

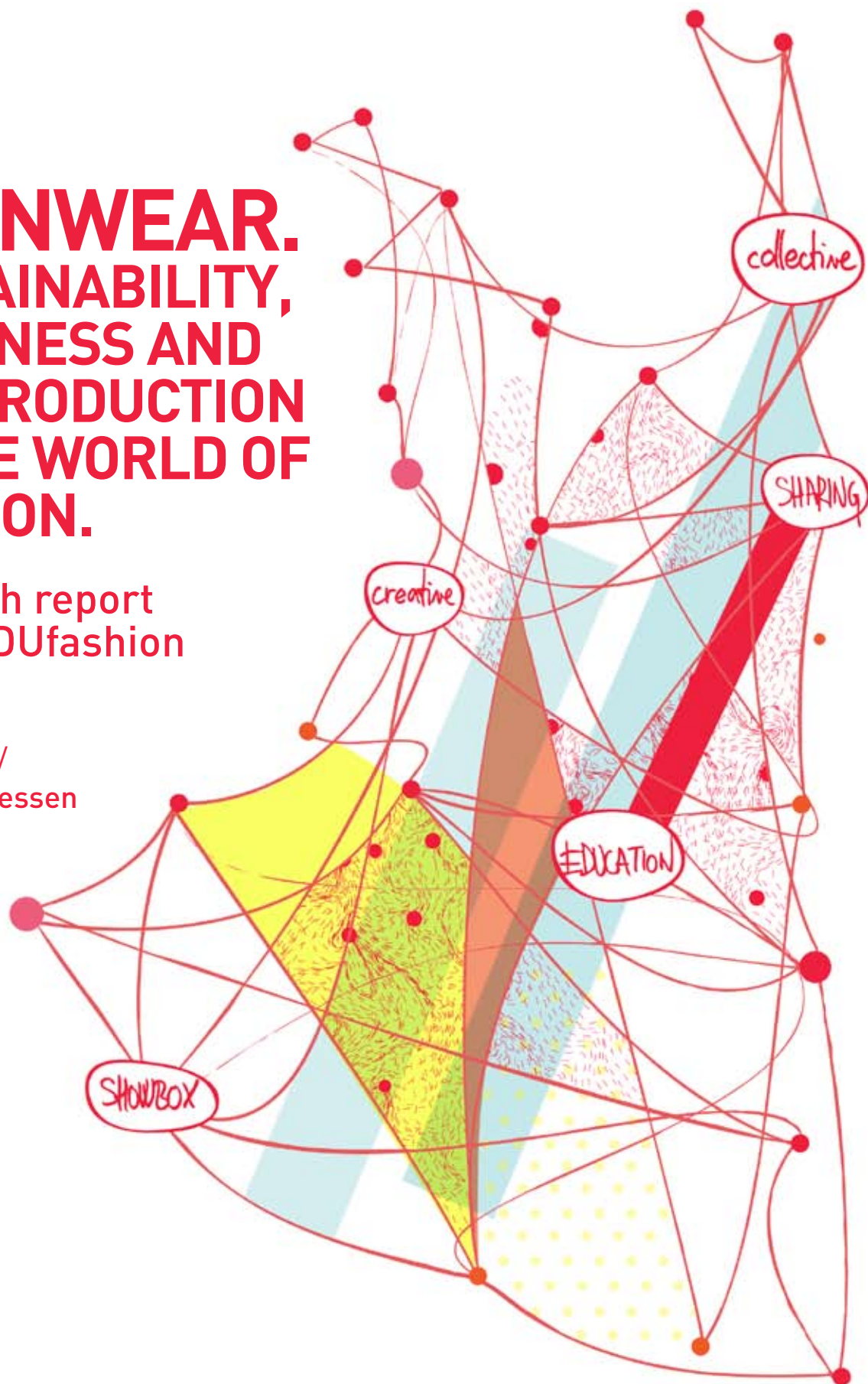
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OPENWEAR. SUSTAINABILITY, OPENNESS AND P2P PRODUCTION IN THE WORLD OF FASHION.

Research report
of the EDUfashion
project

Curated by /
Bertram Niessen



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Introduction and methodology

This e-book is based on the research reports produced during the first year of the EU financed project EDUfashion, a two-year project for the development of a collaborative platform for fashion creation and continuous education emphasizing skill-sharing and ethical branding.

In an age of discontinuity, fashion and its related universe are prisms through which many contemporary issues are being refracted. We are experiencing a twin trend diffusing across the fashion sector. On the one hand consumer demand is being increasingly oriented toward “ethical” fashion items, meaning no sweatshop, ecologically sustainable, locally produced, and fairly traded apparel. On the other side, we’re witnessing the emergence of self-organized employment focusing on independent, socially engaged, critical and multitasking creative production driven more by communal needs than market imperatives or consumer fads. We think that here lies a new perspective on fashion that can be translated into reality by exploring the forces that are behind these consumer and producer trends.

EDUfashion project’s main objective is to foster community, collaboration and innovation to provide a new vision and practice for fashion. Our main goal is to support the dissemination of knowledge, skills and practices so to empower a self-managed workforce, in order to create an alternative learning environment for sustainable garment crafting and selling. It will connect various individuals and groups, to enable them to act as small, sustainable enterprises, which will gather under a single open-source participatory brand whose benefits will be shared.

EDUfashion wants to rethink some crucial aspects of the worlds of fashion, material and immaterial production.

First of all, EDUfashion think at professional development as a triangular process between top-down permanent education and horizontal practices to meet the diverse needs of current production processes and know-hows.

Secondly, it wants to reframe corporate culture and consumerism for a new form of entrepreneurship: business as a way of achieving and sustaining social goals and not the opposite.

Thirdly, it stresses the importance to re-imagine branding tools and intellectual property in order to foster social bonding and redistribution of value instead of exploitation and accumulation of rent.

As fourth, it sees online community as a new public space where to share knowledges and skills, so to produce culture and wealth.

Then, it highlights the crucial role of material and immaterial production as venues to empowerment via multitasking without falling under the threat of precarity and unemployment.

Finally, it critically discusses patterns as the source codes of garments and copying as legitimate resource of the fashion industry.

The research tried to answer the main questions related to these new visions both from the theoretical and practical point of view: is the emergence of DIY production a rearrangement of previous social practices or is it something new?

What is ecological, economic and social sustainability related to fashion? How does the fashion system work from the point of view of global networks of production and consume, and is it possible to bring p2p production in that field?

This e-book is mainly based on literature analysis of a wide range of topics and fields, from the enquiries on creative economies (Landry and Bianchini 1994; McRobbie 2002; Florida 2004; Hall 2000; Pratt 2008) to the ones on fashion system (Breward and Gilbert 2006; Hauge 2006; Rantisi 2004) and on open source and peer-to-peer communities and dynamics (Bauwens 2005; Bauwens 2009; Benkler 2006).

Even if the main source of inspiration is sociological literature, many texts that appear in the report come from Economy, Psychology, Behavioral Sciences, Political Sciences, Communication Sciences and Information Design. Many of the considered phenomena are in the middle of their development, so we have often took into account sources external to the scientific literature. In order to obtain an effective overview, we have looked in a substantial way at the blogosphere and at online communities. From the epistemological point of view, we have tried to consider directly the knowledge produced from actors themselves. Looking at this, we have identified as crucial the role of folksonomies¹ (Guy and

¹ “The most popular tags used on Delicious are listed on the right side of the front page. Related tags, as determined programmatically by the system, are listed on the right side of individual tag pages.

Tonkin 2006; Halpin 2007; Mathes 2004) generated by the users of Wordpress, Delicious, Youtube, Facebook and other social networks; in many occasions, they have brought us in territories different from what we expected.

Another fundamental source for the research was the participant observation in some local hubs of grassroots fashion in Milan, and the realization of a public round table with a follow up of meetings and conversations with the participants.

Finally, we have consulted some actors of networks contacted for previous researches on the milanese creative scene. Unfortunately, we have not been able to analyze quantitative data, because many datasets that refer to our questions are old, not updated, or they contain only data about specific countries that cannot be used in a comparative perspective.

Nevertheless, we are firmly convinced that the qualitative data are strong enough to point in very precise directions.

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The system of organization developing in Delicious and Flickr was called a “folksonomy” by Thomas Van der Wal in a discussion on an information architecture mailing list (Smith, 2004). It is a combination of “folk” and “taxonomy.” An important aspect of a folksonomy is that is comprised of terms in a flat namespace: that is, there is no hierarchy, and no directly specified parent-child or sibling relationships between these terms. There are, however, automatically generated “related” tags, which cluster tags based on common URLs. This is unlike formal taxonomies and classification schemes where there are multiple kind of explicit relationships between terms. These relationships include things like broader, narrower, as well as related terms. These folksonomies are simply the set of terms that a group of users tagged content with, they are not a predetermined set of classification terms or labels.” (Mathes 2004:3-4)

A path towards networked artisans

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Some major changes in the social and economic structures of European countries occurred during the last decades. The phenomena related to globalisation and digital revolution reshaped the goods and symbols social forms of production, introducing new factors and variables, and changing the role of immateriality in the production of value.

The end of fordist economy and the off-shore reorganisation of material production bore a new asset in consumption markets, oriented towards an increasing customisation of material and immaterial contents (Toffler 1980; Lash and Urry 1994; Harvey 1989) . Markets multiplied and differentiated enormously their focus thanks to just-in-time forms of production.

The increasing role of design in production and an always-increasing design value attached to contemporary products are the main consequences of this trends (Molotch 2003) . Such shift is not only related to the necessities of combining hardware developments and users needs but it’s also strongly linked to a new demand for the customisation of material and immaterial products.

The rise of web 2.0

In recent years, the development of digital technologies provided new fuel for the increasing of third sector. As well-known, the first step of digital revolution was the production of customised software tools for the exploration of user-and-institutions-provided-data. The so-called web 2.0 was a second major

development; we can define it as a managerial and technical approach to data organisation, that gives more importance to the possibility of uploading and aggregating the information uploaded by the users (O'Reilly 2004). Social networks users became able to produce and upload easily their contents through the use of blogs, wikis, tags, social bookmarking systems; at the same time, they started to aggregate their researches results and to develop their social capital by technical means (Beer and Burrows 2007).

The importance of creative production in contemporary economies is increased, both as a consequence of the growing space kept by digital contents and because the design-oriented differentiation of markets.

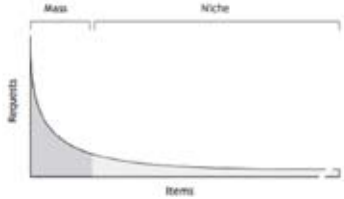
Prosumers and the long tail

The prosumer trend of co-creation is strictly connected to new market organization chances given by the mutating organization of the web. From this point of view, the phenomenon known as the Long Tail Effect is probably the most interesting emerging process: it's an e-commerce strategy based on selling small amounts of rare items to many customers instead of selling big volumes of a small number of popular items (Anderson 2006; Brynjolfsson, HU, and Smith 2006)². In other words, the Long Tail valorizes niches instead of hits, linking economies of scale with non-massive productions and reducing enormously stocking costs because of the on-demand production facilitations³.

The old 'postmodern' version of the brand, in which symbolic innovation was di-

2 The long tail effect is easily understandable if seen as a statistical distribution; as a matter of fact, it's a market application of long-known Pareto-tail (Lorenz 1905).

3 Notable examples of companies that have incorporated long tail patterns in their business model are: Netflix is a service offering online flat rate DVD and Blu-ray disc rental-by-mail and video streaming in the United States (<http://www.netflix.com/>); eBay.com, an online auction and shopping website in which people and businesses buy and sell a broad variety of goods and services worldwide. (<http://www.ebay.com/>); Yahoo! Inc., a corporation that provides Internet services worldwide (<http://www.yahoo.com/>); Amazon.com, Inc., an American-based multinational electronic commerce company (<http://www.amazon.com/>); iTunes Music Store, a software-based online digital media store operated by Apple Inc (<http://itunes.com/>); Audible.com, an Internet provider of spoken audio entertainment, information, and educational programming (<http://www.audible.com/>); Second Life, a virtual world accessible via the Internet (<http://secondlife.com/>); the Grameen Bank, a microfinance organization and community development bank started in Bangladesh that makes small loans (known as microcredit or "grameencredit") to the impoverished without requiring collateral (<http://www.grameen-info.org/>); Compartamos Banc, a Mexican microfinance bank (<http://www.compartamos.com/>); Kiva Microfunds, an organization that allows people to lend money via the Internet to microfinance institutions in developing countries around the world (<http://www.kiva.org/>).



rected towards practices the only use value of which was to legitimise financial and consumer market over-valuation, is coming to an end. It is being replaced by a more participatory 'prosumer' culture with a creator focus on concrete use value (Arvidsson 2005, 2008; Zwick, Bonsu, and Darmody 2008).

Considering this new situation, it's important to understand the shift that is occurring in the social representation of creativity. In its traditional common sense definition (inherited first from the Romantic tradition and then from the popularisation of psychological discourse), creativity was mainly view as a "magic" or "mythologic" characteristic related to individual genius and charisma (Grmek 1981). Thanks to this, the aura of creativity attached to material and symbolic goods was one of the main engines for value production (Benjamin 1963). To consume a product somehow related to the individual creativity of its creator meant a partial sharing of the creativity itself.

The diversification of consumption markets progressively extended the label of creativity to a wider range of products. This put an increasing number of consumers in the position of being "creative" and "special" (Niedzviecki 2006). Today, the importance of creativity is spread to the point that some scholars are hypothesizing the emergence of a new social class composed by creative economy workers (Florida 2004).

Individual creativity vs. collective innovation

The emergence of Web 2.0 and ethical economy is questioning seriously the traditional conception of creativity and its relationships with society and markets. In the past, a number of scholars outlined that is not possible to consider creativity as a mere result of individual processes. At the contrary, creativity should be seen as the outcome of socialised processes that link visions, know-hows and implicit knowledge through social practices of sharing (Melucci 1996; Jedlowski n.d.). From this point of view, individual creativity is highly encouraged by panoramas marked by social innovation.

The thought of Benkler reframes these approaches into the concept of commons-based peer production (Benkler 2006), that we can define as a system linking volunteers communities in the production of open-copyright contents⁴. The main characteristic of peer-products is that they are designed in a way that constitutes them as a common. It means that they can be used, shared, transformed by other users and then re-socialised in the common pool. According

4 Well-known examples of peer-production are the computer operating system Linux and the online encyclopaedia Wikipedia.

to Benkler, the result of these processes is a “networked information economy”, defined as

“a system of production, distribution, and consumption of information goods characterised by decentralised individual action carried out through widely distributed, nonmarket means that do not depend on market strategies” (ibid).

Even if the core of Benkler’s thought is applied to non-market processes, it can generate profits⁵ once it’s enhanced by spin-off companies that work in the same commons-oriented way or through crowdsourcing systems⁶.

Phenomena like the Web 2.0, the long tail effect, peer-production and crowdsourcing are reshaping the meaning of innovation, from a social and economic points of view⁷. On one side, social innovation⁸ processes benefit from more fluid and dynamic methods that are able to work with a peer-to-peer approach instead that a point-to-many (M. Bauwens 2008) . On another side, economic innovation is changing rapidly, as highlighted by Von Hippel:

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5 For an overview of peer-to-peer business see the wiki of the Foundation for P2P alternatives http://p2pfoundation.net/The_Foundation_for_P2P_Alternatives

6 Crowdsourcing is a neologism composed by the words “crowd” and “outsourcing” that indicates the act of taking tasks usually performed by contractors (or employees) and outsourcing them to a specific community of people (the “Crowd”) (Howe 2006) in systems of mass-production.
Here a list of notable examples of companies engaged in peer-to-peer economies through crowdsourcing systems: Slashdot, a technology-related news website (<http://slashdot.org/>); Wikipedia, a free, No[4] web-based, collaborative, multilingual encyclopedia project (<http://wikipedia.org/>); SourceForge, a web-based source code repository (<http://sourceforge.net/>); InnoCentive, an “open innovation” company that takes research and development problems in a broad range of domains such as engineering, computer science, math, chemistry, life sciences, physical sciences and business (<http://innocentive.com/>); Cambrian House, a crowdsourcing community that pioneered the technology to tap crowds for the best software ideas (<http://www.cambrian-house.com/>); iStockphoto, an online, royalty free, international microstock photography provider operating with the micropayment business model (<http://www.istockphoto.com/>); Threadless, a community-centered online apparel store (<http://www.threadless.com/>); Mob4Hire, a 2.0 company that focuses on crowd sourced mobile application testing services and market research related to wireless telephony (<http://www.mob4hire.com/>).

7 Don Tapscott and Anthony D. Williams have coined the term “wikinomics” to identify all the emerging phenomenon related to mass collaboration like peer-to-peer, crowdsourcing, etc (Tapscott and Williams 2006) .

8 Social innovation is a key-feature in recent sociological theory and in EU actions; it refers to new strategies, ideas and practices to meet all kind of social needs enlarging “the economic and technological reading of the role of innovation in development to encompass a more comprehensive societal transformation of human relations and practices” (Moulaert 2009:1) . Social innovation has been at the core of EU FP5 founded project SINGOCOM (<http://users.skynet.be/bk368453/singocom/index2.html>) and of EU FP6 founded project KATARSIS (<http://katar-sis.ncl.ac.uk/>).

“according to the user-driven innovation model, companies can rely on users of their products and services to do a significant part of the innovation work. Users want products that are customized to their needs. They are willing to tell the manufacturer what they really want and how it should work” (Von Hippel 2006:18).

DIY and makers culture

According to the followers of the peer-to-peer economy theory, we are entering a period of ever more socialised innovation which is accompanied by a new and more radical D.I.Y. culture where also material production becomes diffused and networked (Bauwens 2009; Arvidsson 2008) . This emerging trend is clearly visible in new projects that are applying the methodologies of peer-production not only in immaterial economy but also in the material one. Partially inheriting the underground tradition of hacklabs⁹, MIT set up a Center for Bits and Atoms (<http://cba.mit.edu/>) and a FabLab (Fabrication Laboratory, <http://fab.cba.mit.edu/>) that aim at an interdisciplinary spreading of material open production in a wide range of academic and economic fields (Mikhak et al. 2002; Thompson 2005). Many fablabs are growing in different parts of the world, both in developed and developing countries¹⁰, demonstrating that is possible to self-produce the goods generally perceived as limited to mass production. Fablabs insurgence is made possible by decreasing costs for highly technological tools such as laser, plasma and water jet cutters, Computer Numerical Controls machines, rapid prototypers that allows 3D printing with plastic, and printed circuit board milling¹¹.

Fablabs are only the most renewed and technologically advanced vanguards of an international cultural tendency known as “makers culture”, that includes a wide range of actors, technologies and goals (Steeg 2008). Benefiting of tools provided by the web, an increasing number of individuals and groups are exploring the possibilities given by open 2.0 manufacturing and distribution in

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9 Or hacker laboratories (Domínguez 2007). See also <http://www.hacklabs.org> and <http://hackerspaces.org/wiki/Hackerspaces> .

