Digital fashion: seduction or innovation?[1]

Silvia Mazzucotelli Salice

ModaCult, Università Cattolica del Sacro Cuore, Italy

silvia.mazzucotelli@unicatt.it

Carla Lunghi

ModaCult, Università Cattolica del Sacro Cuore, Italy

carla.lunghi@unicatt.it

Abstract

This paper aims to initiate a critical reflection on the relationship between fashion and new technologies. In fashion studies and in the sociology of the fashion a body of work is currently developing around the concept of digital fashion. Fashion scholars argue that a new trend is emerging - open, democratic, shared and hyper-technological - able to transform the canons of taste, costume and design.

The vast majority of the literature on digitization has focused on the fact the fashion companies suffer, and partly incorporate, the seduction typical of digital aesthetics. Social networks and blogs have enhanced the way through which fashion brands communicate their imaginary: from their website to online streaming fashion show, from apps to online showroom.

In this paper we show the relevance of theories of digitization to an understanding of the contemporary field of fashion design. Digital has in fact also entered the world of production overturning the rules and conventions of one of the sacred places of creation, the atelier. Digital fabrication, based on open design, 3D prints, digital laser cutting and engraving, has transformed creative and productive phases, developing a concept of popular crafts, re-contextualized and enhanced.

In particular, and through a discussion of cases of collaborative fashion production, we focus on the idea of digitization as articulated through collaboration. Designers, stylists, tailors, costume designers meet online to share their creativity and their knowledge and thereby contribute both to the creation of a shared collection and to the public dissemination of sketches and patterns. The future of fashion is, therefore, a digital present that is transforming the Web from a simple communication tool to democratic sharing platform. The concept of collaborative production, we argue, allows us to capture the deeply intertwined nature of fashion and digital media and moreover allows design system to foster a more ethical and sustainable fashion because they shorten the supply chain, encourage direct knowledge of the protagonists and facilitate the use of local resources.

1. Introduction: the seduction of the digital aesthetic

When online technologies once emerged they changed the way of doing business in every industry forever. Their successful presence can be observed even in the apparel sector insomuch as that adaptation of the fashion industry to the digital market is more a fact than a new announcement.

In recent years, the digital turn within the apparel industry resulted in new e-commerce platforms that take advantage of the Internet to expand their distribution network and reach larger sections of consumers. According to the Euromonitor, online fashion retailing is flourishing nowadays. Its global growth in 2011 is reported to be 10%. Even apparel companies that do not consider the Internet as their main retailing channel try hard to establish their online presence (Shang et al., 2005). They are motivated by the notion that the Internet is a powerful tool for building relationships with customers. Burberry, for example, shows a determination to seize the opportunities of the new media not only creating online experiences that are in line with those of the physical store, but also trying to gather valuable information through social media, permeating every initiative around the end user.

One of the most interesting cases along this line is the one of British fashion company Burberry. In 2009 the brand launched a website, *The Art of the Trench*[2], showing everyday people wearing Burberry trench coats and thus individual styles from around the globe. The project is still alive and the company continues inviting photographers and trench coat owners to participate submitting pictures taken all-over the world and sharing and commenting on photos. The site also offers information about the history of the Burberry trench coat, showing vintage models from 1910 and moving through the decades with pictures, videos and ads. With this combination of curated and crowd-sourced content the site clearly shows a concrete impact of digital online technologies within the fashion industries: more precisely it shows how the Internet gave rise to new business processes such as online marketing, digital retail and in a more narrow sense to online branding (Crewe, 2013).

However what is revolutionary is not the establishment of the digital channel as a further mean of distribution or communication. The idea that Internet opened up for every brand new ways to relate to their customer is not new at all and the impact of digitally mediated communications technologies on the fashion sector has been largely studied (Crewe, 2013; Rocamora 2011; Bartlett, Cole and Rocamora, 2013). What is interesting is rather the fact that the democratization and miniaturization of ICT & production technologies are reorganizing manufacturing activities: tradition fashion design and production modes are developing around micro and crowd-sourced forms of production ranging from

---

[2] Cfr. http://artofthetrench.burberry.com, last access on October 2014.

mall personal enterprises - micro and indie capitalism (Manzini, 2011; Nussbaum, 2012) - that make unique products in mini-series (tailor-made) to online collaborative networks of designers who blend the values of traditional craftsmanship with the logic of advanced production (Bianchini and Maffei, 2012). Furthermore what is interesting is the fact that traditional fashion brands don't seem exempt from the digital turn but rather they seem seduced by the opportunities digitization can offer to traditional couture.

The increasing presence for fashion brands online, the rising of multi-channels retail and the emergence of a wide variety of tools and methods to manufacture fabrics and producing apparel digitally gives rise to a call for scientific studies aiming to investigate the interplay between digital technology and couture.

In order to advance possible interpretation of the digital turn in fashion the paper is structured in the following way. The next paragraph explores the concept of digital fashion enlightening its possible meanings. The third paragraph focuses on the methodological framework of the research by describing and justifying the choice of Italy as point of observation as well as the methods of gathering and analysing the data. The forth paragraph presents results regarding the observations of digital fashion production in the Italian context. It sheds light on the various ways of implementing digital fabrication and design. The last paragraph presents general conclusions and reflections regarding the findings, theoretical and practical implications of the research and possible directions for future studies.

