

DESIGN-DRIVEN INNOVATION: AT THE INTERSECTION OF DESIGN AND BUSINESS

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March 2006

This article presents a market perspective on the phenomenon of design and business converging into 'design thinking' by presenting notes and reflections following a recent design strategy & innovation conference. In the process, it presents some differences in approach between the American and European perspectives on design-driven innovation.

1. Design + Business: Trends & Developments

During the past few years, the amount of literature on the dematerialization of the economy seems to have multiplied exponentially. We have evidently entered an era where we will rid ourselves of the 'stuff' we learned to produce so efficiently during the Industrial and Information Ages. In one sense, we are merely advancing a step on the Maslow pyramid. Our material prosperity and abundance are giving rise to a phenomenon that places a premium on more 'right brain' sensibilities, such as beauty, well-being, spirituality and emotion. At the same time, the (mainly Asian) competition is knocking on the door of our Western industrialized countries. If we cannot compete any longer on cost, what will our next platform for innovation look like?

At least part of the answer appears to be in the field of design. According to a recent Conference Board survey of CEO's and board chairmen, executives' number one concern is "sustained and steady top-line growth"¹. While internally-focused and left brain-heavy R&D departments are reaching their limits in sustaining this growth, design is coming to the rescue. It has therefore enjoyed a meteoric rise in popularity in the world of business innovation. Design is not merely gaining popularity for its aesthetic dimensions, however. Business managers are recognizing the power of so-called 'design thinking' for its holistic problem-solving ability. By virtue of its integral, non-linear, forward-looking and iterative nature, design thinking has taken center stage at such corporate giants as General Electric (GE) and Procter & Gamble (P&G). The business of design, in other words, is getting its hands in the *design of business*.

The United States, the champion of production efficiency during the 20th century, seems to have been at the forefront of this trend. 'Design' is more a more overt part to the innovation agenda in the United States than in Europe. American authors such as Joe Pine and Dan Pink have clearly documented the rise of the 'Experience Economy' and the 'Conceptual Age'², in which the conceptualization and design of nearly everything will need re-thinking. Furthermore, of the countless 'design + business' blogs, books, consultancies and forums, many are American or have strong American connections.

2. Design 2.0: From Complexity to Simplicity

So where is this 'design + business' innovation agenda headed and what can we learn from the differences between the American and European perspectives? In search of understanding the similarities and differences in approach better, I recently attended one of the 'Design 2.0 Discussions on Design Strategy & Innovation,'¹ organized by Core 77 in New York City on February 28, 2006. Moderated by Bruce Nussbaum, the design & innovation champion from Business Week, this session focused on distilling the ingredients of those customer experiences that represent the Holy Grail in Experience Land: to take complex systems and represent them to users as simple and clear experiences³.

¹ Larry Huston and Nabil Sakkab, "Connect and Develop: Inside Procter & Gamble's New Model for Innovation," *Harvard Business Review*, March 2006, p. 61

² Joseph B. Pine and James Gilmore, *The Experience Economy: Work Is Theatre And Every Business A Stage*, Harvard Business School Press, 1999; Daniel H. Pink, *A Whole New Mind: Moving From the Information Age to the Conceptual Age*, Riverhead Books, 2005

³ See Bruce Nussbaum's March 1 blog entry of this event at <http://www.businessweek.com/innovate/NussbaumOnDesign>

The first panelist, Kevin Farnham, founder & CEO of Method (www.method.com; a multi-disciplinary design & communications agency) envisaged a new relationship between businesses, technology and users in which a more user-centric approach creates more loyalty. He led off by showing how, with an explosion of platforms, people increasingly experience their products through interfaces, thus making interfaces the next battlefield for brands. Kevin explained how the average US household currently has over 25 electronic devices, which are quickly becoming brand storytelling devices as well as new channels in their own right. Kevin's presentation made me wonder: is the interface really replacing content as 'king'? If it's anything to go by, keynote speakers at events of this sort tend to be predominantly from Google, Yahoo, and other 'interface' companies.