10 For a partial list of Fablabs around the world see <http://fab.cba.mit.edu/about/labs/>

11 It worths while to consider that this technologies have been boosted mainly by new media artists interested in investigating the consequences of parametric and code art in the physical world. See the work of Marius Watz on Geneator X <http://www.generatorx.no/> .

fields such as design¹², architecture¹³, clothes¹⁴ and prosthetics¹⁵. At the same time, several start-up companies, like Ponoko (an on-line platform to merge the interests of “creators, digital fabricators, materials suppliers and buyers to make (almost) anything” “with a vision to reinvent how goods are designed, made and distributed worldwide” (<http://ponoko.com>)) and Makers Market (an online market for DIY goods of all kinds - art pieces, clothes, toys, high-tech - <http://makersmarket.com>), are working to provide services to producers interested in Do It Yourself.

Networked artisans are switching continuously from bits to atoms and from virtual spaces to the real ones, organizing makers meet-ups that try to answer multiple needs in terms of technical exchange, leisure, economic feedback and social capital enhancing.

Another crucial recent development in economy that is crossing makers culture is the relatively recent trend of start-up companies based on “open innovation” strategies; such companies are characterised by the use of a great variety of external actors and knowledge, and they are increasingly involving makers in their production processes (Chesbrough 2003; Laursen and Salter 2006).

Makers culture is connected with already existing web-based “how to” networks that spread Do It Yourself knowledge through innovative technological supports, such as video and infographics¹⁶. This trend is particularly relevant if it’s considered together with other three tendencies:

- the development of video-centric social networking sites like Youtube or Vimeo, that allows users to upload video contents and to evolve discussion threads through visual contents¹⁷;
- the rise of users generated “video tutorials” for all conceivable kinds of human activities;
- the spreading of folksonomies, user-driven non academic organisations of knowledge that rearrange informations through the use of web tags (Mathes

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¹² See the work of Massimo Menichinelli (Menichinelli 2008) at <http://www.openp2pdesign.org/>.

¹³ Open architecture has a special focus on cheap and fast architecture for critical areas; see <http://openarchitecturenetwork.org/>.

¹⁴ See Craft, a website dedicated to “transforming traditional craft”: <http://craftzine.com/>.

¹⁵ See the Open Prosthetics Project (<http://openprosthetics.org/>).

¹⁶ See Instructables <http://www.instructables.com/>. See also “2020 Forecast: Creating the Future of Learning”: the platform provides tools in order to reconcile bottom-up developments in education with the traditional top-down hierarchy with a special focus on makers culture (<http://www.futureofed.org>).

¹⁷ This means that users can post a video “in reply” of the video posted by someone else.

2004; Guy and Tonkin 2006).

According to 2020 Forecast, we have to aspect 5 main changes in learning related to the emergence of makers culture:

1. “Expect the maker economy to influence traditional curriculums, school to work programs, and vocational training”;
2. “The maker economy will give new meaning to efforts in project-based learning and purpose driven knowledge acquisition”;
3. “Design will become an effective entry to learning critical skills, ranging from designing production teams and work processes to physical goods themselves”;
4. “Cooperation across disciplines, skill domains, and national boundaries will trump competition as makers demonstrate the value of open, cooperative practices”;
5. “Kinetic learning from interacting with physical objects and materials will open up new ways to experience complex concepts and principles” (2020 Forecast n.d.).

This picture of makers culture is particularly interesting if we put in relationship with some recent theoretical developments in social sciences.

First of all, the considerations about how the convergent and viral nature of digital worlds is conditioning the general conception of culture. Many scholars have recently observed the tendency to a weaker role for institutionally set trends; this means that the traditional role of institutions in symbolic systems selection, organisation and hierarchisation is moving towards more distributed processes (Wood 2004; Parikka 2007; Deuze 2007)¹⁸.

Secondly, the “traditional” conception of subcultures is shifting to a “post-subcultural” approach. Subcultures have always been central in the understanding of innovation related to DIY, because they are mainly forms of bricolage involving the reassembling of material and symbolic goods in search of a form of spectacular consumption that declares alterity in respect of the rest of society (Hebdige 2002). The proliferation and hybridisation of symbolic sub-systems, around whom cultural identities aggregated themselves, is moving in the direction of a mash-up of signs and symbols, where to define identity and subcultural borders is becoming increasingly difficult. This led many observer to describe post-subcultures as a condition where the strong link between identity and ‘symbols’ has been rendered much weaker (Muggleton 2000; 2003).

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¹⁸ Please not that such hypothesis doesn’t necessarily means that the link between culture and power is becoming more democratic. See O’Neil for an analysis of new forms of power emerging in virtual communities and 2.0 culture (O’Neil 2009).

Finally, transformations in general economic trends have produced an overabundance of workers in the creative field. This subjects are experiencing, on one side, increasing difficulties in finding an equal placement in labour markets (Christopherson 2008; Gill and Pratt 2008) and, on the other side, they are involved in economies in which passions and ethics are at the core of value production (A. Arvidsson et al. 2008).

Conclusions

Do It Yourself comes as no surprise. Even in the age of mass production a small number of individuals continued to make things on their own. But, as we have seen, the present-day situation is characterised by some unique features:

1. open approach from the point of view of copyright;
2. peer-to-peer production and co-creation;
3. unforeseen chances given by technology, both from the point of view of production (desktop manufacturing) and circulation (platforms for sociability);
4. cross-fertilisation among different know-how ad disciplines;
5. technology revisions: a core technology gives rise to new implementations of existing projects;
6. technology clustering: groups of products tend to cluster around a core set of technology and integrate with one another;
7. customisation/specialisation: with free and open source software small groups are capable to customise a large project to specific needs¹⁹;
8. green motivation: a tendency to reuse and recycle that is frequently a conscious refusal of planned obsolescence of mass-produced goods;
9. rise of the professional amateur: an emerging field in-between hobbyists and professionals²⁰;
10. quest for authenticity: many of the actors involved in makers culture need to compensate both the lack of human face-to-face interaction in virtual worlds and the feeling of alienation generated by mass-markets;
11. emergence of grassroots economies²¹ that moves the focus from mass production to ethical, personal, political and sustainable values of the goods²²;

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¹⁹ Points from 4 to 7 are a citation from the voice "Commons-based peer production" on Wikipedia (http://en.wikipedia.org/wiki/Commons-based_peer_production).

²⁰ "People participate in peer production communities for a wide range of intrinsic and self-interested reasons....basically, people who participate in peer production communities love it. They feel passionate about their particular area of expertise and revel in creating something new or better" (Tapscott and Williams 2006:70) .

²¹ See the Grassroots Economic Organizing (GEO) <http://www.geonewsletter.org/> .

²² Points from 8 to 11 are a citation from the Future of Making Map (Institute For The Future 2008).

12. overabundance of law-paid creative workers that have developed a different conception of the value attached to their work;
13. viral diffusion of culture and tendency to post-subcultural aggregations; rising of the open innovation start-up movement.

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Studying the structure of the fashion system

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"Study of the fashion system is a hybrid subject. Loosely defined as the interrelationship between highly fragmented forms of production and equally diverse and often volatile patterns of demand, the subject incorporates dual concepts of fashion: as a cultural phenomenon and as an aspect of manufacturing with the accent on production technology." (Fine & Leopold, 1993: 93)

Describing the fashion system is, as indicated in this quote, not a simple matter. However, what is highlighted here was stated in the beginning of the 90's, and important shifts have taken place since. We would recommend moving beyond the slightly simplistic presentation of the system as a meeting between production (supply) and demand. Although this aspect remains of course crucial when understanding any field of business, it tends to separate the manufacturing side of fashion from the final garments, their marketing, branding, sales and general cultural production of symbolic value. The insufficiency of this approach is important in relation to the EDUFashion project, although it might in some aspects be a suitable way to describe the present system. What needs to be developed and toward which we will take a few steps, is a better overview of the interpenetration of the many links and connections in the global fashion system on the one side, and the enforced separation, throughout the entire system, of its manu-

facturing and marketing/branding processes, designed to silence or prevent critique of the often appalling conditions for many actors in the networks of the fashion system. This deeper approach to the actor-networks in the fashion systems will be further developed in later parts of the analysis.

Production complexity

"The strategies adopted by clothing producers are etermely varied and complex. The combinations of techonological innovation, diferent types of internationaliza-tion strategy, the relationship with retailers, and the constraints of the Multi-Fibre Arrangement have combined to produce a more complex global map of produc-tion and trade than a simple explanation based on labour cost differences would suggest. The manufacture of clothing is an ideal candidate for international sub-contracting. It is highly labour intensive; uses low-skill or easily trained labour; and the process can be fragmented and geographically separated, with design and often cutting being performed in one location (usually a developed country) and sewing and garments assembled in another location (usually a developing coun-try). Although international subcontracting in clothing manufacture knows no ge-ographical bounds – with designs and fabrics flowing from the United States and Europe to the far corners of Asia, and finished garments flowing in the opposite direction – there are strong and intensifying regional biases in the relationships. These industries are becoming globally regionalized. At all geographical level, however, it is the big buyers and dominant retailers who call the shots in clothing production." (Dicken, 2007: 276)

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This extensive quote is justified by its ability to summarize the complexity, dynamical aspects, and power relations inside one important field of fashion systems, the manufacturing of clothing. Although dealing with this field and not with i.e. fibre production, retail or marketing, it still gives a pretty good picture of some of the important events in the last decade when it comes to fashion as a whole. One of these events is the gradual global shift leading to more and more power to the *buyers* – that is, the big department stores, mass merchandisers, discount chains, fashion-oriented firms, and more specialized buyers. This leads specialists to describe the fashion system as a highly *buyer driven system*. Which does not necessarily means that the consumers have much of a say, apart from being able to choose between different design and brands. The buyers are in this case also the sellers, in the sense that they are in charge vis-à-vis the rest of the distribution networks as well.

In general, it is fair to say that fashion is one of the best examples of the interrelatedness and connectedness of the globalized world. Today's fashion system is

impossible to think of without understanding the movements across continents of materials, knowledge, and money. At the same time other elements/actants are kept highly local, such as labour force and capital accumulation, (leaving a trail of unemployment and asymmetrical dependencies behind them). As the fashion industry moved into what has been labelled the "democratisation" of fashion in the 1990's, a series of movements took place. These were connected to "the trade-off between labour costs and the need for market proximity", at least when seen from a micro-economic perspective (Dickens, 2007: 268); they were also linked to the development of what has been termed the "network society" (Castells, 1986, 2006) and were, until 2005, controlled by the international MFA agreement about how to let labour, material flows, etc flow within the textile and clothing industries (this agreement being absorbed into overall WTO agreements in 2005, leading to a partial deregulation of the fashion system). Like so many other industries, the globalized networked character of the fashion system also links it across sectors, so that the 'system' overarches private, public, and NGO sectors, as well as economic, political and cultural subsystems. Changes in the fashion system are thus closely linked to changes in other systems, and can be linked through symbolic representations, economic growth/crises, and/or political decisions alike.

The connectedness of fashion makes it a complex field to understand – especially as fashion is, basically not so much one system, but rather more, at least 2-3 systems. There is the system of producing garments. This system is of course closely connected to the brand creation and marketing system. While it might be fair to look at them as separate systems, we could also view them as connected actor-networks (Latour, 2005), in which case it would be clear that many of the same actors are present in all networks. There is a vast interconnectedness across borders in terms of orders and flow of information and money. At the same time, there is a deep interconnectedness of local factors and elements; legal, material, economic, etc. In many cases, the local actors would have more in common with similar workers in another part of the world. But their mutual connections are limited to what goes through the network of the mother brand and the central company. However, with the economic development in some of the main Asian countries, this is changing their role, moving them to some extent from a kind of forced labour to contractors and even buyers in the recent couple of years (Dickens, 2007: 269ff). An analogous development in Eastern Europe has, however, led to both the dismantling of a series of factories, and a proletarianization of fashion workers in many of the former Soviet border states (<http://www.ethical-fashionforum.com/the-issues/eastern-europe>).

The economic network of fashion

"Fashion exports represent 7% of world trade."

(Rethinking Fashion, 2009: 2)

Representing one of the largest industries globally today, fashion displays very clearly how globalized growth functions. The fashion system circulates huge sums of money, with the main exchanges taking place between Asia and North America, Asia and Europe, and Latin America and North America (Dickens, 2007: 268). This economic system around fashion is far from balanced. The money tends to flow the same way as the materials, whereas the orders flow the other way (though not carrying an economic equilibrium with them). On the one side, less than 15% of the world's population represent practically all consumption, whereas quite different countries are delivering the production side. In countries like Bangladesh and Pakistan, fashion is crucial to the nation's economy – with more than ¾ of the total export being placed within production of clothes (and with an average income of less than 1€/day). (Rethinking Fashion, 3ff) In the European context, textile and clothing industry represents a turnover in 2008 of app. 201 b. €. The sector employs app. 2,3 mio people in the same countries. (Euratex, 2010) And Europe remains far behind in the overall economy of the textile and clothing export: world leader China represents 38% of all export, the US 36%, and Europe (27) have fallen from almost 20% to between 10 and 11% in the last 20 years (Euratex annual report, 2008).

Another economic aspect is the movement of labour and different elements in the fashion chains. Costs are concentrated on labour wages in certain processes: i.e. sewing and assembly account for 80% of all labour costs (Dickens, 2007: 259). Globalization continues to lead to jobs and professions that were normal in one part of the world being shifted by the movement of money flows and orders to other parts of the world, where the same kind of work can be done cheaper, and with less control of i.e. toxic waste or working conditions, child labour etc. In their report from 2009, the *Freedom Clothing Project* describe how British fashion/clothing production has declined, where other countries are almost entirely dependent, but at wage levels that even given the local economies, do little more than keep workers in forms of modern serfhood (Rethinking Fashion, 2009: 10ff). Of course, with the rise of the economies of mainly China, Brazil and India, things are eventually changing.

The fashion system as we see it today is the product of a large number of mergers and acquisitions up through the 1980's and 90's, leading to on one hand,

the growth of mega-companies like LVMH Group and Zara, and on the other, to the brands that these companies have been developing and buying each other to acquire. One consequence of the many acquisitions is that very few players tend to control very large shares of the global market. Another is the verticalisation that lead to i.e. brand stores, taking over the role of smaller retailers (Jarnow & Dickenson, 1997:14). The huge companies like LVMH become real cultural factors, not only through their brands (or through the vast markets for copies world-wide), but also through interventions in the cultural scenes. Having said that, and having acknowledged the role of the big players for their sustainability and ethics efforts, they must however mainly be seen as the makers of the new rhythms of fashion over the last 20 years. This includes changes in production and consumption, new uses of ICT, and a highly unsustainable material system.

The changing consumer and consumption

The fashion world is one of many redefinitions – i.e. of fashion itself, of companies and their individual roles, of the flows of production, of luxury and fast fashion, and of relationships between producers and consumers. In the 1990's, it was reported that the consumer of fashion was moving away from the expenditures on expensive apparel (Jarnow & Dickenson, 1997: 17). For what that was worth in the 90's, since then (and until the violent thrash of recession from 2008) we have witnessed 16-year olds buying LV bags at 600€; but we have also witnessed a heavy democratization of luxury, leading to more accessible products for the much broader majority (thus, allegedly more than 90% of Japanese female customers own a LV bag in the 00's), as well as an increase in the speed of collections, making it possible to sell much more clothes due to 'fast fashion'.

The increased attention given to issues of climate change, ethics, political consumption, and sustainable clothing, have had some effect. Clearly, this has not replaced focus on the combination of brand value and value for money, one or the other or both in combination (such as H&M). Rather, the issues of ethical and environmental values have been taken on board by the mega-retailers like H&M or Zara. But the values are only rarely presented directly to the public as a central value for the overall brand or retailer. An interesting question to answer, especially for this project, is whether the 10's will witness the major breakthrough of another kind of customer: the creative, or co-creative, customer. According to Ingrid Giertz-Mårtenson, former director of the Swedish Fashion Council, *"The creative consumer will be more and more active in the future and create their own fashion forecasts through blogs and on-line videos", with fashion forecasting being at least supplemented, and partially replaced, by research online by just about anybody*

who wants it. "A young generation of designers and consumers find their inspiration in a more and more globalized world, where the explosive development of "trend spotting" on the web, in fashion blogs and social networks lead the way to a more individualized fashion. The huge amount of free information on the web will – at least to a degree – erode the importance of the traditional forecasters." (Mårtenson, p.3) The possibility of this being true would of course change the face of many aspects of fashion. At first mostly the surfaced part, the visible part, but eventually also the whole production system. And it must be remembered that with up to 80% of the environmental influence of a product lying after its purchase (cleaning & fast replacement, or purchase of obsolete clothes that are discarded), a change in consumer attitude may indeed be necessary eventually. However, it should not be neglected that a great part of the impact lies in structural and cultural matters that may not necessarily be assigned to individual consumers. Once again, a deeper understanding of the networks of fashion may give rise to improvement and innovation.

An element we will not deal with at length here, but which will be important when it comes to shifts in consumption, is the issue of labelling, eco-, safety, and other forms of labelling. Thus, research in other areas shows that labels are important in the work for more sustainable and fair production and trade, and this might be expected to have a similar effect with regards to fashion. This is however an area that has not been well investigated so far. Also, we will not deal here with the role of ethical issues in the development of the fashion industry: working conditions, fake branded goods, etc., but reset this for the later section on sustainability and fashion.

The (un)sustainability of fashion

"America makes up 4-5% of the world's population, consuming 24-25% of the world's energy, and 15% of every purchase on earth is made by an American. The average American sees 3000 adverts a day – these comprise a sort of propaganda, and this drives the system. The disposability of the products is essential so that we can continue to consume them. To what extent are these products disposable? On average, six months after production, distribution, and consumption only 1% of what has been purchased is still in use. This is the system." (Will MacDonough, CSF conf. 2009)

An interesting element to include when speaking of (un)sustainability is second hand clothing, which in itself represents a rather important trade and aspect of the fashion networks, often not included in traditional accounts of the fashion production line (see i.e. Jarnow & Dickerson, 1997:7). In the UK for instance,

there is an overall use of 2 mio tonnes of clothing every year, with about 10% being recycled, this amount being re-directed to other parts of the world and leading to deep restructuring of culture, economy, crafts and trade in e.g. African countries. Along with other aspects of sustainability, the focus on landfill and recycling is something we will return to in other reports. The development of second-hand and re-design is worth noting, although it is of course a fringe of the overall market development. For example, British NGO Oxfam have noted sales of more than 100 millions £ in 2008 of second-hand clothing (<http://www.oxfam.org>).