2. Digital Fashion multiple meanings

The transition from the analogue to the digital world is creating new business models and changing the value chains upon which they depend. It is transforming the distribution of content and supplies whilst cutting the costs of production and distribution. While all this is most evident in the content-based industries of software, games, music, television, radio and film it has equally profound, if less obvious, consequences for creative sectors such as architecture, design, advertising and, of course, fashion[3].

The term digital fashion, in fact, has made its entry in the vocabulary of fashion professionals for some time: fashion schools have introduced in their curriculum courses devoted to digital technologies opportunities, the most influential fashion magazines have developed an online channel, fashion

---

[3] Cfr. *DCMS*, 2008, *Creative Britain: New Talents for the New Economy*, DCMS, BIS, London.

houses adopted the strategy of online streaming for the enhancement of their shows and so on. However, academic reflection on digital fashion has started recently and critical analysis of the impact of new media technologies on the fashion sector remains largely limited to marketing studies (See, among others, Kim and Kim, 2004; Porter, 2001). An investigation of its broader theoretical implications seems necessary.

What, then, does the label "digital fashion" mean? How are digital technologies structuring our experience of fashion? How do fashion practices - of production, distribution or consumption - are articulated through digital technologies, and, more crucially, are dependent on the digital technologies for their articulation? Are digital technologies transforming the conventions of the fashion world? And, if yes, how?

Digital fashion is a distinctive way to manufacture fabrics and bridge personal and digital realms to reach customers using technologies via desktops and smartphones. Digital has already had a significant impact on the speed and access we have to fashion, from blogging and live streaming video, to online shopping for the latest style for our real or our avatar selves. Technology and fashion are now converging: from the way we capture data about people, their body shapes and style choices to the way we design, manufacture and shop.

The paper identifies three lenses through which we can interpret how Internet, and digital technologies more broadly, are impacting on the fashion sector: a) emergent digitally mediated communication practices are transforming institutional fashion media giving rise to blogging, social media, online corporate magazine and, more in general, user-generated content websites; b) digital technologies are innovating the retail experience turning digital screens into shop windows; c) new digital forms of production are giving rise to a new industrial model cantered on start-up, digital craftsmanship and on-demand & tailor-made production as an alternative to large-scale production.

The next few pages are devoted to these three lenses. The goal is to look at the impact of digital technology from these three points of view, map their main connotations and reconstruct the horizon of meaning within which we move as we say "digital fashion".

2.1. Conventional digital fashion connotations: from e-commerce to social media communication

As already said in the previous pages, at first digital fashion deals with retail and communication. The accessibility of the Internet, in fact, has truly revolutionized the way that organizations, especially that

of e-commerce, operate.

When it comes to fashion, it is important to say that online fashion retailing was considered to be an unsuccessful business until recent years: traditional shopping experience in physical shops and boutiques, engaging all human senses (Kim and Kim, 2004), was considered to be hardly conquerable by online shopping (Rettori, 2010).

However, in recent years e-commerce within the fashion sector increased: on the one hand the number of website dedicated to fashion spread; on the other hand online transactions boomed. In Italy, for example, the number of online fashion buyers is growing fast. According to the latest research conducted by Netcomm, the Italian Association of Electronic Commerce in collaboration with Human Highway, Italian e-shopper who bought fashion items online in 2013 are 47.7% of the universe of Internet users, 13.8 million individuals, 4.8 millions more compared to total amount of e-shoppers registered in 2012[4].

Marketing researcher identified different factors that create a positive experience of online fashion shopping: useful tools toward the creation of an hedonic experience able to replicate and amplify traditional shopping practice range from product viewing to existence of advice and information about the products (McCormick and Livett, 2012).

"Style advice" is the most important part of *aesthetic fashion information*. It creates emotional involvement, provides inspiration and hedonic experience (Magrath and McCormick, 2013). Given the high impact on the bottom line by this category, online retailers are now vying to increase and retain their customers, engaging with them at a non-transactional level. At a very first level special styles aggregators, such as Modist[5] for example, should be mentioned. They can be incorporated in retailers' websites to suggest look, ideas, and inspiration, to consumers as they shop, taking off from editorials, advertising images and info collected from assorted websites. Visual information gives consumers ideas on how to wear a piece and where it has been featured and retailers can engage with clients in-store with an iPad app or include curated content within their e-commerce site. A second topic related to the fact that brands are adding a personal shopping service to their e-commerce through digital platforms characterized by the ability to interact with a personal shopper and provide personalized advice from stylists. Shoppers and stylists, usually selected by the brand, advise clients

---

[4] See more online at:http://www.ipresslive.it/comunicates/1190/digital-fashion-lecommerce-e-sempre-piu-di-moda#sthash.q1QJoPzT.dpuf, last access October 2014.
[5] Modist.co is a new and intuitive tool to engage with fashion consumers - both online and face to face. It presents marketing, editorial and social content to consumers as they shop.

and at the same send feedbacks to fashion brands about consumers' choices and expectations. Sartorias[6], for example, is an Italian platform incorporable to any e-commerce websites allowing fashion houses to offer their customers personalized recommendations outfit and to assist them in person, suggesting the most suitable products for their needs, as they normally would do in the showroom. Finally other websites selling apparel are choosing size-recommendation plugins. Instead of showing the customers a size chart and asking them to use a measuring tape to take their own measurements, size-recommendation plugins, such ad MeasureMe[7], captures the measurements from an image and, thus, give customers back the correct size recommendation for most jackets and shirts in minutes and give a fit profile for the item, allowing customers to see what the fit would be like.

