

**USEFUL
FABRICATIONS**

Four stories about the value of design for business

By Dirk Snelders

Paper prepared for the EdX MOOC Design Practice in Business, organised by the Faculty of Industrial Design Engineering, Delft University of Technology. A previous version of this paper was published in: Karjalainen, T.M. (Ed.), Strategic Design Communication in Business (proceedings of the joint Nordcode/IDBM conference, June 2012, Helsinki and Stockholm).

The author would like to thank Oscar Person for his insightful comments, and the article is written for Thor Helmer.

INTRODUCTION

Some while ago, during a visit at the Evergreen Aviation and Space Museum in McMinnville, Oregon, an American veteran of World War II showed me around. During his tour we stopped at a Spitfire fighter plane, flown by the British Airforce during World War II (see figure 1). It stood next to a German Messerschmitt plane, which was its main opponent at the time. The veteran admired both designs, but each for very different reasons. In his opinion, the Messerschmitts were really the better planes, not just technically, but also because of their superior handling and good looks. However, he pointed out that the Spitfire plane had one key strategic advantage over its German nemesis that made it help win the war: the Spitfire had been the easiest of the two planes to learn how to fly in.



Figure 1. The Supermarine Spitfire Mk XVI NR (<http://commons.wikimedia.org>, extracted 21 April 2012)

At the end of the war, it was this ease of use of the Spitfire that made it the winning plane over Western European skies. By that time most experienced pilots had either been killed or captured by the other side. With both planes predominantly flown by inexperienced pilots, the Messerschmitts had become an easy prey for the Spitfires.

The tour reminded me of the importance of user-

friendly designs that are intuitive in their operation. And I remembered how this aspect in design had gained in importance after the war, when ergonomics came to be seen as a crucial discipline in design, not just for fighter planes, but also for many durables sold on consumer markets. It is also likely that the Spitfire was not the only wartime example of the value of ergonomic design. With the mass conscription of ever younger and less experienced soldiers during the war, ease of operation and intuitive use must have been a crucial value in the design of all military equipment.

The story of the war veteran convinced me of the power of ergonomic design, more persuasively than any book on user-centered design I had looked into before. It also became a story I told to many friends and colleagues, and I noticed how people found it interesting to hear. Some asked me later which planes they were again because they had wanted to tell the story to someone else. But despite the story's popularity, I haven't, to this day, investigated whether it is true.

And I don't think anyone to whom I told the story has checked it. I guess we like to tell stories about design, and care little about their truth.¹

A brief internet search neither confirms nor disqualifies the story of the American war veteran. The information points to the fact that Spitfire had been designed well before the start of the war, making it unlikely that the crucial value of ergonomics had been foreseen by its designers. In the past, I have already worked with others on cases and theories to show that many qualities of design are unforeseen by designers (Lloyd & Snelders, 2003; Person & Snelders, 2010). This implies that the best stories about design are those we can tell in hindsight, stories about the past of design.

¹ Meikle (1998), who cites the story of the design of the Big Ben alarm clock by Henry Dreyfuss, has noted something similar. As the story goes, Dreyfuss had added a weight to the base of the clock to improve its stability and quality impression. Meikle reports how this story has been often cited in the design world, but that it had remained unchecked until Meikle himself opened the clock: he did not find a weight inside.

“THE GOAL IS TO HELP DESIGNERS IN CLAIMING THE EFFECTIVENESS OF THEIR WORK TO BUSINESS”

When it comes to the importance of storytelling, Oak (2006) has demonstrated how oral history in design exists within a context of persuasion. Her view is that people tell stories about the history of design to highlight the relevance of some aspects in contemporary design. According to Oak, “specific terms related to the past are used to support arguments about current design work” (p. 345).

So in the case of the Spitfire story, we can see that it underlines design’s crucial importance in achieving values related to ergonomics. Think of an ergonomics designer who needs to argue for the value of his expertise for business to a top executive. Surely, the story about the Spitfire that demonstrates the value of ergonomic designs would be a good one to tell before going into the details of current projects and what exactly they delivered?

This article will focus on the stories that can be told about design’s past, to underscore design’s importance to current business operations. Readers should bear in mind that the goal is to help designers in claiming the effectiveness of their work to business, and for this purpose we care more about instruction than validation. Of particular interest in this article are stories about the interface between design and business. Which moments in design’s past provide examples that illustrate the strategic value of design for business? As sources, I am relying on popular stories about design and famous examples, many of which taken from a popular television series on design, and books on the history of design, design management, and marketing.² In addition I am relying on accounts about the value of design for business told to me by design and management professionals over the last twenty years.