We will return to how the fashion system, like design and other fields, is trying to deal with this question of unsustainability, in later reports about sustainability and fashion. Here, we will merely sum up some of the aspects of a fashion system that, in spite of lots of talk about sustainability in the media, has far from grown out of its hugely unsustainable form, leading to poverty, invalidation, toxic waste, landfill excess, enormous CO₂ emissions, water waste beyond the imaginable, loss of local knowledge, precarious workforces with no freedom of movement, etc. Basically, it is more correct to speak of the unsustainable as the main aspect of fashion.

Regarding Information and Communication Technologies

In 1995, H. J. Gerber writes about the retailer LL Bean, who is "working on a concept called the 'virtual-catalog'" (Jarnow & Dickerson, 1997:25). In fact, even though there were a huge number of project ideas such as toward the end of the 90's (with Boo as the classical example of how it could fail), it is telling to see how few really interactive fashion sites are around now, 15 years later. ICT has greatly changed many aspects of fashion: the production time has been shortened drastically; changes in the production technology and flows have lead to a dramatic change in the time spent for producing fashion products. "Fashion merchandising has increasingly moved away from the traditional cycles and, instead, has evolved more and more toward a continuous flow of new products." (Jarnow & Dickerson, 1997:8). The possibility of communicating across borders has increased widely (although many garments fabricators in countries like Pakistan and Vietnam are probably still not online); the communication platforms of the www have become both sites for dialogue, for blogging (an important aspect of fashion communication today), and for advertising; for viewing of television-like video channels such as YouTube; and to a still very limited extent, a site for fully interactive services and co-creation.

Fashion system and on-line economies

"one-fifth of all adult female clothing is now purchased via alternative channels (Mintel, 2003)" (Ashwood et al, 2006: 498)

"Online sales account for only a small part of Europe's clothing market, which is worth about 300 billion euros (\$386 billion) a year, according to retail researchers Verdict." (<http://news.alibaba.com/article/detail/apparel/100073862-1-online-fashion-battle-heat-up.html>)

The overall setback of the fashion industry has been impossible to oversee. According to the European organization Euratex, figures for the 1st Q2009 indicate a drop of 23% in production in the textile industry of 14% in the clothing sector in 2008, as compared with the same period in the previous year (Euratex, 2009:2). (To the extent that there has been a global difference, China, Russia and a few other markets have registered a positive development in 2008 (Euratex, 2009: 8))

But with the overall fashion industry experiencing decreasing sales in 2008 and 2009, the online retailers have been able to challenge the crisis and achieve financial growth in the same period. Thus, the development of online fashion retail has been positive, in spite of the overall economic recession.

The market for online fashion retail is in the midst of an important shift. In the period from the end of the 90's, the first big experiments such as Boo.com took place (Boo operated only for about 6 months in spite of a huge investment and high ambitions, in a market that was far from ready, it seems). In the years from 2000 until last year, the market has been dominated by online retailers that are only online. Examples of the greatest successes within this field are etsy.com, ebay.com, and asos.com. In the high conjuncture period until the fall of 2008, the big retailers were generally reluctant and careful, leaving the stage more or less to the specialists in online retail. With the credit crunch setting in, the off-line retailers saw significant reductions of sales volume, whereas the online market continued to grow. Thus, although the big retailers such as Next or Marks & Spencer, H&M or Zara, were aware of the possibility of online trade, the recession is expected to draw many more players online, following the money or the customer flow. (http://www.thisismoney.co.uk/markets/article.html?in_article_id=451915).

In the US, online sales of clothes and clothing accessories composed a mere 1% of total sales for this category. If we look at the figures for the overall growth for

the category and the growth of on-line sales, what we find is that the overall growth has been 48% in the decade from 1998 to 2007 (from app 149 mio \$ to 221 mio \$). The online growth has, in the same period, been a staggering 17 000%! (this covers over a rise from estimated 12 000 \$ in 1998 to estimated 2,1 mio \$ in 2007), thus presenting a steadily but fragile growth. (U.S. census bureau, 2010 statistical abstract, http://www.census.gov/compendia/statab/cats/wholesale_retail_trade/online_retail_sales.html)

Taking the UK as another case, we can look at some claims and figures (the UK figures of course do not cover the rest of the world, but figures from several other countries tend to confirm this, and more research will be):

- industry insiders are predicting that by 2016 the online fashion business will account for 13 per cent of the fashion market and be worth some £6 billion. (Marciniak and Bruce, 2006) spending on clothes on-line landed around £3bn in 2008 in the UK or 6% of the total market (with Mintel forecasting this would more than double by 2013)

http://www.thisismoney.co.uk/markets/article.html?in_article_id=451915&in_page_id=3#ixzzohwdo3mot

- according to [Daily Telegraph](#), (december 2009), online fashion retailers have experienced a growth in turnover in spite of the overall economic turnover the Department of Transport suggested that 38 percent of all households have ordered clothes or footwear online in 2008.
- Interactive Media in Retail Group noted that 30 percent of British women reported that they have acquired clothes online. Top 10 online clothing retailers for July 2008 are also listed. IMRG (Interactive Media in Retail Group, 2005) reported a 34 per cent increase in online shopping in 2005.
- Figures indicate that online revenues for fashion goods have been growing at 25–30 per cent a year since 2000 (<http://www.telegraph.co.uk/fashion/4449609/Online-shopping-fast-fashion-at-your-fingertips.html>) (US figures above are even higher than this, as they rise by 50-100 between 2000 and 2004, only then dropping to 30-40 rise by year)

Before one concludes that the market for online fashion retail is pure paradise, it is important to remember the attraction of the growing internet market, however impossible it might be to predict the future of online fashion retail competition. All sources indicate overall growth in online fashion sales; however, more research will be needed to identify which types of e-trade fashion sites tend to make it and which tend to break it. Or even whether the key factors for success or failure lie in the set-up, technology or content of the site itself – or in other

factors in its overall network, marketing efforts, communication politics, etc. According to experts, the main key factors to online fashion trade success are choice, functionalities, virtual experience, and good payment services. (<http://news.alibaba.com/article/detail/apparel/100073862-1-online-fashion-battle-heat-up.html>) However, these statements are related mainly to pure one-way trade, dealing with enterprises such as asos.com and Inditex, and not including DIY or DIT approaches, let alone re-design or recycle solutions.

Another way to look at online volume (apart from turnover), is to look at traffic on the sites. Of course this does not express directly how much economic volume the retailers produce. The [CBI](#) issued a report in the end of 2008 claiming that clothing retailers had just experienced their worst month for quarter of a century. As we see in the chart below, traffic to fashion retailers has shot up over the last three years. (<http://weblogs.hitwise.com>, 26 june, 2008, so pre-crunch/pre-crisis)



These tendencies confirm the overall economic tendencies, but add an element to the understanding of the online retail system. According to Ebay a piece of clothing sells every 7 seconds on their site (Morrell, 2006) and Top Shop's web site is believed to be its second largest outlet after its Oxford Street flag shop store (Dudley, 2005). (Marciniak and Bruce)

An important source of traffic is social networks (e.g., in May 2008 [Hitwise](#) reported that social networks accounted for 6.37% of upstream traffic to websites in the apparel and accessories category, making sites such as Facebook, MySpace and Bebo a more important source of traffic than lifestyle/fashion websites (5.13%).

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Open Source, p2p, social innovation and clothing

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What is p2p and how it is connected to social innovation?

Peer to peer (p2p) is a concept, derived from Internet file sharing, that has inspired new visions of human relations based on egalitarian social networking enabled by Internet technologies.

According to many thinkers, nowadays it's emerging a "third way of production" (p2p economy) which is different both from traditional capitalism and socialism; p2p economy is clearly visible in the fields of Open Source software and in DIY communities.

Bauwens is convinced that p2p processes

"produce use-value through the free cooperation of producers who have access to distributed capital: this is the P2P production mode, a 'third mode of production' different from for-profit or public production by state-owned enterprises. Its product is not exchange value for a market, but use-value for a community of users."
"are governed by the community of producers themselves, and not by market allocation or corporate hierarchy: this is the P2P governance mode, or 'third mode of governance'."

"make use-value freely accessible on a universal basis, through new common property regimes. This is its distribution or 'peer property mode': a 'third mode of ownership,' dif-

ferent from private property or public (state) property." (Bauwens 2005)

P2p economies actors produce creative value (a string of software code; a song; a clothing pattern) and share it with their communities believing that they will individually benefit, in terms of quality, knowledge and/or wealth, by the collective enrichment. This is exactly the vision that inspires our project.

It's fundamental to underline that p2p developments are affecting almost all the sectors of society. It's not necessary to accept the whole paradigm in order to agree with the fact that an increasing number of social fields are adopting such kind of organizational model.

Which are the social sectors we are looking at?

Recent transformations in craft and design (and, more generally, in all the sectors of creative economy) have considerably reshaped the social words of production and their relationship with all the other aspects of social life. As observed in OECD's report on creative economies:

"In the developed world during the 1990s, the creative industries grew faster than other sectors, including services and manufacturing. One of the major drivers of this growth was the extraordinarily rapid pace of technological change in multimedia and telecommunications that occurred during this period. In particular, digital technology opened up a range of new media through which cultural content could be delivered to consumers, and the creative industries responded by supplying an ever-widening array of creative products to the market. On the demand side, rising real incomes among consumers in developed countries, coupled with changing preferences for modes of cultural consumption, helped to sustain the growth of the creative economy. By the middle of the first decade of the new millennium, the proportion of GDP contributed by the creative industries in developed countries averaged around 3 to 6 per cent. For example, recent estimates collated by OECD for member countries indicate that the creative industries in France and the United States made up about 3 per cent of gross value added in 2002-2003 and almost 6 per cent of gross value added in the United Kingdom".
(United Nations Development Programme. 2008:203)

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For all these reasons, the social sectors we are looking at are extremely differentiated. Considering this, there are some main trends that we have to take into account.

First of all, labour markets are in a process of constant flexibilisation that leads to a precarisation of life careers. These dynamics are particularly clear in some sectors of production, while in others they have been much more hard

to identify for a long period. This is mainly related to methodological problems in the description and analysis of some workers profiles, that are often tangled in a multiplicity of diverse contract forms and that, for this reason, tend to be underestimated (or not represented at all) in statistical reports. Many sectors of creative economy have been hit particularly seriously by the process of flexibilization. Even if there are considerable differences among countries and professions, now it's clear that these dynamics can be considered as a general trend (Gill and Pratt 2008; Gill and Pratt 2008; Christopherson 2008; Hesmondhalgh and Baker 2008; Neilson and Rossiter 2008; Ross 2008).

Secondly, there is an increasing amount of students that choose educational paths related to creativity, design and fashion. This process brings to the diversification and specialization of learning but, at the same time, it clashes with a labour market that is often not ready to absorb all the workers and that tends to react lowering labour cost (Naro, Arvidsson and Malossi 2010; Niessen 2009).

Thirdly, it's emerged that the culture of project in work environments is strictly related to power strategies that renounce to an explicit manifestation of control. According to Sennet (Sennett 1998) such dynamics tend to parcel the production processes, making more difficult also the construction of a meaningful pattern of self-representation.

As fourth, there is a strong emotional involvement of creative workers into production processes, an involvement that passes through the superimposition between the self-representation as "creatives" and the gratification for the (material or immaterial) piece produced. Looking at this, it's interesting to consider that recent researches have underlined how many creative workers language itself tends to use a terminology traditionally linked to the spheres of love and affectivity (Lovink and Rossiter 2007).

Finally, in this situation passion becomes a mean of production itself:
"(this situation) has coincided with the rise of brand-centered business models and the corresponding internalization and rationalization of immaterial production. 'Passion', it appears has become a means of production, systematically promoted and put to work as part of the institutional framework within which brand values are produced." (Naro et al. 2010)¹.

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¹ Another interesting quotation that highlights this phenomena from another perspective is the following:
"We suggest that this productivist orientation can be identified as the emergent 'working society of leisure', a society in which leisure is composed of self-determined work and where, in place of the old work/leisure divide, there is a continuum of work practices that throughout people's lives offer a mix of social, psychological and financial rewards." (Gilchrist and Ravenscroft n.d.:2)

2008 financial crisis is a recent element that is still difficult to put in the right analytical perspective, also because most part of researchers efforts are still in progress; anyway, the most realistic hypothesis is that the whole picture is getting worst because of its consequences.

Profiles of the target groups

It's clear that in Edufashion we are looking at an unforeseen intersection among diverse social fields that in the past were not necessarily connected, at least from the point of view of collaboration in production processes: fashion professionals; other kinds of creative workers not connected to fashion; cratfivists.

A) Fashion professionals

An increasing number of fashion professionals is experiencing serious difficulties in finding a satisfying positioning in the labour market. Their social backgrounds are extremely differentiated, because of the great variety in terms of age, gender, class and educational path. We can hypothesize that there are three main sub-categories:

- young professionals that have acceded only in recent times to the market labour (that it's becoming increasingly aggressive)²;
- women that have left the main career because of family care;
- more aged workers that have been excluded from the labour market by outsourcing politics and, more recently, by the financial crisis.

Given such differences it's hard to focus on specific values shared by all the actors. Nevertheless, we can preliminary observe that the value of independence is a fundamental dimension. For example, most part of the persons we have met was part of the mainstream fashion system as traditional figures (as designers or craftsmen) and, now, they are in search of new forms of independent work. Often such kind of needs are under-represented from the point of view of quantitative data because there is a lack of statistical tools able to track such highly unstable careers (O'Connor 2007)). This point is increasingly now clear even

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² Here it worths to consider the ambiguous relationship that occurs between the previously exposed problems in flexible labour markets and the perverse loop of internship, educational offer and the ideology of "self management". On one side, it has been demonstrated that internships can work if the city is able to become a system (or "creative field", in the view of Alen J.Scott (2001, 2001, 2004, 2006a, 2006b)) that studies enables the exchange across educational institutions and fashion industries (see the studies of Rantisi on New York (2002; 2004)). On the other side, when this connection is missing (Hauge 2006) the result can be a total lack of communication between the two spheres that drives to the conception of interns as free non-qualified replaceable and anonymous workers.

for many statistical offices that are involved in the mapping of creative workers:

“For us it’s very difficult to understand what’s going on. The main traditional resources that we have are fiscal data, but it’s almost impossible to use them to track the paths of small creative or craftsmen. After a few months they disappear, going down in the black economy”. (A conversation with a researcher of the statistical office of a main administration in the Northern Italy)

These nearly invisible subjects are interested in independence but ,at the same time, they do not necessarily perceive themselves as entrepreneurs.

“I do not want to grow. I want to stay small, and I’m ok if I earn 1000 euro monthly. I don’t want to get involved with all the bureaucratic stuff that entrepreneurship brings you. I’ve worked in the fashion system for years with many big names. But it’s an unhealthy environment. You’re totally exploited” (A conversation with a taylor in Milan)

So, what we can observe here is a clash between the neo-liberist ideology of “self made man” and “self-entrepreneurship” and the economic sustainability of everyday life: growth is not necessarily interesting for micro-business. From the point of view of our project general philosophy, this is a great challenge: we are called to find practical answers in order to give symbolic representation and economic sustainability chances for an under-represented typology of workers.

B) Creative workers that are not professionally involved in fashion or crafting

We have already discussed reasons and transformations paths in creative economy of the last decades. One of the main consequences of such processes is that an always increasing number of creative workers feels the necessity for symbolic investments in terms of self-representation as “unique” and “creative” people (Niedzviecki 2006). Often, this request is not satisfied at all by the routinized working practices, at the point that some scholars are going to identify processes that (at least to a certain extent) can be compared with Marxian alienation (Hesmondhalgh and Baker 2008).

A data that emerges clearly from our web communities analysis is that an increasing number of creative workers are looking, in their free time, at crafting and sewing activities as a way to regain the enthusiasm of creative experience, lost in the daily work. In other terms, this process can be seen as a re-appropriation of the relationship among creativity, subjectivity, produced object and production process.

C) Craftivists

Craftivists are a relatively new kind of social actors that emerged at the beginning of 21st century, mixing values of leftists new social movements with practices of crafting and DIY. According to Bridget Dearie Clegg,

“Craftivism aims to increase activism that improves what works in a community and draws attention to community problems through the individualized craft skills and craft projects of people living in that community. “Craftivists” are the socially conscious crafters who enact that positive change.” (Clegg 2010:10).

Craftivist can hardly be considered as an homogenous group. Their degree of organization, their production and their influence in local contexts are highly variable, according to geographical, social and political differences. Nevertheless, they are important because they often act (and are perceived) as avant-gard trendsetters for wide sectors of progressive society .

Values of the target groups

It’s clear that these groups are rooted in so extremely variegated social and economic backgrounds that is difficult to talk about a common set of values. Nevertheless, considering the ecologies of fashion systems for micro-entrepreneurs, craftivists, artisans and small designers, we can focus on a reasonably restricted list.

Here we consider the following values, putting them in relationship with the concepts that are more relevant for our analysis:

- a) creativity, that can foster the interpretation of the fashion system as a peer-to-peer ecology;
- b) reputation, which is strictly related with features such as reputation and identity;
- c) quality, that has to be seen as a situated definition.

A) Creativity, intellectual property and the p2p

Bollier and Racine (Bollier and Racine 2005) conducted an extremely interesting study on the concept of creativity sharing in the fashion industry. Despite usual beliefs, copyright protection can be claimed on very few elements of the fashion production: fabric designs, specific ornamental features and manmade fabrics (ibid, :10); and, most important, the logo is strictly copyrighted, because it’s the part of the brand that produce the value in the fashion system.

On the contrary, people use to think that clothes design, being the expression of the designer’s creativity, is the main source of the value in fashion. But, from this point of view, the fashion system is much more similar to electronic music or hip-hop than to other forms of cultural production: sampling, citation and

other forms of original contents bricolage are not only tolerated, but they are at the core of the production process:

“(...) Elite brands are not frozen in amber; they repeatedly have been built and re-built around an ethic of homage, the respectful referencing and imitation of other people’s creativity. The great designers of today routinely incorporate and adopt aspects of their mentors’ work, refining basic elements and adding new design aesthetics. Ungaro was the protégé of Balenciaga; Lagerfeld drew upon Chanel. Tom Ford incorporated the traditions of Gucci, and Alexander McQueen recognized the style of his sponsor, Givenchy (...) In an environment of constant emulation, it can be difficult to separate “originality” from “imitation.” The two blur together so seamlessly that it often doesn’t make sense to try to sort them out. Such conclusions are jarring to anyone steeped in the orthodoxy of copyright law, which presumes that it is in fact possible – and perhaps urgently necessary – to ascertain the authorship and “originality” of a work.” (ibid, :13-14)

If citation is an ordinary practice among the top levels of fashion, also the practice of appropriation of smaller designers productions from big names is nothing extraordinary. From Miuccia Prada to Nicholas Ghesquière (a star designer at Balenciaga), fashion history it’s plenty of cases of direct appropriations of other’s work (ibid, :26). The word “stealing” here is unappropriated exactly because the whole system is based on a continuous sharing of forms and contents.

From a general point of view, it worths to consider wide parts of the fashion system as an Open Source economy and many of its production as a common. As highlighted by Sinnreich and Gluck (Sinnreich and Gluck 2005), this is strictly related with the core mechanisms of innovation itself.