The examples mentioned above point out at least to considerations: first of all when it comes to digital fashion, retail and communication collide and merge; and, secondly, digital technologies are reframing the fashion world redefining what we understand as creation, production and consumption.

There are a number of means through which digital technologies have fostered the collision between the fields of retail and communication. Social media and digital branding magazines are among those. In recent years a considerable number of fashion brands made great efforts to create and maintain on the one hand their Facebook, Linked-in and Pinterest accounts and, on the other hand, their digital branding magazines. The reason beyond these efforts is linked to the fact that such tools enable fashion brands to convey their lifestyle rather than simply supply commodities. According to an interview to the founder of the fashion brand J. Linderberg reported on New York Times, the editorial content "indirectly gives texture to a brand, creates a feeling, an environment"[8]. Another advantage of digital content is that the companies can use it as a tool of direct communication with the customers.

The main idea behind these examples is not simply to sell products, but to think about building a relationship of trust and confidence with customers. Online presence, in fact, enables fashion brands to create a dialogue with their customers, to build relations and interactions and to become key active players of the process of fashion production. Nowadays, in fact, fashion consumers have a huge influence on fashion markets and are a key actor of the process of value creation itself (Crewe, 2013). Not simply, as already stated by Holt (2002), Internet has empowered fashion consumers, transforming them from recipients of brand messages into active players, but digital technologies and the easy and effortless access to data connection have enrolled the consumer in the production and dissemination of fashion.

And this takes us to second point. Social networking sites and retailing websites have enhanced and

---

[6] Cfr. http://www.sartorias.com/it/, last access October 2014.
[7] Cfr. http://www.doesitsuit.me/measureme.html, last access October 2014.
[8] Cfr. Pfeiffer, A., 2012. *Fashion and Style: The New York Times.* Available at: http://www.nytimes.com/2012/02/22/fashion/22iht-, last access October 2014.

enabled consumer involvement in fashion creation and reproduction thus redefining what we understand as creation, production and consumption of fashion items.

Some authors have labelled these phenomenon, recalling on disintermediatory effects of Internet on markets and consumption, as the premises of a more open, transparent, and democratic fashion system (Rocamora, 2011). However digital fashion it's not just about distributing or conveying fashion through the Internet but it is more about doing fashion through digital technologies and for the digital world. This requires a critical rethink about how the fashion system operates, what constitutes the producer and the consumers and which are the main features of the creation process. Such transformations are certainly more evident as we take into consideration the third interpretative lens of the digital turn in fashion: the transformations of the industrial model of production.

2.2. Innovative digital fashion approaches: digital fabrication and micro-production

When it comes to the third lens, explaining the digital turn become more complex because, as mentioned in the previous pages, emergent technologies are probing and perforating the boundaries between firms and consumers. More precisely they are enabling the disintermediation (or at least reconfiguration) of "trusted" fashion intermediaries and are reworking the relationships between production and consumption. Thus, to talk about digital fabrication of fashion apparel it is necessary to go back to point in which consumers started stepping into the process of fashion making.

The first and most fundamental area in which we talk about the fall of the boundaries between production and consumption is that of collaborative consumption (Belk, 2007 and 2010; Watson and Shove, 2008; Botsman and Rogers, 2010). The basic idea of collaborative consumption is that it consists of practical use of the assets, rather than possession of the goods, because people appreciate and want to enjoy the service that provides the good rather than the prestige or confirmation of status, or informative power provided by possession.

As showed by John, collaborative consumption is a movement, which conceives itself as forming part of sharing economy (see especially John, 2013b). The latter term has recently emerged as socio-economic category related to the context of crisis and the need to optimize resources in production, consumption and use of goods and services. In such a context sharing economy is the general expression with which we appoint the various collaborative activities that take place in what we broadly define an economic field. Different forms of sharing economy, therefore, consist of companies or public services providing, for profit or public policy, access to goods and services (mobility, workplace, housing etc.) assets, structured from below by individuals who share their

personal property. These initiatives are often organized and managed by web platforms providing the organizational infrastructure necessary for scaling.

In such a context Botsman and Rogers (2010) use the term sharing in reference to all the activities described through the prefix "co" (such as, for example, co-working and co-housing), to all forms of bartering and swapping and also to practices labelled by the prefix "crowd" and indicating activities of obtaining needed services, ideas, or content by soliciting contributions from a large group of people (crowdsourcing) or the process of funding projects by a multitude of people (crowdfunding).

