Designing out stigma – The potential of contradictory symbolic imagery

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Abstract
This paper discusses a work-in-progress research project. Its goals are to understand how one can overcome the stigmatizing effect associated to the use of products especially designed for people with disabilities and compensate this phenomenon using contradictory symbolic imagery.
The stigmatizing effect of this kind of object generates a double negative role for the people who use them: on the one hand, it becomes a visible, identifying sign that underlines social discrimination; on the other hand, it exacts upon the disabled person feelings of shame which can lead to further low self-esteem and self-exclusion.
To ensure a degree of control over this signification process, we must develop solutions that respond not only the basic needs but also the disabled person expectations towards social integration and interaction.
Therefore, we put forward a hypothesis of using contradictory symbols to manipulate the stigmatizing dimension of objects, by discussing a design project and an evaluation model that will allow us to assess its applicability in real life contexts.

Keywords
Stigma, product design, inclusive design, assistance technologies

Stigmatizing objects
The symbolic dimension of objects is always present, whether or not it is under the control of the people that design them. Umberto Eco (1978) distinguishes between a process of communication and one of signification in any given object, being the first characterised by the existence of an intention to transmit a specific message and the second a cultural process uncontrolled by the designer.
In the case of objects that are specifically designed for people with disabilities a process of signification occurs that associates the use of the object with a set of socially depreciated characteristics such as fragility or inaptitude that spoils the social identity of the disabled person (Goffman 1990).
This process of signification is not planned nor controlled by the brands that produce these objects. Nevertheless, they lead to the situation in which its usage becomes a stigmatizing symbol with negative repercussions on both the emotional and the public image of the user.
The stigmatizing effect of assistance technologies becomes even more influential under the current growing integration of disabled people in the several layers of social life, a fact that changes their needs profile (Bispo and Branco 2008).
By overcoming an existence bound to hospitals or special homes, disabled people present not only life-support needs but also other traits of a cultural dimension, and the objects developed for life in hospital become inadequate and associated with undesirable meanings when employed in daily life. The solution to such a problem lies in controlling of the signification process of objects developed for people with

disabilities, through their substitution by a communication process, i.e., in which the information that is conveyed about the user's identity is appropriate to their social expectations.
When studying the stigmatizing dimension of objects for disabled people, it is important to establish at the outset what seems to be a fundamental symbolic difference between consumer products and assistance technologies. Whereas the former are based on the assumption that their use is linked to user choice, the latter are seen as objects that the user must use, regardless of his or her own feelings.
A person cannot choose to use a wheelchair. That person must use it due to his or her physical condition. This assumption leads to the fact that assistance technologies are designed with little attention to options that the user could choose between. Indeed, the object's characteristics seem to address directly and unquestioningly the ergonomic specificities of its user.
Moreover, within consumer societies, the sheer possibility of choice is a highly valued cultural commodity, associated to a social ascension model: the higher the social position, the ampler the choices.
Therefore, the usage of assistance technologies associates the user with the lowest link of this value chain, as it were, that is to say, the link made up of people with no choice at all – and in which the deprived, the illiterate or the elderly are bundled up together.
So from the distinction between consumer products and assistance technologies we may fully understand that the latter have a deep-seated symbolic deficit, which is much harder to compensate than the deficit found in consumer products. The very nature of the objects is already tainted with a stigmatizing dimension.
Where consumer products are concerned, one has many avenues to deal with the peril of symbolic deficit: take for instance, daily use objects such as packages or the handles of kitchen utensils. If one analyses them, one often finds solutions that solve ergonomic problems that some people may face with their hands. Nonetheless, there is no stigma related to their usage.

Figure 1: here we have a series of peelers from Oxo Good Grips, the plastic containers Wonderlier Bowl, redesigned in 1991 for Tupperware, and a pack of Duracell batteries. These are but a few examples of objects that exist in the market with the distinctive trait of being easier to handle.

The products presented in figure 1 are seen as something easier to handle and more comfortable, not only by those who need to use these objects but also by whomever wants to use them: thus, symbolically speaking they become an integral part of the market's usual supply.

This approach towards product development seems to solve the symbolic issues of at least part of the objects that disabled people need, by replacing the prejudices and the assumptions related to disability with an image of normality.
Sometimes, however, even in consumer products, it is not possible to find solutions that can be socially interpreted as being designed for anybody and everybody. When this happens, the object falls back dangerously into the category of an assistance technology, and so allows for the return of the “abnormality” prejudice upon the people who need to use that object.

