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Back and Forth with Ethics in Product Development

- A history of ethical responsibility as a design driver in Europe

> “ Early this morning, I was in a bad mood and decided to break a law and start my car without buckling my seat belt. My car usually does not want to start before I buckle the belt. It first flashes a red light “FASTEN YOUR SEAT BELT!”, and then an alarm sounds; it is so high pitched, so relentless, so repetitive, that I cannot stand it. After ten seconds I swear and put on the belt. This time, I stood the alarm for twenty seconds and then gave in. My mood had worsened quite a bit, but I was at peace with the law – at least with that law. I wished to brake it, but could not. Where is the morality? In me, a human driver, dominated by the mindless power of an artifact? Or in the artifact, forcing me, a mindless human, to obey [...]?” (Latour 1997, 225)

An artefact can be designed in a way that makes its immoral use difficult, or the moral consequences of its use can be left to the user. One of the big moral debates throughout the history of product development has been whether products should be designed on the basis of ethical considerations or not. In some cases, the moral choices are not to be made by the product producers. For example, it is clearly not up to the moral judgement of the product producer to decide if a car should include seatbelts or not, as seatbelts are mandatory by law. In many cases, the product developers also face liability issues. Designing toys for toddlers with many parts is in practice made impossible, because of potential liability suit in case a child chokes on the product. However, in most cases of product development the product developers themselves have had a saying on what is the morally right thing to produce, and affect this choice by their own work.

This paper presents historical developments of the role of ethics in European post war product development. It aims to show how ethical considerations have influenced product development to time and what the implications have been for the professionals that work in the area. Further, this paper portrays how the ethical standpoint of product development within corporations has turned from a consequentalist view in the 1960s to a non-consequentialist approach in the 1970s - a moral duty to produce the most appropriate product possible -, and then back into a consequentialist and utilitarian one in the late 1980s with a focus on product differentiation, leaving the moral consequences of product choices to the customer.

In the 21st century, the ethical considerations of product management shifted back towards a more deontological approach. Consumers were no longer considered to choose only rationally, but according to two irreducible utilities and sources of valuation: pleasure and morality. The ethically conscious consumer influenced the companies to re-perceive ethical considerations as their duty in product development. This paper contributes with new insights into how the social and political business environment and the prevailing design and management theories have affected the ethical considerations in product development through time.

Fundaments of Product Development, Design and Ethics

Product development and ethics have always been tightly intertwined. In a corporation, product development is the activity that is concerned with how things ought to be, with devising artefacts to attain goals. Product development has been defined as the set of activities beginning with the perception of market opportunities and ending in the production, sale and delivery of a product (Ulrich &Eppinger1995, 2). Product development is an interdisciplinary activity requiring contributions from nearly all the functions of a firm; however, three functions are almost always central to a product development project: design, manufacturing and marketing (Ulrich & Eppinger 1995, 3).

Generally, design is the one of the three that has to be performed before the two others can take their part. Design and invention come together – invention is the process of inventing a principle and design is the process of applying that principle (Pye 1986, 48). Design has also been defined as the process of converting an idea into information from which a product can be made (Caldecote 1986, 54), as an iterative process that takes an idea or market need forward into a successful product (Hollins & Pugh 1990), or as a basic methodology, a kind of *état d'esprit* which determines, pervades and controls the whole innovation process, often questioning many of the other functions in a company (Aubert 1985, 165). To design is thus to device courses of action aimed at changing existing situations into preferred ones (Simon

1996 [1969], 111-114). Within the context of manufacturing and business, however, the criteria of defining what the preferred situation is, and its ethical implications, have changed during history.

There are naturally many issues which affect what products a company produces, most of which will not be considered in this paper. This paper will view how the product designers have viewed their moral responsibilities in product development activities. The historian John Heskett asks the question whether designers are merely technocrats, devoting their skills to the highest comercial bidder without considerations of the ends they serve, or is there a dimension of social and environmental purpose requiring acknowledgement in their work? (Heskett 2002, 200)

Within product development, the main ethical consideration has been whether products should be designed so that they limit unmoral use, or should any type of product development be allowed and the end-user left with the moral questions of whether to buy or use the product and how to use it. Bruno Latour’s example with the seatbelt in the car proved an example of where the end-user had no choice – the product was designed so that it had to be used in a morally appropriate way (Latour 1997, 225).