Within the fashion field examples are blooming: from swapping to collaborative fashion platforms, such as Weardrobe[9] or Rentez-vous[10], that allow user to rent fashion apparels on a special marketplace where they are either able to lend out their own wardrobe and, on the other hand, to approach brand considered unreachable.

Besides swapping and collaborative fashion consumption websites, a number of other means have enrolled the consumer in the production of fashion through digital technologies. Two particular, and rather different, examples are drawn on here: crowding and making.

The first refer to communities of consumer–producers who together collaborate, share, remix, fine-tune, and redesign products and processes (crowdsourcing) or collect funds for future projects (crowdfunding) (Pais et al., 2014); the second, instead, indicates the evolution of digital crafts and do-it-yourself and refers to a production featured by digital fabrication, local production facilities and sharing of open source projects (Gauntlett, 2011; Micelli, 2011; Anderson, 2012).

Crowding and making are the areas that seem to carry with them a more interesting potential for transformation. They are the digital evolution of the so-called knowledge economy and include platforms that allow designers' encounter and collaboration. Especially in fashion and design - but also in the more advanced forms of engineering - crowding and making together contribute to the development of innovative projects: in many cases they assist in the design of new materials - often arising from up-cycling or reuse of used materials – new production machinery, technology or services.

In the fashion industry especially, crowdsourcing has become a prevalent digital tactic for brands.

---

[9] Cfr. www.weardrobe.com, last access October 2014.
[10] Cfr. http://rentez-vous.com, last access october 2014.

Coined by Journalist Jeff Howe in the 2006 Wired article *The Rise of Crowdsourcing*, crowdsourcing can be explained as the practice of companies making an open call to solve a problem, either through competition or collaboration. At its most basic level, crowdsourcing is allowing users to vote or give feedback. The fashion industry in particular has begun to utilize this tactic to turn to individuals outside the design team, in an effort to gain a better understanding of what consumers are looking for in a product. Furthermore, the fashion industry has enveloped the concept of crowdsourcing and utilized it as a platform to discover and offer aspiring designers, stylists and consumers with an opportunity to share their vision – and sometimes even be showcased[11].

Beside crowdsourcing, within the fashion system there appears to be growing talk of crowdfunding. The latter consists, first of all, in connecting emerging fashion designers to fashion enthusiasts by supporting them financially. Typical reward-based campaigns enable engaged community members to support a project by subscribing to a specific reward, and the funds are made available only in the event that the minimum project-funding goal is reached. Indeed, customers invest and finance designers' collections in return for exceptional and original pieces and an important return on investment. A direct relationship that lets fashion lovers the freedom to be the main actor of the future trends and is seen as a viable alternative to enable emerging fashion brands to access start up capital.

Finally digital craftsmanship is related to what the literature refers to as a designer-enterprise (Bianchini and Maffei, 2012), creative professionals who work on their own or in collaboration with others, taking care of the whole process, from design to material production itself, from commercialization to direct and online distribution (Gauntlett, 2011; Micelli 2011; Anderson, 2012). Digital craftsmanship links its potential development to forms of collective design such as crowdsourcing: professionals, bearers of different skills that combine their efforts to find their place in the market and win often by seeking them one by one, investors and customers.

In an industry famed for its opacity and secrecy, crowdsourcing, crowdfunding and making sought to prise open this closed world and saw the radical and progressive potential of transparency, free reveal, and fashion democracy. While the number of such platforms is increasing and so success stories that demonstrate the power of crowdfunding, crowdsourcing and making, the question is, can these models be successfully applied to fashion? Are these models transforming how the fashion system operates? Do they have the potential to become mainstream and, if yes, which could be the consequences?

---

[11] One of the earliest examples of crowdsourcing in the fashion industry was Threadless.com, a social networked fashion house launched in 2006 and that allows artists to submit t-shirt designs and have them voted into production by a community of followers.

3. The research object: premises and methodology

In order to provide data regarding the main characteristic of digital fabrication, empirical investigation focused on the perspective of various types of online fashion platforms providing tools toward innovative manufacturing techniques was conducted. The research design was implemented in accordance with the design of the survey "Sustainable practices of everyday life in the context of the crisis: toward the integration of work, consumption and participation" within which this research was incorporated and by means of qualitative, deductive approach articulated in ethnographic observations, non-standard interviews (personal and business life stories, privileged subject interview, etc.)[12] and case studies.

The decision to conduct a qualitative study was partly made for the reason of the novelty of the subject. There are no studies that directly address the digital fabrication. Thus, the research can be described as explorative and it is aimed to adumbrate the area and give an impulse to subsequent studies. Due to the explorative nature of the research, limitation of generalization harms the results of the study to a lesser degree. Moreover, qualitative approach allows being more flexible towards directions of the research, which is significant while studying a relatively new area (Silverman, 2000). It also enables to follow the process and ways of interpreting social reality by respondents (Becker, 1998), which is crucial for detecting differences within the wide field of digital fabrication. Deductive reasoning was employed in order to formulate research questions and design the study on the basis of the theoretical background.

