

Design Management in an Era of Disruption



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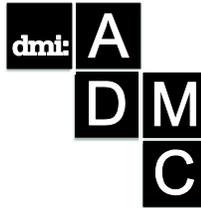
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Disruptive Attitude: The role of design as anomaly; managing crisis and turbulence, coaching creativity and innovation

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Design today is a discipline moving between art and method. Despite its involvement within industrial activities and available engineering tools, the role of the designer is always perceived as related to creativity; such a role is commonly felt in the universities. In widening the design action fields from industrial products to communication, fashion, services, and so on (i.e. from material immaterial goods), the complexity of the problems to cope with introduced the use of conceptual tools based on ethnographic aspects, to define constraints and to provide scenarios, from which to derive the proper features. Despite the value of these methods, the results in applying them largely depend on the kind of users the designer is able to imagine, i.e. the method follows a Garbage In Garbage Out model. More, those methods are biased toward the improvement of what is already known, instead of fostering creativity and innovation, therefore perpetuating stereotypes and consumerism. The paper criticises the (mis)use of ethnographic tools, and suggests a different approach, based on formal models, and a disruptive attitude, to provide real innovation possibilities. The discussion refers mainly to the educational processes and testifies experiences in that field, together with examples of the proposed approach.

Keywords: Disruptive design, innovation, creativity, design methods.

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Introduction

As previously shown in several literatures (Heskett & Giorgetta,1980), (Pevsner, 2005), (Lawson, 2006), the design discipline evolved from craftsmanship to industrialisation and serial production becoming what is presently called “*industrial design*”. This transition brought an increased competition that imposed new meanings and added reasons for convincing customers to buy one product instead of another. The products started to exhibit shapes and styles able to communicate emotions to users; it is what we now call *Design*. A new era started, the post-industrial phase and post-capitalist: industrial production capability and capitals are, in some way, a commodity.

In the same time, the market globalisation, joined with the large diffusion of internet as a communication way as well as a service tool, changed the rules and introduced new challenges. We are now witnessing a common trend, which individuates an unprecedented global crisis. Challenging this view, the following paper considers the possibility that we are simply within a paradigmatic change of the behaviour of an autopoietic new economy that dismantles itself in order to be renewed. This brings to mind a biological model of destruction and renewal of the living systems as proposed by Maturana and Varela (Maturana & Varela, 1974) in which the moment of crisis is related to change. The attention in our case is on how this passage can be better understood and expressed. As a consequence, the role of the design in this process is not marginal, and most of the time creates debris rather than innovation, as it is recalled in the words by Victor Papanek:

Advertising design, in persuading people to buy things they don't need, with money they don't have, in order to impress others who don't care, is probably the phoniest field in existence today. Industrial design, by concocting the tawdry idiocies hawked by advertisers, comes a close second.(Papanek 1984, p.ix)

This introduces the necessity to introduce disruption of an already corrupted process that most of the time is essentially self-referential. This stands true in particular in the educational environments that are supposed to prepare students for the “real world” challenges.

Moreover, Design is a discipline between art and method, claiming creativity, aesthetics and culture, and requiring technical knowledge, the former aspect is over-evaluated in respect to the latter, and formalised aspects are largely far from the educational curricula. As already many years ago Alexander remarked:

Logic, like mathematics, is regarded by many designers with suspicion. Much of it is based on various superstitions about the kind of force logic has in telling us what to do. [...] The use of logical structures to represent design problems has an important consequence. It brings with it the loss of innocence. A logical picture is easier to criticize than a vague picture since the assumptions it is based on are brought out into the open. (Alexander 1964, p.7-8)

The result is an unbalanced attitude of superficial understanding of the rigorous scientific methods and their often-incorrect application. Moreover many those methods, based on sociology and ethnography, risk to discover user needs already expressed by advertising and marketing, quite unreal, and help to develop new versions of old products, as a further edition of the last smart-phone; so, the goal of the creativity is denied, and no innovation is done at all. The responsibility of the designer toward both customers and society is 'anaesthetised', carrying exactly the direction criticised by Papanek.

In the following we consider the possibility that the changed society and the trends in educational courses on Design can have some responsibility in worsening the quality of the productions, and in a "stereotypization" of the creativity toward superficial decorative aspects, while we think that the role of a designer should be of very high profile in increasing, by innovating, not only the quality of the artefacts, but also of the behaviours and cultures.

