

Self-productions: A speculative approach¹

Autoprodução: uma abordagem especulativa

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Abstract

In a post-industrial scenario, where classical industry is ever more frequently converting into new forms, the form/function binomial and the notion of product need to be reanalysed. In a productive context, Advanced Design as a critical transdiscipline is intended as a cultural intermediary which responds to the economic and systemic crisis by being able to trigger, through the project, new attitudes and changes in the paradigm of thought. A transdisciplinary, future-oriented thinking hybridizes different fields of knowledge such as anthropology, science, art, technology and poetry through a humanistic approach. This allows a deep and total look at the complexity of the world. Through a kind of critical research that hybridizes the digital and the manual, the operator of Advanced Design has the opportunity to express himself from a particularly original and evolved experimental point of view. Synaesthetic artifacts, which result from his thinking, create new expressive possibilities and unprecedented fields of action. The goal of this critical approach is to question the world, to move the minds and to encourage debate in order to lead the way towards the future evolution of contemporary matter and thought.

Keywords: transdisciplinary design, critical making, material culture, self-productions, Advanced Design.

Resumo

Em um cenário pós-industrial, onde a indústria clássica é cada vez mais convertida em novas formas, o binômio forma/função e a noção de produto precisam ser reanalisados. Em um contexto produtivo, o Design Avançado como uma transdisciplina crítica pretende ser um intermediário cultural que responde à crise econômica e sistêmica, sendo capaz de provocar, por meio do projeto, novas atitudes e mudanças no paradigma do pensamento. Um pensamento transdisciplinar e voltado para o futuro mescla diferentes áreas do conhecimento, como antropologia, ciência, arte, tecnologia e poesia, através de uma abordagem humanista. Isto permite um olhar profundo e total para a complexidade do mundo. Através de um tipo de pesquisa crítica que mistura o digital e o manual, o operador de Design Avançado tem a oportunidade de expressar-se a partir de um ponto de vista experimental particularmente original e evoluído. Artefatos sinestésicos, que resultam do pensamento, criam novas possibilidades de expressão e campos de ação sem precedentes. O objetivo desta abordagem crítica é questionar o mundo, movendo as mentes e incentivando o debate, de modo alcançar a evolução futura da matéria e do pensamento contemporâneo.

Palavras-chave: design transdisciplinar, *critical making*, cultura material, autoprodução, Design Avançado.

Introduction: Design as transdiscipline

The contemporary scenario of production is changing continuously, thanks to new kinds of processes, technologies, needs and scientific knowledge. A pioneering research in the productive field frequently leads to unexplored territories and unexpected possibilities, which are often difficult to adapt to the immediate circumstances.

So, the relationship between traditional industry and Advanced Design is not easy to develop and increase. More-

over, this specific kind of research is related to a future aspect of the project. A research which can be called “advanced” is nearer/closer to an anti-industrial view, because the experimentation, philosophical speculation and divergent thinking which derive from it are apparently utopian. Advanced Design is strongly linked to the conceivability/planning of the possible and the unthought-of, which at present does not exist yet. But a research activity aimed at the future necessarily needs a boost, thinking outside the box, away from pre-established models. It requires a divergent thinking.

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Talking about divergent thinking means, first of all, introducing a transdisciplinary way of making research, since that critical thinking needs to be sustained by more than one field of knowledge in a transversal way. The transdisciplinarity together a humanistic approach, has to lead to the understanding of the new complexity of the world, through future-oriented thinking. Only through a significant interpretative ability of comprehension and transformation of reality will it be possible to implement an unexpected and culturally deep project (Olivetti, 2013). In "Not for Profit" Martha Nussbaum underlines the importance of a "deep-rooted culture of philanthropy" for the development of minds. An imaginative observation, along with the ability to develop a divergent thinking which does not comply with tradition, is a fundamental skill for an operator of Advanced Design.