In writings of science and product development history, two different approaches to the above mentioned questions have been identified. In the pre-modern tradition, the responsibility to delimit science and innovation has been argued at length (Mitcham 1987, 3-39). The most referred to examples are Archimedes (287-212 BC) refusing to write a treatise on certain of his mathematical discoveries because of the dangers of the engineering applications it could have, and Leonardo da Vinci (1452-1519) not wanting to publish his design for a submarine because of the evil nature of men that could use it as a means of destruction at the bottom of the sea (Mitcham 1987, 8).

The second approach has been illustrated with Galileo (1564-1642), who did not see the pursuit of science or new product development as subject to any prudential limitations (Mitcham 1987, 9). At the height of the Enlightment, Galileo argued that scientists have the right to publish the scientific truth without concern for its possible unsettling social consequences. In product development, this could be equalled with the thought that the product developers can launch any innovation that they have created, and the moral consequences of the usage of the product then lies in the hands of the consumer. In the modernist tradition, this second approach was the prevailing one. Particularly after the Second World War, it was emphasized that science or product development was not responsible for horrors like the atomic bomb, and the responsibility was laid on the users of the product, i.e. the political decision makers.

Post-war consumption

In a shattered post-war Europe, belief in a new world and modern, liberal democracy was largely expressed through consumerism. Americanisation had brought a new model of consumption to Europe in the 1940s and 1950s (Sparke 2004,118 ; Pilditch 1976, 279-286. See also Djelic 1998). Although the American model of consumer modernity was emulated to a greater or lesser degree in most modernised or modernising countries, the practices varied across Europe. In some of the more affluent, capitalistic European countries of the 1950s, such as Britain, Germany and Italy, consumerism played a large part in everyday life. Other European countries, such as those with a strong tradition of social democracy behind them, particularly the Scandinavian countries, and others with a cultural antipathy towards the "American way", such as France, initially attempted to resist the impact of conspicuous consumption but soon followed (Sparke 2004, 118; Whiteley 1993, 38&45. On conspicuous consumption see Veblen 1994 [1899]).

In the countries with a stronger idealisation of the American way of life, particularily domestic appliances and cars were often designed following of the American streamlining style. Vacuum cleaners emulated the look of airplanes and toasters were styled as if they could move with the speed of light. This was particularly evident in the imaginary in British cars in the late 1950s, such as the Vauxhall Velox and Cresta and the Ford Anglia, strongly influenced by the features of American Baroque automobile styling with space-rocket symbolism in the dramatic tail-fins and rear-light clusters (Woodham 1983, 111).

The late 1950s and the 1960s brought two significant aspects to design that we now take for granted: that design is a social language and that design expresses lifestyle (Whiteley 1993, 17). The products were largely bought to show affluence in a time of scarce resources. A gleaming new car was a sign of financial success, announcing to the peers the owner’s position on the social ladder (Whiteley 1993,18). The product producers were more interested in expressing the new modernity through their products than in focusing on ethical issues behind them.

In the Scandinavian countries, with their ideals of social democracy, the main goal of product development was to make sure that everybody could achieve the new modern inventions in their everyday lives, and through them improve the standard of living. Therefore, much of the product development of the time focused on producing products that could be afforded by as many as possible – some of which still emulated the styling of their other European counterparts. In France, the social theorist Roland Barthes saw the Citroen DS as the equivalent to the greatest Gothic cathedrals – a purely magic object that appeared to have fallen from the sky (Barthes [1957] 1990). Barthes also viewed the mediatised DS, with its streamlined forms and its dove-tailed sections, as embodying the very essence of petit-bourgeois advancement (ibid. See also Sparke 2004, 185).