“As with music, fashion encompasses a large gray area between the extremes of consumers and producers. This gray area, in which creative thinkers draw upon an ever growing and constantly circulating pool of common memes, is arguably the source of new ideas and trends within the fashion industry. Sociological literature on innovation describes it as an interactive process, dependent upon cumulative knowledge and the capacity for interchange between individuals, institutions and organizations. Academic research on fashion echoes this definition.” (ibid,:14-15)

The same mechanism is driven in an opposite direction by many small companies (i.e. ABS, AnyKnokoff and Victor Costa), that constantly copy the haute couture models worn by cinema and music stars on the the main premiers and events red carpets, and place them in more ordinary markets (ibid, :26). At another level, big fast-fashion brands like H&M commonly get something more than a general inspiration from other (famous or unknown) designer’s work.

Finally, the practice of cool-hunting is used by designers at all levels, from students to top stylists. The symbolic productions of subcultures, countercultures and ethnic groups are (directly and indirectly) one of the main sources of inspiration for all kinds of designer.

The main path for the production of value, at higher levels, is the brand and its capacity to sanction counterfeits:

“here is value – for companies and for innovation – in sanctioning imitation. The elite designers can charge a premium for their perceived superiority and “originality,” and imitators can make money by catering to mid-market and lower-tier consumers who are not likely to buy the elite brands. (...) A brand name is, in essence, the commodification of socially created value “. (Ibid, :25-26)

Here it emerges again the distinction rooted in common sense between individual creativity and collective innovation. Due to the social emphasis given by actors to the values of genius, creativity and originality, there is still a strong belief in the fact that a cultural product created by an individual is directly originated by its personal genius despite of (or, sometimes, against) its wider social and cultural environment. In other terms, the cultural product owns an “aura” (Benjamin 1963) that it’s inherited by the direct relationship between the product itself and the object. This relationship is embedded in the realms of sacral-ity, art and ineffability. To buy a good that incorporates such values means to be recognized as legitimate owner of a part of this aura³.

As it’s clearly demonstrated by Bollier and Racine for fashion, and by many other scholars for other fields of production (see for example the seminal work of the GREMES group led by Maffesoli on bricolage in music (Tessier 2003; Berthou 2002)), such kind of distinction is much more blurred, at the extent that it makes sense to say that there is no individual creativity without social collective innovation.

“The legal distinction between a counterfeit and a knockoff is crucial. It is what enables the fashion world to sustain its wide-open creative ethic while maintaining its profitability. A counterfeit dress is one that falsely bears the label of another

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³ It’s important to underline that this is not the only way of value creation in fashion, even if it’s the most interesting for the path that we are following: other analysis suggest diverse and complementary mechanisms. In an extremely synthetic way, we can say that all the classical studies on fashion in sociology, from Simmel and Veblen to Bourdieu (BIBLIO) have focused with diverse lenses on the capacity of fashion to produce at the same time processes of social distinction and social cohesion, representing the uniqueness of the taste of certain social groups and ratifying their status. This allure, that can be seen as a materialization in clothing of the social relationships of power, it’s a fundamental mode of production of value in the markets.

designer even though no license has been paid. A knockoff is a dress that may be almost identical to a brand-name dress, but it does not purport to be anything but what it is: a nearly identical knockoff produced by someone else. Counterfeiting is wrong not because it imitates design elements, but because it steals from the repository of value in fashion – the trademarked name and logo. Designers have credibility, stature and profitability because their name comes to represent a look and an artistic standard.” (Sinnreich and Gluck 2005:23)

B) Reputation, symbolic capital and p2p

In this ecosystem, some actors at the high level have the possibility to use legal tools to protect creations from counterfeiting, but this not affects inspiration, imitation or knockoffs. This makes sense because for such actors the root of the value itself is rooted in their brands.

The more an actor is small, the less this kind of legal protection of the brand makes sense. The reputation of small designers, craftsmen and micro-entrepreneurs is based on totally different logics. Since they are tangled in small and specific (even if not necessarily in spatial terms) networks where face to face communication (or its digital equivalent) is the dominant mode of interaction, they are called to responsibility through different means. This involves mainly what, in sociological terms, can be defined as a mixture of social capital and symbolic subcultural capital (Bourdieu 1979, 2000; Thornton 1996; Harvey 2002; Niessen 2009).

In its theory of the capitals, the french sociologist Pierre Bourdieu identified a quadripartite system: economic capital, which is the direct and indirect set of material resources that an individual or group can use; cultural capital, constituted by the formalization of the knowledge through educational institution; social capital, that can be synthesized in the quality and quantity of significative social relationships that can be mobilized to reach specific goals; symbolic capital, a more volatile set of resources that has to do with the possibility to accumulate and show certain symbolic traits that are referred to desirability within specific social groups⁴.

Considering our *groups* in their local contexts, their main source of value is located in their social capital (“who do I know, who does know me and how we can do thing together”) and in the located subcultural symbolic capital they can accumulate and use. Here, we are using the term “subcultural” not referring necessarily to spectacular styles like punks and mods but, in a wider sense, to lifestyles that

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⁴ Someone may say that this is a quite brutal simplification, but it works to the extent of our purposes in this chapter: complexity and depth of Bourdieu’s thought are certainly wider.

express values and practices that differ sensitively from the ones accepted by the majority of the social body. Nevertheless, subcultures in the sense of “alternative movements” are very important. As highlighted by Claire Bridgett Dearie, “Craft’s marriage with political statements originated with the Arts and Crafts movement of the 19th century, which stood in opposition to the Industrial Revolution. In the 1960s and ‘70s, counterculture once again embraced craft as a way to reconnect to the earth at a time when pop art praised commercialization and consumerism. (...) In the early 1990s in Olympia, Washington, the roots of the riot grrrl movement spread and jumpstarted a DIY culture in music, writing, fashion and feminism. (...) Riot grrrls planned social events, workshops and eventually entire conventions to bring about social and cultural change.” (page 11)

Subcultural symbolic capital is strictly connected with identity and reputation: certain social actors have gained a particular kind of credibility that is recognized by all the members of their networks. It’s important to underline that such credibility is necessarily not linked to the same values and practices in all the contexts. At the contrary, it’s strictly local and situated: it not only differs on a national base, but also on a micro-regional one; at the same time, in the same spatial context should coexist many different subcultural networks that recognize desirability, and value, to different kinds of symbolic capitals, expressing different set of values. A higher degree of complexity is given by trans-local subcultural networks, that detach the process of symbolic creation from spatial limitations and aggregate subjects through technological means.

One of the driving ideas behind Bourdieu’s theory of capitals is that, to a certain extent, is possible to convert some parts of certain kinds of capitals in others: so, for example, it’s possible to use the formalization of knowledge given by cultural capital in order to find better jobs that will increase the economic. Symbolic capital can work in the same way: it’s possible to exchange the reputation acquired within certain networks with economic income. This exchange can happen at two different levels.

The first one is very similar to the one that we have already took in exam for the mainstream fashion system: the reputation of certain designers or craftsmen can generate an “aura” of uniqueness that can be embedded in cultural/material products (clothes) and sold. The main problem with this process is that such kind of productions usually cannot benefice of the main features of economies of scale: mass purchasing (materials bulk buying facilitated by long-term contracts); managerial specialization; better financial options for borrowing or other financial products and instruments; advertisement and marketing; and ac-

cess to capillar distribution systems.

Another fundamental obstacle is that most part of the potential buyers of micro-fashion are not ready to pay high prices for clothes, because it's not affordable or because this is not considered a socially desirable behavior, regardless the real amount of time and specialization invested by the producers. This means that another key mechanism of the fashion system, luxury, is excluded.

The model known as Long Tail Economy can be seen as an alternative to economies of scale for small productions. We have already described this phenomena and its mechanisms in the first chapter. Here, it worths while to consider that the most famous and successful on-line community for crafting e-commerce, Etsy, has opted exactly for this strategy (Abrahams 2008)

Basically, Etsy has built a community of "crafty people" mainly focused on selling; apart from this, its main successes are constituted by the capacity to build micro-narrative around micro-businesses. Many sections of Etsy's website are dedicated to a constant monitory of what's going on in the word of craft, to tell the stories of the most active crafters and most successful micro-entrepreneurs. Far from being only a marketing strategy, this can be seen as a proper process of community-building (Wiertz and de Ruyter 2007; Jankowski 2007; Koh et al. 2007; Brown, Broderick, and Lee 2007) that enhances the identity construction process of groups and individuals. It's important to underline that on Etsy all the participants conceive themselves mainly as individual (and individualized) small entrepreneurs or part-time crafters. The community is strong, but it's a community that aggregates individuals that produce on their own and then promote their products on a web platform.

Considering the open source nature of the fashion system and the micro size of the actors we are taking into account, it's reasonable to consider the whole field with the lens of peer-to-peer economy. The fashion system is characterized by abundance and distribution, the two conditions that Bauwens identifies as necessary for the emergence of peer production:

"Abundance refers to the abundance of intellect or surplus creativity, to the capacity to own means of production with similar excess capacity. Distribution is the accessibility of such abundant resources in fine-grained implements, what Yochai Benkler has called modularity or granularity. Again we could talk about the distribution of intellect, of the production infrastructure, of financial capital." (Michel Bauwens 2006:2)

As we have seen, abundance of signs is a keyword in the world of fashion: all the actors are constantly involved in processes of creating, re-creating, transforming and mixing. Distribution is fostered by the general trend of User Generated Con-

tents and the Blogosphere is documenting and making accessible this whole amount of creativity.

In a P2P perspective, both these aspects have to be implemented and systematized. Re-appropriation and bricolage can be seen as the first steps in a path towards the establishment of a conscious co-design process oriented towards a commons perspective. At the same time, distribution has to be implemented not only by technical means but also through a narrative work able to represent the transformations in identities and production processes.

A P2P business model for fashion has to take into account the partially non-monetary nature of certain kinds of micro-economies; if an important part of the value is obtained by the actors through the enhancement of their subcultural symbolic capital, the business model should help them firstly to work on this and, secondly, to establish networked forms of derivative monetary resources; finally, it has to help them to earn directly monetary value from the sell of co-created products.

Writing about derivative monetary resources we are referring to the whole economy that revolves around the simple activity of sewing and selling: micro-realities are very often involved in parallel activities like teaching, organizing and taking part into events. The more they are active in their own local networks, the more such events will not include merely fashion. This drive us back to a wide definition of fashion system that includes not only fashion actors and institutions but that also overlaps with sectors of art, design, music, etc.

C) Quality and the local context

Quality is at the core of all the crafting activities. As highlighted by Richard Sennett in his seminal work "The craftsmen" (Sennett 2008), craftsmen can be defined as individuals that feel to be part of specific social communities that basically shares two core values: delivering quality and working good⁵. Such definitions of quality are mainly implicit, because they are linked to material practices characterized by a low degree of verbal formalization; according to Sennett, explicit criteria of quality (i.e. quality control) are often in conflict with the implicit knowledge shared by the communities.

In the traditional industrial framework, there are four main kinds of quality:

"- Quality of the construction or structure: set of product properties built in the design that becomes apparent both in the production process and use (e.g. grain of shoe upper or leather goods, composition of athletic footwear's soles).

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⁵ A side consideration of Sennett's theory is that the building of this ideology is linked to institutions that work on co-operation. For this reason, the planning of a successful crafting network has to be based on collaboration and not on bureaucracy or competition (2008).

- *Functional quality expressed by the product's suitability for its intended use, reliability, security and comfort (e.g. geometry of travel goods vis-à-vis storage capacities, dimensions of shoe lasts, water-vapor permeability of shoes and gloves).*
- *Production/execution quality determined by workmanship and technology precision, absent of faults, realization of the (aesthetic) design (e.g. symmetry of left and right shoes and gloves, evenness of seams and overlaps, finishing consistency).*
- *Realization/recognition quality that plays extremely important role in marketing of fashion goods (e.g. compliance with avant-garde trends).*" (Flynn, B. B., R. G. Schroeder, and S. Sakakibara. 1994)

In our project, it's important to think in a flexible way to this different kinds of quality in relation with the implicit ones, because each Local Context and Sub-culture will demand for different kinds of quality. For example, in many contexts of grassroots fashion, the absence of imperfections is not important; at the contrary, imprecisions are often seen as a distinctive mark of authenticity. This is not something that we can choose but it's more a structural limit: each local producer will produce the collection without our supervision in terms of material quality, responding to the inner logics of the local scenes. Far from being a problem, this can be seen as a way to get in touch with the specific symbolic capitals of local contexts.

What is the specific knowledge that we want to share?

Trough the analysis of blogs and communities it has emerged a clear discrepancy between the forms of knowledge provided by most part of educational institutions and the ones requested by the real economic world. As a matter of fact, while the content of learning seems to focus mainly on project culture and on technical skills, the labour market requires increasing competency in terms of self-entrepreneurship, management, financial and fiscal design and management. At the same time, the uprising individualization process requires an hyper-adaptive learning capacity that enables workers to become quickly proficient in new technologies, both in the field of production (i.e. CAD softwares) and in that one of communication (just think about e-mail communication or at blogging and social networking).

Here it's necessary to make a reflection on the general project philosophy. Considering the fashion workers as isolated and monadic entities in the depersonalized empty space of economic relations, to focus on learning means to give emphasis to the skills needed to become efficient entrepreneurs. But considering them as integrated parts of social networks means to help them to develop skills in order to be efficient members of such networks; so, technical and managerial

skills are important, but it's more important to develop skills in order to understand their position in local contexts and global markets on the basis of their own needs and values.

In order to proceed, it makes sense to analyze some of the most recent technological developments that are related with knowledge sharing in the worlds of fashion and crafting.

A) Instructables

Instructables, and other similarly inspired websites, are platforms that encourage the creation of multimedia instructions generated by the users themselves, driving the audience through prefixed steps to the realization of material (and sometimes immaterial) products. The general philosophy is that one of the broadening of the meaning of the traditional "How To" section in DIY magazines and websites. Instructables do not focus exclusively on sewing but includes a wide set of topics (from robotics to cooking, from woodcrafting to electronics) with a broad range of difficulty levels (from the entry level to the hyper-qualified one) (Meyers, LaMarche, and Eisenberg 2010; Rosner and Bean 2009; Cavallo and Nichols 2007).

The main positive features of Instructables can be identified in the following points:

- a) knowledge organization and communication is highly informal and often funny; this encourages also not well educated users to learn;
- b) the implementation of the discussions around a certain "How To" does not freeze the specific knowledge in a fixed product, but, on the contrary, it develops it continuously thanks to the community;
- c) since many diverse fields of production are taken into account, Instructables seems to encourage the cross-fertilization among different practices and knowledge.

We can also observe some criticisms⁶.

- a) Even the more detailed "How To" are not able to communicate the whole amount of implicit knowledge that is embedded into certain crafting skills; and the more this skills are professionals, the more it's hard to communicate them (this doesn't avoid very complicated sewing Instructables like "How To Make a Neo Victorian Ball Gown" <http://www.instructables.com/id/How-To-Make-A-Neo-Victorian-Ball-Gown-Advanced-Se/>).
- b) This problem is amplified by the barriers of language; even if there is a

⁶ This makes sense only for the specific purposes of this writing and don't affect the whole project, that can be considerably coherent in the relationship between its purposes and their pursuing.

wide and sharp use of multimedia contents, the main core of this kind of instructions is constituted by written and/or recorded words.

B) Spyn

Spyn is a prototype that have recently thrilled communities of researchers and crafters (Rosner and Ryokai 2009, 2008; Rosner 2010). It was realized by two researchers of the School of Information at the University of California, Berkley, Daniela Rosner and Kimiko Ryoka. In their own words,

“Spyn (is) a system for knitters to virtually weave stories into their creations. Using Spyn, a knitter can record, playback and share information involved in the creation of hand- knit products. Spyn uses patterns of infrared ink printed on yarn in combination with computer vision techniques to correlate locations in knit fabric with events recorded during the knitting process. Using Spyn, knitters can capture their activities as audio, image, video, and spatio-temporal data. When users photograph the knit material, the Spyn system analyzes the ink patterns on the material and visualizes events over the photograph of the knit.” (Rosner and Ryokai 2008:1).

The main interesting points in Spyn are:

- 1. it facilitates the emergence of a tacit knowledge related to an activity that is usually seen as “minor” in despite of its high degree of complexity;
- 2. it encourages a rich contextual documentation of craft practices; far from being merely a gadget, it lets come into view the emotional complexity of DIY practices: this is a decisive factor in the production of subcultural capital;
- 3. the data obtained through the tool can be shared through a wide range of web tools and platforms.

The main problems that we can highlight in Spyn are:

- a) even if it can be considered as a simple tool, Spyn requires an interaction with hardware and software technology; this can be seen as a major barrier for many member of the target group, that are nearly non-literate from a technologic point of view;
- b) storytelling, which is the main value of the tool, is a practice that requires considerable efforts in order to be efficient;
- c) at the moment, the tool has been developed only for knitting; even if it's extremely interesting, there are no evidences that it can be enhanced also for sewing or other craft related practices.

C) Web 2.0 Tools

Social Networks are becoming much more popular and diffused than all the previous forms of the internet. Even if the mass use of social networks is producing an unforeseen amount of communication trash in the history of man on Hearth, at the same time it's also creating a promising set of tools for new kinds of learning.

In this section we're not taking into account a specific tool or set of tools, but more generally the logic of web 2.0 itself; the reason is that specific platforms and tools tent to became obsolete very quickly⁷. Nevertheless, the intrinsic logics of web 2.0 can be considered as valid and we can expect that in the narrow future they will be expanded more than overcame.

From the point of view of the groups that we take into account, web 2.0 environments offer many interesting features (Ullrich et al. 2008) Clothing is a highly sophisticated activity that requires face to face interaction in order to transmit physically the implicit knowledge embedded in gestures and other kinds of non-verbal communication. We cannot expect that such kind of knowledge will be communicated via internet, especially considering the supposed degree of web-literacy of our target. But they can use our platform to let emerge the elements that connote their identity as members of specific sub-cultural local communities; in other words, they can use it for the enhancement of their sub-cultural symbolic capital.

As it has been shown by other researches (Niessen, 2009) and by our qualitative fieldwork, there are many difficulties for professionals, tangled in specific local contexts, to understand how to do this fundamental step. Very often, institutions are seen as alien actors that speak an incomprehensible bureaucratic language and that use to appear only to limit the activity of micro-entrepreneurs with fines and penalties. At the same time, there is often a tendency to self-segregation into the comfortable borders of their own communities, seen as “safe” places where common values, languages and practices are given for grant. If this “protective” approach can be successful when small networks are benefiting of the enthusiasm given by novelty or by particular circumstances, on the long term it tent to bring the networks to some sort of implosion.

From this point of view, online sociability enhanced by web 2.0 can be seen as a way to implement a more sustainable path for micro-producers. More precisely, it can provide tools for 4 main dimensions: self-representation, acknowledgment, sharing and networking.

