THE GREEN LOOK. IMAGE SCIENCE AND DESIGN RESEARCH

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ABSTRACT

Designing responsibly means not only taking into account the way things are made and used, but also researching the appropriate images for such projects, and their iconic value. While forty years ago “green tools” were usually simple natural design objects, today they have to be balanced between the archaic and the high-tech. The windmill is an old image but by transferring it onto a larger scale and with contemporary high-tech materials and construction methods, it has become a new icon of ecological energy production. It has also become an ornament of contemporary architecture, serving a symbolic value. This paper aims to describe the phenomenon of the transformed “Green Look” at the beginning of the twenty-first century. We live in a world where a biodegradable plastic shopping bag could be more environmental friendly than a shopping bag made out of a natural material such as jute. Design helps to visualize complex things by the use of simple images. Two examples out of the contemporary design context have been selected to explain the use of images in design. A concept car serves as an example for a discussion of design iconology, while a consumer ritual is described as an example for the use of the power of images as part of symbolic actions. The “power of images” is a notion used to make us understand the impact of images that can actually change our lives just by looking at them. While in design theory, images are often explained using semantic theories, the author proposes to use contemporary image science as a base of discussing the use of images in design science.

Keywords: sustainable design, image science, design research

1 THE GREEN REVOLUTION

Announced revolutions don’t take place – but is that true for the green revolution? For decades, intellectuals and activists from the design scene have been formulating imperatives for a revolution of architecture and industrial design into responsible design disciplines. Undoubtedly, one of the forerunners in this regard is Victor Papanek. His classic book Design for the Real World was originally published in 1971 and became one of the world’s most widely read books on design. The fact that it has been translated into 23 languages since it first appeared illustrates its enormous success. Papanek clearly stressed the point that designers are heavily implicated by the increase of toxicity, the garbage explosion, acid rain and poisoned groundwater (Papanek 1997:252). Today, nearly four decades later, the presentations at design conferences dealing with sustainability often start with an image of a landfill, a symbolic confession implicating designers in the environmental crisis. With very clear words, Papanek explained that “If design is ecologically responsive, then it is also revolutionary” (ibid). A simple instruction for design rebels, still applicable today. In recent years, environmental issues have become more popular among the public. Controversial books and films on the problem of climate change like An Inconvenient Truth by Nobel Prize winner Al Gore (2006) have helped to make the public and especially designers more aware of the world’s critical situation. The western economies are exploiting the world’s resources in an unprecedented way. Mathis Wackernagel and William Rees (1996) coined the term “ecological footprint” to make this fact tangible. The ecological footprint is equivalent to the amount of land and water area required by a population to produce all the goods it consumes and to assimilate all the waste it generates. This is measured in global hectares (ibid 61ff). As we all know, the surface of the world is limited, as is the ability of nature to recover. The world population is increasing dramatically. According to scientists’ calculations, it would be fair on a global level to have an ecological footprint of 1.4 gha. In Europe, the average footprint is approximately four times larger. We need to reduce dramatically the footprint of the developed population especially in order to make a certain standard of living possible for everybody on earth. Designers play an important role in that revolutionary process of
making the world’s consumption sustainable. They draw the images of a new world in which people want to live. But how can images change the world? And following that thought, can image science help design research to better understand the power of images?

2 THE POWER OF IMAGES

The study of images is known as visual studies. Historically, this term derives from cultural studies and visual culture, which narrows the area of cultural studies by emphasizing the visual (Elkins 2003:1-4). Visual studies appeared at the beginning of the 1990s as a confluence of art history, cultural studies and literary theory (ibid 4-5). This is a complex mixture, when we take into account that cultural studies borrows from a number of other neighboring disciplines, including anthropology, sociology, art criticism, film studies and gender studies. However, visual studies has managed to create its own body of knowledge in the last twenty years. There is specialized literature and methodology, an agreement on actual image problems and a substantial discussion about these image problems within the discipline’s boundaries. The proximity to art history and its methods is what visual studies has in common with design history. The discourse of art history applied to non-art or applied art objects has been often and rightly criticized, because most of the time it does not fit the characteristics of the phenomenon, producing only books on design styles changing over the decades of the twentieth century. It would be more productive to follow art history’s further development and its contribution to visual studies. This is what we will attempt here with an artificially-created computer image produced by the design department of an automotive company.