Good design

The post-war products with their often futuristic form language hence created products which were more about showing social status than about functionality. Many designers started questioning this approach as vulgar, or as an epitome of kitsch. The designers questioned whether they should stretch their refined and exercised taste although only a few like-minded cognoscenti would understand it or learn to aim at the best that is acceptable to untrained eyes? (Pilditch 1976, 31). In order to amend the decadence in product taste, the discussions about good taste and form started around Europe, partly to educate the larger public in what was perceived as *good design*. As the French sociologist Pierre Bourdieu emphasised, it is those in power who define concepts such as taste ([1979] 2004).

Especially in northern Europe, Germany and the Scandinavian countries, this approach was cherished both by the designers and the national instances. In many countries a special commission or jury was established to identify and nominate *good design*. In Sweden, there were educated ‘Enlighteners’, who travelled to even the most remote areas of the country spreading the gospel of good design theory and its correct practice. This exercise in consumer education was orchestrated jointly by the state, non-profit organisations, trade unions and industry (Hagströmer 2001, 44). In Germany there had since 1954 been a *Rat für Formgebung,* conceived in highly idealistic terms as the good custodian and patron of good German design: *Die Gute Form* (Erlhoff 1990b, 73).

The standard of industrial design used by these government institutions was defined as “good” – in a moral as well as in an aesthetic sense (Hiesinger & Marcus 1993, 176). The term *good design* appeared everywhere in the 1950s, in Europe as well as in countries such as the U.S. and Japan. The high-minded good design theorists publicly disdained the commercial approach of earlier products, claiming that good design was instead a matter of universally valid qualities that could be discerned by unbiased aesthetic judgement – to merge form and function in order to reveal a practical and sensible beauty (Hiesinger & Marcus 1993, 177).

The idea of the good design promoters was that there would be one ideal form for a particular function expressed through the notion of *form follows function*, and that this ideal form would be devoid of any details or decoration unnecessary for the functionality of the product. The aim in product development was also that this one, most purposeful form would be easy to use for as many as possible.

One of the most influential sources for this thinking of simple and functional products was the Hochshule für Gestaltung (HfG) in Ulm, Germany. The HfG Ulm re-honoured the statement of the Viennese architect-designer Adolf Loos (1870-1933) who had in 1908 stated that ornament was a crime (Loos 1998). The intention was to reject the status-ridden definition of product development, and to align design with the efficiency of mass-production industry.

The HfG in Ulm was originally conceived as a successor to the famous design school Bauhaus, but quickly abandoned the Bauhaus model of the craft designer and aimed to improve design for mass-production (Lindinger 1990, 10). During its brief existence from 1955 to 1968, the HfG Ulm was an advocate of an objective and socially aware design for industry. Ulm oscillated between apologia and critique – setting out to be on the side of the modern age and simultaneously criticising many of the results of the same reasoning (Erlhoff 1990a, 51). The sceptical thinking of the HfG Ulm was largely derived from the Frankfurt School, and under the heading of Thomas Maldonado, the Ulm students were taught to examine, sceptically but objectively, their ideas against stringent philosophical schemata before accepting – or more often rejecting – their ideas for further development (Banham 1990, 59; see also Spitz 2002, 430-461).

The students at the HfG Ulm were trained to design objects for everyday use in the home, in offices, in production and in science. On one hand, there was a need to integrate all the factors involved in the design of a product: functional, cultural, technological and economic. On the other hand, there was a need to invent and determine new and rational patterns of use. Design assignments were keyed not only to individual, self-contained products, but also to groups or systems of products (Lidinger 1990, 69). *The Ulmer Modelle* was against all the styling of products as it viewed styling as nothing but packaging. It opposed the showy automobile design with fins and other decorative elements, and in general putting an glittering facade on products that were outmoded, sloppy and useless (Erlhoff, 1990b, 70).

Besides the philosophical thinking, the HfG Ulm also created a visual style – very aligned with the notion of good design. The products designed by the Ulm students were generally white, gray or beige, with simplified graphics in black. Special features that acquired exceptional attention were often marked with a small dot in orange. The most known example of the Ulm style came through the co-operation with Braun. Under the leadership of Dieter Rahms the company produced products that fulfilled all the Ulm requirements for decades. The Braun approach was reductionist - eliminating every unnecessary detail, concentrating on ordering essential elements and almost always using white surfaces with gray or black details – entirely in the vain of the Ulm ideals (Heskett 1980, 142). However, under the auspices of this noble notion of functionality, the goal of the Braun Corporation was to appeal to the sophisticated consumer with their modern design style, a strategy that proved very successful as the Braun products gained immense publicity in the press and consumer fairs for their tasteful design (Mäntele 2003, 165).