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⁷ Just consider, as an example, how MySpace has been overtaken by Facebook in a couple of years.

“Self-representation” means the construction of a personal and professional identity able to recognize and empower individual and collective narratives. Here, when we talk about identity we are talking about values, symbols and practices.

“Acknowledgement” means mutual recognition of identities produced in other sub-cultural contexts. Recognition leads to a public reputation and this leads to trust⁸.

“Sharing” means the chance to exchange symbolic capital thanks to the two previous features. Sharing is not only a techno-optimistic ideology that uses plastic words from the internet; in a more sociological framework it’s also the gate for social innovation.

“Networking” means the possibility to act pragmatically with other actors with a common view.

Even if these steps seem quite simple, they take into account the possibility to act at the same time at the symbolic and material levels.

Learning, web 2.0 and local contexts

We can define a *Local Context* as a spatially determined set of social networks of actors related to our target users, with specific priorities in terms of values, practices and skills. It’s fundamental to always remember that the success of Open-wear is strictly connected with the importance given to different Local Contexts. The main reason of this importance is that we are going to manage an online community that will group actors deeply rooted in their territories and used to produce clothes in a material (offline) world that is locally defined.

It has been demonstrated that fashion is one of the sectors of creative industries with the higher importance of off-line meetings (D’Ovidio).

At the same time, we have to remember that some cities (at least: Berlin, London, Amsterdam, Milan, Barcelona, Madrid) are crucial in the definition of contemporary styles; this means that we have to develop site-specific strategies in this regard.

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8 Here Arvidsson’s theory about the emergence of an ethical conception of economic relationships can be an interesting interpretative lens; briefly:
“The next economy will be an ethical economy where value is no longer based on labour as in the capitalist economy (nor on land as in the feudal economy that preceded it), but on the ability to construct ethically significant social relations.” (Arvidsson and Petersen, ethical economy, 2010 provisory, page 1).

Each Local Context has different assets from the point of view of Local Fashion Systems; Local Scenes, Subcultures and Gatekeepers; Social and Economic Environment; Local Hubs.

Each *Local Fashion System* has a different structure, according to: the different kind of historical productions; the presence or absence of small producers at different steps of the production process; the networks in which the area is involved; the kind of educational and non-educational institutions rooted in the area; the size of the context and its rural or urban nature.

Local Scenes are related to the world of *Subcultures*. In the common sense, subcultures are often related to spectacular styles and attitudes like the ones of punk, mods, hippies, etc. Nowadays it has been observed a tendency to post-subcultural identities: it means that people are going to integrate different values, icons and elects of styles in a less structured way. At the same time, most consumers and users communities can be partially seen as subcultures.

This is a crucial point: in order to get in contact with the local contexts we have to establish direct connections with *Subcultural Gatekeepers* (local actors with a notable subcultural symbolic capital).

Social and Economic Environment differs conspicuously from one context to another. The main variables from this point of view are:

- *Gender and Age Inequalities* (different chances to access satisfying positions in the labour market can drive to different approaches to the idea of career);
- *Local Welfare Systems* (a conspicuous support to unemployment can establish wide groups of high skilled unemployed, especially in the creative sectors);
- *Real Estate Market* (prices too high for dwellings, studios and laboratories can drive to the choice of a more “regular” career);
- *Local Economic Structures*.

Local Hubs are the physical spaces relevant for networking. According to the characteristic of different local contexts (or specific subcultures) they can be shops, laboratories, associations, cultural institutions, schools, markets, art centers, informal aggregation centers.

Given these general definitions, the consequent question is: how can web 2.0 tools help in sharing knowledge that will drive to an enhancement of symbolic capital for our target users? And what is the more practical knowledge that can be integrated with the previous one?

tributed labor networks are using the Internet to exploit the spare processing power of millions of human brains.

For the last decade or so, companies have been looking overseas, to India or China, for cheap labor. But now it doesn't matter where the laborers are – they might be down the block, they might be in Indonesia – as long as they are connected to the network.

Technological advances in everything from product design software to digital video cameras are breaking down the cost barriers that once separated amateurs from professionals. Hobbyists, part-timers, and dabblers suddenly have a market for their efforts, as smart companies in industries as disparate as pharmaceuticals and television discover ways to tap the latent talent of the crowd. The labor isn't always free, but it costs a lot less than paying traditional employees. It's not outsourcing; it's crowdsourcing.” (ibid))

Crowdsourcing is particularly interesting for creative industries. Websites like 99design continuously launch competitions for logo design, print design, t-shirt design, web design, etc.

From this point of view, Crowdsourcing is appealing for the business because it allows to rise quickly an impressive amount of immaterial products, often with considerably lower expenses than in usual systems. People participate for a wide set of reasons, but recent researches indicates that, for example,

“the crowd at iStockphoto is motivated by money and the opportunity to develop individual creative skills, not necessarily by the desire for peer recognition or the opportunity to build a network of friends and creative professionals“ (Brabham 2008).

The uprise of Crowdsourcing originated very different reactions; on one side, entrepreneurs seems to be enthusiastic. On the other side, professional associations of specialized creative workers, that fear to be replaced by crowdsourced professional amateurs, are organizing campaigns against such “speculation”⁹. The main criticisms can be summarized as follows:

- 1. crowdsourced creativity has low project design efforts and this can compromise quality;
- 2. crowdsourcing tend to diminish the economic value of creative work;
- 3. there are no clear legal patterns for intellectual property¹⁰;

9 The most famous is “No Spec” (<http://www.no-spec.com/>)

10 These are the three points highlighted by the official critical document of the professional association AIGA (<http://www.aiga.org/content.cfm/position-spec-work>).

- 4. crowdsourcing can foster alienation of workers that became totally detached from the “real” meaning of their production;
- 5. oeuvres produced in crowdsourcing are nearly useless from the point of view of workers careers in terms of portfolios, curriculums, etc¹¹.

The problem is that the rhetoric of crowdsourcing uses to depict it as an expression of “the power of the crowds”; such definition seems to invoke a more democratic, participative and equal distribution of the production process. But, as it's highlighted by many skeptics¹², things are going in a different way.

Peer-production

Peer-production is a new form of production (of goods, contents or services) that involves members of communities on an organized base. It's a

“coordinated, (chiefly) internet-based effort whereby volunteers contribute project components, and there exists some process to combine them to produce a unified intellectual work” (Benkler 2006:277).

According to Benkler (Benkler 2006), the information production costs lowering is going to reduce the value of strategies based on property and, at the same time, it's going to make commons-based knowledge more important; it's also going to increase the range of motivations to produce in public form¹³. Finally, it's creating the basis for wide cooperative projects that were previously inconceivable.

As summarized by Tom Abate

“Benkler lays out three characteristics of successful group efforts:

“They (the tasks)

- 1) *must be modular. That is, they must be divisible into components, or modules, each of which can be produced independently of the production of the others. This enables production to be incremental and asynchronous, pooling the efforts of different people, with different capabilities, who are available at different times.”*

11 Point number 4 and 5 are identified by Jonathan Zittrain in his talk “Minds for Sale: Ubiquitous Human Computing and the Future of the Internet“.

12 See <http://emahlee.wordpress.com/2010/06/12/the-power-of-design-crowdsourcing-vs-collaboration/> , <http://opensource.com/business/10/4/why-open-source-way-trumps-crowdsourcing-way> .

13 This is clearly demonstrated by the bibliography on the motivations of open source communities (McLure Wasko and Faraj 2000; Bonaccorsi and Rossi n.d.; Stewart and Gosain 2001; Bonaccorsi and Rossi 2006; Vainio et al. n.d.; Oreg and Oded Nov 2008; Yang and Lai 2010; Brabham 2008; Ekbja 2008; Zehle n.d.; Mikkonen, Vadén, and Vainio 2007; Coleman 2005; Schroer and Hertel 2009; O. Nov 2007; Hars and Ou 2002)

- 2) “For a peer production process to pool successfully a relatively large number of contributors, the modules should be predominately fine-grained, or small size. This allows the project to capture contributions from large numbers of contributors whose motivation levels will not sustain anything more than small efforts toward the project”
- 3) “... a successful peer production enterprise must have low-cost integration, which includes both quality control over the modules and a mechanism for integrating the contributions into the finished product, while defending “itself against incompetent or malicious contributors””. (<http://www.newcommblogzine.com/?p=509>)

Here the issue of power is fundamental. On one side, we have a collaborative project that can be seen as similar to the one of crowdsourcing; on the other side, the property of the results of the production joins a common pool where everything will remain public.

So, in other words, we can say that in crowdsourcing the crowd is producing for the wealth of the fews, while in peer production a crowd will benefit of the efforts of a crowd¹⁴.

A survey of crowdsourcing experiences in fashion and clothing

1) Threadless



14 For a more detailed description of the differences, please see <http://blog.p2pfoundation.net/why-crowdsourcing-is-peer-production/2007/03/08>

Probably, the most famous crowdsourcing project related to clothing is the Chicago-based company Threadless (<http://www.threadless.com/>). In the words of its founder, this is the process they use:

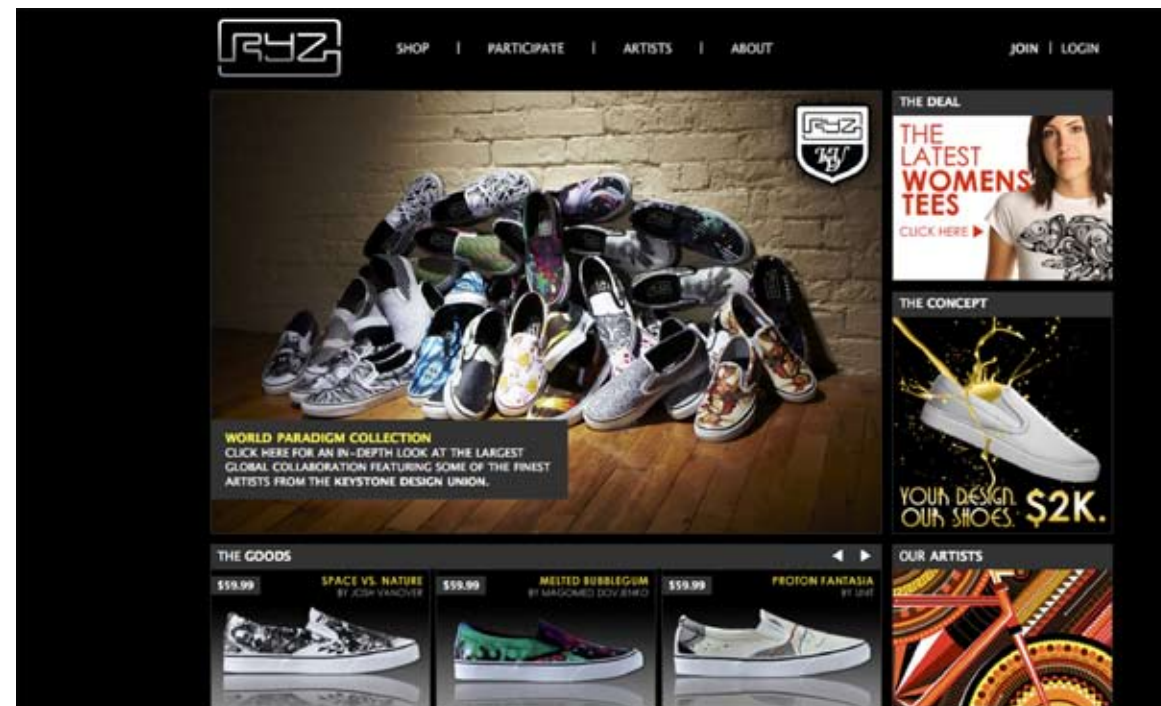
“Threadless is an ongoing, online tee shirt design competition. Designers download a template and upload a design. Each design is scored on its own for seven days. The designs are voted on from 0-5 by our community of registered users. Currently, we have a little over 500,000 of them. There’s not real set “end date” for a contest as each design is available for scoring for seven days from the time it was submitted. However, each week we release seven new designs and two re-prints to sale on our site.

The designer of each winning tee receives \$2000 in cash and prizes: \$1500 cash, \$300 gift certificate to Threadless and a membership to the 12-club, a monthly subscription-based line of tees. We receive about 150 submissions per day and have printed a little over 900 designs. We currently sell about 80-90 thousand tees per month and ship them from our Chicago office/warehouse” (BIBLIO: Ten Questions with Jeffrey Kalmikoff, Chief Creative Officer of skinnyCorp/Threadless http://blog.guykawasaki.com/2007/06/ten_questions_w.html#axzzotOE46ibf).

Threadless can be defined as a process of “customer co-creation”, “user innovation” or “crowdsourcing” working through the mechanism of an on-line auction that rewards the ones are able to match with the community interests (this process is defined as “crowdvoting”). Threadless has progressively extended its production with specific one-shot contests for a wide range of goods. The image of the company highlights elements like: participation; being part of a community; to be out of the fixed patterns (the two founders are defined as “both college dropouts (...) now in demand at the nation’s top business schools”¹⁵); freshness; and coolness.

15 From: “The Customer is the Company: how Threadless is using crowdsourcin” http://www.inc.com/magazine/20080601/the-customer-is-the-company_pagen_6.html

2) Ryz



Ryz is a mixture of crowdsourced, and crowdvoted, design for shoes and crowd-voted design realized by famous artists and designers. In their words:

“As an ongoing, open call for design submissions, RYZ welcomes the community to get involved by submitting designs, commenting on designs, or by voting on their favorite designs”.

(There are two ways of getting paid):

“1. Every 7 days the most popular design submission in Vote, based on community ratings and critiques, will be deemed Design of the Week. The winning designer banks \$100 good towards merch in the RYZ online shop.

2. After carefully watching the progress of a design, RYZ will select a production-worthy design to be officially manufactured and sold both online and around the world in select retail and boutique shops. These designs will have proven the community test and showcase an overall ‘above average’ quality of work. The selected artist will pocket \$2000 cash and \$100 good towards merch in the RYZ online shop.”

<http://www.ryz.com/design/howitworks>

The image of the company differs from the others because it's more framed on “art” (notably visual and street art) and “coolness”¹⁶.

¹⁶ Similar project respectively for shirts, female shoes and high heels shoes are Cameesa (<http://cameesa.com>), Walking Resistance (<http://www.walkingresistance.com/>) and Dream Heels (<http://www.dreamheels.com>). The first one is focused on amore “arty” image, the second one is more “young” and the last is more “classical”. Substantially, they use mixed processes of crowd-

3) Fashion Stake



At the moment we are writing, the crowdfunding company Fashion Stake (<http://fashionstake.com/>) is relevant only for its advertisement techniques.

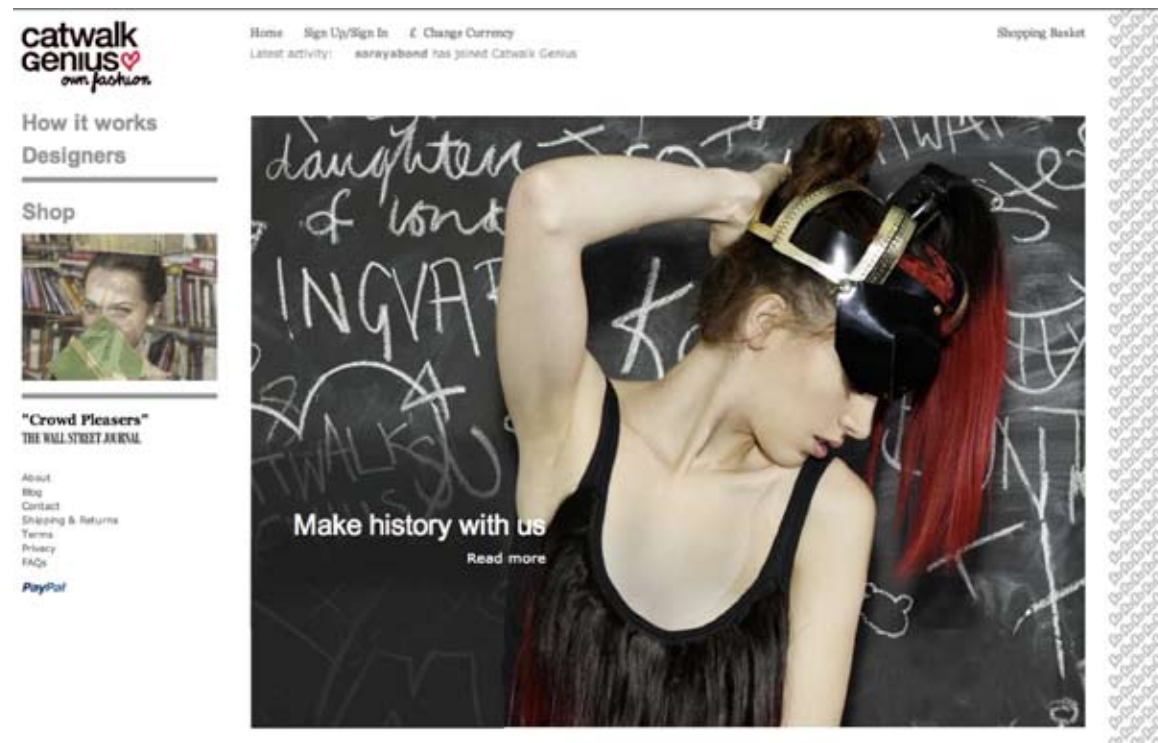
Without showing a single part of its platform, it has been able to become a media phenomenon with articles on many relevant business blogs and portals. On one side, the image of the company is absolutely traditional: it focuses on the usual values of the mainstream fashion system (as highlighted by the names of the first scheduled designers: Phillip Lim, Alexander Wang, Donna Karan and Jeffrey Montero). On another side, it tries to follow the path of other successful startup companies, talking about “democratization”, “sharing”, “power of the crowd” and “community support”.

More concretely, Fashion Stake seems to be a crowdfunding platform where the customers can financially support a mainstream designer’s collection and suggests some changes in the clothes¹⁷.

.....
funding, crowdsourcing and mass-customization.

¹⁷ Rick Roubin’s project seems to be oriented in the pretty same way (<http://www.dickroubin.com/media.asp?t=1>).

4) Catwalk Genius



Catwalk Genius (<http://www.catwalkgenius.com/>) is a crowdfunding platform for traditional mainstream fashion. In its page on Open 100 it's defined as follows:

"Catwalk Genius introduced the concept of 'crowd-funding' to the fashion industry. In short, anyone may buy shares in a new fashion collection. The funding collected is used to create a clothing range and the revenues from its sales are shared equally between designer, supporters and Catwalk Genius. Supporters are given perks in return for their support, such as signed design sketches or seats at a catwalk show." (<http://www.openbusiness.cc/2010/01/13/catwalk-genius/>)

Here the whole image is very conventional and seems to be shaped more on fashion blogs style than typical crowdsourcing companies one (bonuses for catwalk shows and mentions on Vogue and Grazia are two good indicators in that sense).