Marissa Mayer, VP of Search Products & User Experience at Google, was a case in point. She leads the product management efforts at Google and illustrated how her job is to provide a simple interface to Google visitors. Asked what 'innovation' means to Google, Marissa explained that Google begins and ends with the needs of its users. This sounds trivial, but maintaining a balance between complexity and simplicity is difficult. For one thing, users cannot necessarily articulate to Google what they need. Interestingly, this problem gets worse as users become more advanced (to my surprise, advanced users are Google's target audience, for the simple reason that everyone is an advanced user after about one month). It turns out beginners can sometimes put their finger much better on basic problems related to interface. Google also learned: insert too many features and users lose oversight, eventually using Google less, not more (Google calls this the 'spiral of doom'). Google therefore focuses on providing ease and speed for its users, so that they don't necessarily stay on the website *longer* (the Yahoo strategy), but return to the Google site *more frequently* for their everyday queries.

Jenneane Rae, co-founder of Peer Insight (www.peerinsight.com; an experience design consultancy) began by comparing the financial performance and five-year stock returns from innovation-minded companies that focus on the customer experience (e.g., Starwood Hotels, P&G, Apple Computer, etc) with those of S&P 500 companies. With the former group performing significantly better, she demonstrated why design thinking and strategy are considered key to top-line growth and profits at the moment.

Jeneanne continued by noting that services represent around 80 percent of the US economy. Why then, she wondered, is most attention directed towards *product* innovation? In her view, a customer experience in a service context is an ongoing relationship defined by multiple touchpoints. These touchpoints, she explained, must engage all senses, evolve over time, and contain both functional and emotional elements. From her experience as an advisor to P&G, she talked about how the company employs two 'moments of truth' (MOTs). First, there's an 'F-MOT', the first moment of truth, when people approach a product on the shelf and make a decision whether or not to purchase it. The second 'S-MOT' occurs when they actually use the product: how much satisfaction do they get out of using it? Will they use it again? She made a strong plea for focusing on consumer empathy instead of short-term profits, as this mindset only pays off in the long run. Starwood Hotels, for example, has focused on the 'exhale' moment, when guests at their hotels close the door behind them, put down their bags and look around the room. At a cost of \$800 million, it created the Big Bed concept to delight during that 'exhale' moment. Has it worked? "Just look at their stock price," offered Bruce Nussbaum.

Other 'Rae-isms' for customer experience design included:

- Use well-articulated brand values as a 'North Star' for the customer experience. This should be expressed in terms of a customer need, *not* a business need (an exemplary case is Whole Foods, the leading natural & organic foods supermarket in the U.S.)⁴;
- Link IT platforms with HR models to create mass customization (a good example is how frontline employees at John Lewis, Harrah's Casinos and other companies share a

⁴ See for instance: Charles Fishman, "The Anarchist's Cookbook," *Fast Company*, July 2004

significant portion of company profits as a direct result of commonly defined targets – e.g., Harrah’s focus on profitable customers);

- Entrust your customers to co-create their own experience (e.g., the ever-evolving customer interface of Netflix, the leader in the DVD-by-mail rental market in the U.S.)⁵;
- Emphasize the development of concepts that combine multiple elements of innovation (business model, IT platform, channel, etc.) to increase impact and distinctiveness (e.g., the iPod/iTunes ecology);
- Use a holistic approach to deliver a magical customer experience. This requires techniques and structures that counterbalance risk aversion. For starters, profit-and-loss silo’s and front-line employee incentives will require addressing to get all noses pointing in the same direction.

Jeneanne recently wrote a series of interesting articles for *Business Week*’s online *Innovation* section which cover these principles in greater detail⁶. She certainly offers a very interesting view of service-based innovation for which, in countries largely devoid of a service culture like The Netherlands, there is ample opportunity.