The sampling includes selection of the Italian digital fashion platforms of crowdsourcing, crowdfunding, supply chain disintermediation, self-production and micro-production. Criteria for digital platforms selection were established before the observation. In general particular attention was dedicated to different degrees of internal structuring so to include within the research a wide range of practices, from the more informal ones to the more structured, which seems to be more similar to traditional fashion firms.

The observation is still on-going. At present overall, four digital fashion branding platforms were analysed: *Openwear*[13], a collaborative platform for fashion creation but also an online community where everyone can share values, access to knowledge and practice of collaborative and distributed work and where digital artisans, fashion producers, local small businesses, educational institutions can

---

[12] For a comprehensive analysis of life stories features and interview technique see, among others, Bichi (2002).
[13] Cfr. http://openwear.org, last access October 2014.

work together to create collections that anyone can download and customize; *Redo Factory*[14], a self-production project based in Rome and aimed to the creation of a sustainable, ethical and collective fashion brand; *Wowcracy*[15] a fashion crowdfunding platform where fashion designers and brands can test and showcase their upcoming collections and which aims at becoming a global meeting point of ideas, projects and fashion financing; *Wemake.cc*[16], a makers space based in Milan where digital artisans can make things and connect with people around 3d printing, laser-cutting, wearables and smart textiles.

3.1. Why Italy? Italian Fashion in-between old traditions and new approaches

In Italy, the production system of fashion has its roots in the first half of the twentieth century and matures during the post-war reconstruction, to be realized in its essential form in the seventies with the ready-to-wear. In those years, and in the following decades, this particular organizational and business model has innovated the processes of creation, production, distribution and communication of fashion (Bucci, Codeluppi, Ferraresi, 2011); moreover it has further evolved over time and to this day, experimenting moments of great success and others of crisis, without losing prestige and, above all, remaining a flagship of Made in Italy and an active voice in the balance of trade (Mazzucotelli and Medicina, 2011).

The current appearance of the Italian fashion system bears the traces of all phases of this fairly long process and shows a profile, which is widely recognized as peculiar to our country, together and limit resource of our model of industrialization. Like many other national manufacturing sectors, in fact, the fashion industry in Italy has developed thanks to small and medium size enterprises, often active in local districts strongly dedicated to textiles and apparels, where sometimes a larger or simply stronger (compared to the others) firm has played a catalytic role for human and economic resources. One of the main effects of this concentration was, in the opinion of many observers, the capitalization of collective knowledge - tacit knowledge and expertise - transmitted outside training institutions and circulated thanks to the density of social, familial and work relationships that the inhabitants of a certain territory normally maintain with each other in the course of daily life (Cavalli, 2009; Colaiacomo, 2006; Mazzucotelli and Medicina, 2011; Micelli 2011). The Italian fashion industry has, therefore, a complete chain, characterized by widespread tissue of small and medium enterprises, engaged in all the activities needed to create apparel items, from the processing of raw materials to packaging (Corbellini and Saviolo, 2004). Indeed, a thriving business sector of textile machinery

---

[14] Cfr. http://www.redo-factory.com, last access October 2014.
[15] Cfr. http://www.wowcracy.com, last access October 2014.
[16] Cfr. http://wemake.cc, last access October 2014.

makes the Italian textile-clothing industry one of the most comprehensive in the world (Continisio 2013).

This industrial structure isn't far from to the topic discussed in this article. The presence in the system and in an area of limited size, of all parts of the supply chain has historically made possible the coexistence of different work models (Mora 2009; Continisio 2013). In the past the industrial system and the craft one co-existed. They used to cooperate to the creation of the "made in Italy" whose success hanged on casual elegance, luxurious fabrics and exceptional craft manufacture. Such features, apparently recalling a traditional allure, mark out some of the most innovative and contemporary Italian fashion trends. Today, a new craftsmanship lives next to the fashion industry is that of small and knowledge intensive technology laboratories that use technology to launch innovative processes of production impacting on the traditional fashion system. The manufacturing ability deals with the digital turn, based on open design, 3D prints, digital laser cutting, transforming the creative and productive phases and developing a new meaning of crafts, based on local networks, short value chains and culture of sustainability.

4. Decoding Fashion: tales from Italian Fashion System

What at this point should be clear is that the easy access to the Internet, the rapid technological innovation and the availability of low-cost technologies are fostering an alteration of the typical language of fashion: consumers are empowered and entitled to vote fashion items into production; designers-makers have potential easier access to fashion financing; crowdfunding opens up for on-going fashion weeks and thus seems to potentially delete seasonality; fashion shows, as a consequence, appear to loose their role as springboards for new collections.

Though the above-mentioned transformation seems far from becoming mainstream, the need for a better understanding of the potential transformative rules introduced by digital fashion is increasing. In such a context the new language produced by the digitization of the fashion system need to be decoded or, in other words, converted into a form that traditional fashion actors and intermediaries can understand. Thus, how to which extent crowding and making in particular, and, more in general, digital tools are transforming the fashion system?