The structure of the article is as follows. I will first discuss the problems that designers encounter when they have to argue for the value of their work for business, and conclude that popular stories about design’s value in the past may be of help in this. Next, I will classify the success stories of design according to the way in which they can be of value to business. By doing so, we might see that some values of design are related to ‘leading’ success stories in certain historical periods. When this is the case, we will not withhold readers a tentative analysis of crucial developments in those periods that can be connected to a particular value of design. At the end of the article I will provide a critical discussion of what is currently the most dominant success story in design, the story about user-centered design.

²Particular sources are the BBC series ‘Genius of design’ (2010), popular handbooks and influential articles on design history (notably Betts, 2004; Buchanan, 1998; Forty, 1986; Meikle, 2005; Alessi, 1994; Sparke, 1986), business history (Brand & Rocchi, 2011; Keith, 1960; Kotler, 1997; Pine & Gilmore, 1999), and design management (Blaich & Blaich, 1993; Borje de Mozota, 2004; Best, 2006).

THE PROBLEM FOR DESIGN OF CLAIMING SUCCESS IN BUSINESS

Designers face a general difficulty in explaining the value of their work for business. Their influence on leading financial indicators is very indirect. As an activity that makes plans for production (Roozenburg & Eekels, 1995), design often sits at the beginning of product development projects. As a result, its effect on business performance is confounded by a large number of business functions that co-determine performance, but whose influence is exerted at later stages of product development and launch (such as engineering, branding, sales, etc.).³

This means that, whenever designers do something to advance a business goal, they depend on other functions in a company (quality production, good pricing strategy, strong advertising a motivated sales force) to actually achieve those goals. This also means that, in order to stake a claim in the success of a new product, design needs to compete with other functions in a company. Given that those other functions have had a more direct impact on performance it should be no surprise that designers find it hard to claim that their work is crucial to company success.

Things become even tougher when we take into consideration that the effect of design on business performance depends for a large part on effects that take time to come to fruition. As we shall see, many of today's designers claim that they focus on the use value of products, more than on the exchange value of products. By doing so, the effect of design on business performance is felt mostly in the long run, through repeat purchases and a good word of mouth from experienced users to future potential users. Thus, effectiveness claims of designers in terms of business performance are highly problematic, and a designer having to make such claims will have a hard time to do so.

Outside the scope of single design projects, the importance of design for business performance has been confirmed by a number of studies. Most notably, research shows a) that investment in design is associated with relatively higher profits, profit growth and sales growth in companies (Gemser & Leenders, 2001, Gemser, Candi & van den Ende, 2011), and b) that companies with award winning design efforts tend to enjoy stronger growth of their stock market value (Design Council, 2004). Thus, design has been shown to be instrumental in achieving business goals as sales, profit, and stock market value.

However, as much as these studies have specified performance indicators for business, as little have they done to specify the type of design activity that has been conducive for achieving these effects. On the contrary: in trying to establish the importance of design for business, these studies have tended to define design very broadly, implicitly blurring industrial design with product development and engineering design (Gemser and Leenders, 2001), or communication design (Design Council, 2004). In addition, when trying to specify design activities these studies typically separate design into activities aimed at functional and symbolic value, which is something most designers and design researchers find highly problematic (Alexander, 1964; Bonsiepe, 1999; Fallan, 2010; Person & Snelders, 2012; etc.).

The above research serves a good reminder to business to invest in design, but it does not support designers to claim that their particular (often specialised) work can be of value to business. A better place to be looking for this might be in cases where companies hire external design consultants. Such consultants are selling their expertise, and incessantly remind business that they are strategic partners in value creation.

³This point has been made earlier by Hertenstein and Platt (2000)

A good example is frog design, one of the biggest and most generalist design consultants in the world. On its website, frog has put a number of statements to define its capacities, and that makes it stand out against other (often more specialised) design consultancies. The statements are shown in Table 1, and include many clues for designers to define the value of their work for business.