In order to engage into an innovative process and leave behind the obsolete mind frames it is necessary to introduce an alternative paradigm based on acknowledging the games of power, influence and corruption, inherent to any environment in which the design process is collocated.

From Material to Immaterial: Methods for User-Centred Design

Design is becoming more and more pervasive, and its declination embraces products, interior, communication, web, fashion, services and so

on. In fact its pervasiveness is due to the, often unexpressed, role of the designer as a mediator between a producer and users.

Nevertheless, only the less formalised methods were used, and the ease of their application allowed their application without many times disregarding their clear role. A survey of some of the widest spread UCD, such as informal usability testing, user analysis/profiling low-fidelity prototyping and scenario-based design, criticizing their superficial application (Hudson, 2000), (Vredenburg, 2002).

Perhaps one of the best-known examples is the personas method “invented” by Alan Cooper (Cooper 1999). His goal however, was not to set up a design tool, but a tool helping him to think, and then to choose. Today interaction and service designers learn to apply it mainly as a project tool reiterating what Steven Portigal calls “the inevitable impulse to misuse them” (Portigal, 2008).

As the method of *personas*, other present similar problems, all of them pivoted around themes related to the User Centred Design: terms as *User Experience* and *Scenarios* are example of conceptual tools largely taught in the design schools and learned as a design tool (Pillan & Suteu, 2010).

Among the various criticisms we could report on the use of those tools (absence of a scientific approach, large dependence on the individual designer, irreproducibility of the results, and other) (Rönkkö, et. al., 2004), (Pruitt & Adlin, 2010), we point out a specific characteristics: all those methods tends to be strongly connected to ethnographic observations, without a further modelling of the results. So they tend to improve or satisfy user expectations instead to create new solutions.

An experience

We base our remarks on specific educational experiences at Politecnico di Milano. During the second year of the master in Design, a mandatory course is the *Second Year Master Course*: it corresponds to an activity in which the students, organised in small groups, carry on a design experience on a specific subject, using the knowledge gained during the studies, slightly driven by the teachers. One of those courses was referring to the development of an application for mobile phones, related to experiences in shopping (fig. 1)

Ethnographic observation on site	Scenarios	Collection of common trends in the use of smartphones & personas		Resulting application
- A large collection of information gathered - The experience of the user resulted into looking at the windows, entering the shop, browsing, choosing, asking for helps, asking for advises, taking pictures, talking with a telephon, possibly buying; - Problems in efficiency and effectiveness were considered as a stress source;	- Designed to cope with the supposed problems observed, respecting the user behaviours, the following scenarios were build, through story-boards. - The possibility of planning the shopping tour online, offsite; - The availability of interactive totems substituting the reduced shop personnel; - The use of virtual mirrors to increase the capability to "try" virtually the clothes;	- The use of "advisors" on fashion (on the model of Tripadvisor) and the spreading of "selfies" were pointed out;	- 30 year old Russian architect (woman) travelling for business; a - 25 year old Chinese woman, tourist; a 30 year old teacher of surf (man), from Milan; - 19 year old student (woman) living in Milan for the studies; - 29 year old fashion stylist (woman) from Milan	A social community for shopping, to share information, experiences, pictures, and so on; shops provided with totems, virtual mirrors and relationships with the community.
SUPERFICIAL		OBVIOUS & STEREOTYPED		"CLEAN" BUT MEANINGLESS

Figure 1 Example of ethnographic tools used in a service and interactive design class

Beside the compliance of the followed method with the learned approaches and the required work, we can observe:

- there is no innovation at all: the application is modelled on actual behaviours; creativity is not enforced by the approach, more, it is inhibited;
- the choice of the personas is quite determinant: the results would have been quite different if a 60 old mother was chosen, or some 40 old housewife, or some young starlet; the method is not suggesting solutions, but is closing chances;
- any aspect of the analysis tended to re-apply stereotypical behaviours, also out from the shopping context.

We consider the Design as the activity of creating things that will change the world, and simultaneously the world that will change thanks to those things, and in this case we find simply and badly a replication of models without any criticism nor responsibility.

If Akio Morita, as a co-chairman of Sony, had based his ideas on such a kind of method, no Walkman, no iPod would had created, and no individual music listening would be visible.