At a basic level, such models are a solution to a variety of barriers for new designers getting into the marketplace. As one of the interviewee said about crowdfunding:

>Wowcracy.com opens its doors to emerging designers who have brilliant ideas and are
>looking for financial support and visibility, giving them the opportunity to showcase their

talent to an audience of global fashion lovers: emerging talents will have to persuade them, turning them into supporters who will help them transform their creative project into a real business [Crowding_Interview1].

More specifically, while crowdsourcing can increase the visibility of young professionals among peers and established fashion brand, crowdfunding eliminates the pre-production barriers for emerging designers by allowing users to vote on the best handbag designs.

When you are participating in a crowdsourcing project, you are basically on the one side contributing to a collective result and, on the other side, branding yourself within the community of your peers [Crowding_Interview3]

In fashion, mainly in Italy, when it comes to young designers, public discourse is rather paternalistic. It is something people of the fashion world use to show upcoming novelties that in the end have nothing to do with the fashion world. In part it is true. But what little is said is that this is so because for a young designer the initial investment needed to see realized his or her collection is very high. Investments, at least in our country, are few and limited to actions aimed to increase the visibility of young fashion designers. There are no funds to put into production. You must become an entrepreneur yourself, and this is understandable, but the costs are very high. [Crowding_Interview2]

Moreover, as said by a young fashion designer who recently used a crowdfunding platform to raise funds to finance the first collection of her brand:

Having my collection displaced on wowcracy.com was a great opportunity to me: on the one side I had the chance to realize my collection, to promote it and to sell it. On the other side the fact that the presell of my collection was successful, that my funding goal was reached and, thus, that consumers appreciated my design, aroused the interest of a fashion firm which then hired me within their style department. [Crowding_Interview2]

A second sphere of plusses usually mentioned when it comes to digital fashion tools is that one of consumption. Consumers also gain advantages from digital tools cause the latters makes fashion inclusive and empowering. Instead of handing down mysteriously conceived designs from on high, crowdsourcing, crowdfunding and making are turning to the crowd to decide what to make, and how much of it.

Consumers can participate in the success of young designers, […] participating actively:

each designer, in fact, when outlining his/her idea and financial plan – which on wowocracy.com has to be achieved in 30/90 days – establishes also the reward that will go to those who wish to support their project. In other words: believing in the project of a young talent will mean, for instance, having the chance to wear clothes still not on sale. [Crowding_Interview1]

Opportunities are open also for fashion firms. Crowding, for example, give the community that revolves around the project the chance to have a preview of innovative and fresh ideas. Such a community can include also the apparel industry, which indeed is starting to explore how controlled crowdsourced design can be, and how much data can come out of it. One of the interviewee, active maker and contributor to a crowdsourcing platforms, affirms:

Crowdsourcing and crowdfunding can raise a new class of fashion businesses in which fashion firms know exactly what their consumers desire. Moreover, digital technologies in general give rise to new forms of data collection through which any brand can have a potential access to a clearer image of its clients. [Making_Interview2]

Another interesting point deal with sustainability. In this complex and articulated horizon, behaviors, which show an explicit willingness of individuals to take personal responsibility, seem to be growing (Watson and Shove 2008). In other words, social actors involved in such practices seem to be aware of meaning and consequences of their consumption practices.

Consumers help us line up supply and demand every single time. Crowdsourcing is the mechanism we use to let them tell us what to make. Without inventory piling up in a warehouse and wasteful marketing campaigns to convince clients to buy what we already made, there is tremendous efficiency. We pass that savings back to you. Unlike other brands that cut out the middleman but keep the savings, members of our community are getting boutique quality at true wholesale. [Making_Interview1]

Many users of online digital tools also aim to reduce the carbon footprints of production and consumption, and stimulate local economies, though these effects are, so far, more hypothetical than proved. In fact, while some designer call into question the radical value of reducing waste:

Digital technologies make possible to control production and to reduce waste. Basically they can assist any firm in minimizing the warehouse, or even in eliminating any stock […] and fashion firm realize only the items that have already been sold. [Crowding_Interview3]

Other interviewees highlight the opportunities for a more fast production that, far from reducing carbon footprints, aims at providing the market with further styles and different consumption stimuli.

> New technology makes it easier for designers to develop a large variety of prints making it the fastest production to distribute new fashion. This is something rarely mentioned. But as a matter of fact the digital turn incorporates productive and disruptive potentials. Are not the technologies per se but, as usual, is the use we make of technology. [Making_Interview2]

Luxury brand seem particularly aware of this and, as Dennis Valle from Versace said during Milan's Fashion Week in September 2014:

> The luxury brands will abandon the concept of inaccessibility: in an interconnected world, the real luxury will become the immediacy […] The trend will be more and more opportunities to sell from the very moment of fashion shows, as it happened for example for Versus[17].

The examples mentioned above show clearly that crowding and making are transforming the fashion system. Such a transformation, however, seems, so far, to impact more on the speed and on the democratization of fashion production rather than on the internal organization of the fashion making. Is fashion manufacturing changing or not?

