Strategic Design Research Journal, 4(1): 5-13 January-April 2011
 - doi: 10.4013/sdrj.2011.41.02

Design and self-production. The advanced dimension of handcraft

Design e produção própria. A dimensão avançada do artesanato

Marinella Ferrara

marinella.ferrara@polimi.it

Politecnico di Milano, Dipartimento INDACO, Advance Design. Via Durando 38/A – 20158, Milan, Italy.

Abstract

Handcrafted practices of young designers, capable of acting as draftsman, craftsman-producers and selling agents of their own creations, are triggering the revaluation and the transformation of hand-crafted activity in Europe. The overview of the situation, which has reached the highest point in the occasion of the design week in Milan, also appears in other Mediterranean countries and in some Latin American countries, but with different distinctive features. However, it delineates a new relationship between design and handicraft, so that is convenient in an ambivalent way. This specific kind of "hand-crafted practice", defined "self-production", sometimes "new-handicraft", again "technological handicraft" or "electronic handicraft", differs from the traditional practice for its progressed or "advanced" dimension, that is enable to interpret crafts, techniques and expression changes, harking back to the union between technical skill and design, manual aptitude and creative process.

Key words: self-production, handicraft, young designers, technology, rapid manufacturing, open source.

Resumo

Práticas artesanais de jovens designers, capazes de agir como desenhistas, artesãos, produtores e agentes de venda de suas próprias criações, estão desencadeando a reavaliação e transformação da atividade artesanal na Europa. O panorama da situação, que atingiu o ponto mais alto na ocasião da semana de design de Milão, também aparece em outros países do Mediterrâneo e em alguns países da América Latina, embora com diferentes características distintivas. No entanto, isso traça uma nova relação entre design e artesanato em um modo ambivalente. Este tipo específico de "prática artesanal", definida como "produção própria", "novo-artesanato", "artesanato tecnológico" ou "artesanato eletrônico", difere da prática tradicional pelo seu progresso ou de sua dimensão "avançada", que permite interpretar o artesanato, as técnicas e as mudanças de expressão, remontando à união entre habilidade técnica e design, aptidão manual e processo criativo.

Palavras-chave: produção própria, artesanato, jovens designers, tecnologia, manufatura rápida, código aberto.

In 2000 I wrote an essay entitled "Production, self-promotion, self-production," published in 2001 in the book *Scenarios of Young Designers* (Ferrara, 2001). The text highlighted the emerging phenomenon of self-production/self-promotion, a practice that unites young creative people in a form of self-productive activity which, for reasons related to the contemporary departure from previous forms of self-production, like the one present in Italy in the 1970s and that characterized the design of Memphis which was driven by a strong ideology.

This new form of self-production mostly by young designers began to assert itself in the nineties in London, specifically at the Chelsea neighborhood, where the Arts & Crafts Council[1] funded many "craft" projects, rewarding the enterprise of young British designers with a strong inclination towards experimentation, probably derived from the teaching method of Germanic Anglo Saxon style.

Designers, previously unknown, such as Ron Arad, Tom Dixon and Sebastian Bergne began their ascent in the design world, offering new products characterized by

[1] Today, the Crafts continue to fund projects in England to promote the phenomenon of self-production practiced by young designers. In London it is common practice to build prototypes of their projects. Often, in addition to the studio, the designers have a laboratory-workshop, which sometimes becomes a showroom. Tent London is the event dedicated to designers that self-produce.

the use of an innovative language, a handcraft taste which was hand-marked by their imperfection, uniqueness, local identity, the coincidence between design and production, between those who made the product and those who would sell it.

In contrast with the scenario of progressive homogeneity that characterizes the industrial production in the era of globalization, self-production is being increasingly appreciated by users who have begun to reassess small productive series that have strong and characteristic forms (coming to a point where there is a preference for "ethnic" items). It becomes evident how the culture based on the uniformity of industrial products is being slowly replaced by a culture based on differentiation, specifically in a post-Fordist phase.

Since the 1990s the phenomenon of self-production/self-promotion has begun expanding throughout Europe and beyond, even if quietly. Like all social phenomena that have arisen spontaneously bottom-up, they are interwoven with models that are being abandoned and models that come forward to start slowly, but steadily transforming the consolidated system, with different characteristics depending on geographical, social and cultural contexts.

The phenomenon, which has its visibility peak during the design week in Milan as well as during 100% design London, design week Brussels and Istanbul Design Week, is also present in other countries, particularly in countries of northern Europe, where Dutch Design is presented under the auspices of the Netherlands with formal and material experimentation related to environmental issues, with objects that have all the characteristics to make them adequate to be sold in the international markets.

In some Latin American countries, notably in Brazil, self-production is characterized by the social value and inclusion in a profoundly local reality that gives the product strong expressive-symbolic features that make it a success.