The art historian Erwin Panofsky was a specialist in the Middle Ages and the Renaissance. He introduced a systematic discussion of images in his standard reading Studies in Iconology. It is a three step analysis (Panofsky 1982:40f) that is, with few adaptations, still used in psychology today. The first step is the pre-iconological description. The equipment necessary for interpretation encompasses practical experience, the familiarity with objects and the history of style. What we can see with this equipment in Fig. 1 is a car, sitting on a huge flat asphalted area (a parking space?). On the horizon are trees, probably the beginning of a forest. The car is pointed towards three windmills that are used for power generation. The car seems to be a concept study, with details that are not found on everyday cars. The rear-view mirrors are replaced by a micro camera (a future care feature). The most striking detail is that all the car’s windows are tinted fluorescent green. The second step of interpretation is the iconological analysis. This requires a familiarity with specific themes and concepts and a knowledge of literary sources. While

Figure 1: Zero emission concept car in artificial landscape (© Renault)
Renaissance paintings use ancient Greek mythology, the image here uses a text related to sustainable design. The initials “Z.E.” on the rear of the car stand for “zero emission”. Zero emission cars do not emit greenhouse gases like carbon dioxide. In our case, it is an electric car. And where does the electricity come from? Of course from renewable energy resources like windmills. The windmills are used here like the attributes of an ancient god. We recognize the electric car by means of the windmill attribute, which can be found in every handbook of ecological design. The last step is the iconological interpretation. Art historian E. H. Gombrich points out in his classic reading Art and Illusion that the study of art will be increasingly supplemented by inquiry into the linguistics of the visual image (Gombrich 1987:7), which today is known under the term rhetoric of images. This includes what can be said about images, but also what images say. W.J.T. Mitchell, one of the key theorists of visual studies, turned this into the question of “what do pictures want?” (Mitchell 2005). Iconological interpretation needs synthetic intuition, familiarity with the essential tendencies of the human mind and knowledge of psychology. This interpretive step brings us back to the fluorescent green-tinted windows of the car. The scenario wants us to picture a greener world. The world is painted green just by looking out of the car. The sky with the clouds would be green, the windmills would be green, the trees would be even greener, and even the grey asphalt will be grass green. What a wonderful world! The image anticipates a better, greener world. The power of images is a notion that relates on the one hand to the power relation of the institution (church, automobile industry…) and on the other hand to the symbolic actions like idolatry and iconoclasm performed by the spectators. The image of the future car gives aid; it is a saint car, which perhaps performs miracles (changing the world into a better one). Hans Belting has shown the same for ancient religious images (Belting 1996) and Mitchell has pointed out, “that the magical attitudes against images are just as powerful in the modern world as they were in so-called ages of faith” (2005:8). The promise of aid has moved from the sphere of religion to that of consumption.

3 THE PICTORIAL TURN

The notion of the pictorial turn describes the cultural shift from text to image that is also known as the iconic turn. In contrary to that, design theorist Klaus Krippendorff (2006) searches for a new foundation for design in the semantic turn, a kind of retro philosophy also known by the forty-year-old term linguistic turn (1967). But what is the product semantic other than a visual phenomenon? How does the word “futuristic” produce the concept car, as Krippendorff wants us to believe in his book? It is silver, as most of the cars on the street today. It stands on a big parking space, is surrounded by windmills as seen in many places, and trees. A strange detail is rather that the car seems to look at the windmills, but this is a contextual detail outside the object. It seems to have a life of its own, reflecting its dependency on the green electricity produced by wind energy. The product semantic is unable to tell us that an electric motor is used instead of a combustion engine burning fossil energy resources. Krippendorff explains the outer surface (of e.g. a car) as a semantic layer (2006:126ff). There is no typology for an electric car that makes it evident from the first view that it is a green car. So it needs text, like “E.V.” here on the car’s rear. But for reading this, we need no semantic turn. As Horst Bredekamp has pointed out in his critique on the linguistic turn, it is based on analytical philosophy and the idea of the world as text (Bredekamp 2005:15). The pictorial turn is thinking in images about images. Designers are thinking in images, adapting them to new design solutions. Visual studies is the appropriate methodological tool to consider the cultural complexity of images and prepare a scientific approach to such images of design (objects).