Digital technologies are not simply offering new way of production but they entered the world of production overturning the rules and conventions of one of the sacred places of creation, the atelier. As one of the interviewee mentioned, the production process is becoming more and more intended as a collective action in a way that recalls traditional arts and crafts labs mentioned in the literature on artistic craftsmanship (Mazzucotelli and Medicina 2012):

> Although we produce fashion, we don't see ourselves working in an atelier. We call them lab or workshop. Those are spaces based on the mixture of technology and craftsmanship. Although it is clear that we, as protagonists of this new way of production, perceive ourselves more artisans than solo fashion designers. [Making_Interview2]

In such spaces, there is no real enterprise structure (Bianchini and Maffei 2012) and with the typical

---

[17] Cfr. http://www.vogue.it/magazine/notizie-del-giorno/2014/10/decoded-fashion-milano-e-pitti, last access October 2014.

factories of our stereotypes those examples seem to have little or nothing to do. However they have similarities with what the historian Giuseppe Berta defines as smart manufacturing factories, triggered by an effervescent mix of human capital and technology (Berta, 2014).

The adhesive of the whole is constituted by the high technological competence, but the materiality of the fashion item with its dense concreteness is also pivotal and for this reason digital fabrication is to all effects an industry in the most classic valence of the term.

> The products of crowding are intended for becoming real. Same results for item produced by makers in labs. In this sense digital fashion is first of all a clear example of manufacturing, in the very traditional meaning of the term. [Making_Interview1]

In such a context, digital fashion, based on open design, 3D prints, digital cutting and laser engraving, has transformed creative and productive phases of the fashion work, contributing to the elaboration of a new concept of crafts, re-contextualized and enhanced by which established fashion firms seem more and more seduced. However such a seduction seems still far from producing innovative transformation within the mainstream fashion manufacturing. Inclusion and exclusions of digital fashion practices from the realm of the traditional fashion firms is, in fact, a matter of art worlds conventions (Becker, 1982) or, to better say, of social considerations. As one the young designers pointed out:

> All these tools are useful to gain visibility. However those who decide weather or not you are talented enough to enter the fashion world sits on fashion magazines or styles department. Consumers 'attention can help arousing visibility, but they still have the last word. [Crowding_Interview2]

5. Conclusions

The given article provides an insight into producers' perspective regarding digital fashion, which was not previously known. Thus, the research offers new knowledge and insights on online fashion platforms. In particular it shows that in spite of the successful expansion of the fashion industry on the Internet there is still a gap between fashion designers exploiting the opportunities provided by online digital platforms and traditional fashion companies:

However atypical phenomena in the fashion world, or to say it with a traditional sociological term, "deviant practices", are multiplying and spreading in such a quantity that is difficult to even consider such activities uncommon rather than the representation of a an emerging pattern. What's happening

is not particularly new or hard to understand. These services simply represent another wave of consequences from the collapse of barriers to entry and the transfer of power to consumers produced by the digital revolution.

The invention of a new technique is always a factor of destabilization of the known systems. Initial rejection, which is indeed inevitable at the beginning, is usually followed, sooner or later, by a more or less rapid inclusion. Even in the case of digital fashion, the inclusion or exclusion are not guided by aesthetic issues or by languages more or less advanced but, once again, from purely social parameters. In the practices we have mentioned, there are cases of the opposite sign:

This back and forth between inclusion and exclusion is obvious. Moreover, for a new talented designer who financed his/her first collection through crowdfunding and then had the opportunity of presenting his/her collection in the most important fashion weeks there will always be thousands of fashion designers who will work in anonymity, in the folds of the digital world.

What is interesting however is not simply the total amount of innovative young fashion designers that enter the kingdom of Fashion with capital F. Rather, recalling Roland Barthes's view on fashion as a language (Barthes, 2006), what is interesting from a sociological point of view is that these platforms are out to change the way people think about clothing. The human use of clothing becomes an act of dressing both shaped by and shaping the shared system of how to dress (Barthes, 2006): in this case instead of something designed, created, and delivered to us by someone else, online digital production tool are allowing us to think about fashion as an area for great personal creativity and empowerment.

References

Anderson C., (2012), *Makers. The New Industrial Revolution,* Crown Business, New York.

Barthes R., (2006), *The language of fashion*, Power Publications, Sidney.

Bartlett D., Cole S., Rocamora A., (2013) *Fashion Media: Past and Present*, Bloomsbury, London.

Becker H., (1998), *Tricks of the Trade: How to Think about Your Research While You're Doing It*, University of Chicago Press, Chicago.

Becker H. S., (1982), *Art Worlds*, University of California Press, Berkley.

Belk R., (2007), *Why Not Share Rather than Own?*, in "Annals of the American Academy of Political and Social Science", Vol. 611, The Politics of Consumption/The Consumption of Politics, pp. 126-140.

Belk R., (2010), *Sharing*, in "Journal of Consumer Research", Vol. 36, n. 5, pp. 715-734.

Berta G., (2014), *Produzione intelligente. Un viaggio nelle nuove fabbriche*, Einaudi, Torino.