New symbolic imagery for disabled people

So, if we really wish to tackle the core of the symbolic problem that comes about with the objects designed for people with disabilities, it seems to be crucial to understand how these same objects can be developed despite remaining unequivocally associated to its use by disabled people.
In order to do this, we will start by studying assistance technologies. We believe, however, that the symbolic compensation mechanism to be found can be extrapolated to those consumer products in which it is not a goal, or it is not possible, to hide the segmentation for people with disabilities.
By comparing several walking frames, as seen in figure 2, we can have a better perception of how we can control the object’s signification without having to hide the disability perception.

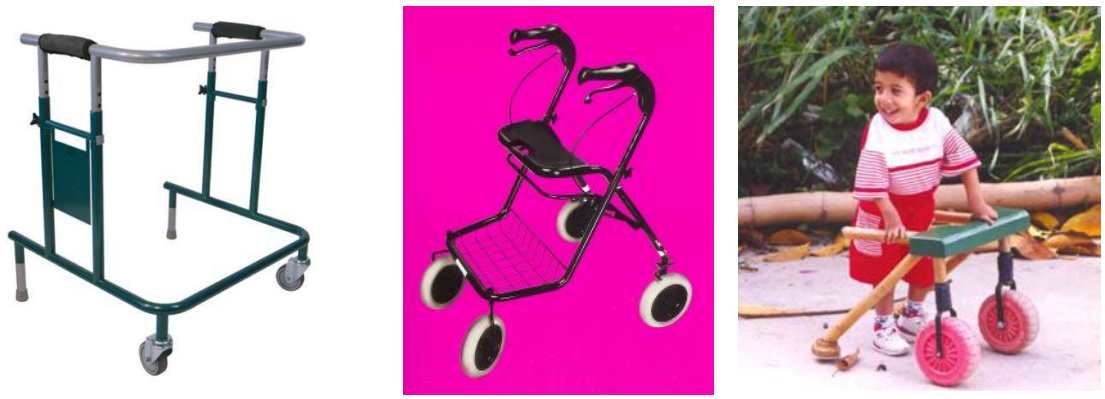

Figure 2: we can see here three different walking frames: (to the left) a model commercialized by Homecraft Abilityone, (centre) a model designed by Ergonomiedesign Group, (right) a model designed within a research project at the Pontificate Catholic University and the Centro de Vida Independente of Rio de Janeiro.

The first walking frame (at the left) has large dimensions and small wheels, it seems to be designed for hospital use, in which one has no need to step out of the premises or to overcome different kinds of paving These features stress, albeit unconsciously, an institutionalized lifestyle and, consequently, a socially depreciated lifestyle.
The walking frame in the centre provides solutions to the needs of pedestrians in public streets: it has larger wheels, brakes, an integrated transportation cart and a seat. These features point to a more autonomous lifestyle, and give a more independent image to the disabled person. Nevertheless, it still proposes a formal option, devoid of cultural references, as if stating that these references are not important for the person who will use it.
The last walking frame (to the right), besides having even larger wheels that allow it to be used in public spaces, is made of materials such as bamboo, painted wood and colourful plastic, thus bringing it in line with social expectations as to toys. This

particular walker responds not only to the need for a walking aid but also, according to the authors of the project, seems to address the need to erase feelings of shame and leads to greater acceptance of the disabled child among other children.
This small group of examples shows us how the same type of object, while solving the same ergonomic problems, can communicate very different lifestyles.
The production of these proposals is a task that requires us to mould pre-existing cultural meanings into new readings, that run contrary to prejudices, and which can be interpreted by both the community of people with disabilities and society at large.
Take the Paralympics as an example. Here is an event whose signification, by associating professional-level sports with the common image of disability, contradicts prejudices regarding physical fragility and ineptitude which are usually associated with disabled people. This relationship between contradictory symbolic elements shakes the preconceived perception of disability, thus generating a rupture in which prejudices are questioned and in which a new social image can be found for people with disability.

Figure 3: Stills from the documentary *Murderball*, from Dana Adam Shapiro and Henry-Alex Rubin, a film about tough, highly competitive quadriplegic rugby players.

In figure 3 we have two stills from the documentary film *Murderball*, which depicts the recent evolution of wheelchair rugby. In this movie it is quite evident the positive result of the objects that associate disability to sports, the dirty, smashed look of the aluminium coating (to the right) signals the falls and bumps throughout the matches, which then underline the physical endurance of the players, questioning our prejudices towards them.
Unfortunately, membership of an elite group of professional sports athletes, and the Paralympics in particular, is something accessible only to a few. Most of the common disabled citizens are left out of this equation. Nonetheless the possibility is there. In order to guarantee an effective symbolic transformation of disability, the proposed new symbolic imagery must be capable of socially interpretation as well as run contrary to existing prejudice.