4 THE POLITICS OF NATURE

A recent philosophical model that abandons the dichotomy between subject and object, human and nature, production system and environment comes from the science philosopher Bruno Latour. His book The Politics of Nature (2001) creates a model of a parliament (democracy), where politicians (delegates for humans) and scientists (delegates or speakers for the non-human beings) form a new political institution with the utopian demand of involving every aspect of the world that can be clearly articulated (ibid 121). So the polluted river is at the same table with the factory polluting the water, able to discuss the problem of water quality with human delegates. The idea of nature is formed by science and its disciplines. We can see nature only by the means of science. But until that utopia becomes reality, we still have to deal with the dichotomy between scientific facts and moral values, which hinders the political ecology in its fight on nature’s behalf (ibid 13). The minister of economic affairs of Baden-Württemberg
(Germany/Europe) said in his statement on a newly-established environmental product design prize (Focus Green) that “Where companies once pursued eco-friendly product policy more for ethical reasons, nowadays they do so out of economic necessity” (Design Center Stuttgart 2008:7). So, luckily, companies need not to be involved in ethical discussions, at least. But the designers need to be prepared to face increasing moral discussion on their works. A couple of design books with a green agenda are stressing the shift of discipline’s paradigm. In the future, good designers will be those who are able to translate the demand for ecological products into high-quality items (Uphaus 2008:7). And total beauty can only be achieved when products are sustainable, which means they have to be cyclic, solar, safe, efficient and social (Datschefski 2001:28). This is still a world where things are used as means with a purpose (sustainability). Latour is warning that this concept is a modernist failure that extends Kant’s philosophy to nature (2001:200). And if inanimate things may not have a soul, they certainly have politics (ibid 123).

5 PICTURE MAGIC

The power of images comes from their special ontological character. Pictures are able to cause emotions in their role as objects in symbolic practices. We cry before them, we kiss hem, we break them. We are stirred by them, they incite to revolution. But are pictures able to cause a green revolution? The use of pictures has not changed from archaic times to the modern industrialized world of today. The mode of being of a picture is characterized not by being a copy of something, but by its ontological communication with what is copied (Freedberg 1991:77). This ontological communication is the essence of primitive magic as well. The symbolic imitation should cause a real change.

![Figure 2: The Viennese adidas store installed the corporate logo as huge lawn surface in 2008 (© adidas)](image)

We can observe such symbolic actions and the use of images in our modern consumer culture. One example is the spring rite of one of the largest worldwide brands of sport shoes and apparel. The brand introduced an alternative collection of responsible fashion items. At the launch date, the local stores installed the corporate logo as huge lawn surface in a crowded shopping area directly on the grey surface of a pedestrian plaza. Idolaters stopped and worshipped the picture. They were asked to register in their local store to receive a sack of plant seeds, with instructions to green the city in the manner of guerilla gardeners. Instead of using paint as graffiti sprayers would, they were to use plants to conquer the urban space. The green logo on the street could also cause the action of iconoclasts, destroying the lawn surface or stepping on it. Idolaters will lie down and dream a greener future. The green grass is symbolically green-washing the brand. The blue logo color that is normally sacral is here replaced by green to
communicate with nature. The timing of this product launch relates the consumer ritual to the spring rites that are performed around the world to awaken nature again after the winter. The greenness of the fashion items is difficult to communicate, so the marketing people and their designers decided to communicate symbolically through picture magic and create a ritual to worship the brand. As everybody has a natural sense for picture magic and ritualization, scholars of image science are not needed to create such rites.

6 DESIGN SCIENCE

Ernst von Weizsäcker and Amory and Hunter Lovins prepared a report to the Club of Rome that was published under the title Factor Four (1997). The idea behind this book is to halve all resource use. Fifty examples show how wealth can be created for the economy by resource reduction. They point out an interesting fact, which is usually underestimated in the discussion of sustainable design: “It demands optimization, not rules of thumb. It requires a new approach to design education and practice.” (Weizsäcker et.al 1997:xxvi). It requires a design science! Total beauty can be calculated! There are a couple of models that help to calculate sustainable product concepts today. Those for whom this idea sounds new will be disappointed. Buckminster Fuller introduced the idea of a design science already in 1963 in his essay World Planning (Fuller 1998:157). Weizsäcker et.al introduced their resource halving as an efficiency revolution, and there is less doubt that they are right with their radical approach for a green revolution. Otherwise it will be not possible for 100 percent of the world’s population to have access to resources, as Buckminster Fuller demanded. More than forty years after that revolutionary idea, we are far from reaching this goal. So we will finish our image study with a calculation of beauty. Let us assume that one of the wind turbines produces 920,000 kWh/year. An electric car (today) uses 10-20 kWh/100km. So with the power of wind it is possible to drive 4.6 million kilometers/year. If the car drives 10,000 km/year, then 460 electric cars can be operated by wind energy. As there are three windmills, a total of 1380 cars can be operated. So maybe the big empty space in the image is the parking area for the remaining 1379 electric cars that drive around with zero emissions. The global footprint caused by individual mobility can be reduced by approximately 1 gha. (Remember, the average is more than 5 gha; 1.4 would be fair). Still not enough to save the world. Lots of things for the designers of the future to do!

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