Table 1. The self-professed capacities of frog design

1. We are fanatical about improving the world
2. We choreograph cultural change... through design
3. We are not just a business, after 40 years we are part of the cultural fabric
4. Our work outlasts movements and fads
5. Quality is our non-compromising obligation
6. We strive to change minds, touch hearts, and move markets
7. We are vigilant, expert, cost driven, and aware of the need to save our scarce environment
8. Our talent is both an art and a science. It is both business and culture
9. Our clients are the key to our success (however, we don't take any b.s., inside or outside)
10. We live honestly, open, and without fear
11. Humor and spirited fun are the essence of frog

Source: www.frogdesign.com/about (extracted March 2011)

Relating these self-advertised capacities of frog to its self-professed history (frog design, 2012; Esslinger, 2009), we can see that the various design capacities of frog have developed over time, slowly cumulating into the list in Table 1. Given this history of frog design, the first and last listed capacities (fanatically improving the world, bringing humor and spirited fun) are likely to have been part of the company since its start in 1969, while other capacities (e.g., choreographing cultural change) refer back to the time when it became the famed design consultant for Sony in the 1970s, and others (e.g., being cost driven) to capacities it has been developing more recently.

When taking a more general perspective, the statements of companies like frog design can best be seen from a 'dynamic capabilities' perspective

(Helfat et al., 2007; Teece, 2009). From this viewpoint, business organisations survive by fostering the capabilities of their workers and business relations, and by stimulating that these capabilities develop in response to constant changes in the environment. The dynamic capability perspective provides us with important insights in the way that design can tell stories about its importance for business. First, this perspective focuses on design as a slowly developed capacity, one that cannot be developed overnight. Design activities, even when placed in out-house design consultancies like frog, tend to have a natural connection to in-house development and production processes of business. Many capacities are heavily related to business processes such as engineering and marketing, and must be integrated with these processes to become successful. This means that design is not a hit and run activity based on a few good ideas, but rather an activity that needs time and effort to come to results for business.

Secondly, the capacities of design have their own history. For instance, the capacities of frog developed at one stage in time, and for one set of business clients, are brought to the next set of business clients for better or for worse. This means that the list of capacities of design becomes ever longer, something that has been noted before by Valtonen (2005).

Thus, based on the dynamic capabilities view, we can assume that a) that the capacities of design are in a slow, but constant state of flux, and b) that capacities of designers are broad, with later developed capacities adding to, rather than replacing many earlier developed capacities. This means that the problem for design in claiming success for business boils down to the following question: How can design claim that it has a strong and standing tradition in creating value for business? In other words, what are the success stories of design?

FOUR SUCCESS STORIES OF DESIGN

Below we will focus on four success stories about the strategic value of design for business: Design as Decoration, Design as Promise, Design as Integration, and Design as Empathy. Our stories will hinge on examples from the past. Some of these will be early examples, showing how a particular capacity of design became noteworthy, but others will be more ultimate examples, showing the full potential of a design capacity during a later time period.⁴

Design as Decoration: Creating Affordable Value

This capacity of design is about the activities of designers to deal with the drive of companies to optimise productivity levels. Design here has to work within the boundaries of a company that wants to produce goods at ever-lower costs. This business orientation is validated by a number of characteristics in the environment of firms. Typically, companies need to invest heavily in cheap production when they cater for fast growing markets where demand is predictable but price sensitive. In such situations, development costs are likely to be high, since they include investments in expanding production facilities and distribution networks. Given that markets are predictable, but also price sensitive, the goal of the company is to produce at high volumes, using the economies of scale to bring its cost price down, in the knowledge that a lower selling price will disproportionately increase demand.

The capacity of designers that is called for here stems from an ambition of production oriented companies to have their cheaply made products not appear valueless. Thus designers here perform the task of retaining as much perceived value as possible, given an often downgraded quality standard. In the list of frog design (Table 1), this capacity is mentioned under point 7, which deals among others

with design being vigilant and cost driven.

An early example of how this capacity developed stems from the early stages of the industrial revolution. Meikle (2005) describes how industrial clock makers in the US quickly expanded their market for clocks at the beginning of the 19th century. Before the industrialisation of clock production, crafts-based clock makers worked with high skilled metal workers, and would typically produce 10 to 15 brass movements (i.e. the internal mechanism of a clock) per year per workshop. This method of production meant that movements were an expensive luxury, often purchased as movement only, with the case and dial being ordered from a lower paid local craftsmen. However, over the late 18th / early 19th century, within a timespan of some 30 years, the clock-making business changed dramatically. At the end of this revolution in clock production, movements were made by non-skilled workers, and the annual production of some clock makers ran up to 300.000 clocks per year (see figure 2 for an example). As a result, clocks became a cheaper and cheaper; an affordable, mass produced industrial good for an upcoming US middle class.