The expansion of the phenomenon also affects other countries of the Mediterranean: in Morocco, where the relationship between design and craft is very strong, as it represents the only chance for designers to move into the production circuit; in Israel, where the post-industrial craftsman is the "parallel" activity of young designers who are related to high-tech companies from which they obtain materials and get in contact with technologies that they use in their own independent experiments;[2] in Lebanon where design is an activity that blurs with artistic practice and is sold in art galleries.[3]

In the web abound portals that promote or market limited editions, unique pieces, numbered and signed by the designer that produce them, these products are sometimes exhibited next to standard products of famous design brands, as Young Designer Home and Nomade DESIGN, which have an eye set on international expansion.[4]

In Italy events that promote the fusion between design and craftsmanship are multiplying, especially in Veneto and Lombardy, where the presence of numerous workshops and small businesses keep institutional interest alive in initiatives aimed at promoting business suffering with the economic downturn as those recently carried out: the festival "AAA wanted new craftsman" in Vicenza, the trade show "Young Designer Home in Venice, the "Art-Art" of Varese. In Turin, the Design Week 2010 will devote this year's edition *Operae* market to self-production.

The scenarios that self-production outline are diverse and present us with a constellation of realities as well as productive relationships that add value and enrich the product system.

Design-Art-Crafts: fruitful ambiguity

The first thought that the investigation of the phenomenon of self-production/self-promotion generated was regarding the transformation of the design profession: the new approaches to the work of the designer showed a remarkable concreteness that is enough to push the profession beyond the single project and towards the construction of working prototypes to present to companies, international exhibitions, competitions and to the press; self-promoting its identity as an individual or as a group, with his/her own thoughts and ideas, the designers promote themselves as artisans, producers, graphic communicators, sales agents of their own creations, and are often photographers and traveling salesmen.

In the everyday activities they hybridize different scales of intervention and also levels of professional practice, managing on their own or as a group the entire process from design to sale or through a network of partnerships that they coordinate. A new kind of designer-craftsman and designer-entrepreneur takes shape.

At the same time new modes of expression that hybridize art and design are emerging, some of which gave life to the *Design Art*, a form of experimental design that was born from the collaboration with art galleries and results in unique pieces or limited editions that occupy fairs, salons, galleries and exhibitions: from Design Miami Basel fair to FIAC (International Fair of Contemporary Art) in Paris, from London to Shanghai Art Fair. The resulting works are being auctioned for thousands of euros to the emerging new elites in developing countries.[5]

It's interesting to note that the new way to propose and work of the designer is not opposed to the canonical mission "design for the industry". This approach is not at odds with the design aimed at the industrial product. S/he is not limited to one way of proceeding, but is able to manage the possible coexistence of different production systems and moves with ease among them; it turns out to be flexible and able to change depending on the circumstances and objectives.

This is verifiable given that, if proposed to them, the self-producers are all potentially available to produce their projects industrially. So the young designers do not identify themselves with the movement of Art and Crafts, founded by William Morris in 1861 as a reaction to indus-

[2] For further reading: Rozenberg (2009).
[3] On the evolution of design in the Mediterranean countries: Ferrara and Finocchio (2008).
[4] Among these: The Italian websites *Young Designer Home, NOmade DESIGN, GarageDesign*; and the French site *Bientot desmain*.
[5] This subject was widely documented in Ferrara (2008, p. 4).

trialization, understood as the enemy of artistic freedom of the designer, if anything, they can be recognized from a perspective of post-Fordist work (Pasca, 2001), which admits the possibility of pairing industrial production with the logic of the unique piece made in their own laboratory with extreme pragmatism, without any ideological conflict.

They are not reflected in "[...] the ideological confrontation between craft and industry that had come together in the meeting of the Werkbund in Cologne in 1914 and then in the 1980s, with the controversy brought by the postmodern rationalism against industrial (but it would be more accurate to speak of Fordist-like functionalism)" (Pasca, 2001, p. 15).

On one hand, it was a contrast that showed the industry as a value, because it is capable of producing low-cost series of products, of which a proper design would ensure the final quality of the product. On the other hand, it called for the refusal of the alleged homogenization operation. At the same time, there were voices that invoked a return to the value of the handmade, identified with the "human" *tout court* (Rilke), or at least of *One Off*, a single-piece or a small number of pieces that are highly distinctive and particular in terms of form (Pasca, 2001, p. 15).

Today the search for meaning of creative work is entrusted to other factors. Italian design has been a pioneer of this reality. In Italy, because of the peculiar productive structure made of a dense network of artisans and small industries scattered throughout a territory, awareness of the integration between industry and handicraft has been an underlying common theme of the Made in Italy products; whereas in Northern Europe this integration has been mostly supported and promoted by the design education model.