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Sustainability in fashion

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Textile recycling recipient set up in New York City, 2010
(<http://www.ecofashionworld.com/Players/NYC-TEXTILE-RECYCLING.html>)

“One of the strongest trends in fashion is the expression of ecological, social and community consciousness through for-profit fashion design corporations, which most recently have moved upscale from organic cotton T-shirts and hippy-ish drawstring pants to high fashion. There is now a wide range of companies offering well

designed merchandise, from one-off art, recycled and redesigned clothing, organic and sustainable textiles and garment production, to a range of community and indigenous support cooperatives bridging the gap between traditional craft and high fashion.” (book cover for Sass Brown: Eco-Fashion, published sep 2010 <http://www.ecofashiontalk.com/>)

“Fashion does not evolve, it changes: its lexicon is new every year, like that of a language which always keeps the same system but suddenly and regularly changes the “currency” of its words.” (Barthes, 1990/1968: 215)

As the two quotes indicate, we can say that there is a shift in fashion towards a more eco-friendly direction, at least in the way that the fashion system sees itself. However, what Barthes’ consideration should remind us of is the paradox that sets in when we compare fashion and sustainability: fashion is a book that changes its pages every year, but it is very questionable whether the system of meaning of fashion ever changes. Fashion may thus be defined as the discarding of clothes that are fully functional for purely semiotic or symbolic reasons. Sustainability, on the other hand, has to do with the very long perspective, perhaps even with infinity as such (Koefoed, 2008: 61). In order to understand sustainability, one has to think of the infinite repercussions of any action and think it in terms of a system in which everything per definition remains unless broken down through the use of energy (Norbert & Cumming, 2008). How is it possible that these two fields may truly converge and create anything else than the infatuation of the “eco” in fashion?

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1. Sustainability defined and related to fashion

“There has been a tendency in many fields to focus on single aspects of sustainability while ignoring the larger and more complex system to which they belong.” (Norberg & Cumming, 2008: 279).

The simplest definition of sustainability is probably the one which is also the best known, stated in the Brundtland report (1987): sustainability, as stated there, amounts to satisfying the needs of the living without infringing on the needs of future generations (Our Common Future, 1987). This definition is probably the most widespread, however its focus has been changed in the later years. Not so much by theorists, as by the development in business and political organisation, which have installed sustainability as one of the main agendas in the latter years. Overall, one must say that the somewhat simplistic definition

has been replaced in many circles by concepts of sustainability that are more directly influenced by theories and experiences of networks, complexity, entropy and equity.

Thus, the definition of sustainability has had to expand or adapt itself, enabling it to better answer to the questions arising in the present and how we work with it, i.e. "the equitable, ethical, and efficient use of social and natural resources" (Norberg & Cumming, 2008: 4), rather than only in relation to a future or imprecise horizon. The Brundtland Report already emphasized that sustainability is a three-legged stool of people, planet, and profit. But this alone does not do it. Part of the modification calls to placing focus more directly on the surroundings – whether these are defined as the environment, the eco-system, or nature – around whatever actor is valued as sustainable (or not). Thus sustainability may, from a systems-perspective be defined a bit more complexly as that which "integrates natural systems with human patterns and celebrates continuity, uniqueness and placemaking" (Early, 1993) or "using methods, systems and materials that won't deplete resources or harm natural cycles" (Rosenbaum, 1993), or again a balancing between life forms in the present and emerging life forms, anticipating future complex worlds (UN 1997).

As explained by Norberg and Cumming, sustainability must deal with aspects of high diversity, a good anticipation of change to come, nurturing sources of adaptive capacity, governing self-organisation, and connecting to future for a sense of the way overall winds may blow (Norberg & Cumming, 2008: 279-81).

In short, sustainability on the one hand covers a stance towards the possibilities of future generations, maybe even from the point of view of the future, with all the difficulties that this perspective implies (Kemp, 1991: 132). And on the other hand, sustainability is about connecting to the present with a particular sensitivity, acutely aware of resources and 'eco-poietic' or 'eco-organising' (dependent and defined by external forces and resources) processes (Jenks & Smith, 2006, Kagan 2010).

These definitions are most directly related to what one could call ecological or environmental sustainability. When bringing in economy, there is an important distinction to make. In economy, one would mostly call an economic unit or system sustainable, when it has the capacity to uphold its own existence. Sustainability in economy is normally equivalent with durability. One might add to this an element of quantitative growth, complicating matters somewhat as continued growth eventually leads to problems of resources in a local context (or global, as things have developed). This problem is of course well known in business and is dealt with through competition and mergers, etc. We will not deal further with the issue of market evolution in itself here due to the complexity of the matter.

The issue does however of course lie at the root of all recent development of networked, open source, p2p and similar organisations of fashion collaboration and other organisational work (see previous and following chapters).

"A sustainable economy must be based on a fundamentally different paradigm, specifically, on the paradigm of living systems. Living things by nature are self-making, self-renewing, reproductive, and regenerative. Living plants have the natural capacity to capture, organize, and store solar energy, both to support other living organisms and to offset the energy that is inevitably lost to entropy. Living things also have a natural propensity to reproduce their species. Humans, for example, devote large amounts of time and energy to raising families, with very little economic incentive to do so. Obviously, an individual life is not sustainable because every living thing eventually dies. But, communities and societies of living individuals clearly have the capacity and natural propensity to be productive, while devoting a significant part of their life's energy to conceiving and nurturing the next generation." (Ikerd, 2005: 2)

The later years have brought the rise of theories of sustainable economy in terms of management of eco-systems. But also of economic systems that change the rules of the game towards more ethically or socially sustainable models, such as Ikerd's. Sustainable economics is of course very much an ethical matter, and has social effects as well as economic. The discussion around the potential of Open Source as a model for economic systems is relevant to the question of sustainability in economic systems, although of course not the only possible perspective. Basically, the issues at stake in sustainable economics have to do with two different matters: the issue of the relation to nature and what human societies are doing to it, on the one hand. And the issue of fair distribution of wealth on the other (Putnam, 2000). As for the social issue of sustainability, this gets even more clouded and nebulous. The term "social sustainability" actually mainly covers over another way to speak of equity, as can even be seen from the definitions above. Fairness in treatment of workers, responsible behaviour, etc. If you translate social sustainability to business perspectives, it more or less amounts to the same as CSR, Corporate Social Responsibility. This is a vast agenda, which might roughly be divided in two: responsibility towards one's own workers and responsibility towards the rest of society (and/or nature). Or one could sum it up as: supply chain, environment, products, employees, and communities of customers. Ironically, sustainability as an economic term also points to the survivability of any economic endeavour, be it a company, a project, a product or a nation (Daly, 1996).

Of course, it is just as arrogant to pretend to say anything satisfactory about sustainability and business or economics in a page or two, as about sustainability as such. Such a description must make clear that there has been a dominant issue of the incompatibility of business agendas of quick profit and the ‘infinity ethics’ of sustainability. This is not a problem easily solved, and the position is not rare that the growth ideals of capitalism are incommensurable with sustainability (e.g. Kovel, 2007; Daly, 1996, etc). As described in the book *Natural Capitalism* (Lovins, Hawken & Lovins, 2008), sustainable business should include the sustainable development and use of, at least, the following four types of capital: financial, manufacturing, natural, and human. Another way to look at it is that the company should seek to meet the demands of the triple-bottom-line: people, planet, profit. This model leads to many investment project, such as in the Danish windmill industry these years.

M. de Brito et al. identify three main drivers towards sustainability in fashion business: compliance with legislation, as we are dealing with production that is followed rather closely in both research and law development; the attempt to obtain a competitive advantage; and the impact of Corporate Social Responsibility in companies over the last decade (de Brito et al, 2008).

2. Best and worst practices in fashion production and consumption

Best and worst practices are of course a complex matter to describe. Overall, the main problems in fashion in terms of sustainability are the twin factors: the creation of want for unnecessary renewal of the wardrobe (also known from the producer’s perspective as planned obsolescence), and the unsustainable practices of production of clothing etc, ranging from cotton production methods to horrifying working conditions for workers involved (Skov, 2009). In other words, the problems are closely linked to the “planet, profit, people” aspects identified in the Brundtland report, with a certain logic prevailing: the people are abused within or profit from a profit-driven industry that by and large ignores the needs from the planet. This is not the whole story, though, as there are also scores of interesting projects and collaborations from a sustainability perspective. The main problem is a systemic one, making a list of best and worst practices a bit problematic. However, this attempt might in itself serve to raise some awareness and some reflection and thus, help to get a bit closer to accepting the more systemic issues.

There are obvious cases, such as Patagonia, that has been working under a spell

of environmental sustainability for more than 20 years (<http://www.patagonia.com>). More recently, companies such as Nike have introduced vast recycling programmes, inspired by systems such as Cradle-to-Cradle. And top designers in fashion are signing in to green fashion or eco-fashion (<http://www.eco-fashionworld.com/Events/ECO-FASHION-FLOURISHES-IN-BERLIN.html>). An issue in all of this of course is that there is no sign anywhere of anyone of the major companies inspiring customers to lower their consumption. This is of course one of the systemic issues. We can not be sure that there is not an endemic way to hold on to aesthetics and pleasure and still be more aware of the way that we relate to clothes and consumption. But until we discover these way, it might very well be said that the fashion producers carry an obligation to make their customers aware of the conditions under which clothes are produced, as well as make them aware of the issues of post-purchase unsustainable behaviour.

In this sense, the growing amount of eco-oriented designers is best and worst practise at the same time. When a seemingly very consequent fashion brand like Banuq can state on their website that they are “well aware that there are plenty of ecological fashion brands”, this is a sign of the times. At the same time, when the same brands and other bigger companies continue to promote the consumption model that creates a mass of about 10 mio. k of waste clothes every year in Britain alone (CSF, 2009b), the question is how much of a difference that makes in the bigger picture.

On production

“Sustainability is not singularly about minimising negative impact, but also maximising positive impact, allowing individuals, communities and economic systems to flourish. To work sustainably is to question the status quo, challenge convention and find new ways of working that achieve ecological, social and cultural balance that is in tune with human behaviour.” (CSF, 2009a: 9)

If we divide the question into the two themes above, the issue of production links closely to the philosophy of “cradle-to-cradle”. This has not yet made its impact in the fashion world, where most products are still made from new garment elements. C2C demands that producers think in terms of “waste-for-food”, taking every aspect of the production chain into consideration (C2C-link). A check at MBDC’s web site shows that out of more than 50 companies working with this market leader in C2C development, only 2 are directly connectable to clothing, let alone fashion (<http://mbdc.com/clientlist.aspx?linkid=4&sublink=14>). This does not mean that fashion companies do not

work at improving their production, in fact many of the large fashion companies have programs today to reduce their impact through production on the environment. A large-scale fashion company such as H&M run more than 50 different projects of varying scale across national markets to improve their sustainability issues (<http://www.hm.com>). Reading H&M's descriptions of their work is also a way to understand the deep interconnectedness and global network characteristics that are so important to grasp when trying to describe conditions in fashion. This connectedness leads to the importance of bringing the major companies to take a decisive turn towards sustainability. Another aspect visible on [hm.com](http://www.hm.com) is that they consider it important enough to work with transparency in their reporting. A project similar but less ambitious than C2C is the BCI, Better Cotton Initiative (<http://www.bettercottoninitiative.org>). Apart from state funders, this improvement project counts about a dozen fashion, clothing, and retail members. Surely, these projects are many but still cover only a smaller percentage of the overall production. And it should also be noted that even a complete change towards e.g. C2C processes of production in fashion would not solve the sustainability issues in the industry. This has to do with the fact that an estimated 60 % of the environmental impact of garments appear after they are purchased (laundry/washing at too high degrees, landfill due to non-recycling, non-recyclability of the products themselves, obsolete products remaining in cupboards) (CSF, 2009). One of these problems is illustrated thus:

"Once bought, an estimated 21% of annual clothing purchases stay in the home, increasing the stocks of clothing and other textiles held by consumers" (ibid)

On consumption

The role of consumers in driving the demand for sustainable fashion is crucial, but diffuse. While the media often credit the turn to sustainability to consumers who 'are fed up' and 'demand goods that are produced under decent conditions', the industry has no doubt that consumers are passive, and in many ways blocking otherwise sound initiatives by first and foremost adhering to the modernist paradigm of 'the cheaper the better' and perhaps by being so sceptical about the industry that they do not trust its information and intentions. Probably the truth is a combination of both – leading to vicious and virtuous circles to some degree in a 'hermeneutics' of sustainable fashion development (or its opposite): trust from consumers towards producers or retailers leads to increased sales; leading to increased eco-production and focus on ethical working conditions etc; leading to further trust and consumption etc. The picture is supported by quantitative and qualitative studies in different countries, although the data

is somewhat fragmented. In market surveys that only include consumer attitudes, sustainability and other ethical initiatives such as codes of conduct and CSR appear as central parameters – something which is of central importance to consumers. But surveys that include actual purchasing behaviour as well find that there is a big gap between what people say and what they do/where they put their money. Arguably, a more ethical consumerism has led to an increase in green brands, also in fashion. In the food and drinks industry only 5 green brand products were launched in 2002, increasing to 328 in 2007. A similar figure is not known for the international fashion market, and the definition may be a bit too blurry to give truly trustworthy results.

The type of consumers that are the most studied in qualitative research that take account of the whole way of life belong to subcultures. They differ from mainstream consumers by consciously seeking consistency between their beliefs, political commitment, main work and consumption, which almost appear as an epiphenomenon. For example, a study of Danish animal activists showed that not only do they avoid animal products, such as fur, leather and silk in clothing, but they also go to great length to keep a vegan diet (even one informant who suffered serious skin allergies from beans and pulse), avoid alcohol and restrict sugar. Thus they had decided to condemn the soy chocolate milk that some of the younger members of the group had taken to – because it was too indulgent.

We infer that this kind of asceticism is in stark contrast to the main paradigm of consumer culture in which shopping has been established both as a personal reward and a comforter, thus being linked with both high and low of normal emotional fluctuations. Extremely successful tv series such as *Sex and the City*, seconded by *Shopaholic* etc. presented a notion of shopping similar to sex – a powerful desire which it would be unhealthy to repress, and which once satisfied can resurface again almost immediately. The emphasis on acquiring new things is almost stronger than owning, wearing or using already purchased consumer goods. Until the financial crisis in 2008 credit card debt was in some circles romanticised as a kind of liminal ritual for women.

These ideas are mirrored in the development of the fashion industry from the interwar period: the shift from big ticket items – whole ensembles such as suits and dresses – to little ticket items – blouses, shirts, skirts, trousers and coordinates, such as twin sets; the speeding up to production cycles – from two annual collections to Zara's two week production cycle, the spread of fashion cycles to types of dress that used to be stable, such as underwear and accessories, and the overall drop in the price of clothing, as a part of a family

budget¹⁶. With these changes shopping for clothes have shifted from being a task that was based on need and commitment of a significant amount of money, and with that emotional investment, which could take some time (as does the acquiring of customized or semi-customized clothes) to a task based on seduction; individual purchases may have little significance, but purchasing decisions have to be made on the spot because the goods may be sold within few days. In Fine and Leopold's analysis these are the defining features of the fashion system, understood as a vertical system of provision that links production and consumption. They date their emergence to the New York fashion industry in the 1920s when the technological possibilities of the sewing machine for rationalizing the manufacturing process were used up. Thus what they present has a strategy to compensate for the fashion industry's inability to reap the advantages of large-scale production, characteristic of Fordism, has made it emblematic of the post-Fordist emphasis on flexible specialization. This digression to show how deeply the fashion system is linked to notions of novelty, and a particular notion of novelty – which is reproduced by the industry and transferred to the consumers through purchases.

A last remark can be made around the point that the styles of sustainably produced clothing are under rapid transformation. From Danish success designers Noir (Peter Ingwersen) to general remarks on ecofashionweb.com, everyone seems to agree that “eco-fashion does not need to be dull”. This will in itself lead to an increased share of organic/eco clothes overall – but will, as mentioned before, not change the business models in itself, and maybe have only a very limited impact on overall cultural change processes around fashion and consumption.

3a) New sustainable business models emerging in other related fields

1. One of the first fields to challenge the economic models prevalent in the creative industries, was the music business. With the development of music file sharing platform Napster.com around 2000, a big step was taken into a revolution in economics of consumption, whose consequences are still waiting to unfold. Surely, in spite of the lawsuits and subsequent closing down of Napster, this model has to some extent and in multiple forms grown and expanded to a score of other platforms (such as YouTube, just to mention one relatively important example). Basically, the business model evolving at present from this displaces the revenues from the direct sales of digital music files, to income linked to the attention and presence of consumers on platforms and at events where these (now free) products attract the attention of consumers. This is the first generation of development of the business model,

which will certainly undergo many other changes in the years to come. The relevance of this model lies for the businesses in fashion today that share the profits of a dissipated production; they also challenge the concept of ownership and thus challenge the underlying (unsustainable) economic system. Probably, this system will grow rapidly in the years to come, but is questionable as to its impact on various aspects of sustainability (see *infra*).

2. Another type of sustainable change arises around the development of an approach such as C2C in design and industry. A product of this lies in the development of a new model for production and consumption: the consumer leases the product, and when it wears or becomes obsolete, it is returned to the producer, who delivers a new product to the consumer. The returned product is taken apart and recycled into new products, or even recycled into used products for other, less up-market markets¹⁷. Such a model has not yet been developed within fashion, but is not unthinkable, given a change of management culture as is needed in any other trade to which this approach is applied. Still, the production of clothes to share and re-use may still be quite a few steps away from the consumers' general perspective today.

3. A third type of sustainable business model lies close to the first one. This can be exemplified by the 'punk scene' in the 1990's. As the scene grew and developed, many relations were built around practices of mutual help. To the extent that there were particular expertise fields developed, the expertise would be taken up by the members and remain in the network. In general, one can say the lack of money and the need for trust in exchange, alongside the musical practices developed communities of practice. In these communities, network relations were often knitted tighter than the average producer-consumer relation. As very little money was involved, the networks grew out of what could be defined as qualitative growth (Capra, 2009). Underneath these traits, you would find the closer relations formed by common spaces, sounds, etc. Anyone wishing to belong to the community network would tend to develop capacities needed in the network. And a strong DIY/DIT culture developed in Europe, leading forth logically to the later evolution into Napster.com and similar. This model is present today in the work and communities of designers and other people sharing ideas and fabrics, tools, etc., and will be described below. Its lack of direct recognition and profitability will make its way to the stars very unlikely in the first years to come.

4. The possibility of a greater degree of micro-financing or micro-sponsoring in fashion can be taken from inspiration from other fields. In developmental support, in the mobile industry, in cultural projects, the practice of micro-financing through pooling of very small sponsorships is gaining momentum very slowly, but coming up (see www.justgive.com as one example, or even www.qifang.cn). This could be experimented with in fashion and design to support the development of new collaboration forms or more sustainable production, as suggested by a leading designer.