The political awakening in the 1970s

The late 1960s and the 1970s were a period of strong left-wing political movement in Europe, and the ethical justification of capitalism was frequently questioned. Designers were inspired by ethically critical writings such as *Silent Spring* (Carson 2002 [1964]) and by events such as the formation of The Club of Rome in 1968 (Margolin 2002, 81; Whiteley 1993, 48). The product developers started to view themselves as responsible for the products they produced, partly as a reaction to the values of technological progressivism that had been prevailing in the 1960s, where bigger and faster were always better, and partly as a rejection to consumerist attitudes that promoted a ‘you are what you consume’ mentality (Whiteley 1993, 48). In the annual conference of the International Council of the Society of Industrial Designers in London in 1969 the theme was “Design, Society and the Future”, and the designers aimed to contribute to a wider debate on the sort of society they were helping to create (Whiteley 1993, 49).

In product development, the *good design*-ethos had made it the duty of the development team to create products that were as easy to use for the end-user as possible, and much emphasis was put on issues such as ergonomics (Dreyfuss 1955; 1967). Special effort was made that also users such as the elderly and the disabled could use the products, but still with the underlying assumption that there was one optimal product solution to be found for one functionality or usage situation, despite where it was to be used and by whom.

Stronger opinions were soon raised. Many writers argued the case against rampant consumerism and maverick manufacturers, but Victor Papanek has been identified as the one turning the ethical blowtorch on the industrial design profession (Lewis & Gertsakis 2001,19;Whiteley 1993, vii; Heislinger & Marcus 1993, 249). Papanek stated that there were professions more harmful than industrial design, but only very few. He claimed that advertising design aimed at persuading people to buy things they did not need, with money they did not have, in order to impress others who did not care. He considered industrial design to come a close second after advertising in being the phoniest profession in the world. He emphasised that industrial design had become a dangerous breed by putting murder on a mass production basis, designing criminally unsafe cars that killed millions of people around the world every year, as well as by choosing materials and processes that polluted the air we breathe and by creating whole new species of permanent garbage to clutter up the landscape (Papanek 1972, xxi). He demanded a higher social and moral responsibility from the designers (Papanek 1972, 86).

Papanek emphasized that the prime function of the designer was to solve problems (Papanek 1972, 133). However, he also claimed that industrial design differs from its sister arts of architecture and engineering. Where architects and engineers are hired to solve problems, industrial designers were often hired to create new ones (Papanek 1972, 152). Once they had succeeded in building a new dissatisfaction in people's lives, they were then prepared to find a temporary solution for it. Industrial design was, according to Papanek, in the beginning a system that reduced manufacturing costs, made things easier to use, and improved the visual appearance of products along functional lines to provide greater saleability. But as industrial designers gained power over the design of more and more products and began to function as long-range planners on upper managerial levels, they became purveyors of trivia, the tawdry and the shoddy (Papanek 1972, 153).

With the concept of *social responsible design,* the societal and moral responsibility of the designer was broadened to encompass also the underdeveloped countries and others in need, and product development was to be made such that it strained the world resources as little as possible (Papanek 1972). Criticism was raised against what was defined as 'market-led design' (Whiteley 1993, Hansson 2006, 20). The argument was that designers focused too much effort on the aesthetic and stylistic aspects of design, rather than considering the whole product – its function, utility, reparability, affordability and its environmental and societal consequences. Money, status and consumerism were seen as dubious for an ethical product developer, even within a corporate framework.

The prime example of Papanek's thinking was the third world tin radio. (Papanek 1972, 162-163; 1984, 224-225). The product was created by taking a used tin can and adding some electronics, it was fuelled by the heating of wax or cow dung and designed so that anyone in the third world could create one. No-one, neither the designer nor UNESCO for which the project was conducted, nor any manufacturer, made any profit on the device (Papanek 1984, 227). The idea of a simple product that would fulfil a real need was idealised, in the same time as designers, according to Papanek, wasted their talent on designing trivia such as mink-covered toilet seats and electronic fingernail-polish dryers (Papanek 1984, 221).