It can be thought of the new professional profiles delineated by Lucius Burckhardt (1994)[6], a design theorist and historian, director of the new faculty of the Weimar Getstaltung: new profiles proposed according to a strategy of response to the crisis in the world of work that lies ahead for young people due to the limits of the Fordist mass production model, the outsourcing of the production processes in developing countries and the lack of development of the service sector: a new concept of "intelligent artisan" that, paradoxically, applies knowledge in a productive and innovative craft, which combines technical expertise and artistic ability to develop products, supported by ideas, and "thoughtful artists that start by the idea and the concept and not from virtuosity" and also "consultants who do not offer the right solutions to wrong problems, but show how to formulate an efficient strategy, avoiding a separation between means and ends".

For example, the Design Academy Eindhoven, has removed from its trademark the word "industrial" that preceded the word "design", which gave a clear implication of what design supposedly was, and according to the current view, it established a reductionist view of design. This was not to encourage or imply the possibility of a nostalgic return to pre-industrial craft but it is a sort of membership to a post-Fordist era in which the designers must first develop concepts focusing on their own awareness of design, production and the use of objects.

In general, English and Dutch schools tend to teach design independently from an industrial brief, developing individual research concepts. This is encouraged in order to enable a search for self-awareness in relation to productive processes and the use of objects, which in the end should help the designers to define their own "attitude" towards design. This awareness can be considered the starting point of the renovation of the professions and trades, both of the designer and the artisan.

Thus, the past ideological conflict between industrial and handicraft products appears to be resolved. Not only the choice between artisan and industrial has lost its meaning, but the ambiguity between the terms and their approaches now become central and fruitful as much as the memory of the handmade, which combined to the potential of digital technologies allow the "irregularities of the handmade" as well as the intersection between craft and technology, as in Marcel Wanders' projects who uses innovative technologies and materials and mixes them with antique, archaic shapes. It is this crossbreeding that permits the experimenting of new concepts. All these experiences show that the value of the project is in the idea, not in the assumptions of the possible production processes, nor in the type of technique used.

There is no longer a single definition of the relationship with the production of the project. Slowly but steadily, we can see the consolidation of a new designer profile that is independent and develops new ideas.

The designer-entrepreneur

Even designers who work primarily with the industry are experiencing a series of transformations in the profession. As the young designer Odoardo Fioravanti states, nowadays we are witnessing, in Italy, an expansion of the competences of the designer, who absorbs, within his/her small-company or studio, pieces of the productive chain, which were previously exclusively made inside the industry.

> *"There are historic Italian design companies that are still interested in being part of the development process of a product, but most of the new companies are less and less interested. The overall trend is that the designers should execute pieces of the work-flow that the company cannot cope with. So it happens that designers develop the technical aspects and the engineering of the product up to a detail that was previously unthinkable, or even find suppliers for the company, linking different stakeholders to ensure the birth of a new object. There is also another common trend: the designer has to think of photographing and communicating the product and give the idea of a possible advertising campaign. It is as if the designers directed a fiction scenario of an object that does not exist, prepare all its life and sell this package to businesses, so their traditional role is slowly becoming weaker as they are becoming a sort of evolved distributor, which deals with the relationship with customers."*[7]

[6] These concepts were explained in depth in the program of the Gestaltung di Weimar faculty in Burckhart (1994, p. 86).
[7] Cfr. interview of Elena Sommariva (2010) published in *Domus* online.

As you can imagine from this statement we are in front of a twofold phenomenon: not only companies are changing, but the industry has benefited from the phenomenon of self-production/self-promotion by outsourcing research that now entirely rests on the shoulders of the designers.

The companies, prompted by globalization, are looking at conquering the new global markets. Small companies, as Italian companies generally are, have insufficient capital to face the new challenge with the enormous costs of communication, and what it entails. This could be an explanation for the new interest of financial institutions, aimed at bringing the "Made in Italy" to the world markets, since individual companies find this increasingly difficult to do. These financial institutions embrace the more general trend of investing on consolidated star designers and on the production of luxury items, now invoked as a method to face international competition. In the hands of financial institutions, companies become just an "evolved distributor." At the same time, designers choose to jumpstart self-production to start producing independently, without having to knock on the doors of companies and strive to convince them of the validity of their projects. Self-production is indeed an excellent springboard for designers who want to present themselves to industry. Industry will come knocking to their doors later on.

The problem now is that those who decide to self-produce must become also businessmen and entrepreneurs themselves. A new profile is emerging, a designer-entrepreneur, a promoter, who designs and sells commercial products that s/he publishes looking for contractors in the area, and using the potential of local supply chains for the best advantage, all this while setting up a strategic capacity for communication and promotion of products and events (Maffei and Zurlo, 2001).

At the same level of entrepreneurial work, craftsmanship is one of the extraordinary conditions of experimentation that can draw on the expertise of local production. That is why the Italian territory is still configured as an ideal, productive and operational base of designers who come from all over Europe. The skills of the designer will increasingly be focused more and more on relationships, and in the ability to mediate between big and small networks, between local and global.