Disruptive Design

The traditional approach conducted the students to apply a design model in order to provide a service based on the following decision paths by the user:

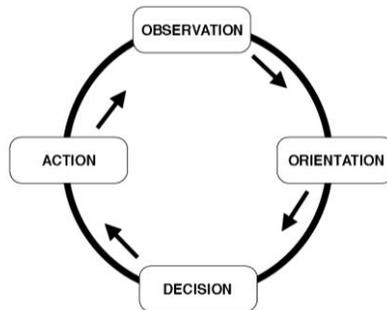


Figure 4 The decision process (Source: Joint Publication 3-13.1, Joint Doctrine for Command and Control Warfare (C2W) (Dahl, 1996)

The user usually observes, gets orientation by the clerks and the friends, takes a decision and acts as a consequence; the designed application amplifies the same path, increasing the capabilities of observation, augmenting the orientation mechanisms (despite possible inefficiencies of the shop), without interfering with the reasons driving the decisions and the related actions. Elsewhere we have shown how the alteration of the beaten path by introducing a conflict situation increases the creative flow in the project groups (Galli, Suteu, 2013). Following the same principle we focus on a different stance, that of the design practitioner carrying on a field study and investigation.

If we consider the role of the design as a way to innovate, and also by disrupting actions, we need to get our responsibility on the project choices, according to our ethical view.

In this sense, we can provide a different service, following a modified decisional path, carrying the user to criticize the current model and to change the behaviour paradigms. The, we modify the scheme of fig. 4 into the following:

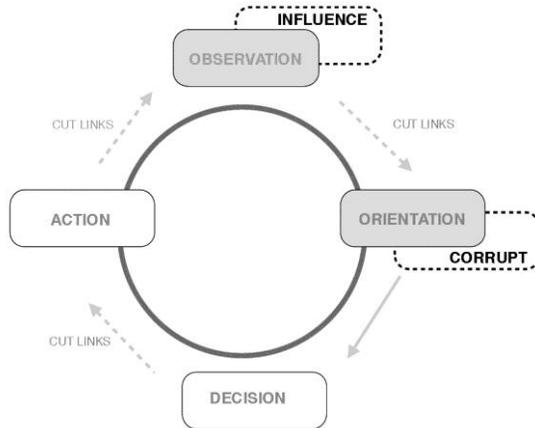


Figure 5 The decision process modified according to war theories

So, our application should provide:

- some kind of filter influencing the observation; those filters should be defined according to a specific ethical view, we decide: it could be related to attention to emerging nations, or to the reduction of consumerism, or to some no-logo attitude, and so on;
- some action “corrupting” the orientation phase: in some way, according to the chosen ethical point of view, the application should make evident the negative interpretations of a possible choice;
- the application should be designed not only in order to make some choices unacceptable, but also to provide positive emotions, and possibly the same observed as required, through the ethnography: for example, it should make the user proud of the non-conventional choices, aggressive in violating usual trends, and so on.
- as a consequence of those design choices, the behaviour of the users is supposed to change, and in a more conscious way. The process sketched (fig.6) imposes the designer to take a strong responsibility, and accept the violation of usual rules, trying disruptive actions, with unpredictable effects.

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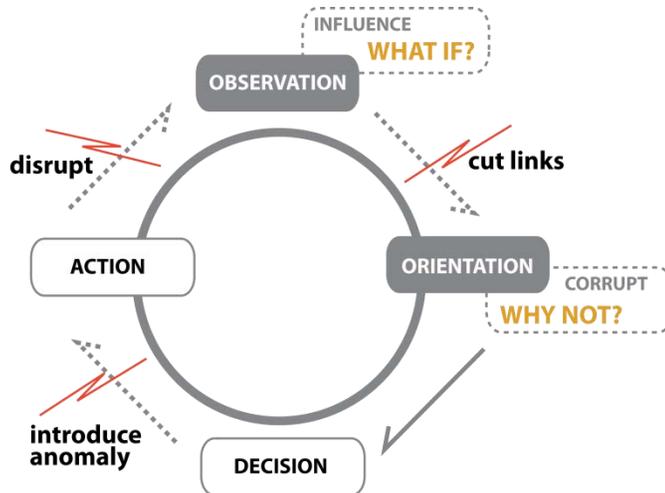


Fig.6 The decision process adapted to support a disruptive design approach.

