work of Hilary Cottam and Participle in the UK, a group of designers working with a group of seniors in Peckham to improve their circumstances (Rawsthorne 2008). In the US, such activities have a longer history in the field of Architecture, best symbolized by the work of Cameron Sinclair and Kate Storr in organizing the group Architecture for humanity with truly global outreach. Given the intense interest of the current generation of design students in engaging in a meaningful way with social problems, this area of application of

design thinking can only expand in the future.

4 DESIGN THINKING IN EDUCATION

In education, design thinking is evident in graduate programs in a small number of institutions and less so at the undergraduate level. Stanford University is the home of the D-school, now formally the Hasso Plattner Institute of Design, re-named due to major financial support from SAP. The D-school links Tom and David Kelley and IDEO, within the particular environment of Silicon Valley. Whilst not offering any specific degree programs, the school offers a variety of courses that are taught by teams of faculty from different disciplines and introduce students from across the University to design thinking, brainstorming and other delights.

Carnegie Mellon University was for many years the academic home of Dick Buchanan and Craig Vogel, both vigorous proponents of design thinking, now re-located to Case Western and University of Cincinnati respectively. CMU has a reputation for inter-disciplinary education across the campus and the design department offers programs in Industrial design and Interaction design at undergraduate, graduate and doctoral level, linked with Technology departments and the Heinz School of Business. Chicago is a veritable hotbed of design thinking. The Institute of Design at the Illinois Institute of Technology developed from its Bauhaus origins to be a Graduate School and a centre for design thinking and design methodology in its Masters and Doctoral programs. IIT/ID has been the academic home for Charles Owen for many years. ID students can study for an MBA in parallel with their Masters programs. ID has strong links with Rotman, P+ G and Steelcase, and ID students organize two excellent conferences each year, one in Design research and one in Design strategy. North Western University has the recently established Segal Design Institute, with the redoubtable Don Norman as Co-Director and offering a variety of opportunities to combine study for MBA and Masters degrees, in the environment of a Graduate Engineering School. Both the Chicago institutions have a sizeable proportion of part-time and post-experience students, giving a characteristic professional orientation to their activities. A recent development in Engineering education is an interest in design thinking and design science as a means of introducing human-centred, holistic, collaborative and project-based activities into the traditional Engineering curriculum. Whilst recruitment to Engineering programs has not experienced the same level of decline as the UK, it is not as buoyant as it used to be, is less diverse than other subjects and experiences high dropout rates. This has led the National Science Foundation to encourage the development of design thinking and design science within undergraduate and graduate programs (hence the NSF workshop referred to at the beginning of this paper) Some of these developments invoke serious feelings of *deja-vu* for those veterans of the 1960s Design methodology movement in the UK, (Cross 2007) as the process of quantifying the qualitative can easily dominate, with a concentration on developing reliability rather than validity and minimizing the effect of judgment. The encouraging thing is that designers are on the same playing field, albeit towards the base of the slope.

In his writings, Dan Pink uses the example of the electoral process in Florida in 2000 as an example for anyone who doubts it of how important design is (Pink 2005). Hanging chads are his example of bad design and the electoral consequences were significant, inspiring Marcia Lawson, Head of the Design department at the University of Illinois in Chicago to work with her students in the Design for democracy project, impacting the future political process in a very direct way. No mention to my knowledge, of chads, hanging or otherwise, this time round. Good job, Marcia. Good job, design thinking.

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David WEIGHTMAN
University of Illinois Urbana-Champaign
School of Art + Design
408 E. Peabody, Champaign, IL 61820
diw@uiuc.edu
217-333-0855