Then there are the designers who although they are not considered design stars, want to be producers and publishers. In London Tom Dixon has recently opened the Tom Dixon shop, the first shop where we can find, next to the products designed and produced by his own studio, the products of other designers, chosen for similarity of taste and modus operandi. In the shop and in the spaces where it is possible to participate in design events, he pulls off a performance of the "factory worker" who before the eyes of customers, create customized products. In the *Industry* booklet, produced by himself, Tom Dixon states his interested in designing products, in the production, distribution, and consumption systems. Managers of themselves, designers defy the market and return to the production in the new factory in an attempt to stop Europe from becoming a place only of consumers who cannot produce anymore, and soon will also stop consuming as well. They believe that instead of stimulating a long network of relations of production and distribution it could be possible to shift to a model of products that are locally produced when ordered, with no storage and no waste, without the risks of remaining unsold. It is necessary to be more flexible, faster and closer to the market.

Self-production as a dimension of the experimental design research

Among the designers who practice self-production, Michele De Lucchi complements his professional practice with independent research on the issues of design, material transformation, technology and crafts. From this research derives his "Private Production." For De Lucchi this is an experimental activity, using technology in the frontiers of the possibilities of industrial production, which is necessary to encourage a more responsible approach to the quality and beauty of things. For instance, in the De Lucchi´s shows, self-production is a kind of attestation of autonomy from the demands of industrial production and the current market, which implies in a reflection of the contents of the design and the use of objects, a redefinition of the value of the designer s own activity. The self-production can be experienced as a form of self-discipline that serves as training for reflection, for solving the challenges of the project through manual work, fully understanding the perception of the production process and the lines of thought that it stimulates.

These designers choose to show, with extreme pragmatism, their commitment as designers in society, without any claims or wanting to overturn the established system, on the contrary, they offer their approach as a parallel way, offering a lucid and often humorous personal view, however significant on the world of goods, legitimizing the new approach.

Designers that self-produce travel often, are well informed, frequently engage with the market and are good communicators; they are experimenters that are immersed in interdisciplinary areas and have the ability to interpret the contemporary languages. They know what design is and have the ability to convey the added value of their own products. They do not hesitate to adopt the tools of marketing even if it means they have to go in to other areas, such as image creation and communication. They consider the project an essential part of their research. They are the dividing line between craftsmanship and contemporary.

The observation of their methods, has allowed us to identify three different lines of research defined as: crafts (handcraft-DIY), technological crafts and electronic craft.

Do-It-Yourself Craft

The DIY Craft (which is close to metropolitan craft, as defined by Ugo La Pietra)[8] takes its inspiration from metro-

[8] "[...] The problem of design today is that it produces so many objects that claim to have a meaning, of being beautiful, [...] products that attract attention with a loud voice, but that actually do not say anything: this huge amount of stimulation should be compensated with products that have no meaning, objects that are born under the sign of immediacy, practical objects, which are not created only for their beauty" (Ramakers, 1998).

politan cultures and it aims at achieving design solutions to be made with limited means and resources: recovering discarded objects, recycled materials and waste from industrial production, and using industrial parts originally made for other purposes. The result is the design of low cost products made with simple materials, which do not aspire to be lovable or attractive as the sophisticated industrial products, neither elegant as the luxury items are, yet they are simple and practical items that make sense since they have a functional value, and a sustainability intent that comes from adapting the formal research to waste that is readily available. They are often unique or produced in small-scale series in which each piece is different. Because of their simplicity, immediacy and raw look they have been the object of harsh criticism, since they appeared to result from *non-design* as theorized by Renny Ramaker (1998)[9], co-founder of Droog Design; in short, they produce a strong contrast to the abundance of visual crowding present in the market today.

The self-produced objects are the bearers of small ideas, of "different looks", of lifestyles and daily routines, a kind of poetic autobiography that brings back personal memories. An example of craftsman-*bricoleur* is Martino Gamper, the Italian designer based in London, who owes his fame to the project *100 Chairs in 100 Days 100 and Its Ways* (Gamper and Abake, 2007), started in 2005. He has specialized in the reuse of discarded materials. He collected 100 abandoned and broken chairs and disassembled them in order to make them functional again, reassembled in new combinations. The experience was narrated in a book of the same title. His main resources are reinterpreting the old objects, deconstructing them, regrouping them into new compositions giving rise to a new kind of humanism that turns waste into resources.