Papanek also counterpointed ethics and aesthetics. In 1967, he showed slides of his tin radio at the HfG in Ulm, where it was highly criticised for its ugliness. The students in Ulm had suggested that the product should at least be painted (in gray, they suggested), but Papanek argued that painting it would have been ethically wrong as he claimed he had no right to make aesthetic or “good taste” decisions that would affect millions of people in third world countries with different cultural backgrounds than his own (Papanek 1984, 227).

Papanek’s first book, *Design for the Real World* (1972)[1], quickly became the bible of the responsible design movement, and Papanek himself became a leader to the dissatisfied or disaffected in design practices (Whiteley 1993, 98). Many designers wanted to save the world by their own actions – and considered themselves strongly responsible for the developments around them. The designers wanted to solve every problem from abortion to the Vietnam war and to abandon design for profit (Heislinger & Marcus 1993, 250). The old *form follows functio*n or *fitness for purpose* slogan was changed to *fitness for need* at the Design and Industries association in 1975 (ibid.). The designers also saw themselves opposing to large corporations, which were seen as capitalist exploiters – a rather double-faced approach considering that the designers were simultaneously employed by the same companies.

The post-modern consumers

The idealised, fully functional but potentially somewhat boring products that were designed in the seventies product development were ethically or morally very righteous – but they were not always what the consumers sought for.

With the economical upswing in the 1980s, ethics were suddenly of lesser interest for the designers. Designers no longer aimed to find one ideal product solution or to defend those with disabilities, but to do good business. Design management theories of the time were very closely tied to neoclassical economics and management theories. The London Business School was particularly influential in design management in the mid- and late 1980s (Gorb 1988; 1990). The neoclassical paradigm was based on the idea of the hedonistic and self-centred consumer that did not want a product solution that was optimised for functionality, but one that was optimal for him. Consumers were to be making decisions based on rational judgements, and buying products became again a way for individuals to communicate ideas of status and social distinction. Design was largely used for product differentiation: to create anything and everything for the consumers, who were given the liberty of choosing as they pleased. Within design management, it was more important that products fitted the corporate product portfolio than that they were appropriate for users.

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[1] The book was first published in Swedish in 1970 as *Miljön och Miljonerna: design som tjänst eller förtjänst?* (Bonniers boktryckeri, Stockholm) and then in German in 1972 as *Das Papanek-Konzept. Design für eine Umwelt des Überlebens* (Nymphenburger Verlagsbuchhandlung, München) before it was published in English in 1972.

The shift away from Fordist mass production towards flexible mass production reinforced the importance of design in ensuring product diversity. As a result of sociocultural change, the democratisation of consumption, and the move to large-scale batch production, products were largely developed for niche markets. In order to appeal to the intended consumers, designers ensured that goods had distinctive identities and manufacturers increasingly modified their production systems to be able to produce enough goods with a sufficient level of diversity (Sparke 2004, 154).

The Swiss watch producer Swatch was in the forefront of this approach in the 1980s. In a situation were cheap digital watches were imported from the far east and the Swiss watches were considered reliable but boring, Swatch decided to produce a myriad of designs and turned the watch into a reasonably priced fashion accessory to be discarded when its style became outdated (Sparke 2004, 154; Whiteley 1993, 23. See also Heskett 2002, 77). The company also promoted multiple ownership – no longer did the yuppie of the 1980s need one watch to show the time, but at least two – one for the day and one for the evening – and preferably several more to ‘enhance their look rather than the efficiency of the time-keeping’ (Whiteley 1993, 39).