I would only add that stock price performance by itself may not be the best way to gauge innovation. A stock price reflects the expected ability to manage the *bottom-line* – i.e., to generate cash – going forward, and therefore, the ability to create market share (or –power). It does not necessarily reflect long-term *top-line* revenue generation potential (or the ability to create sustainable innovation). In fact, stock prices are often at best *late* in spotting innovative potential. Consider the iPod launch and Apple Computer’s stock price: introduced in October 2001, iPod initially did little to Apple’s share price. Even taking into account market performance and Apple making the technological platform available to Window users (in 2002 and 2003, Apple released the second- and third-generation iPod for Mac and Windows), the stock price reacted little. Not until October 2004, when it became evident that the iPod dominated digital music player sales in the United States (with over 90% of the market for hard-drive-based players and over 70% of the market for all types of players), did Apple shares take off (see graph below)⁷:



⁵ See for instance: Jena McGregor, “High-Tech Achiever: Netflix,” *Fast Company*, October 2005

⁶ See for instance “The Value of Inventive Services,” *Business Week*, July 29, 2005, and “Building an Innovation Engine,” *Business Week*, November 3, 2005

⁷ Chart courtesy of Yahoo! Finance

Lastly, Andrew Zoll, founder of Z+ Partners (www.zpluspartners.com), took the stage. Andrew, a member of Fast Company's *Fast 50 Club* and an advisor to GE, is a futurist who analyzes trends at the intersection of culture, technology and global society⁸. In what could have passed as a stand-up comedian's performance, Andrew managed to really connect with the audience through storytelling. He first focused on what he calls the 'tyranny of choice': American consumers are awash in a sea of 40,000 products in an average supermarket, yet actually *look at* only 160 of these (not to mention *recall or recommend...*). Not surprisingly, it's now the experience of these products that counts. But what is the next big thing after experiences? Interestingly, Andrew offered *culture* as the next step (where Boswijk, Pine and others use personal 'transformations'): brands are culture now and we mix them when and how we like. And so his second story focused on the participation revolution (or, the emergence of co-creation).

So far a more or less familiar story, but then Andrew really started to drive the point home by wondering: how will we get there? What will the path of innovation toward the next level of economic offerings look like? To get the discussion started, he offered five innovation models:

- *Invention*: the classical innovation model involving the 'genius' (or R&D department) working in isolation, dreaming up new inventions;
- *Ethnography*: since consumers cannot tell you what they want, use diverging techniques such as contextual observation, metaphor elicitation, etc;
- *Foresight*: as a futurist, trying to predict what the future will/might hold;
- *Iteration*: picking the best 3 models or solutions and re-work (or re-design) them;
- *Network*: leveraging external sources to find good ideas and bring them in to enhance and capitalize on internal capabilities

Andrew clearly expects most from the network innovation approach, citing the success of P&G's 'Connect & Develop' innovation methodology. As at other companies, R&D productivity at P&G until a few years ago was flat while the company faced a growth mandate that their existing innovation models couldn't support. By embracing the network model in 2000, P&G began to experiment with the concept of open innovation, leveraging other firms' (even competitors') innovation assets – products, intellectual property and people. Now, this model generates 35% of the company's innovations as well as billions of dollars of top-line growth.

3. The Value of Design-Driven Innovation: It's about a Mindset, not a Department

Attending events such as Design 2.0 has convinced me that a widespread acceptance of 'design thinking' in the business world will require a shift in the way we think and talk about it. What we need are different mental models and stories for inspiration. This goes beyond labels – it's about a different approach to the concept of *value*. To illustrate the point, 'innovation' and 'design' are still two very different quantities in the eyes of most managers. Innovation is often regarded as the primary task of the R&D department, while design sits at the very back of the value chain, with seemingly little impact on the bottom line. One could, of course, argue whether we should be speaking of a value *chain* any longer in the first place in an era of networked innovation and customer co-creation. But what I really want to do here is to highlight the need for design to become more articulate about (and ultimately, equated with) *generating* value. Secondly, I want to dispel the notion that innovation (or *conceptualizing* this value) should be confined to a firm's four walls.