Recovery and reinvention are the main talents of the craftsman-*bricoleur*, who deconstructs, cuts, merges, or simply shifts the sense of a thing or a substance using it in an unexpected way; restores the life of objects re-contextualizing them, redefining "things" starting from the production process, their expressive language, their functional value and the way that they will maintain or renew their way of life. Another example of DIY Craft is Recession Design. The group that presented itself in 2009 and 2010 at *Fuori Salone* in Milan with a provocative exhibition on "Design – Do It Yourself, for a design process that goes beyond the trend of the moment and once again focuses on the essential form and function". The idea around which the project Recession Design was born was that now the economic crisis can become an opportunity for critical reflection on the world of contemporary design. Recession Design is also the name of a collection of objects created with materials available in any hardware shop and processed and assembled with commonly used tools and equipment (drill, electric saw, screwdriver, etc.). With a clean but not trivial, essential but not poor design, we can see from objects, how good design can also generate quality design from materials and tools that are simple and easy to find.

Technological Craft

Another line of research is technological craft, a research methodology based on an experimental approach to the use of techniques, which show the need to regain possession of handcrafting as a tool of design, of the manufacturing processes, of the capacity of managing the various stages of construction and characterization of the objects, which have become increasingly sophisticated in the industry. By rediscovering the manual qualities, it helps to change the perspective of a process, which is nowadays, quite often limited only to a digital form. The technological craft manifests a willingness to reflect on the meaning of design by doing, a need to experience the expressive dimension of new technologies and materials, demonstrating that the problem is not returning to a handmade form but being aware of how handcrafting stimulates the creative process.

In such a design process the experimentation process becomes more important than the final result, since it is considered a path to knowledge because it consists in a process of trial and error that tries and tests the materials and their potential, uses industrial techniques in an artisan-like way and often intervenes reinventing the manufacturing process.

Along the way, the attempts to contribute to the development of skills become important milestones. The fact that one is not constrained to proceed without precise objectives or predefined purposes or products, helps to clear the mind.

Discoveries are often lucky strikes, and along the way it is possible to discover something unexpected and remarkable: this is what gives meaning to the passion of the artisan, in a similar manner of how it happens in scientific laboratories, more often than not.

The technological craftsman knows how to use technologically advanced machines, which sometimes can be rented by the hour or are available in their own laboratory. S/he knows and manages all stages of the process, from concept to commercialization of the products made. Process and product rely upon the same person, the creative lives with the worker, with the researcher.

There are many examples of design that fall into this mode of thought and action. It ranges from the Italian Massimiliano Adami who developed in *Modern Fossils* a production process that includes both the attitude of a *bricoleur* and a feeling of an artistic nature, but who demonstrates a particular capacity for technical invention; to the Israelis as Yaron Elyasi, Tal Gur and Erzi Tarazi who are experimenting in a free way production processes, open up the industrial technologies to technical inventions of great interest; to the Belgians Jo Meesters & Jens Praest that have developed alternative materials made from paper waste, and to the young designers from all over the world who have participated in the contest "*The Intelligent Hand*", summoned by Design boom, which

[9] There are different technologies that are grouped under the name of rapid manufacturing; from rapid prototyping (3D printing) to CNC milling, to laser-cutting with a water jet, etc. Initially, these technologies were used for (rapid) prototyping exclusively, today thanks to lower costs, they are also being used for production. It is possible to buy a professional 3D printer for under 10,000€ and there are in the market now many low-cost printers starting from € 500, which are not yet suitable for industrial production but that have the potential to revolutionize the production system.

had had as its central theme the renewed interest in the phenomenon of production that calls for a union of the hands with the mind, manual ability and critical thought. In these cases, the self-produced design itself retrieves the craftsmanship and it re-proposes it with an added value: reunification of the creative process with the construction process, of the manual ability with the design culture, the designer puts his hands and mind in the process of production and reinvents the established techniques, experimenting with those that are innovative, hybridizing traditional materials and innovative materials, and while interpreting the changes s/he is open to new forms of expression, and is, thus able to project forward the techno-design culture.

Electronic Crafts

The third line of research is the electronic craft, an activity that combines the traditional handcraft attitude with experiments that test the potential of information and digital technologies. The latter, after having influenced the design process, is beginning to characterize the physical realization of the objects, freeing it from its many limitations and opening up the design process to non-conventional areas, which are useful to social creativity. The rapid manufacturing technologies[10] have planted the seed of a potential revolution in the methods and systems of manufacturing. They offer some important advantages: formal freedom to allow the designer to become a "digital sculptor"; the possibility of producing either unique items or small series of products, with reasonable construction costs especially for small-scale productions, the lowering of the costs of access to production. These advantages translate into opportunities for formal, expressive and social meaning of the design process.

Nowadays, the potentialities of rapid manufacturing go beyond the mere impact on production. In fact, according to the thesis of Neil Gershenfeld, a brilliant professor of the famous Massachusetts Institute of Technology, personal computers will soon be joined by a *personal fabricator*. The access to the tools of creativity is becoming a social prerogative. These can stimulate the creation of productive activities either individual or collective, with the possibility of producing almost anything, depending on individual needs, without necessarily having to resort to normal commercial channels of mass production. It is being prefigured the prospect of democratizing mass creativity and mass customization[11], which opens up to new modes of production and new business ideas, and why not, even to new economies. With the integration of ICT technologies, with those of rapid prototyping, allowing you to print a 3D physical object from a digital model, the projects can be downloaded from the network and then "made at home," individually, with a home printer. One can also imagine that when objects are no longer useful, they could be reused in the manufacture of new ones.