The postmodernist ideals of the 1980s saw the meaning of a product to be the primary criterion in its conception and use, rather than the uses to which it was to be put (Heskett, 2002, 57; Julier 2000, 31). In some product categories, the style of the product even became more important than the functionality of it. The Italian post-modern furniture design group Memphis had long experimented with pieces of furniture that were more sculptures than functional pieces of furniture. The designers questioned the inadequacy of modernism to continue to meet the cultural needs of the contemporary society, and presented product developers as media-conscious messengers whose role was to instigate and represent changing cultural codes and, in the process, sell products and services (Sparke 2004, 172). Many products were developed mainly to attain media attention, and functionality was not seen as particularly important. The Italian forms of post-modernism were influential out of all proportions considering the fairly modest economical success of the Memphis group (Heislinger & Marcus 1993, 279).

In the post-modern era, products thus took on arbitrary forms that had little or nothing to do with their use (Heskett 2002, 58). Product developers designed products that were justified by their meaning to the end-users, rather than functionality. The moral choices of which products to buy and what to do with them was entirely left to the consumers, as they expressed themselves through their product choices and such choices were not to be done by the product developers. The argument was that designers making moral judgements would be interfering with the consumer's right to choose in a 'free' society (Whiteley 1993, 40).

The most referred to product where the character of the product became more important than its functionality has been the fruit squeezer designed by Philippe Starck in 1990, called *Juicy Salif* (Heskett 2002, 58; Julier 2000, 67). It is considered a collectable and a household icon. The product is highly impracticable for fruit squeezing, and costs some twenty times what a fully efficient fruit squeezer does. As an utilitarian kitchen implement, it only half-works (Julier 2000,67). The product has been cited to be intriguing, tactile and desirable, and even though it squirts juice all over your shirt it is fun to use (Julier 2000, 69; Sweet 1998, 36). The product became synonymous with the excess and pretensions of the late 1980s (Julier 200, 69).

The post-modernists were attacked by critiques claiming that the practitioners lacked integrity and moral purpose, and that function and cost were irresponsibly ignored in their products in favour of fashionable and expensive aesthetics (Hiesinger & Marcus 1993, 279). The products were claimed to shout rather than whisper, and to reflect all the complexity and anxiety of a new computerised era (Hiesinger & Marcus 1993, 283). With the growing concern for globalisation the machine-age approach of postmodernism soon lost its glamour and local, craft based design regained in popularity (Sparke 2004, 212).

The return towards moral issues

With the arrival of the 1990s, the importance of brands grew for companies. The main focus was no longer purely on the product portfolio, but also on the end-user experience of the corporate and its brand (see Press 2003; Mitchell 1993; Kuniavsky 2003; Shedroff 2001; McDonagh 2004). As the world was already perceived full of products, the new way of differentiating a product or a brand was not through the product itself, but through the entire experience that was created for the user. The intent was to get the customer tied to a brand on an emotional level, instead of just buying products to show off or even for their functional needs (As exemplified by Jensen 1999, 40). There was a paradigm shift from the utilitarian, rationalistic-individualistic, neoclassical paradigm, to a new paradigm where people were considered to be able to act individually and rationally but with a very strong moral and emotional underpinning.

In this new paradigm, scholars such as Amitai Etzioni argued that consumers were no longer to be seen as black boxes, responding only to external changes rather than internal processes, but as individuals balancing between their basic urges and desires and their moral commitments (Etzioni 1990, 11&21). His argument was that unlike the traditional neoclassical paradigm prescribes, people do not make their choices merely on rational grounds, they also consciously base them on their values and emotions (Etzioni 1990, 4).

In the early 1990s, the view on moral issues in design thus changed again. This time it was not an oil-crisis or a political ethos that affected the change - but a sharp economic recession that made the design-bubble burst (Whiteley 1993, 1). Whiteley also points out that the design boom of the late 1980s became in the end its own enemy and choked on the froth of its own hype. The conscious consumers of the 1990s expected a more ethical approach from companies, and the product development of many companies again started considering ethical issues more profoundly. However, unlike in the seventies, this time it was not only the product developers that aimed towards a more ethical approach, but also the corporations were very inclined to produce new, morally conscious products which the consumers started requesting (Whiteley 1993,50).

The designers started re-asking ethical questions. Design was no longer referred to as being a basis for solving the society's problems. On the contrary, designers started to view design, and particularly "market-led" or "consumer-led" design, as part of the problem (Whiteley 1993, 1). Whiteley also posed the question that if design would be a person, would it be a 'mature adult taking responsibility for its actions' or a 'whining adolescent, insecure and struggling to come to terms with the outside world' and argued for the latter being the case.