In this sense, the humanistic culture, which proposes the transdisciplinary thinking, can lay the foundations for a responsibly critical attitude of co-creation towards the complexities of the world. "Innovation requires minds that are flexible, open and creative; literature and the arts cultivate these capacities. When they are lacking, a business culture quickly loses steam" (Nussbaum, 2011). One of the first interesting examples of a combination of critical thinking and scientific culture is provided by the exhibition entitled "Design and the Elastic Mind" curated by Paola Antonelli at the Museum of Modern Art (MoMA) in New York (Antonelli, 2008).

The original curatorial project expressed for the first time, in a decisive manner, how design had been evolving in a critical way and how the role of the designer needed to be rethought. The term "elasticity", included in the title of the exhibition, was used to define a new quality of contemporary society. It expresses a strategic merger of smart flexibility, human-centered design and critical thinking skills. The exhibited projects, as products of this mixture, combine the logic of the most advanced scientific research with the possibility of an actual use by humanity. Through the many concepts and prototypes on display, the designer is presented as a thinker of his time, whose task is to give shape to his thought, through a new critical view of the world.

In a manner that is coherent with this feature of transversality of Advanced Design, the designer is called to be an intermediary between research and production, due to his ability to interpret not only objects, but also visions and strategies. His transdisciplinary training and the constant habit of working in a team put him in a unique and necessary position, in a sort of cross between analytical skill and intellectual pragmatism. The outcomes of such methodological combination lead, indeed, to the development of innovative theories, models and osmotic artifacts, conceived in turn as tools for the creation and understanding of new knowledge and practices.

The time of self-productions: a double path

Thanks to new networks and digital production systems, design crosses its industrial boundaries and opens up to new possibilities, which a few decades earlier were considered utopic. In 2004, Enzo Mari, in "The Suitcase without a Handle", wrote: "Project and production do not

match today [...] as we already know, industrial production is based on this non-coincidence [...] design and production may coincide in the near future" (Mari, 2004). In the light of what we have seen in recent years, the text of Mari appears to be remarkably anticipatory because it underlines the strength of design deriving from the union of these two practices, thinking and doing. In contrast, what Mari described as the utopian hypothesis of self-producing designers has become a very common phenomenon of production. Together with the classical industrial economy, indeed, a new kind of manufacture is beginning to exist. It is small and widespread, characterized by a community of makers, micro-entrepreneurs, self-producing designers: a spontaneous activity of manufacturing which takes care of all the stages of the creative process, starting from design, through production, promotion and, finally, sale. Most of the time these projects do not have a single creator but a network of co-authors and they are intended for other designers, niche markets, a mature audience, who are already conscious of the aesthetic uses and the meanings of those products. These new systems of self-production are spreading according to a glocal model, thanks to the development of new information technologies, which make it possible to work, also remotely, with small amounts of products and experiment with a model of customized product and on demand distribution. According to the B2B logic, in most cases the recipients of these micro-manufacturing companies are already in the network.

Design museums, concept stores, galleries, end-users, designers are all involved in an expanded community always connected in a global network. We could speak of a many-sided galaxy, made up of people and their objects, acting beyond the traditional logic of production and market. This different development of business and selling logic gives designers the possibility to build their own self-narrative independently, so that they can reach people who so far have been too distant and establish specific collaborations as well as reinvent themselves on a different scale. It triggers a new way of consumption, led by all the actors of the network, a kind of "bottom-up" model which makes the end user an active subject who influences and participates in the design process. The time that characterizes this type of new productions is very fast, made of moments and intuitions, which are realized almost immediately thanks to the availability of shelf technologies and open source. However, the speeding up of manufacturing processes made possible by the new technologies must not lead to a risk of impoverishment of design at the beginning of the creative process, but it should rather put the designer in a position of greater responsibility. This manufacturing speed will be complemented by the researcher of Advanced Design with another, slower time, represented by a historical cultural stratification which allows the mind to go deeper and to address the real needs of man. Only through this double-track time action will an Advanced Design research be able to conceive evolved objects, which are integrated with the new manufacturing systems in a conscious and educated way. The intense international debate on the concepts of makers, designers, self-producers, artisans requires new reflections, aimed at investigating the

role of the project in the digital age. Nowadays the factory is everywhere and it is easily accessible, but the places of doing, if they really want to innovate, have to take the form of open cultural systems within which both tangible and intangible assets converge with stratified knowledge constantly hybridized with the new. Inside an apparently simplified production process, the designer must assume new responsibilities, through a deep thought, to which he was not previously obliged.