The digital design is a standard file that can be spread through the network to be shared. This also applies to creations in the field of digital music and art, but also 3D projects "to feed" the "digital fabricators". Also with the digital applications, conveyed from the Internet websites, it is possible for any interested user to manipulate the data file modifying the object to fit one's taste.

The computer and digital technologies offer a space for experimentation that was previously unknown both in the virtual and "material" worlds which give consumers the opportunity to become protagonists of the process of product innovation. Pioneers of this vision were Jochen Gros, a professor at the Hochschule für Gestaltung in Offenbach am Main and the designer Friedrich Sulzer whom at the end of the nineties developed tools to facilitate the so-called "democratization of design". They have created a network of over 50 technical drawing construction details, such as joints and fixtures for timber structures, templates and building plans for furniture. Everything is in a digital version you can download, customize and use to produce by yourself using CNC technologies. Their project pointed to a possible path towards a total change of the design system, the production and the distribution that ensures the products" quality, diversity and innovation.

Oriented towards this strategy of development of the design process many services have been developed such as those offered by 100K Garages[12], Ponoko[13], Flexible Stream, and Cuuso , all of them, through a virtual space, exploit the potential of Web 2.0 and act as facilitators of social creativity with the "desktop manufacturing" . Other related phenomenon is the Maker Fair, the exhibition of hardware garage inventors (mainly based in the U.S.), the proliferation of Fablabs which can produce unique pieces that include intelligent systems and open hardware.

An interesting project that allows to broaden the debate on the potential of digital technologies and the relationship with the crafts is *L'Artisan Electronique* by Studio Unfold and Tim Knapen, which is produced by the Belgian contemporary art gallery Z33 and embraces the possibili-

[10] Many companies are turning in this direction, especially in the fashion and automotive industries, but not all offer the same type of customization. Currently it is possible to choose the colour of a shirt, to engrave a name on a watch, or to make a change in an item of clothing. The NIKEiD website allows you to change the colour of a shoe, to choose the materials and put a line of text to be embroidered on it. Freitag's site lets you choose the fabric and the model of the bag. Such experiments are interesting; however, they do not fully utilize the whole potential of mass customization.

[11] Fluid Forms is a group of designers based in Graz (Austria) who call themselves creative covers. Once they have identified a project to goes into production, Fluid Forms programs an application that allows you to manipulate the form by assigning values to variables. These variables can be geographic coordinates, dates, strings, or many more depending on how the algorithm describing the three-dimensional object is defined. Earth bowl pinstripe is, for example, a bowl, but also the prospect of a three-dimensional topographical location of a site. Through Google maps, the online application developed by Fluid Forms allows you to select a geographic area at will and its form will be converted into the form of an object. In this way, it is possible to reproduce in a piece of wood the aerial view of a city, or any other place. The user becomes a co-creator of the object through the definition of the form that will be produced. What Fluid Forms has designed is not an object, but a number of possible solutions. We no longer speak of design stricto sensu, but of design-space and design-tools. The design-tools by Fluid Forms are simplified 3D CAD programs that can be used by anyone.

[12] 100K garages is a workshop community with digital fabrication tools for cutting, drilling, carving and fabricating machine-made precision parts for your projects or products in all types of materials.

[13] Ponoko is a New Zealand project, a personal manufacturing platform, a virtual space for a community of creators, consumers, producers and other related services that use the Internet as a place to co-design, manufacture and sell individual ideas that become products.

ties of new digital technologies, designs the expansion of the horizons of single instruments by intervening in the relationship that is currently short-ranged between design and production of objects using rapid prototyping. Studio Unfold has created a system that combines the design in digital form with the manual process of forms modeling. It has created a new intelligent system that customizes a RepRap 3D printer that builds forms section by section from a clay paste, based on the input received from a connected computer, and has integrated it with a 3D scanner that can read optically and in turn transform into digital information readable by the system the user's hand gestures which in turn can be projected on the virtual model in order to alter it or shape it. Unfold thus has increased the possibilities given by open source software already guaranteed by the design file in digital form, hybridizing it with the manual process of forms modeling.

In this way the design can benefit of the potentialities of form control allowed by the software, without being influenced by the language of the machine enabling to add the touch of the hand that is imprinted on the physical matter in the design process.

The horizons of digital age tools become increasingly wide and with them the idea of open cultures[14] (open source, open data, open software, open hardware, etc.) that have reached beyond the boundaries of subcultures activists. Moreover in the digital world, we live in a"permanent beta version"[15]. The products are by definition incomplete because they have no sense without the intervention of the user, who refines the product through the use.