Many of the moral standpoints that were topical in the 1970s returned to the field of product development in the 1990s. In addition to experience design, several topics emerged where ethics were again the focus of design and management theories. Social responsible design represented by Papanek in the 1970s, resurfaced with a shift towards *sustainability* and *green design*. Even Papanek himself has with his book *The Green Imperative* (1995) turned towards this approach. A new consciousness regarding product recycling and reuse appeared, characterised by products that embody a design strategy that is consistent with the values of minimizing waste and using less energy (Margolin 2002, 49). John Thackara (2005, 1&17) claimed that eighty percent of the environmental impact of the products, services, and infrastructures around us is determined at the design stage, and the designers were again urged by their peers to take their moral responsibility more seriously.

Lewis and Gertsakis (2001, 15) emphasize that it has become vividly apparent that those professions and trades involved in designing new products are key players in helping realise a more sustainable future. In many European countries, such as the Netherlands, Germany and the Scandinavian countries, many of the environmental issues have now become so evident that they are even regulated and underpinned by laws (Lewis & Gertsakis 2001, 22; see also Thackara 2005, 15). It has been argued that without the governmental intervention, or the threat thereof, it is unlikely that ecological issues would have been taken as seriously as they today are (Lewis and Gertsakis 2001, 22).

One area of industry, which had previously not been particularly interested in ecology, was the car manufacturing industry. As pollution became an everyday reality in many cities and the notion of dwindling resources dug deeper into the public consciousness, stronger demands for new solutions emerged from the customers (Sparke 2002, 230). Suddenly, most car manufacturers commissioned the designers to work on ecological issues, and in the turn of the millennium new, small and ecological concept cars were a regular feature in all car trade shows.

A recent return to the approach of the product fitting everyone has taken place through the rise of the *Design for all* concept (Hansson 2006, 25-28)[2]. Its aim is to design products that would be usable for as many people as possible. The main driver behind this movement has been the aging population (Hansson 2006, 11). Although the birth of the movement was very much tied to special needs of the elderly and disabled, the interest has recently shifted from this somewhat discriminating approach to a general view on accessibility. The frustration of packaging that is difficult to open or products that are too complicated to intuitively comprehend can be experienced by users of all ages and capabilities. This concept is important especially in the areas of products that are to be used publicly by a large group of people, such as cash machines or public informational websites (Hansson 2006, 34). In the EU, the issue of *Design for all* is no longer a question of moral consideration when public spaces are considered; it is also enforced by directive[3].

However, in the late nineties and the early 21st century, moral issues are far from the only approach that product development takes. Victor Margolin (2002, 78-91) has argued that there are currently two paradigms co-existing: the *sustainability model,* considering the world a system of ecological checks and balances that consists of finite resources, and the *expansion model,* were the world consists of markets in which products function first and foremost as tokens of economic change (Margolin 2002, 82). Margolin emphasises that these two agendas for social development that are central to the sustainability model and the expansion model are not only in conflict, they are on a collision course that has already led to considerable fallout (2002, 83). He argues that given the powerful capacity of the expansion model to simulate human aspirations for a life of comfort and pleasure and the political stakes that underlie the drive for economic power, the likelihood of achieving widespread consumer abstinence in significant numbers is low (2002, 86).

Although the two paradigms are far from each other, it is possible that design might be able to bridge the differences. As efficiency is required in the expansion model, many large companies use design because it can change the process behind products and services, and the extraction of materials used to make them. Resource efficiency brings not only ecological, but also economic, benefit to an enterprise – cited as ‘market-based environmentalism’(Thackara 2005, 17).

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[2] *Design for all* is a European name for this concept. The same approach is called *Universal Design* in the US and *Inclusive design* in the UK.
[3] The EU directive to include Design for All: Amendment 33, Article 23.