What is interesting for the capacity of designers is that these new industrial clocks were sold as full working clocks, the movements complete with their case and dial, which made up the 'user interface'. These interfaces were designed according to styles adopted from higher quality, luxury crafts products (often a style of a European court or from antiquity). Although the inner parts of industrial clocks were very different from those of crafts-based clocks, from the outside these clocks still tried to appear like these earlier luxury clocks. Thus, the capacity of the first industrial designers that was called for was to retain as much of the perceived value of expensive crafts products within the confines of cheap, industrial production.

⁴The distinction between early and late example is inspired by the work of Kunkel (1999), who looked to the role of design over a product and brand life cycle, and who noted that there are iconic examples of design at early stages of a life cycle, followed by later ultimate and retro examples.

The clock example is an early example, but one could say that throughout the 19th century designers would imitate the decorative styles of crafts products, in order to retain as much of the perceived value as possible for much cheaper industrial products. However, Design as Decoration is not limited to products where crafts set the standard. We can see later examples of Design as Decoration for industrial products where crafts would not directly set standards for industrial products. A famous example here is the T-Ford, which was produced from 1909 until 1927, and was redesigned over and over to reduce costs. Still, in its design and many redesigns one can find (brass and leather) parts that reminded buyers of more expensive luxury cars (and which themselves were often referring to quality standards of crafts-based coaches and luxury furniture).



Figure 2. An industrial, mass produced 19th century Chauncy Jerome clock (source: http://commons.wikimedia.org/wiki/File:Chauncy_Jerome_Clock.jpg, extracted 26 April 2012)

Current examples of Design as Decoration can be found in food packaging or the computer industry. In the latter case, the first designs of a new type of computer (e.g., the first desktops, the first notebooks, the first notepads) often set quality standards that designers typically try to retain in later designs of cheaper, knock-off products. The business logic driving design in all these examples

is the same: to produce as cheaply as possible, while trying to uphold perceived (and earlier established) quality standards as much as possible.

Design as Promise: Adding Value by Styling

This capacity of design is about the activities of designers to stimulate the sales of products for which demand is uncertain. This capacity is validated by a business drive to take larger and larger shares of a market. Such an orientation makes sense for companies who aim for a fast return of their investment in new product development and production facilities, and who operate in an industry with a production capacity that is larger than the total demand in the market for products from that industry. These companies operate in a system of competition that economists call monopolistic: companies seek to conquer segments of a market where its position is the strongest and most secured (thus running near monopolies within these segments). In this way, direct head-on competition on price is avoided, and customers within specific market segments are supplied with products that better fit their particular needs. Within this context, selling many new products quickly to a specific market segment becomes a way of keeping competitors at bay.

The capacity of designers that is called for here is to design products that allure, and that turn people in targeted market segments into buying consumers. Thus, products need to be designed in ways that attract attention, support media advertising, and create a desire to try out the product. In the list of frog design (Table 1), this capacity has to do with changing minds, touching hearts, and moving markets (point 6), and with a description of design talent as an art and science (of persuasion), being both business and culture (point 8).

There are many examples in design that highlight this capacity for selling, many in connection to the styling movement in the US between the 1920s and 1960s. A famous example is the styling

section of General Motors. In reaction to the massive sales success of the T-Ford, this company launched a number of different cars, each targeted to a different market segment, and with a clearly distinctive expression. However, under the bonnet there were many parts that were shared by the cars, so GM could still – to some extent – enjoy the economies of scale, while offering less generic cars than the T-Ford. GM's strategy was highly successful: by offering more desirable products at a marginally higher price the company was able to win back market share from the T-Ford (for a longer description of GM's strategy, see Gartman, 1994).

With respect to this design capacity, it is perhaps good to point out that a strong focus on selling only sustains and aggravates the problem of overproduction in an industry. For this reason, Design as Promise has been criticised for its contribution to obsolescence and pollution. By the 1950s American cars became equated to dinosaurs: wasteful, and unfit to survive in a world more and more dictated by scientific rationality (Maldonado, 1958). Indeed, Design as Promise often lead to oversized, wasteful designs. For example, many 'designer' versions of consumer electronics, such as the Alessi line for Philips (designed 1995 by Alessandro Mendini), or the Rowenta coffee maker (designed 2004 by Jasper Morrison) tend to be oversized in the same way as the 1950s American cars. The underlying problem might be the same as well: these tend to be products for which the (outside) expression of the product has been the departure point, and the underlying engineering has been done with existing components taken from the shelf. If the inside components cannot be changed, then the easiest way for designers to get more freedom of expression is to enlarge the outside shell, making it bigger than needed.