Bianchini, M., Maffei, S. (2012). "Could Design Leadership Be Personal? Forecasting New Forms of "Indie Capitalism", *Design Management Journal*, vol. 29, pp. 1-6.

Bichi R. (2002), *L'intervista biografica*, Vita e Pensiero, Milano.

Botsman R. and Rogers R., 2010, *What's mine is yours. The rise of collaborative consumption*, Harper Collins Publishers, New York.

Bucci A., V. Codeluppi V., Ferraresi M., (2011), *Il Made in Italy*, Carocci, Roma.

Cavalli A., (2009), *Moda*, in P. Colombo, con A. Cavalli e G. Lanotte (a cura di), *Mestieri d'arte e Made in Italy. Giacimenti culturali da riscoprire*, Marsilio, Venezia, pp. 259-297.

Colaiacomo P. (a cura di), (2006), *Fatto in Italia. La cultura del Made in Italy*, Meltemi, Roma, 2006.

Continisio C., (2013), *Sempre di moda. Per una storia dei mestieri d'arte nel sistema della moda italiana. Le origini*, in Colombo P. (a cura di), *Artefici di Bellezza. Mestieri d'arte nella moda*, Marsilio, Padova-Venezia, pp. 49-82.

Corbellini E., Saviolo S., (2004), *La scommessa del Made in Italy e il futuro della moda italiana*, Etas, Milano.

Crewe L., (2012), "When virtual and material worlds collide: democratic fashion in the digital age", Environment and Planning A 2013, vol. 45, pp. 760-780.

Gauntlett D., (2011), *Making is connecting*, Polity Press, Cambridge.

Holt D., (2002), "Why do brands cause trouble? A dialectical theory of consumer culture and branding", *Journal of Consumer Research*, vol. 29, pp. 70-90.

John N., (2013b), "Sharing, collaborative consumption and Web 2.0.", Media@LSE Electronic Working Paper #26, available online at
http://www.lse.ac.uk/media@lse/research/mediaWorkingPapers/pdf/EWP26-FINAL.pdf, last access October 2014.

Kaplan A, Haenlein M, (2010), "Users of the world unite: the challenges and opportunities of social media", Business Horizons, vol. 53(1), pp. 59-68.

Kim E, Nam D, Stimpert J, (2004), "The applicability of Porter's generic strategies in the digital age", *Journal of Management*, vol. 30, pp. 569-589.

Kim, E. Y. and Kim, Y.K., (2004), "Predicting online purchase intentions for clothing products", *European journal of Marketing,* vol. 38(7), pp. 883-897.

Magrath V., and McCormick H., (2013), "Marketing design elements of mobile fashion retail apps", *Journal of Fashion Marketing and Management,* vol. 17(1), pp. 115-134.

Manzini E., (2011), *SLOC, The Emerging Scenario of Small, Local, Open and Connected*, in S. Harding, ed., *Grow Small Think Beautiful*, Floris Books, Edinburgh.

Mazzucotelli Salice S., (2012), *Simbiosi: pratiche di collaborazione nella cultura urbana*, in Pedroni M., Volonté P. (a cura di), *Moda e Arte*, Franco Angeli, Milano, pp. 155-170.

Mazzucotelli Salice S., Emanuela M., (2013), *Il mestiere d'arte e la sua relazione con la moda*, in Colombo P. (a cura di), *Artefici di Bellezza. Mestieri d'arte nella moda*, Marsilio, Padova-Venezia, pp. 115-140.

Mazzucotelli Salice S., Medicina I., (2012), *I maestri del fare. Indagine socio-economica sulla domanda di mestieri d'arte a Milano*, Marsilio, Padova-Venezia.

McCormick H., Livett, C., (2012), "Analysing the influence of the presentation of fashion garments on young consumers' online behaviour", *Journal of Fashion Marketing and Management,*

vol. 16(1), pp. 21-41.

Micelli S., (2011), *Futuro artigiano. L'innovazione nelle mani degli italiani*, Marsilio, Venezia.

Mora E., (2009), *Fare moda. Esperienze di produzione e consumo in Italia*, Bruno Mondadori, Milano.

Nussabum B., (2011), *4 Reasons Why The Future Of Capitalism Is Homegrown, Small Scale, And Independent* in fastcodesign.com.

Pais I., Peretti P., Spinelli C., (2014), *Crowdfunding. La via collaborativa all'imprenditorialità*, Egea, Milano.

Porter M, (2001), "Strategy and the internet", *Harvard Business Review*, vol. March, p. 63-78

Rocamora A, (2011), "Personal fashion blogs: screens and mirrors in digital self-portraits", *Fashion Theory,* vol. 15, pp. 407-424.

Shang, R. A., Chen, Y. C. and Shen, L., (2005), "Extrinsic versus intrinsic motivations for consumers to shop on-line", *Information and Management,* vol. 42(3), pp. 401-413.

Silverman D., (2000), *Doing Qualitative Research. A Practical Handbook*, Sage Publications, London.

Watson M., Shove E., (2008), "Product, Competences, Project and Practice. DIY and the dynamics of craft consumption", in *Journal of Consumer Culture*, vol. 8(1), pp. 69-89.