Nowhere else has this market-based environmentalism been shown as clearly as in the car industry. In a time when many of the cars that are sold for urban dwellers are immensely large and consume huge amounts of petrol, the perceived environmentalism has become a selling point more than an ideology. For example the *Toyota Prius*, the world's first commercially mass-produced and marketed hybrid automobile, has become a selling success (see Sparke 2002, 231). The Prius is largely bought because of its perceived ecological image, although the amount of energy required to manufacture a Prius is higher than that of a similar gasoline powered vehicle, and the car in fact uses more petrol than smaller gasoline powered vehicles. Consumers thus prefer to show themselves as environmentalists – maybe more than they actually care for the environment.

For product designers, the lesson has been that small actions can have big affects (Thackara 2005, 14). Although they might not be able to save the world in the omnipotent fashion they pursued in the 1970s, or even to design a car that is remarkably more ecological than its predecessors, they might be able to portray the world as they would want it to be.
Thackara (2005, 26) argues that shared visions act as forces for innovation, and what designers can do is to imagine some situation or condition that does not yet exist but describe it in sufficient detail that it appears to be a desirable new version of the real world. If a car that is designed to embrace the ideals of new, more ecological world gains popularity, it is most likely that also the general awareness of ecological products, and producers’ willingness to produce them, will rise.

Discussion on the ambiguity of moral issues in product development

This paper has shown that the moral considerations in product development have differed depending on the surrounding economical context. In the post-war period when Europe was shattered and in need, to show one’s prosperity through product choices was common.

Products were to a large extent used to show social status, and not only to fulfil a functional need. This notion was highly criticised in the sixties and seventies. In the sixties there was a strong movement to create products that would be highly functional and very ergonomic to use for all users, despite their purchasing power. The products were largely produced in muted colours with clear and simple instructions on how to use them. The designers considered it their moral duty to ensure that a product was usable, but no further implications of the product as a social phenomenon were considered.

In the seventies with the stronger political movements, the desire was no longer only to ensure that products could be usable by all sorts of users, such as children and the elderly, but product development was seen as a larger social and moral issue. The product developers had to take action in order to make a better world. The choice could not be left to consumers, which might not understand their own good and do the right thing. Ecological issues arouse, and many of the designers considered it to be the most moral decision not to produce anything at all.

In the economical upswing of the 1980s, designers completely forgot about any moral considerations. Style, fashion and flair were considered far more important than usability or ecology by the post-modern designers. Their approach was only questioned in the nineties, when the economy was again reclining and globalisation seen as a threat. Then many of the moral considerations that had been stated in the 1970s reappeared, and designers again considered themselves responsible for the products they produced.

Within the post-war period, the moral emphasis of product development has shifted from a consequentalist approach after the war to a deontological in the 1970s, then back to a consequentalist approach with the economical upswing of the 1980s, and has now returned towards an deontological or virtue based moral at the turn of the millennium. Those of the moral considerations that have been underpinned by regulations of national institutions have also been publicly promoted by designers: good design, usability and environmentality. Although some moral issues are more frequently considered by the designers than others, the economical situation appears to affect the designers’ willingness to emphasize moral issues in their work.

The moral reasoning in product development thus appears to be highly dependent on the prevailing economical context – at times the product developers see themselves as the ones to make moral decisions about how the surrounding world should become – at times they just lift their hands up and claim themselves to be powerless servants for consumer requests.
When the economy is growing, as it was in Europe after the Second World War and in the eighties, the designers appear to loose interest in any moral considerations and only design what the consumer desires. In times of economic lows, such as the seventies oil-crisis or the recession that troubled much of Europe in the early 1990s, ethical issues again play a larger role for designers.

Although this paper has shown that there is a relation between the economic situation and the designers willingness to consider moral issues, this is a topic that should be further studied. The topic is particularly interesting as the designers' actions do not appear to follow the traditional patterns of organisational behaviour. When economic times are low, unemployment is generally high, and people tend to be less eager to venture their own jobs. During economic upswings people are prepared to take larger risks, and venture out in brave new enterprises. With the designers, the opposite appears to be the case: they follow the requests of consumers and their employers toothlessly in times of increasing prosperity - but then question their employers the most when the economy is low. It will be interesting to see if this assumption holds when the economy turns the next time, as that might mean that we would again get new and truly innovative solutions that are based on moral considerations.

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