The role of design as anomaly: conscious and scientific models as a way for creativity

In the study of processes improvements carried on, initially in Japan, in the frame of the Total Quality (Powell, 1995) approaches, two different kind of actions were supposed:

- *kairyo*: a dramatic change in the production process, often due to new materials/technologies, can have huge impacts on the quality of the products, and the costs and on the efficiency of the processes;
- *kaizen*: the continuous process improvement; by modelling the actual production process, measuring the related performances and proposing small improvements, it is possible to get results in better quality, cost reduction and efficiency; many small improvements can provide advantages as a breakthrough change.

The methods referred in the previous chapter seems to be useful for some *kaizen* in the artefacts, but are absolutely useless if we ask to the designers something new, some *kairyo* in the proposals.

What we propose, for the same kind of design area, an approach more based on scientific and formal methods.

Modelling ethnography

Starting from the same investigation, we start to model what we observed. Through semantic networks: roughly, we represent the observed elements as the nodes of a net, being the nodes connected by oriented arcs referring a relationship we observed (Maiocchi, Pillan 2014). In our case:

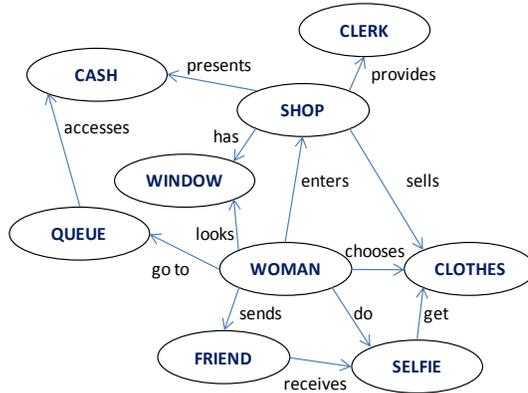


Figure 7 The semantic network representing the ethnographic investigation

This representation reflects simply the facts, but not an ethnographic interpretation of those facts; we can add some properties of the observed elements, in order to understand the implicit motivation of the behaviors:

Following the more recent and simple model (Panksepp, 2012), there are seven basic emotional systems:

- *Seeking*: makes creatures interested in exploring, and in getting excited when they get what they might desire;
- *Rage*: aroused by frustration, tends to freedom of action;
- *Fear*: leads creatures to run away, or, weakly stimulated, to freeze;
- *Panic*: governs social attachment emotion, specifically for the absence of maternal care when babies;
- *Lust*: involves sex and sexual desire;
- *Care*: maternal love and caring;
- *Play*: pushes young creatures to facilitate learning.

Without entering in a detailed description of the aspects of emotional design (Maiocchi, Pillan 2014), we can now add to our schemes the emotions we suppose involved:

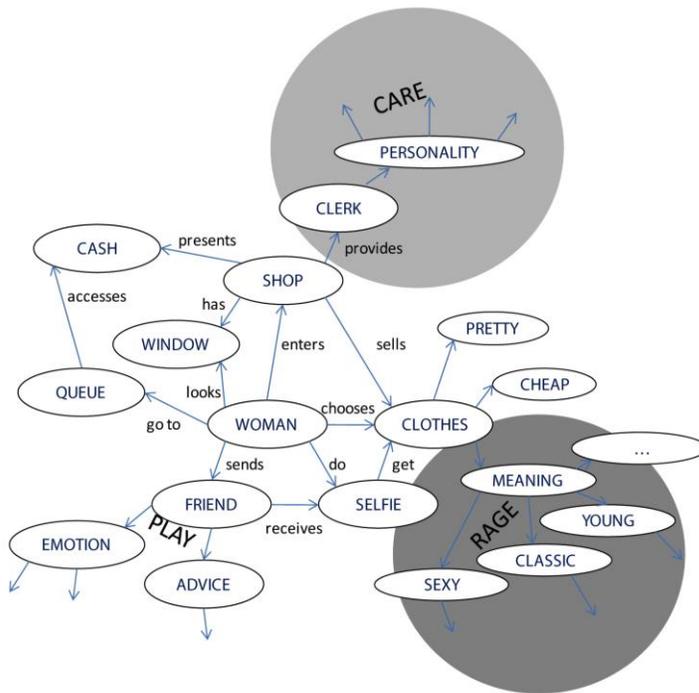


Figure 8 The semantic network with new elements related to the supposed driving emotions.