It is the law of Open Source, of the world of video games, of social networks, of YouTube, where there is no distinction between those who design and produce, and those who use it.

So, the self-produced design questions the potential of technology and its relationship with the anthropological aspects to meet the demands of a society looking for complex qualities.

The profound change of work, business management, production and consumption determined by the developments in information technology, give design tools for total management, including management of production and distribution. Self-production can give rise to a business model that regards the overcoming of the Fordist model and is particularly suited to the advantages of a flexible network production model.

Guidelines and perspectives

Self-production is characterizing the post-Fordist transition, which by definition is flexible; it adapts to the opportunities offered by ICT, the tools of the new economy, and fosters networks of relationships between companies and other actors. In times like these, when it is evident the crisis of the Fordist industrial system that puts companies in turmoil and seriously endangers the existence of small and medium-sized enterprises, self-production seems to chart a new opportunity to reposition production at the focus of economic activities, social actors should participate in the transition towards sustainable development.

Intellectuals like Richard Sennett (2008), the American sociologist who has researched widely on the changes taking place in the capitalist system, agrees and proposes that the craft is a way to counter the current system based on global finance, which like a castle of cards, is collapsing, producing one of the worst crisis that industrial society has ever lived. As an alternative to the current model of flexible capitalism, Richard Sennett proposes a new model that promotes the skills and their development through collaboration, which can counteract and balance the effects of the outsourcing of both intellectual and productive productions, which moves to territories where the cost of labor is cheap.

In this framework and anticipating a reorganization of the relationship between industry, craft and design culture; design can play an important role due to its communication and interpersonal skills. Particularly, the phenomenon of self-production that is "invading" the territory of typical craft stimulating a more intense relationship between designers and craftsmen, can be beneficial in ambivalent ways to the mass of young designers who come from schools with a strong desire to express themselves and to promote their talent, which often clashes with the difficulty of obtaining assignments from the industry. For the craftsmen, the activities that derive from the relationship with young designers can give a boost of vitality and creative energy, as well as new ideas and strategies to be implemented.

The phenomenon can trigger a reassessment and potential transformation of the crafts trade, making it a type of work more appealing to young people, more relevant to contemporary culture, able to communicate with designers and industry, to convey local knowledge within of a global culture and to push products in global markets.

In this perspective there are three elements, in my opinion, on which to focus to make craftsmanship progress to an advanced dimension.

New technologies

The construction of a more contemporary relationship between craft enterprises and the market will need to go through the use of the new production and communication technologies. Tools such as CAD, rapid manu-

[14] Open source is an established phenomenon in the field of software and Web applications. It guarantees the possibility of further development of the adopted solutions and it allows their free circulation.

[15] "To grasp the meaning of this term it is necessary to retrace the steps that lead to the creation of a program. When the application is still new and not fully it is called "alpha" version. When it is refined and it must be tested before being put into production and sold, one or many of these Beta versions are "tested" by a group of volunteers. As the release date comes closer, the candidate release is prepared to become the final release version, and then the software becomes gold, like the colour of the CDs that are used as the master to be then, copied in large quantities. The consolidation of the Internet as a technological platform for the distribution of content allowed altering radically the way applications are created and distributed. Google, for example, develops applications that are typical of the Web 2.0, and this is a fine example of "permanent beta". The software is accessible online and is constantly being improved although they don't offer any guarantees of usability to the users who can have it for free, as a model of the company's innovation" (Dini, s.d.).

facturing technologies management software and ITC are necessarily part of the skills that any contemporary craftsman must master, just like the art of the own trade.

The ITC technologies allow participating in the division of creative labor that in a local scale is being organized towards becoming global. In the past, the sharing of information took place through the transportation of physical products/prototypes; today this is done through digital files. The craftsman must be able to combine his dexterity with the ability to use digital tools. S/he must be able to experiment with new forms and new languages with technology, to interpret the changes in the crafts, techniques and expressions while maintaining the particular character of the craft to create a dialogue between the past and the future.

Communication

The international markets increasingly demand for communicative quality across many economic sectors ranging from luxury products to food products, such as the Slow Food movement, that is so much in fashion at the international level. It is not as easy as showing an evocative authenticity in the press releases, rather it has to be certified through a qualitative difference that the user can perceive. In craft, a certain quality comes from the fact that there are people behind the product who, through their passion and skill give a soul to it. These skills can also, depend on the ability that was acquired from a know-how embedded local cultures and the territories where it is produced. It is necessary to develop communication devices that are able to tell the story, using the appropriate communication codes, of the added value that is naturally present in craft. Only by mixing correctly the local and the global elements a craft product will be suitable to be placed in global markets.