There are three types of value that design can create. Everyone would agree that design delivers *aesthetic value*. It delivers two additional dimensions, however, that remain less well recognized: *economic value* for business (e.g., return on investment and profitability), and *social value* for people (products and services being responsive to user needs and having to possess social qualities that are positive and reinforcing). This sum of these value dimensions can be powerful: beyond looks, and even economics, design-driven innovation has the power to enhance *life*.

⁸ See for instance his recent article "Demographics: The Population Hour Glass," *Fast Company*, March 2006

So if we are to measure the impact of design-driven innovation, we must bear the above in mind. Equity analysts have traditionally equated innovation with R&D spend. In a world where the value of innovation is accurately reflected, this can no longer hold true⁹. If innovation is increasingly co-created by companies and users alike, company-centric metrics such as return on investment (ROI) and earnings per share (EPS) will need to be complemented by a 'return on user experience' (ROX) and/or other metrics that measure *user value* (the value which the *user* receives or can expect to receive). This will become increasingly important, and while not yet perfect, a number of people are already making considerable progress in this arena.

The next frontier looks to be to obtain a better understanding of the operational and organizational design implications of the 'network innovation' model that Andrew Zolli spoke of. In a recent article on P&G's 'Connect & Develop' program in *Harvard Business Review*, Larry Huston and Nabil Sakkab highlighted four key guiding principles¹⁰:

1. *Where to play*: establish carefully defined targets around the desired type of innovation and determine the areas in which to look for these ideas;
2. *How to network*: establish how to build and use the network (e.g., by tapping different types of networks and different players within the customer experience ecology);
3. *When to engage*: once products and ideas are identified, screen them internally;
4. *Push the culture*: establish 'carrots and sticks' to encourage external idea hunting and internal idea exchange, as well as to combat risk aversion (as Jeneanne Rae noted, "Why try something radically new when you're successful at what you're already doing?").

Evidently, the challenge at some point becomes less about coming up with innovations *per se*, and more about identifying which ones best support new business opportunities, as well as seeing how these opportunities support top-level business goals.

4. Comparing the American and European Perspectives

Lastly, I would like to reflect on the differences in approach to design-driven innovation between the United States and Europe. First, there is credibility. Design is more established as a part of the North American innovation agenda largely because big, slow-growing companies discovered its problem-solving potential. Even the government and education sectors have joined the bandwagon (witness, for instance, the Governor of the State of Michigan articulating plans to turn the state into the "innovation capital of the U.S."¹¹, as well as the business/design school tie-up between INSEAD and ArtCenter College of Design, or the integration of design thinking into the MBA curriculum at the University of Toronto's Rotman School of Business¹²).

The U.S. seems to be ahead in realizing that "we're moving from a knowledge economy that was dominated by technology into an experience economy controlled by consumers and the corporations who empathize with them."¹³ I say "seems to be" because it is happening more overtly in the U.S. and it is led by the private sector, contrasting with more covert and more government/institution-driven innovation in Europe. To be sure, the art of storytelling has better mingled with business in the U.S. than elsewhere, and the concept of value is more crystallized out there. And while the pervasive optimism, the sense of determination and the urge to quantify everything in American business circles may at times seem shallow, it has made the definition of the value of design more holistic and personal. Witness, for instance, the title of Tom Kelley's new book, *The Ten Faces of Innovation: IDEO's Strategies For Beating The Devil's Advocate & Driving Creativity Throughout Your Organization*. Contrast this with Europe, where the perception of design still struggles to move outside the aesthetic sphere, and where innovation remains more often than not the subject of a government subsidy or awards ceremony.

⁹ See for instance the scrutiny of TheStreet.com's analysis of Apple Computer's 'innovation spend' by the '37 Signals' blog: http://37signals.com/svn/archives2/innovation_is_not_proportional_to_money_spent.php

¹⁰ Larry Huston and Nabil Sakkab, "Connect and Develop: Inside Procter & Gamble's New Model for Innovation," *Harvard Business Review*, March 2006, pp. 58-66

¹¹ Jennifer Granholm, "Michigan Governor Talks Design," *Business Week*, March 1, 2006