However, it would be a caricature to state that Design as Promise is by definition connected to being needlessly oversized. In the early examples of

General Motors it was already acknowledged that a car stylist should never forget "the utility of his design" (Earl, 1955, p.5). Even Maldonado (1958), who critiqued the stylists for producing dinosaur cars, acknowledged that many designs by American stylists like Henry Dreyfuss and Walter Dorwin Teague had still been 'heavenly.' Thus, what seems to be essential to Design as Promise is not its connection to waste, but its basis in the belief that consumers are hesitant to buy new products, and that an attractive offer that is full of promise can boost sales enormously. Indeed, when products are affordable, yet still relatively expensive, and when consumers are relatively inexperienced, Design as Promise may well be the approach with the highest business rationale.

Design as Integration: Added Value by Integration of Technology

This design capacity focuses on the highest possible value creation in the production process, leading to products with high integrative quality, as expressed by high performance, reliability and longevity standards, and a seamless interaction between product and user. The required design capacities for achieving these values are typically fostered by design (educational) institutions that aim to express certain national or international ambitions through design. Design as Integration can also have a commercial logic among companies that are positioned in higher quality segments of markets, where the focus is more on making profits than on lowering cost or boosting sales. In many industries, the companies that provide higher quality levels in a market also tend to enjoy higher profit margins. The demand from quality-oriented, relatively price-insensitive segments can also drive the development of design capacities. In the example of frog design, we can see this in statements about being fanatical about improving the world, that their work outlasts movements and fads, and that quality is their non-compromising obligation (Table 1, points 1, 4, 5).

What is also telling in the quality drive of frog is that it is seen as an obligation. Thus, the assumption here is that designers and the companies they work for should proactively strive for high quality products, regardless of what markets want. This drive towards quality becomes apparent in the famous “good form” (Gute Form) campaign of the postwar German Werkbund. This institution promoted high quality products for mass markets, only to find that their favoured designs ended up becoming the style of the smaller market segment of the new German elites (see Betts, 2004).

A similar disregard for the needs of the market can be found in the cars produced by Porsche from the 1960s until the early 1990s. Probably the best example here is the 924 model, introduced in 1978 as a cheap entry model (the so-called ‘poor man’s Porsche’). Initial quality levels of this model were modestly high, so that prices could be kept at a modest level as well. However, successive improvements of this model in the newer generations 944 and 968 quickly made the car much faster, more agile, more durable, and also much more expensive. Figure 3 shows the price development of these models, suggesting that Porsche, during that time, was simply unable

to sustain its production of cars at suboptimal quality levels. Admittedly, this orientation on integrative quality worked well all through the 1980s. The market for expensive cars had grown dramatically in that period, and Porsche was reaping the benefits of its constant push for ever higher quality. Even when Porsche departed with the 924/44/68 models from its initial goal to make an entry level car with modestly high quality, it seemed that markets simply followed Porsche in its drive to redefine quality for luxury sports cars. This development lasted up until the economic crisis that started in 1990, when Porsche’s model policy was suddenly undermined and nearly bankrupted the company.⁵

Design as Empathy: Co-creating Use Value

This capacity is about design activities that put the user center stage. It is about satisfying user needs through products that are easy, pleasant, or interesting to use. It aims at a profound, ‘empathic’ understanding of the user experience of his/her world as a departure point for design. Another aspect of Design as Empathy is that it is appreciative of the potential creativity of users to co-design or co-produce the products and services rendered to them. This last aspect of this design capacity is also expressed by a tendency in the