5. Finally, it has been suggested that collaboration is beginning to take over the agenda of young designers in fashion, taking over the role of competition. The logic would be that they feel part of a movement, not part of a competition with each other (this of course only counts for some designers, but if there is such a trend, it is definitely worth following). This would point towards a form of Open Fashion, as suggested by some young designers themselves in an interview from New York Fashion Week 2010. Such a point can not be substantiated at this point, but seems to fit in with tendencies in e.g. ICT, film making, theatre, music, etc.

3b) Economies involving consumers and fashion workers in new sustainable business models

In the past years, a range of initiatives has grown offering e.g. organic clothing through on-line communities. This has already been dealt with a bit in the previous section on on-line fashion trade. So far, the most common version of this is the on-line platform proposing organic and ethically produced goods to consumers through a network/shop concept. The business model around this can vary somewhat, with some cases (Organic exchange, Ecofashionworld, Ethical Trade Place) generating more income through ads and offering more community services, blogs, social media elements, etc., whereas others (Touch2give, H&M on-lineshop) are merely web-shops, with a fairly traditional, capitalist economic structure of exchange of goods for money. A third variant is the on-line/off-line community based around local communities of consumers becoming their own retailers as in the food sector, or promoting clothes produced by others in small shops. A fourth, growing group of initiatives builds on pure natural exchange, namely the clothes swapping phenomenon. From micro-events bringing together friends and friends of friends in private swapping to www.bigwardrobe.com, this is probably one of the fastest growing examples of a sustainable practice in fashion consumption. Of course, it may be discussed whether this is sustainable in all aspects of the term: for instance, as there is no exchange of money, there

is no revenue for the designers of clothes (these having been paid once this is hardly an ethical issue, however it may in the long run become an issue that will change the economic model around swapping). At present, a site like Bigwardrobe.com generates its revenue from selling ads, as is seen in many other parts of the creative industries etc.

A particular remark should be made about entrepreneurs and SME's in relation to sustainability in the fashion industry. For whence one might assume a certain romanticism, brought forward also by narratives from i.e. the blogosphere, around the designer and the small enterprise, there are no figures to back up the idea that small equals sustainable. On the contrary, SMEs are viewed as a challenge in the sustainable development debate. They are seen as standing at its periphery and to be generally unconcerned by environmental and social issues. (interview with TMS at Danish Industry, June 2010) This is of course not the case as such with small eco-fashion-designers such as Bantuq. But they do also in general escape the scrutiny of activists and campaigners, given their small size. At the same time, SME's tend to take much of the risk that does not affect larger companies as much, such as just-in-time delivery issues, supply chain management etc. They have a hard time keeping ideals up and costs down (www.bantuq.com), yet they struggle to live up to the standards they set for themselves. In this context, it is once more important to highlight the network structure of fashion production, distribution, and consumption. The network is also where the SME's and entrepreneurs can turn to seek support. But this requires a strong structure and networks with high common affiliations, similar core values, and long-term gain of collaboration.

3c) Examples of sustainability and (lack of it) related to fashion, crafting, D.I.Y., crowdsourcing

In the next section, there are several cases of crowdsourcing, D.I.Y and crafting, which are not dealt with specifically from a sustainability perspective. The first example, Threadless, is a good case of how important it is to think sustainability through more than one dimension only. To get a grip of Threadless.com, you need to think in terms of all four pillars of sustainability: the environmental, the social, the economic, and the cultural. From the environmental angle, there are some obvious issues about the project: rather than limiting the production of obsolete clothing (one of the great problems of unsustainability in fashion), it seems to encourage more production and use, and even an extent of the kind of fast-fashion trend that has boosted obsolescence and over-consumption in the

uses of fashion consumers in the last decades. Looking at the cultural dimension alone, it might also be a bit hard to see the case for sustainability here. As such, it does not offer any particularly viable path for a different approach to culture, to meaning, to understanding of the world or relations between people. Of course, there are innovative T-shirts and the very fact that they are produced by the peers themselves does seem to give a taste of another world, more sustainable in cultural terms as well. But the strong points around Threadless regard the economic side, the business model (community-based, sharing profits, rewarding co-creation, etc) challenging the role of consumer and rewarding any move beyond this (at least to the gifted ones that win in the competition - again, the cultural aspect is not very innovative, but the economic side is convincing). And of course the social side of sustainability might also be said to play a certain role in Threadless, both in the narratives that the organisation creates around its online presence, but also in creating a community across cultures and social groups, one that is based on co-creation rather than on consumption and distance. This is in itself an important aspect, which might be said to link the economic, the social and the cultural aspects of sustainability together. A similar case can be made about the next example, RYZ, except that the project is smaller, more artsy, and more limited in its scope and challenge. The third project, Fashionstake, can be classified more or less in the same category as the two previous ones, except that it more obviously seems to support a particular form of aesthetics well within the safe boundaries of fashion. Thus, the problematising of the cultural lack of sustainability in the other cases would seem to count even more for Fashionstake. The same can be said for the last examples in the section on crowdfunding in fashion. And having said this, what count for one, may also count for them all: the question here is whether or not the economic sustainability engine can drive culture beyond itself and into a totally new relation to things, clothes, and consumption. So far, a careful sceptical stance would be our preferred position, but leaving the possibility open. One has to remember though, that in order to pass a critical trigger point or leverage point and enter into a more sustainable relation to things and goods, it might be necessary to keep pushing and changing aspects of fashion quite deeply for a long period of time (Rahmani, 2009; Bell, 2007; Norberg & Cumming, 2008).

4. On the debate about so-called “greenwashing” practices

In general, Greenwashing can be seen as practices that pretend to green while keeping some untruthful communication or worse hidden to the public. Greenwashing is in general considered a relatively big problem to serious companies

and consumers working for sustainable change. To green brands, the threat of greenwashing reduces the trust linked to their activities by stakeholders. Trust is of course a part of the relation between brands and their environment, whether within organisations. A green brand is associated with environmentally, socially, economically, and culturally fair and creating practice. Any action that is performed which breaks with that trust is a direct impediment to the relation between any brand and any consumer. Greenwashing is hardly a phenomenon towards which consumers have very precise knowledge. But the stories that make it to the media may harm much more than the firm then causes them to arise. This line of thought is convincing in many ways, but of course it builds on the classical approach to branding given by e.g. Wally Olins (2003). When you consider the relation as clouded somewhat by for instance fashion companies speaking of sustainability yet working from a concept of planned obsolescence. This double side of fashion companies is not resolved by more branding, but will remain a clear case of greenwashing.

Another way to look at greenwashing is through the eyes of branding as a case of power to the environment, not to the single actor (Arvidsson, 2006). Through this perspective, the betrayal of greenwashing becomes even worse, as the consumers have taken in the product and endorsed it publically. This empowerment of the consumer in terms of brand value creation has strong effects on general affects, as in i.e. the case of BP this year (last year, the oil company made a strong claim to be one of the leading companies the development towards greener worlds). The case of BP makes it clear that loss in status also spills over on other actors around in the networks around companies.

5. Advocacy groups/organisations in fashion in Europe

The role of organisations and networks in fashion is a matter of understanding the complex causal relations between different actors in the many network ramifications in what we call “fashion”. Logically, the most obvious groups to look for are groups of consumers or producers. A collaboration such as the above mentioned Better Cotton Initiative surely is a coalition that has gained some results and attention. This coalition involves both public and private actors as well as NGO’s, and works on several fronts at one time. A similar coalition forms around NGO’s such as the Organic Exchange, informing, collaborating and campaigning for organic cotton development. Or even Global Reporting Initiative, as well as around even more complex coalitions such as the international collaboration for ISO standards. The most recent ISO 26000 deals specifically with sustainability standards for business and organisations, and has been

underway for 3 years, involving more than 300 different partners from all three sectors. On a general level still, coalitions of business actors include the World Business Council for Sustainable Development, creating projects and knowledge sharing and setting standards as well taking part in the global debate for sustainability in business and public life. Last year, this council met in May in Copenhagen with the presence of e.g. the secretary chief of the UN and a very long list of business leaders. Even the annual Davos meetings may be counted as coalitions that in one way or another create agendas around sustainability. Similarly, it would be fair to include institutions such as Ethical Trading Initiative (ETI) or the European Fair Trade Association (EFTA), and of course a range of UN-based institutions like the International Labour Organisation.

There are many locally based networks and institutions that work for sustainability (such as Dutch CREM or Swedish The Sustainable Fashion Academy). The list would be much too long to render here. If we focus more specifically on fashion oriented groups (although there is no guarantee that the effect of these groups is greater in the overall picture, but this discussion is too vast to undertake properly here), we find a combination of communities, networks, organisations, projects, and campaigns, creating agendas and seeking to create change towards more sustainability in fashion. Institutions such as the British Centre for Sustainable Design (facilitating discussion and research on eco-design and broader sustainability issues) and the Danish Centre for Sustainability in Textile production (Center for bæredygtighed i tekstilproduktion) are examples on a publically dominated level. Arguably, educational players would be some of the most important to follow, due to the direct impact of their programs on specific users and on creating a positive learning process alongside a critical capacity. On a world-wide level, an institution such as the Schumacher College in Wales or the Centre for Ecoliteracy in California may serve as important bases for development, capacity building and learning.

On a more politically critical level, we find coalitions like the Clean Clothes Campaign, uniting actors around improving workers' conditions in garment production on a global scale, or the Environmental Justice Foundation, running a continuous campaign around better conditions in cotton production world-wide, or even No Sweat, working on a sharp, critical edge against all forms of unsustainability in clothing production. Other similar initiatives are Ethical Fashion Forum and German based EPEA, working a.o. things to enhance the impact of C2C in textile production. Beyond Europe, interesting initiatives are the US-based Fair Labor Association, working against sweatshop labour and finding new, sustainable solutions to exploitative labour conditions; and the Australian Fairwear, ad-

resses the exploitation of workers who make clothing at home, and providing information on how and where to shop for clothes ethically.

Information and dissemination around sustainable fashion channels through thousands of channels and networks. Some of the interesting sites to follow are the Centre for Sustainable Fashion, Ethical Consumer, Sustainable Style Foundation, and even Forum for the Future. Typically, these actors are more based on the third sector with support from the other two, thus running a somewhat more autonomous line than for example the business councils and the purely state-driven initiatives.

The role and impact of the most popular blogs and forums (such as Ecofashionworld) is hard to define precisely, but should definitely not be underestimated as an influencing of the general agenda and awareness among fashion consumers and among designers and entrepreneurs in some parts of the world at least (more lists will be uploaded and shared through this project's profiles on Citeulike and Delicious).

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Interviews

Open-p2p-design

Massimo Menichinelli, participated future

TXT: Bertam Niessen / Eng: Henriette Vittadini

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Talking about commons and peer-to-peer, the most well-known names to readers might be Yochai Benler, author of “The Wealth of Networks”, and Michel Bauwens, who wrote “The Political Economy of Peer Production”. Besides them, however, a thick network rapidly developed on a global level, testing the application of peer-to-peer and commons’ principles to a strikingly wide range of fields, going from city-planning to prosthetics, through design and material production (last but not least the shining example of how p2p revolutionized our ways of operating as social and economic beings in the world: open source softwares).

This is a world whose boundaries are constantly expanding and interbreeding, where practices and definitions unceasingly multiply. For this reason, coherently with the features of the subject, I would solicit readers to look up for unfamiliar terms on Wikipedia and on Foundation for P2P Alternatives website.

It is precisely due to the dazing acceleration of these fields that I chose to start by interviewing Massimo Menichinelli, founder on 2006 of openp2pdesign.org was a blog that in 2010 turned into an open-source community aimed to find and de-

velop complex collaborative projects for territories and communities. The core of his activity is indeed entirely methodology and planning, and it is my belief that nothing could be better than some good old methodology to tackle complex phenomena.

Designer Massimo Menichinelli’s work concerns professional activity, research and projects regarding the introduction of Open and P2P dynamics in designing processes in connection with communities and territories. He is interested in the relation design is developing along with territory, communities and complexity, adopting practices and principles which originated within software phenomena like Open Source, peer-to-peer and Web 2.0 in order to develop focused interventions on local communities that would support their self-organization for the improvement of local conditions.

Through these researches, in 2005 he started developing Open P2P Design planning method, created in first place for planning processes for and together with Communities/Localities (a community together with its territory) with the aim to achieve a collaborative activity which should breed initiatives of opened and social innovation (Open Innovation / Social Innovation). method. Hence, design is seen not only as an aesthetic and formal mean, but also as a tool to organize and facilitate systems, processes, open projects.

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Bertram Niessen (BN): Reading through your website, the subjects of posts range from social service design to car design. How would you then define open p2p design field of application/action?

Massimo Menichinelli (MM): Open P2P Design is the proposal of a new design method for the co-designing of open and peer-to-peer collaborative activities with/for communities, through an indeed open and shared process aimed to co-plan such active collaborations. A community-centered design, in short. I began developing this method in reaction to a lack: albeit the definite presence of an interest in replicating open and p2p organization patterns, the matter has so far been faced uniquely through implementing the use of dedicated software and technologies, missing a proper social planning (with the result on a sometimes ineffective approach).

The fields in which this can be applied are potentially vast and still being defined. Think about the various cases of open methods implementation: we go from biotechnologies to mineral processing, like Goldcorp Inc. In sum, these systems can be applied to any activity we are aiming to turn into an open and collaborative one, or on top of that wherever it is thought that a cooperative activity might solve a specific issue through the presence of active participants.

Open P2P Design is not the planning of communicative artifacts neither commodities, but rather a collaborative activity (for instance design of services and other disciplines), which would itself be dedicated to the matter to be tackled (maybe then through the cooperative planning of a communicative artifact or some commodity). I chose not to bound Open P2P Design action field solely to design since it would be limiting and also because it can actually represent a further way to diffuse open and peer-to-peer principles and dynamics.

Open P2P Design method can as a general principle be applied wherever it is desired to arise a collaborative activity, both in already existing communities and in ones to be created.

We can develop cooperative activities within firms businesses as well as collaborate with them to create community-based cooperative businesses. An example of this is Open Innovation initiatives, where instead of merely catching informations or offering activities where users/communities don't have an option to intervene, it is chosen to really co-create together with a community the development of open innovation. We can also initiate collaborations within a firm, in case the sole adoption of a software appears to be insufficient to generate the aimed collaboration (i.e. the current Enterprise 2.0 approach).

On top of that we might even develop community-based businesses, as it happened with GiffGaff telephone company, in which some of the company tasks are preformed by users (and examples might continue with mass customization). I also believe users and communities must be involved in 'bottom of the pyramid' targeted businesses, in order to avert inadequate suggestions (see The Onion satirical article in this regard), establishing an equal debate instead.

Concerning public administration, it is interesting to examine the Open Government form: this definition presently refers to the publication of government owned data, put under open licenses in order to facilitate citizens and organizations to independently visualize and present them. This move aims to increase institutions' transparency in order to allow citizens to be more aware of public management and hence making aware choices. A big step forward, nonetheless we could push ourselves further, for instance developing open p2p and collaborative public services, as RED Unit del Design Council did in Britain. A further step forward might be turning activities that are now governments' and public administrations' prerogative activities into open, collaborative ones, as the documentary "Us Now" thoroughly shows .

Finally, public administrations can adopt this method in case they might need/ want to develop collaborative networks within a definite territory or city, concerning the field of social development enterprises willing to reinforce local social and economic networks.

Furthermore, this system can be applied in order to develop creative projects such as Open Hardware e Open Design conceived as Open product design as well as Open Web Design, Open Interaction Design, Open Font Design, Open Movie Design, Open Game Design, Open Architecture and Open Fashion Design, just to give some examples.

We must notice, though, that all these examples currently consider Open Design simply publishing one or several files under a free-share license. I.e. no one conceives involvement and collaboration as starting points on which to build up an active community, whereas those would be pivotal points in the process Open P2P Design advocates. Moreover, the project, namely the website openp2pdesign.org, is an open source community aimed to study and develop projects on social systems, collaborative systems and complex systems: we are going to use Open P2P Design method to define its very way of functioning.

BN: How do you articulate the relationship between design and metadesign in your approach?

MM: The concept of Metadesign (or metaproject) still isn't largely known among designers, yet it is sonly spreading, being defined and developed; this is shown for instance by the increasing number of designers using Processing to program their softwares. Basically metadesign means designing the designing process of material, immaterial and cognitive artifacts. The interest towards metadesign represents a growing awareness about design means and processes and the influence these elements have on final results; an awareness proving to be more and more essential in view of social and economic changes, entailing consequent changes in the projects.

Also, if we are willing to involve users in the designing process we will immediately realize that the final outcome is no longer fully controllable and that is much more convenient to structure and plan the process itself, rather than the final result (which will be affected by community and users inputs). Therefore an approach becoming increasingly essential in Open Design projects, projects that we can also, as a matter of fact, consider all as Metadesign projects where the releasing of the first source code is nothing but a tool for the community to arise.

In Open P2P Design, Metadesign is even more deep at the roots : we neither plan the final result we aim to obtain (solving some specific problem) nor the collaboration activity that will design and act to obtain such result. Actually what we do is to design the process and the tools we will use together with a community, to co-design for the community itself a collaboration activity.

Furthermore, this metadesign feature makes Open P2P Design applicable on three possible levels: 1) metadesign of cooperation activities for problem solving aims sorted by communities (for example for an Open Design project); 2) meta-design of collaborative activities which plan/realize tools and processes for other collaboration activities (for example, for the designing and production of Fab-bring technologies); 3) Metadesign of collaboration activities that re-plan Open P2P Design method itself.

The importance of the metadesign approach consists in enhancing the project's potential to suit the actual user's, communities' and market's needs (amongst the main incentives for the opening of design processes to a wide participation). Moreover, Open P2P Design is an open source method itself, thus not only being willing to evolve but also to be modified and further adapted for each specific local context and its needs.

BN: Co-design strong points are now pretty clear, at least in their claims: being cross-sectional, they make the most out of collective intelligence etc. Which are its main limitations?

MM: Co-design and basically all Open and P2P Systems are facing three main limitations at the moment: one connected with participation, the second to the understanding of open dynamics and the third concerning the actual possibility to realize these projects. The participation issue is crucial, although often being overlooked or taken for granted. To ensure a wide and rich (not excessively homogeneous) participation is far from being an easy thing to achieve and the risk is to impoverish and nullify a project based on co-design processes.

Participation often tends to follow flows of most influent tendencies, where not all the participants contribute equally to the project but only a few of them do it actively. A way must be found for metadesign projects, to not only involve a large number of people but also to actively implicate their diversity of knowledge and experiences, averting the influence being dictated by only a handful of participants. Besides, participation is mainly based on the skills and knowledge needed in each specific phase of the design process. Therefore it is necessary to pay attention that these skills are distributed among a sufficient number of people easy to be in touch with and aim to valorize them and their developments. It might otherwise become a great limitation for any co-design project: it is crucial in order to be able to co-design projects together with users and communities, that these people 'exist' or that conditions are favorable for helping these people to arise and improve, otherwise both the very necessity for the project and the resources that enrich it become pointless.