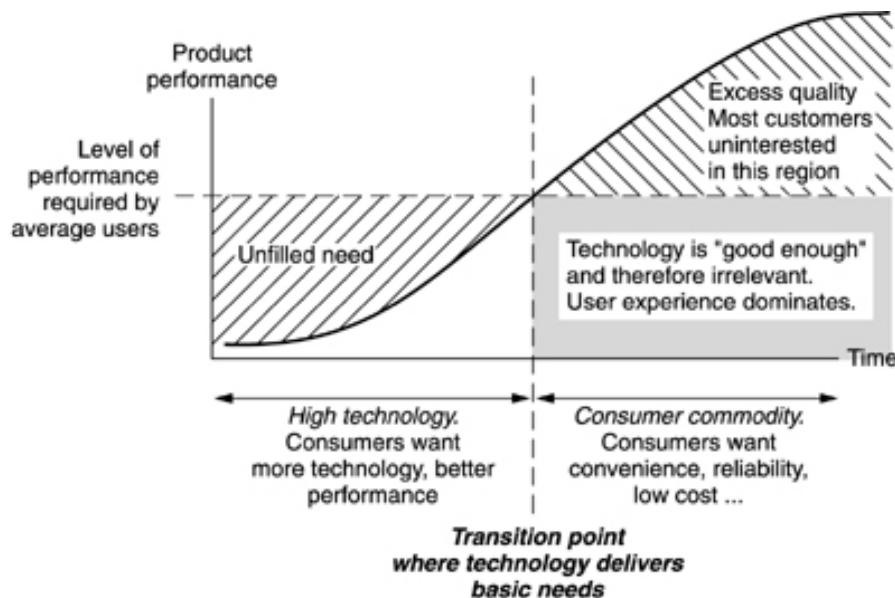
¹² Bill Breen, "The Business of Design," *Fast Company*, April 2005

¹³ Bruce Nussbaum, "The Empathy Economy," *Business Week*, March 8, 2005

In this sense, recent innovation programs in the American private sector seem, on the whole, indeed more empathic than more 'invented' European initiatives. Symptomatic of this is the unparalleled ability of American customer-experience firms to 'reframe' the very definition of "what business they are in" *from a user perspective*. Starbucks' market, seen this way, is not coffee drinkers, but "people who buy into an upscale twenty-first century café experience."¹⁴ Such an 'outside-in' approach contrasts with a more functional, 'inside-out' mindset found in Europe (where one might more easily expect the "a coffee shop is, after all, a place where you can buy and/or drink coffee" sort of rebuff).

So the classic American marketing maxims of *speed* and *differentiation* – the faster and more differentiated you are, the higher your chances of succeeding – have yielded the U.S. a head start in articulating the empathic dimension to the value of design. But can there be 'too much of a good thing', or indeed, an "innovator's dilemma" (Clayton Christensen) at work? There is still a difference between 'firms meeting user needs' and 'users achieving personal transformation' (by facilitating what Albert Boswijk calls a 'personal journey', in which the user "constructs and directs his own experience, without the intermediation of suppliers")¹⁵. I would argue that on the whole, the European mindset might be better suited to develop this latter dimension as it seems less involved with organizations (such as the corporation) and more occupied with the involved, transformative experience at the individual level. This contrasts with the often more passive, 'staged' approach originating at the organizational level in the American private sector.

The role of technology illustrates the point because its major competitive platform *is* speed, because people increasingly experience products through electronic interfaces and not least, because the U.S. seems to bestow a nearly limitless faith upon it. The uptake of technology tends to follow an S-curve (see graph below).¹⁶ It starts out at the bottom left, delivering less than users require. Users then demand better technology and more features, to the point where technology can satisfy the basic needs. Beyond that point, the growth of perceived product performance diminishes, as there simply is 'too much' technology available. So while the left half of the graph is technology-led, the right half is usability-led, as a consequence of excess technology:



¹⁴ Alison Overholt, "Thinking Outside the Cup," *Fast Company*, July 2004

¹⁵ Albert Boswijk, Thomas Thijssen and Ed Peelen, *A New Perspective on the Experience Economy: Meaningful Experiences*, Pearson Education, Amsterdam (forthcoming)

¹⁶ Graph adapted from Don Norman, *The Invisible Computer: Why Good Products Can Fail, The Personal Computer Is So Complex And Information Appliances Are The Solution*, MIT Press, 1999

It is therefore very important to be clear about where one is on this curve, and who is in charge. Mobile telecom operators, for instance, tend to be 'all over the map', sometimes behaving in a technology-led fashion, sometimes in a user-led way. Yet on the whole, technology firms (particularly American ones) tend to behave as if the world is more technology-led than it really is.