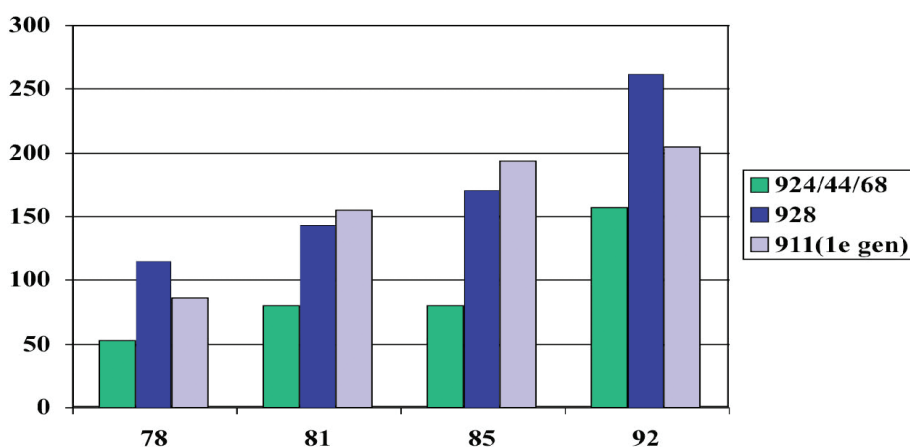


Figure 3. Prices of Porsche models on the Dutch market between 1978 and 1992 (all prices are corrected for inflation and listed in Dutch 1990 guilders).

⁵After the 1990 crisis, Porsche revised its strategy and started paying more attention to customer demands. It succeeded in this after introducing the first Boxter models in 1996, at a price level of about 70% of its predecessor, the 968, and produced on the basis of a cost-effectiveness program (which included shared body panels with other Porsche models, and a very plastic-looking dashboard). After the Boxter had become a success, Porsche’s website declared its philosophy was to be customer oriented, and that Porsche and its employees had ‘understood’ this now.

designs themselves to be styled in an unassuming, playful manner, often with room for users to self-customise the product.

This capacity of design tends to coincide with an orientation of companies towards creating a strong brand following. The logic that is followed here is that companies should care about their long-term relations with buyers. People are seen as making ‘sovereign’ decisions, based on their personal, past experiences as users of products. This implies that the decisions of users are informed by previous purchases of products, potentially by the same company. Through branding, the company can develop relations with users, turning them into customers who recommend the brand to others, and who are enthusiastic about trying new product offerings by the same brand. Thus, companies with a strong and loyal brand following will not only benefit in the present, but also in the future, with products that have not been developed yet. A strong brand thus becomes an equity of the company, an expression of goodwill that is highly valued by financial markets. This allows companies to grow very fast, since they can invest in future business with borrowed capital, and with a low interest rate.

Turning back to the example of frog design, we can see that this capacity is expressed in statements that frog has become part of the cultural fabric, that clients are the key to its success, and that humor and spirited fun are the essence of frog (Table 1, points 3, 9 and 11). It could also be argued that Design as Empathy is the most defining capacity frog design. The decision at the start of the company to always write its name in lower case points to the tendency to understate its importance. Next, some of the most important products in frog’s history can be seen as heavily centered on an empathic understanding of the needs of users. The Sony Triniton of 1975 by frog design was one of the first black televisions, with the Sony brand name as its only noticeable feature. Its design, as well as the advertising that surrounded it, stressed

that the value of televisions does not reside in the object, but in what users do with the object. The Triniton was presented as a mere conduit to the television programs users wanted to see, and the only thing that stood out in this product was the Sony brand name, as a small and constant reminder of a company supporting the all important user.

Other early examples of this design capacity include the early hatchback cars from the 1970s (notably the 1971 Renault 5 and the 1975 Volkswagen Golf I). These cars were very different from the ‘dinosaur cars’ of earlier ages. They excelled in usability by being flexible, multipurpose vehicles, yet remained unassuming in their expression, ‘mere conduits’ to a larger need of transportation. A later example of this capacity is the Nokia 3310 from the year 2000. Again, the design style employed here was that of an unassuming, friendly smiling object, offering a helpful hand by providing users with a highly intuitive interface, that help to support the claim by the Nokia brand that they were in the business of “connecting people.”



Figure 4. The Nokia 3310 as an example of Design as Empathy (source http://commons.wikimedia.org/wiki/File:Nokia_3310.png)

NEW STORIES FOR DESIGN

The four success stories presented above point to a variety of ways in which design can be of value to business. Depending on the context, a business can decide to set itself goals in terms of costs, sales, profit, or stock market value (based on the brand loyalty of its customer base). In addition, the required design capacities may differ according to these different goals, with each capacity being in need of a success story that ‘proves’ its value for industry. In some respect, the stories can be historicised, because some contexts that situate a story may have been dominant for industrial design in the past. For instance, a Design as Decoration makes more sense when markets are underdeveloped, and companies must make huge investments in value chains in order to deliver products to people who are mostly very poor. In many western countries, this situation was mostly characteristic for the period of the industrial revolution. However, this is not to say that a focus on adorning low cost products is now completely out-dated. On the contrary, as our examples show, there are still market niches and parts of industry where a focus on cost makes sense, and where the need for Design as Decoration is as strong as ever. In addition, we want to avoid the suggestion that a focus on low-cost production is slowly dying out, and has no place in the world of the future. Who knows which story of the past will be most applicable to the world of tomorrow?