We added CARE (of course, the net is roughly cut just for exemplification purposes) in the relationships with the clerk, because we suppose that a maternal embracing behaviour is what the customer feel missing; in the same way we added RAGE near to the meaning, but it could be better modelled, according to the fact that sexy clothes prevail on classic, and so on (in any case, the choice is related in some way to the need of self-assertiveness); we added then PLAY to the contact with friends, as the goal is the social approval with happiness.

Beside the fact that the description provided comes from the same ethnographic observation, there are three fundamental elements that differentiate this approach from the previously presented one:

- the model is formalized: we can say whether or not the descriptions are well formed;
- the model is unambiguous: for each node, for each arch, it is possible to argue if we agree or not on that;
- the emotional impacts are not vague and naive, but refers to a choice on a possible well defined menu.

Interpreting the result

The emerging user is a person, in the rough example a woman, with the need of success, of social approval, of affection. It seems a clear evidence of the representation of the *Cinderella complex* (Dowling, 1990).

If we want design to produce innovation, we should provide solutions contrasting with the ethnographic evidences, fighting the intended stereotypes. As an example, (but it is just a preliminary rough hint), we could sustain Rage by refusing the need of sexy and pretty attitudes, to support Care by changing the role of the friends from consultive to participative, to introduce Play by biasing the communication on the beauty and the sex appeal (previously refused) with irony.

These tensions, specific to the real life environment, can only become evident through the acknowledgement and visualization of the dynamics of power and influence, and all the stimuli that are provided by the economic and cultural context in which they emerge. Looking from this perspective the implications for the design intervention are strongly related to the generation and management of influential ideas and the power expressed into articulate, scientific reasoning rather than the blindfolded application of borrowed ethnographic tools.

Final Remarks

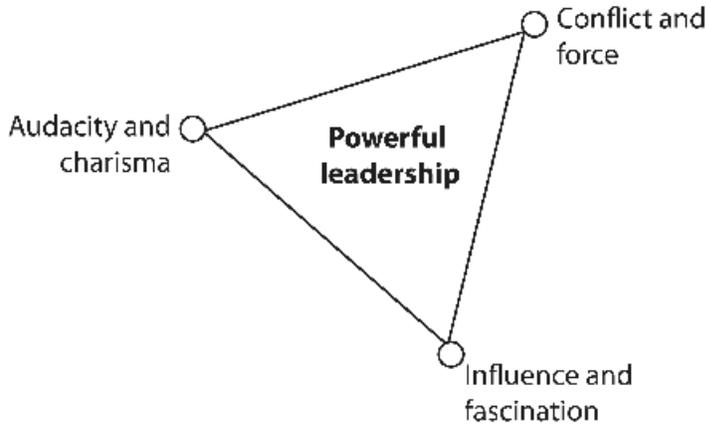


Fig. 10 The three main attributes necessary for a powerful leadership.

Throughout the evolution of Design as a process the notion of “tools” that can be used according to specific “methods” was always kept in high respect, and declined in the most different interpretations. No matter the material, immaterial or so-called “conceptual”, designers have a deep affective attachment to their instruments and the skill related to their use and adaptation. This keen attachment to the objects mediating the creative process hinders the emergence of lateral possibilities that cannot be anticipated by any method or modelled by the available tools. Although the concept of disruption has only been recently borrowed from the innovative organization literature (Markides, 2006), (Yu & Hang, 2010) into the field of design design, we suggest that this different approach has important possibilities yet to be explored. The paper herein touched upon only a few theoretical insights from neurosciences and war theory in order to bring a rigorous argument to support the disruptive design framework.

The role of the disruptive design is to demystify the importance of the outcome and acknowledge the true nature of innovative processes based on the breakdown of existing rules, by influencing, corrupting and finally imposing different cultural paradigms. In this process the role of the designer is that of a charismatic, transformative leader (Bass, 1991) (fig. 9) that envisions the possibilities of change where others follow the imposed rules. One of the main objectives of the paper, is precisely to indicate how further research can investigate the possibilities of constructing a different

theoretical framework to analyse disruption for its real value and coach future generations of designers as innovative leaders and not followers.

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