On the other hand, the original meaning of the word "self-production" brings attention to the intimate and autonomous method of manufacturing, which sees man as the active and responsible center of the process. The act of producing, in the old sense of physical making and constructing, keeps within itself a strong immaterial meaning. The act of making, indeed, derive from the Greek word "poieo", which really means both "fabricate" and "compose" poetical verses.

So, the word "poieo", even if belongs to the spiritual dimension of the poetry, is also strongly put in relationship with the physical action of doing. For this reason, following the ancient greek language, "the act of making", can be seen as an action, material and immaterial, a constructive work accorded to the principles of the human soul.

Interesting paths of research in this direction could come from a study of hybrid supply chains, innovative technologies integrated with traditional ones, grafts between craftsmanship and industrial processes, excellent digitalized manufactures. In this perspective, Advanced Design can accomplish a critical cultural process and investigate within those boundaries that surround the debate on the contemporary design, such as production, ethics, aesthetics, functionality, market.

Between the digital manufacturing and the space of matter exploration

"Within design research there are three main areas that can be distinguished: a research for design (when it tends to produce new tools with which to project), a research on design (when it generates a critical reflection on

design and its methodologies), a research through design (when, to produce visions and proposals, it uses the specific tools of the designer)" (Manzini, 2009). The aspect of investigation which this essay wants to emphasize is the third strand, which makes the designer as a "maker" of his instruments of knowledge. This research, alongside the established and various methodologies of analysis and formulation of scenarios, can be combined with other, more specific practices: the laboratorial and the experimental ones. A design goal projected towards a future that is placed in the front-end design-driven innovation requires a continuous capacity for critical thinking able to compete with practice and with doing manually. The new open source technological possibilities and the ease with which they can be accessed make a whole range of otherwise unknown techniques and materials widely available. What is more, a union of innovative materials, advanced manufacturing techniques and self-generated tools allow the project to accomplish an unprecedented, highly original and experimental research. In addition, complex projects, especially from an anthropological and speculative point of view, increase the need to develop suitable methodologies and instrumentation, which only later will be engineered and made accessible on a large scale. Through practice, you can spontaneously get access to a deeper understanding of the project, of its material, of its forms (Sennett, 2008). A kind of understanding that, left to the mere digital instrument, would be impossible. "The tactile, the relational and the incomplete are physical experiences in the act of drawing. Drawing stands for a larger range of experiences, such as the way [...] of playing music to explore again and again the puzzling qualities of a particular chord. The difficult and the incomplete should be positive events in our understanding; they should stimulate us as simulation and facile manipulation of complete objects cannot" (Sennett, 2008). Advanced Design, which leads research using the tools of the subject, may in this sense lie somewhere between an advanced digital manufacturing and the space of matter exploration.

This widespread return to the art of doing, paradoxically promoted in contrast to an increase of digital tools,

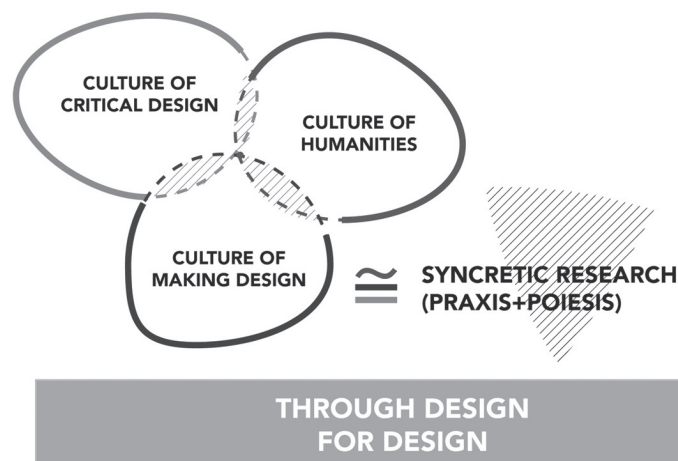


Figure 1. Diagram of the author's study which schematizes the cross-fertilization between the three areas of design culture that generate a syncretic research (praxis + poiesis).