But the real point is this: it's not about speed for speed's sake, but about truly connecting with users at a deep level. Just ask any mobile telecom operator or retail bank. The further one travels – using a Maslow lens – up the hierarchy of attributes that technologies offer, the less things like speed and technological power seem crucial, while things like emotional appeal and involvement (i.e., real loyalty) gain importance. At the most basic level, we find 'hygiene factors', followed by the attributes that yield customer satisfaction and delight, respectively (the former being expected and the latter unexpected). At the top, we find transformative attributes that facilitate the 'personal journey' through self-produced meaning. To be sure, this hierarchy is in constant flux: what was once viewed as a differentiating attribute (a camera on a mobile phone, for instance) might now be seen as a hygiene factor. But on the whole, the organizational perspective becomes less important, and the individual perspective more so. At the risk of generalizing, it would be fair to say that such a notion can more easily be attributed to the European perspective, where the individual more often takes priority over the firm than in its U.S. equivalent.

There is another nuance to the point above. With technological attributes ascending the Maslow pyramid towards emotional appeal and involvement, technology itself becomes more subservient to storytelling. Storytelling is about portraying a Hero and his Journey. When comparing the European and American story, the European story is often the *tragedy* (the Hero rises and then falls), and the American story is the *success story* (the Hero first falls and then rises). In the European tragic story we can recognize the process of socialization. As Ashraf Ramzy said, "misery unites."¹⁷ In the redemptive pattern of the American story, on the other hand, we recognize the process of individualization. The corollary of this might well be that, seen from a distance, European technology-based innovation attempts to 'socialize' (think of SMS technology) while its American counterpart has more of a tendency to 'individualize'.

Finally, the 'S-curve' phenomenon that applies to technology may hold equally well for innovation: here too, there is a precarious balance between 'too little' and 'too much'. Imagine what the right half of the innovation S-curve would look like. Parallel to the user experience assuming importance in the technology S-curve, it would reflect innovation becoming a 'commodity'. People such as Tim Brown from IDEO and Roger Martin from the University of Toronto's Rotman School of Business have described this phenomenon as unpredictable (or 'wicked') problem solving, in which neither the problem or answer are defined, becoming mainstream. In the twenty-first century, there are more of these problems than ever before, like 'how can big cities actually work'? "Fixing them," writes Martin, "is [still] a major mystery."¹⁸ Wicked problems are unpredictable and complex largely because they are inherently social in nature. And if the history of societal problem tacking is any indicator, one could argue that Europe may be more inclined to tackle wicked problems than the United States (though one could also argue that the U.S. may be *forced* to do so soon).

In conclusion, we have seen that the United States is enjoying a clear head start in design-driven innovation for its ability to make the concept of value more holistic and personal. And while the European perspective lags behind at present, it may well eclipse the American inertia as innovation climbs further up the Maslow pyramid and its social dimensions – thus far all too often considered *inhibitors* to innovation – turn into virtuous prerequisites for innovation. But let's not forget this is not a race to arms. In fact, speed may in the end not be as much of a Holy Grail as sometimes proclaimed¹⁹. So let's take things one step at a time.

¹⁷ Ashraf Ramzy, "The American Story," presentation at the Palm Springs Story Conference, 2002

¹⁸ George Martin, "The Design of Business," *Rotman Management*, Winter 2004, p. 9

¹⁹ See for instance: Steve Hamm, "Is Your Company Fast Enough?" *Business Week*, March 27, 2006