Hospital Food – A design case

A design project was developed by a postgraduate student who was advised by the authors of this research project. It consisted of the development of food design proposals for people with partial paralysis following a stroke.
It was undertaken with the assistance of the Alcoitão Rehabilitation Centre, which provided kitchen facilities and nutritional advice, as well as the twelve institutionalized participants with varying degrees of paralysis.
The case study set out to measure the symbolic valuation of the meals served to the patients and, simultaneously, attempted to recuperate the patients' autonomy in regard to the meals, by providing dishes corresponding to traditional cultural models.

Different dishes were prepared and eaten by the patients in rehabilitation. The more positive aspects of the case study were the feelings expressed by all participants: they all felt the meals were of a better quality and more pleasant than the usual hospital food. All the patients were able to eat their meals unaided, which was contrary to the custom for this particular group. And the nutritionists considered it an enriching experience for the patients' re-sociabilization, since the experiment drew them nearer to a position of full recovery, culturally speaking.

Image 4. (on the left) Image of a typical meal for people recovering from stroke in the Alcoitão Rehabilitation Centre. (on the right) Prototype of a traditional Portuguese dish adapted to the needs of semi paralysed persons, developed by Sandra Neves.

We can consider that this first case study confirmed, even within its limitations, the hypothesis we put forward, by demonstrating that the proposal of a symbolic transformation for hospital food, under which the patients are able to eat unaided and meals follow traditional cultural models, gives rise to substantial meaning transformation without bringing into question the necessary nutritional constraints. However, up to now, the evaluation was only conducted among the disabled people and their particular nutritional team, so we still do not know what kind of impact and image this solution will have on other people.
This is an on-going case study, and it has been applied to other patients with more extreme needs who can only eat mashed food. The way in which these foods are presented must be culturally re-valued.
Although this project is being developed with the users themselves, which allows us to make permanent adjustments to its efficiency, the results obtained should be measured using the evaluation model discussed below.

Evaluation Model of the stigma in objects

Based on the theoretical presupposition, a research model was developed with the intent of evaluating the way in which the construction of signification is made in objects developed specifically for people with disabilities.
This model aims to respond to a difficulty inherent to the very nature of the study: the identification of a stigma symbol is an unconscious phenomenon, where emotional reactions and interpretations deeply rooted in cultural codes converge.
Such a constraint leads to the need to employ three different data retrieval methods, linked to the three levels of emotional response proposed by Donald Norman (2004) - visceral, behavioural and reflexive - each complementary to each other, when the interpretation of the participant's reactions are concerned: 1. Registering the attention focus of the participant, by monitoring it via eye tracking technology, capturing the image points that are being observed, and which provides us access to a precognitive

level. 2. Evaluating the emotional impact of the image through association with a predetermined range of emotions, a method developed by Pieter Desmet (2003) for the emotional evaluation of products. 3. Open-ended questions about the meaning attributed to each image – which provide access to the participant's reflexive process. The crossing of the data collected from these three levels of reaction will allow us to relate the attribution of meaning and the emotional state of each participant to the most relevant details of each object in his or her perceptive process.
In the first phase, objects are presented solely by the use of images. There are two reasons for this. First, images retain within themselves most of the relevant content of the object necessary to the significance construction process. Secondly, image evaluation does not allow for an ergonomic or functional evaluation, so the participant zeroes in on the issues of a symbolic nature, the very goal of the study.
In order to allow us to compare the results from the set of images thus far assembled, we cover: mainstream objects, products that are pointed out as excellent examples of universal design, assistance technologies, real and fictionalised contexts in which the disability(ies) can be approached in a non-stigmatising way, and objects developed for disabled people through new imagery' perspectives.

Future development

A second design project is currently starting out, in which the main target is the prejudice that disabled people have to deal with when they have to spend most of their lives confined within their homes or indoors. It will be examining symbolic transformation associated with an open-air lifestyle.
The objects being developed are based on this imagery, and will bring about the functional and symbolic transformation of walking frames and other objects associated with mobility.
We hope that this new case study will not only induce feelings of improvement amongst the users of the objects as significant as those in the first study, but will also make it possible to assess the impact of the new image on the rest of the population.

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