recognizes a renewed meaning of the subject and an ability to trigger imaginative and symbolic processes. "From atoms to bits" (Negroponte, 2004) and, metaphorically, in the near future they can evolve into something different and capable to generate a human ecosystem of techno-scientific knowledges that foreshadows the changes in the world. About the relationship with matter, the anthropologist Eleonora Fiorani writes that "participating in it is a way of integrating ourselves with the nature of things in the world that we ourselves have built. It is remembrance of the raw material of which we are made. Its usable material character and its symbolic role are the vehicle of socialization, the construction site of the social structures, source of endless narratives" (Fiorani, 2000).

A "designer-thinker" capable both of using materials and technologies and of using critical thinking will have the most appropriate tools to radically renew the conventional system. In relation to new production processes, the actions of thinking and doing flow into a culture of unprecedented coexistence between sophisticated design and manual sensibility.

This futuristic dimension of research will be developed through a convergence between manufacturing excellence, marked by a slow and human time, and an advanced industry, marked by a fast and digital time. Two worlds compared, two different measures of time which need each other and whose design unity can only be understood by an intermediate thought.

An experimental approach beyond the digital

Talking about the digital in a future perspective seems like dealing with an idea that contemporary society has already absorbed and metabolized. In a future vision, the digital dimension will permeate everything that surrounds us and will be considered a natural requirement.

As predictable, the era of access (Rifkin, 2001) has produced an overwhelming profusion of images, products and data, to the extent that the excess of the digital over the real is imminent, as some data of Cisco theorise (Cisco, 2012). PCs, digital cameras, mobile devices of all kinds are spreading at an uncontrollable speed and in such great numbers that in about twenty years' time they will be able to cover the entire world's population in a 1:1 relationship to man. Disoriented by an iconogenic surplus and a deafening set of languages, not able to consume all the images we produce, we will end up chasing what we can, with the risk of losing control over ourselves. This paradigm shift of the way of life is going to be enhanced even more by the development of the web that in the coming years will see the transition from the IoT, Internet of Things, to the IoE, i.e. the Internet of Everything (Cisco, 2012). In the IoE, which in some cases is already a reality, the human world, the natural world and the world of data live together.

The web is the only life experience. This coexistence of things which are extremely physical and digital at the same time leads us to a new point of view on the material practices of contemporary design. Incapable of explaining in words the profound transformation that our world is experiencing more and more frequently, designers express their thoughts through reinvented materials, interactive mechanisms, the use of hybrid digital-natural tools, homemade instruments. All of these are just a small part of the research practices that many well-known studies by emerging designers are adopting to communicate their critical point of view about the world. In an organic vision of the union between the digital and the physical, man, even while connecting to the world and absorbing electronic sensors, still stays on a different, not computable level, based on a deep and ancestral relationship with things. At the centre of this infinite exchange and beyond every limit of people, data, ideas, in fact, a special place for a new, bold experimenta-



Figure 2. InResidence-Design Dialogues (2010), edited by Marco Rainò and Barbara Brondi, workshops, Du Parc Residence, Turin. In these selected images there are some conceptual laboratories that use a series of unusual experimentations in order to draw reflections on the project and on the role of design. Available at: <http://inresidence.it/projects/>. Accessed on: 10/01/2014.

tion exists, which transcends physical boundaries and investigates man. This practice, all yet to be explored, is proposed as an opportunity to search for a future scenario that goes beyond the classical notion of the digital. Nicholas Negroponte, the author of the worldwide bestseller "Being Digital" and founder of the prestigious MIT Media Laboratory in Boston, was the first one to use the term "post-digital": "[...] the digital revolution is over. Its literal form, the technology, is already beginning to be taken for granted, and its connotation will become tomorrow's commercial and cultural compost for new ideas. Like air and drinking water, being digital will be noticed only by its absence, not its presence" (Negroponte, 2004).