However, we must also point to the last success story, that of Design as Empathy, as one that has become most dominant in design since the 1970s, under a growing influence of the famed “Hochschule für Gestaltung” in Ulm in the late

1950s and early 1960s. It might be good to stand still at the thoughts of some of the school’s leading figures, such as Max Bill, Inge Scholl, Tomás Maldonado and Gui Bonsiepe. Their early writings on user-centered design point to problem areas that can now be felt more strongly than before.⁶

To end with their thoughts, the ideas behind Design as Empathy were developed as a reaction against what was seen as a dangerous growth of a consumerist culture. For many Ulmians, user-centeredness was not meant only to confirm and validate people’s expectations about a comfortable life in a private domain, but also to confront them with an obligation to lead socially responsible public lives. This meant that Design as Empathy, when it was first conceived, was not addressing people only in their role of playful, ironic consumers, but also as more serious democratic citizens. However, in its application in business, user-centeredness in design has become mainly an instrument for brand building, by supplying people with playful, unassuming objects that mostly addressed private needs of play and comfort.

Ulmians like Maldonado and Bonsiepe (1964) wrote about this misrepresentation of their ideas in business, stressing that designers also have a more provocative role to play. We can see that influential writers in design have been echoing these thoughts, pointing to the importance of design to critically confront users with their social needs (e.g. Dunne, 1999), and to the imperative of a design for happiness instead of overconsumption (Desmet, 2011). It is hard to say, at this stage, whether such calls go beyond user-centered design, as has been claimed by Verganti (2009), or whether they merely ‘complete’ this important capacity of design.

⁶For an overview of the thinking at Ulm, see Betts (2004, chapter 4). For a good collection of late Ulmian texts see <http://ulmertexte.kisd.de/autoren.html> (retrieved 27 April 2012). In specific, the texts of Maldonado (1958), and Maldonado and Bonsiepe (1964) have been of the biggest influence in this article.

I started with the Spitfire example in this article to illustrate the relevance of stories about design's past for the present. In my mind, Spitfire has become an icon of the value of ergonomic design, influencing postwar, postindustrial design practice. It taught Nazi Germany a lesson, one that designers in the Federal Republic of Germany may have taken at heart when they worried about the misleading guidance of values in design that were either too consumerist or purist. It also seems a story we have not fully digested yet, and that still occupies the main stage for discussions about the of design for business today. When I was at the Aviation and Space Museum in Oregon, I bought a small model of the Spitfire, and gave it to a little boy who liked playing with war toys (luckily his mother did not mind). I hope one day I can tell him the story of how that plane was quite special.

REFERENCES

- Alessi, A. (1994). *The design factory*. London: Art & Design Monographs.
- Alexander C. (1964). *Notes on the synthesis of form*. Cambridge, MA: Harvard University Press.
- Best, K. (2006). *Design Management: managing design strategy, process and implementation*. Lausanne: AVA.
- Betts, P. (2004). *The authority of everyday objects: A cultural history of West German industrial design*. Berkeley, CA: University of California Press.
- Blaich, R., & Blaich, J. (1993). *Product design and corporate strategy: Managing the connection for competitive advantage*. New York: McGraw-Hill.
- Bonsiepe G. (1999). *Interface: An approach to design*. Maastricht: Jan van Eyck Akademie.
- Borja de Mozota, B. (2004). *Design management: Using design to build brand value*. New York: Allworth Press.
- Brand R., & Rocchi, S. (2011). *Rethinking value in a changing landscape: A model for strategic reflection and business transformation*. Eindhoven: Philips Design.
- Buchanan, R. (1998). Branzi's dilemma: design in contemporary culture. *Design Issues*, 14 (1), 3-20.
- Design Council (2004). *The impact of design on stock market performance – An analysis of UK quoted companies 1994-2003* (retrieved 3 May 2012 on http://www.idsa.org/sites/default/files/The_Impact_of_Design_on_Stock_Market_Performance.pdf).
- Desmet, P. (2011). *Design for happiness; Four ingredients for designing meaningful activities*. In N. Roozenburg, L.L. Chen & P.J. Stappers (Eds.), *4th World conference on design research (IASDR)*, Delft, October 2011.
- Dunne, A. (1999). *Design Noir*. In C.J. Overbeeke & P. Hekkert (Eds.), *Proceedings of the 1st International Conference on Design and Emotion* (pp. 83-85). Delft: Delft University of Technology.
- Earl, H. J. (1955). *The Look of Things*. Detroit: General Motors Corporation / Dept. of Public Relations.
- Esslinger, H. (2009). *A fine line: How design strategies are shaping the future of business*. Hoboken, NJ: Jossey-Bass.
- Fallan, K. (2010). *Design history: Understanding theory and method*. Oxford: Berg.
- frog design (2012). *frog History* (retrieved 2 May 2012 at <http://www.frogdesign.com/about/history>)
- Forty, A. (1986). *Objects of desire: Design and society since 1750*. London: Thames and Hudson.
- Gartman, D. (1994). *Harley Earl and the Art and Color Section: The birth of styling at General Motors*. *Design Issues*, 10 (2), 3-26.
- Gemser G., Candi M., & van den Ende J. (2011). *How design can improve firm performance*. *Design Management Review*, 22 (2), 72-77.