New educational paths

I believe that today the relationship between design and some type of craft is essential to combine the energies for the creation and development of a new educational project. Industry and mass production will continue to grow globally, but the quality of the relationship between the thought and the experience of the designer along with the manual experience of a craftsman that is willing to listen can help to improve the quality of products.

While the new creative professions (design, communication, etc...) get a considerable attention from younger generations, the craftsman trade is relegated to a world considered antique and obsolete, not in line with the preferences of young people. To change this perspective, it is important to update and upgrade the existing learning paths of craft with the aim of emphasizing its innovative dimension. This is possible by pairing it with design and communication. It is striking to observe, for example, that in the world's most important design schools give much value to the teaching of handcraft techniques. It is a pity that in Italy, although the country has a rich handicraft heritage this not embedded into educational fields that are attractive for young people.

Education today, is in a moment of extreme difficulty (for political and economic reasons), should ask not only how can you transfer knowledge but how to develop skills. It should seize the opportunity to change and develop a new world of work that places an emphasis on the work itself, on production, on the intimate bond between the company's profits and the work of those who produce it, stimulating a more social and sociable capitalism, more oriented towards the capacities of the workers, based on the needs and the personal development of workers towards a sustainable economy.

Conclusion

The self-produced design as a form of response to the crisis of the working world, that young designers face, represents also a potential for countries like Italy and many other Mediterranean countries whose strength lies in their technical and manual abilities as well as in the flexibility of the small businesses and craft shops that make up the dense productive system. This fact can only happen if it becomes a phenomenon of its own social-economic importance; but something that has not happened yet. The possible evolution scenario of current events concerns the "advanced" crafts through the transformation through the use of design, into a hotbed of innovation for the industry, according to a view that is similar to the concept of *"New Crafts"* made by Andrea Branzi (1984). A "slow" dimension that allows the designer to experiment and develop research themes that otherwise, if executed inside the industry, would be very difficult to develop and that operates from a perspective of craft that does not engage ideologically in conflict with traditional design of the industrial product. The craft dimension is for the designer-entrepreneur a metaphor, a metaphor just to put aside for a moment the term "design" since it carries an aesthetic surplus meaning that does not fit in the interests and social objectives of the project. The designer is the ideal partner of craft that enhances the integration between the production and conceptual phases through the concept of experimental research, and directs the technical knowledge towards innovation.

References

GAMPER, M.; ABAKE (eds.). 2007. *100 Chairs in 100 Days in 100 Ways*. London. The Aram Gallery, 100 p.

BRANZI, A. 1984. *La casa calda. Esperienze del Nuovo Design Italiano*. Milano, Idea Books Edizioni, 156 p.

BURCKHART, L. 1994. Una soluzione per superare la crisi. *Domus*, **757**:86-87.

DINI, A. [.s.d.]. Beta permanente. *Il Sole 24 Ore*. Available at: www.ilsole24ore.com/art/SoleOnLine4/100-parole/Tecnologia/B/Beta-permanente.shtml?uuid=ba494740-8aec-11dd-953b-4eca81469376&DocRulesView=Libero. Accessed on: May 23, 2011.

FERRARA, M. 2008a. Il lusso, l'arte il design. *Design Review*, **1**(1):4

FERRARA, M.; FINOCCHIO, G. 2008. *Palermo Design week 2007*. Catalogo dell'evento, Palermo, ICOD.

FERRARA, M. 2001. Produzione, autopromozione, autoproduzione. *In:* V. PASCA; V. TRAPANI (eds.), *Scenari del giovane design. Idee e progetti dall'Europa e dal mondo*. Milan, Lupetti, p. 253-275.

MAFFEI, S.; ZURLO, F. 2001. La contemporaneità difficile – riflessioni sul giovane design italiano. *In:* V. PASCA; V. TRAPANI (ed.), *Scenari del giovane design. Idee e progetti dall'Europa e dal mondo.* Milano, Lupetti, p. 169-184.

PASCA,V. 2001. Premessa. *In:* V. PASCA; V. TRAPANI (ed.), *Scenari del giovane design. Idee e progetti dall'Europa e dal mondo.* Milano, Lupetti, p. 8-24.

RAMAKER, R. 1998. Un nuovo tipo di consumatore. *Domus*, **800**:72-77.

ROZENBERG, E. 2009. Attitudine sperimentale. *In*: M. FERRARA; S. LUCIBELLO, *Design follows Materials*. Firenze, Alinea.

SENNETT, R. 2008. *L'uomo artigiano.* Milano, Feltrinelli, 320 p.

SOMMARIVA, E. 2010. Raccontare gli oggetti e il mestieredel designer. *Domus online*. Available at: http://www.domusweb.it/it/design/raccontare-gli-oggetti-e-il-mestiere-del-designer/. Accessed on: May 23, 2011.

Submitted on August 12, 2010.
Accepted on December 10, 2010.