The expression "postdigital" was later used in the field of art to indicate a research developed in recent years which uses the analogic technologies, through a rediscovery of past techniques, full of symbolic contents, putting them in synergy with the advanced ones. In the book *The Future of Art in a Postdigital Age*, Mel Alexenberg defines postdigital art as "a work of art that relates to the humanization of digital technologies through the interaction among biological, cultural and spiritual systems, between cyberspace and real space, between high tech and at the same time high-sensory experiences, including visual, tactile, auditory and kinaesthetic multimodality, between virtual reality and augmented reality, between roots and globalization, [...] all through participation, interaction and collaboration that redefine the role of the artist" (Alexenberg, 2011). In line with these interpretations, the postdigital may take the form of an indissoluble union between the physical world and the virtual world, understood as going beyond contrast. Hence, there is a double relation with the digital interaction which sees, on the one hand, a complete assimilation of the digital and its outgrowing, and, on the other hand, a transformation of this phenomenon into something new that embraces an atavistic and at the same time advanced understanding of the world around us. This operational mode should engage in a sort of "neo-humanism", which elevates man as a central element and motor of the system, according to a renewed concept of human-centered-design. There are already many projects underway which operate a reflection on anthropological and epistemological design through a material-experimental type of investigation. Among these there is the annual project "In Residence – Design Dialogues", curated by Barbara Brondi and Marco Rainò, held in Turin at the Residence Du Parc. This interesting curatorial project concerns design culture meant as a critical process that continuously develops between more people, professional designers and young students, in order to extrapolate from an activity, which is both dialogic and practical, the reasons of thought, of matter, of its formalization. "In 2010, the project addressed the domain of the material: "Matter Matters", the programmatic title of the workshop, defines an area of interest and frames the intention to examine the theoretical and practical criticalities, related to the use of substance" (Brondi and Rainò, 2010). Among the many international studios invited to take part in the project, just to name a few, there are Formafantasma, Mischler' Traxler, Studio Glithero, Minale-Maeda. All these studios, award-winning at the international level with their research of a speculative nature, regularly collaborate with

the highest quality museums, design foundations, galleries, which promote a kind of design intended as a tool of comprehension and critical analysis of contemporaneity.

Conclusion and future developments

Through this procedural approach, which mixes material and digital tools, it's possible to increase the number of paths and multiple tools capable of breaking fresh ground for new developments beyond the digital paradigm.

The ultimate idea is to develop, through the final PhD dissertation, a new operating postdigital scenario, based on a series of personal experimental and theoretical models, in line with some peculiarities of Advanced Design. Thanks to a partnership with Science City of Naples and through participation in the European KIICS (Knowledge Incubation in Innovation and Creation for Science) project, from May to September 2014, the doctoral research had the opportunity to investigate some technological aspects in the Open WetLab at Waag Society in Amsterdam, which is a research institute specializing in transdisciplinary contamination between design, technology and art. The final aim of this international cooperation is to experiment operationally with new postdigital production models which hybridize digital fabrication and bio interfaces with a humanistic approach. The results of this transdisciplinary admixture are no longer simple products, but they become complex, organic hybrids. Just as in the past alchemists worked through the use of laboratories that combined thinking and doing, in the same way this mixed approach is able to continually offer new unexpected paths and connective possibilities.

On the future table of research, textural experiments, concepts, performative processes, artefacts, pictures, sounds, videos are displayed in a logic of transparency of the whole creative process. This is a procedural syncretism that allows to communicate the complexity of reality through the creation of relational meta-objects that interface both with the human and with the digital. From this point of view, they can be innovative tools for a future-oriented project, in order to reveal unexpected chances of understanding contemporaneity, stimulating an innovative dialogue about mankind.

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