- Gemser, G., & Leenders, M.A.A.M. (2001). How integrating industrial design impacts on corporate performance. *Journal of Product Innovation Management*, 18(1), 28-38.
- Helfat, C., Finkelstein, S., Mitchell, W., Peteraf, M., Singh, H., Teece, D., & Winter, S. (2007). *Dynamic capabilities: Understanding strategic change in organizations*. Malden, MA: Blackwell.
- Hertenstein, J. H., & Platt, M. B. (2000). Performance measures and management control in new product development. *Accounting Horizons*, 14(3), 303-323.
- Keith, R.J. (1960). The marketing revolution. *Journal of Marketing*, 24, 35-38.
- Kotler, P. (1997). *Marketing management: Analysis, planning, implementation and control*. Upper Saddle River, NJ: Prentice Hall.
- Kunkel, P. (1999). *Digital dreams: The work of the Sony design center*. New York: Universe Books.
- Maldonado, T. (1958). *Neue Entwicklungen in der Industrie und die Ausbildung des Produktgestalters*. In: <http://ulmertexte.kisd.de/155.html>, accessed 27 April 2012 (ulm 2, 2.10.1958, S. 31).
- Maldonado, T., & Bonsiepe, G. (1964). *Wissenschaft und Gestaltung*. In: <http://ulmertexte.kisd.de/218.html>, accessed 27 April 2012 (ulm 10.11.1964, S. 10).
- Meikle, J. L. (1998). Material virtues: On the ideal and real in design history. *Journal of Design History*, 11 (3), 191-199.
- Meikle, J. L. (2005). *Design in the USA*. Oxford New York: Oxford University Press.
- Lloyd, P., & Snelders, D. (2003). What was Pilippe Starck thinking off? *Design Studies*, 24, 237-253.
- Oak, A. (2006). Particularizing the past: Persuasion and value in oral history interviews and design critiques. *Journal of Design History*, 19 (4), 345-356.
- Person, O., Snelders, D. (2010). Brand styles in commercial design. *Design Issues*, 26 (1), 82-94.
- Person, O., Snelders, D., & Schoormans, J. (2012). Re-establishing styling as a prime interest for the management of design. *Advances in International Marketing*, 23, 161-177.
- Pine II, B.J., & Gilmore, J.H. (1999). *The Experience Economy: Work is Theatre & Every Business a Stage*. Boston, MA: Harvard Business Publishing.
- Roozenburg, N.F.M., & Eekels, J. (1995). *Product Design: Fundamentals and Methods (Product Development: Planning, Design, Engineering)*. Chichester, UK: Wiley.
- Sparke, P. (1986). *An introduction to design and culture in the 20th century*. London: Allen & Unwin.
- Teece, D.J. (2009). *Dynamic capabilities and strategic management: Organizing for innovation and growth*. Oxford: Oxford University Press.
- The genius of design* (2010). London: BBC (television documentary)
- Valtonen, A. (2005). Six decades – and six different roles for the industrial designer. In: *In the Making (Proceedings of Nordes, the Nordic Design Research Conference, Copenhagen, Denmark, May 2005)*.
- Verganti, R. (2009). *Design-driven innovation: Changing the rules of competition by radically innovating what things mean*. Boston: Harvard Business Press.
-