Lastly, the tools we choose/design will also be an element of influence on the

number of people that will be able to actually participate. An Open Design project thought for being developed collaboratively only on, say, an iPhone might be interesting, but only someone who owns one will be able to collaborate. Thus it is crucial to lower the barriers and allow access the design process. For what concerns the understanding of open and co-design projects, we are slowly exiting a phase in which mass-collaboration has been glorified as a all-comprehensive panacea and the real change that this type of collaboration brings to public and private organizations have been scarcely considered. Cases of collaborative dynamics and/or open and p2p employment happened in isolated contexts and not always along with a proper methodological consideration on which the limits and fields of application might be.

It is certain that further initiatives in research and publication are now essential since the lack of full comprehension of these dynamics among the ones studying them, employing them and what's more in society itself, is remarkable. A criticism often addressed to co-design processes, for instance, is the fact that its timings are too long: the truth is that the actual dynamics and timings of design productive processes are not always fully understood, and anyways through a metadesign approach it is possible to plan projects including a variable number of participants, hence entailing variations in timings according to what's needed.

For those in charge of the organization of these Open Design projects and collaborative activities, the main limitations consist in the lack of services, the fact that they still are in an embryonic phase or that they still require considerable economic resources. Anyhow, costs are dropping and presently the price of a 3D printer is lower than laser printers prices in 1985.

The software used to develop collaborative projects have consistent limitations as well. Above all the fact that having these softwares which have been created by programmers for programmers, work perfectly in a collaborative work based on code or text, yet not so well if used to work collaboratively on images, drawings, videos and 3D models. Still, it takes just a little bit of hacking of the softwares in use, no need to write even a single line of code, to trick the boundaries although these will remain a high barrier to access design processes until these problem are solved.

BN: During the last couple of years a great enthusiasm about desktop manufacturing field arose (where personal computers are used to control 3D printers which create physical objects bypassing traditional industrial centralized production). In your opinion, will open design methods be mainly (or more satisfyingly) applied in

this area or will they also find an implementation in industrial production?

MM: For what I've seen in my experience, I reckon that a lot depends on local situations, both in terms of technologies, productive power and local strategies and conveniences. Desktop Manufacturing is a fascinating idea, yet it will be coexisting with other diverse strategies: individual desktop manufacturing, desktop manufacturing shared in local communities, Fab Labs in Universities and companies producing services, local weaving factories willing to produce on small scale digital on-demand commodities, individual technologies accessible through online services such as Shapeways and Ponoko, networks between individuals like 100k Garages, marketplaces as Cloudfab Fabbers Market, Blomming and also traditional firms.

There have already been at least three cases of Open Design projects coming from actual business companies which managed the production and distribution of the physical artifacts: Openmoko, VIA OpenBook and Bug Labs. The problem here is not much about finding an industrial production application, but rather to actually 'open' the designing process and make it collaborative. In short, it is a matter of both economics and appliance of knowledge: those Open Design collaborative activities that will succeed are going to be the ones that best manage to handle the material, economic and knowledge resources needed for them to function.

An example is given by the uncountable number of Open Car Design cases: everyone attempts to re-design a fairly sustainable vehicle from scratch and struggle to proceed in realizing the project. The most interesting cases are either from firms that were already producing cars, applying a tailored business strategy (like Local Motors) or from initiatives aimed to transform already existing vehicles, hence requiring less knowledge and economic and material resources (like eCars - Now!). For such reasons it is likely that Open Source Fashion Design projects might succeed more, given that theoretical and technologic skills needed for this kind of design and production are cheaper, easier to access and have already spread on territories.

BN: You deal with a field that occupies an ambiguous position among disciplines. Which are the problems that you think might be caused by this? Which are the benefits?

MM: Given that 'historically' design environment has never had a strong relation with the concept of 'community', my first researches have also had to be about architecture, town-planning, psychology (especially the Activity Theory), online communities, social networks analysis. Along with this, in the future I would like trying to integrate or connect Open P2P Design method with the Motivational

Design project from Gianandrea Giacomini and Davide Casali, using tools such as the Net-map toolbox .

Besides these disciplines, it is most important for me to study complex systems (therefore complexity), a subject I have always been interested by, and on which I became even more keen after having read "Linux: A Bazaar at the Edge of the Chaos" by Ko Kuwabara. I believe it is very important to adopt a point of view that takes in consideration the complexity of each problem we tackle in our projects, and when it comes to design projects for communities and territories, understanding the dynamics of such complex systems becomes fundamental.

An Open project is much more than a mere change in the code, made by a single person, at local level; it is a proper complex system coming with its own evolutionary dynamics, as Kuwabara explains. In fact, openp2pdesign.org main targets are not just about studying and developing Open projects but they also study and develop complex systems such as Generative/Genetic Design, Bionic Design/Biomimicry, in order to spread the culture of projects bound to complexity. The necessity to draw from all these disciplines was a hurdle in the beginning, but it then turned out to be a benefit, since I surely have more tools to tackle projects oriented towards distributed systems. In the future it will probably be more simple to develop such projects, however in this beginning phase it is important to devote our energies on research in order to structure design and metadesign methods.

It has to be noticed that terms like Open and P2P are sadly still sound "uncomfortable" rather than ambiguous because of the consistence of change they entail. It would actually be important to understand how current types of organization do represent present trends, where the ability to build social webs and communities through self-organization, sharing and collaboration are nothing but a way to become more reactive and capable of adapting to society and an economy suddenly changing.

Furthermore, historically, the designer's field of action is consistently limited by management and marketing representatives; consequently nobody would expect a designer to be intervening on organization issues (and this is perhaps one of the reasons for which Design of Services hasn't had its breakthrough yet).

Maybe now along with the interest in Design Thinking, companies are beginning to realize that 'design' doesn't mean shallow anarchic creativity, but rather rules and processes, tools and roles for the collective development of projects oriented toward users, social, environmental and economic context. The main benefit beyond these limitations, is to have a designer education and the ability to develop various projects using diverse processes and tools, along with the capability to ponder on ourselves.

Bertram Niessen: It seems to me that dialectics does not occupy a central role in the reflections of those that concern themselves with Open Manufacturing. Do you agree? What tools and methodologies do you think that should be implemented?

Massimo Menichinelli: Indeed, I also found few cases of dialectics connected to the systems of Open Design in general, both from whom participates to the phenomenon and those that are concerned with dialectic itself. Most probably, the capacity of the change has not yet been understood, or maybe it is being hindered or ignored for this very reason. Dialectics is, in my opinion, fundamental in this case: as I was mentioning beforehand, the question of knowledge is central for the success of these processes and projects, not only for what concerns the education for the dynamics and for the instruments needed for the projects, but also in the sense that one has to make sure that the users and the communities are the real bearers of knowledge and interesting capabilities in the process of co-design.

Amongst the few cases that I have encountered, I found that the work of Ezio Manzini deserves attention. He organised, together with other professors at the Faculty of Design of Milan's Politecnico University a series of workshops on the project-making of joint services; the one by Marta Malè-Aleman, that held a course of Open Design within the context of didactic referred to Fabbing at the Institute for advanced Architecture of Catalonia in Barcelona; the one by Roger Pitiot, that held a course on Open Design at the International Design school for Advanced Studies (IDAS) in Seoul. Without forgetting that Arduino was born in the context of didactic itself, one should mention also the Open Font Titillium that was born in the Accademia di Belle Arti in Urbino, thanks to the involvement of the students of the two year specialization course.

Actually I am doing some didactics myself, amongst the various lectures and workshops carried out in Europe and Asia, even if this activity has been carried out only in occasion of events or under invitations. Most probably, one of the main activities of openp2pdesign.org will be to develop and offer a didactics organized continuously. To find a solution to this shortage, the main thing to deal with is to spread the awareness of these projectual processes, of their limits and of their advantages.

The tools that have to be utilized are those already in use in the current processes, and also, the involvement of Universities, research centers and enterprises could be a strategy for the development of those tools that are currently missing or poorly developed. For what regards methodologies, there surely can be many paths, I however do not exclude that one can think of using Open P2P Design for the planning of joint activities of open didactics with specific local contextuality.

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Small creative entrepreneurs on a conference in Seattle.

An interview with Andrea Porter

TXT: Alessandro Delfanti

The first Conference of Creative Entrepreneurs took place in Seattle from 13th to 15th August 2010, and it gathered dozens of crafters, small entrepreneurs, artists, and do-it-yourself activists of the West Coast of the United States. Andrea Porter, entrepreneur – she runs the Matthew Porter Art store – and member of the organizing committee of the Seattle's Grassroots Business Association was one of the conference organizers. We talked with Andrea about crafters and DIY activists from a business and economic viewpoint.

Alessandro Delfanti (AD): Why did you organize this conference, and why in Seattle? Has something changed? Do you see a link between the crisis of wage labor and the rise of DIY crafting?

Andrea Porter (AP): My husband and me started our activity seven years ago, and since then we saw the rise of the do-it-yourself movement. Today, more and more people are finally reaching a level in which they can sustain themselves with their craft. Therefore it was the logical time, because as a movement we are at the stage in our career in which we are acknowledged enough. Crafting is now a viable option and not just a hobby: it gives the possibility to make a full-time living. And Seattle is one of the cities where the movement is stronger.

(AD): Why people start their own micro-businesses? Is it related to the lack of traditional jobs or rather to an attitude against boring, daily jobs?

Andrea Porter: The general economy is important. But being able to pursue their creative passion and give up their daily jobs is the reason for most of these people who participate in the DIY movement.

(AD): What are the main problems confronting people starting a micro-business to sell their stuff? How can they be solved?

Andrea Porter (AP): Health insurance, for example, can be a problem. My husband and I pay \$500 a month for that. This means we have to pay the full amount of our social security. Things that are presently not provided by the US government should be implemented. There's a lot of tax money going to US businesses. But when the government talks about supporting small businesses they are not talking about micro-businesses involving one person. They'd rather talk about small enterprises with fifteen employees... a reality completely different from ours.

AD: Is the craft movement able to exert political pressure? Do you know any example of lobbying or unionization campaigns?

AP: There are some organizations but they are more high-end (for example they represent art galleries). We don't have that power now, not even at the local level, even though we have our small organizations. But who knows, perhaps in the future. I used to work for a union and I really feel like we should do something similar in the future.

In fact it is interesting to see the rise of politics in our group: people are more self aware and reflexive. But we are in an early stage, in which people are still moving forward and perhaps a next step could be to be even more political, talk to congress people about our rights, benefits we need. But again, many people are at an initial stage... I think it's a direction the movement will go towards.

AD: What are the main activities of the Grassroots Business Association?

AP: We have a meeting once a month, and every time we discuss a new topic. Last time for example it was about how to hire an employee, to help small businesses to figure out how they can upgrade. We get to know people and we do networking at a local level. We do social events and courses. But we don't have a political role within the city.

AD: The majority of participants in your conference are women. Is it by chance or is it a reflection of the actual gender balance in the crafting scene?

AP: The crafting movement is intended to put together artists, crafters and designers. But we, the organizers of CCE, are more crafter orientated and we are women... But for example, my husband does magnets, posters, not necessarily hand-made stuff. There is a lot of discussion going on about balancing family life and work. Still, I'm surprised at how women are predominant, in our association as well.

AD: In a recent article we read that Etsy sellers are housewives with husbands making \$60,000 per year: they do not need the money. So how many people can actually sustain themselves with this type of activity?

AP: Most people have a part-time job plus do Etsy on the side. We use it but we also do a lot of craft fairs... it is a platform you can use but always in combination with other activities... I don't know anybody who does just Etsy and lives off that. They can never quit their daily jobs. On the other hand, those platforms work if they are just a part of your selling activities.

AD: Is the craft/DIY sector linked to alternative energy production and local/organic food? Or to other networks of grassroots innovation?

AP: There are no formal connections but if you ask anybody here, there's definitely an ideal of how to live your life. And it's about sustainability and localism. If you are into the DIY scene you also value people making their own food, producing energy from sustainable sources... and everything you do to change your normal life. I think it's more an ethos we share rather than direct links with those activities, though. It's: "This is how I wanna live my life". If you see the value of independent stores, you want to support them. And this is happening with the growth of other independent scenes... for example, we are interested in working with a local bank that supports local organizations with donations.

Small creative entrepreneurs on a conference in Seattle.

An interview with Laura Venell.

TXT: Alessandro Delfanti

Lauren Venell is an independent producer based in San Francisco and famous for her Sweet Meats series. She is also one of the organizers of the Conference of Creative Entrepreneurs, held in Seattle from August 13 to 15. In her work she pays attention to social and environmental responsibility – she wants to be sure that her products don't exploit workers and match good environmental standards, for example.

From the website: *"Sweet Meats are made from 100% recycled, super cuddly fleece, and colored with recycled dye materials. (...) Our sewing partners have the highest internationally certified working conditions and product quality standards on the planet. To help us with our shipping needs, we work closely with a local non-profit company that provides employment for adults with disabilities."*

Alessandro Delfanti (AD): How do you started your activity and how you manage the "ethical" certification of your products?

Laura Venell (LV): In 2004 I started a company, and I needed to outsource part of the production. At the beginning I produced in China but I wanted to avoid sweatshops, toxic products, minor labor and so on. So I decided to work with companies that have connections with domestic producers, women companies

and that guarantee that the productive process will be ok. They certify Asian toy manufacturers that are sweatshop-free, pay minimum wage, are not environmental dangerous and so on. Furthermore, the labor costs in china are getting high now, they are skyrocketing, and so the domestic (US) production is getting competitive again. We are starting to get to a point in which you can find fair but competitive production in the US. Anyway there are companies here that do just one thing (they treat raw material, cut, sew, etc), so you have to make sure that all of them are certified.

AD: Why did you choose to produce your stuff in this way?

LV: It is not really altruistic... it is part of my business! I can talk confidently about my products only if I am proud of them. And I can't be proud if I know I am harming other human beings or the planet. I don't want to contribute to any negative impact on the world and on society. So now I can go and say yes, you can buy my products and my company is a great company. I can meet people who otherwise would not be interested in my products. Otherwise, I wouldn't be able to sell my stuff.

AD: Do you have direct responses from your costumers?

LV: People love being able to buy something they know is not harming human beings or our planet, which is ultimately good for me. And yes, things can be a little bit more expensive to produce. But if about 5 years it costed twice as much (which was still affordable), now the prices are coming down and it's more affordable to produce according to good standards.

AD: Do you use open licenses? What is your way of giving back to the community?

LV: I tend to use Creative Commons licenses instead of a straight copyright. I'm very happy to share anything I can, as long as you're not using my idea to disrupt my business. And then I am an active member of the community. I organize things like this (the conference). I also give classes in San Francisco. I publish tutorials for anybody to make the things that I make. I don't teach people how to do exactly the toy that I make, but how to use my techniques for their ideas. People love to connect to you and to your story. There's so much competition but the way to stand up is to be identified as an human being, and that makes your products special. They buy stuff from a company or from an individual because they believe in them.

AD: What are the major problems you have to face in your business?

LV: They are not bureacratic problems. You fill one piece of paper and pay 25 dollars and you're in business! Plus, if you want to sell goods then you need a seller permit but that's really it. But then, goods based businesses are much more difficult than service based businesses. That's why I'm trying to move out of the product side of things (bookeeping, packing, shipping...).

AD: I'd like to know if you have ever had problems for the fact that you present meat in a positive way.

LV: Yes, but not very often: maybe one person per year has a problem with that. But I have butchers on both sides of my family and I have a very positive association with meat.

Consumer's new clothes.

An interview with Clean Clothes Campaign in Italy.

TXT: Zoe Romano

“The consumer’s new clothes” is the title of a little book (Atraeconomia Edizioni) I stumbled upon during last Fa’ la cosa giusta (Do the right thing), Milan’s annual fair of sustainable lifestyles and ethical consumerism. In the book, you can read not only about the stories and the mechanisms hidden behind garment production, but also about possible local/fair/eco alternatives in Italy. It becomes clear how fashion is a paradigmatic example of our social mode of development.

I got in touch with the author a few days ago when I discovered she was presenting the book in a bookstore here in Milan. Her name is Deborah Lucchetti, and she is one of the funders of Fair, a cooperative managing the Clean Clothes Campaign here in Italy and also promoter of Made-In-No, a project of eco-fair underwear, creating bridges of collaboration and solidarity between sustainable supply chains and local markets.

We had a nice and long conversation and we agreed on many things but on top of all we shared a common starting point: fashion is something that concerns everyone because we all need to wear clothes, like we all need to eat food.

Zoe Romano (ZR): How did you embark on critical fashion?

Deborah Lucchetti (DL): I did my first job experiences working in factories in Turin during my 20s, then I became unionist and the passion for workers’ rights grew. After that phase, I worked as manager for some multinational companies because I wanted to see “the other side”, be part of the moment of decisions are taken, and this is how I understood the mechanism of outsourcing, offshor-

ing and restructuring of enterprises. I moved to Genova and in 2001 I participated in the protests and initiatives against the G8 and discovered the world of fair trade. I quit working for multinationals and I started working for some coops and then I found Fair. In 2005 I met Gesualdi, one of the inspirators of the movement of ethical consumption, and accept his proposal to coordinate Clean Clothes Campaign in Italy. Since then workers rights, textile sector and ethical consumption are my fields of action.

ZR: Do you think the time has passed when wearing ethical fashion meant to wear a jute sack?

DL: It's not a foregone process but we are on the right path. Unfortunately in Italy ethical discourses are often coupled with ideological pauperism and many people still think that something is good and just if when you wear it, it doesn't enhance the esthetic side. In Italy we are generally less pragmatic and different environments don't get along so easily. For example it's difficult to find here male managers wearing earrings like in the UK. Abroad people are less moralistic, there is less ideology and more pragmatism. We need to break these walls and make ethics and esthetics interact to respect the radicality of values, otherwise we lose younger generations forever.

ZR: Do you agree that it has become more urgent to create new models of production and consumption instead of limiting ourselves to criticize unfair practices?

DL: Yes, absolutely. In the last 5 years I've been campaigning against unfair supply chains that don't internalize social and environmental costs of production, because they are not transparent and trackable, because they express asymmetric relations in which major brands and big distribution companies determine life conditions of people at the top and at the bottom of supply chains. Starting from this reflection, I'm interested in understanding what are the effective alternatives. Our project called Made-in-no is our attempt to create a supply chain with a transparent price where you can see clearly that the producer earns 40% of the price and not the usual 3%. We try to get rid of distribution interlopers and exploitative marketing. Our supply chain is entirely trackable and raw materials are organic. We can keep our prices low even if the quality is good because we focused on cutting profiteering. And most of all you realize, how you feel better by wearing eco underwear, also because it lasts three times more as these garments are designed to last. This year Made-in-No received a prize as best project of international cooperation.

ZR: How do you see the sustainability of micro fashion producers?

DL: The model based on economies of scale is the one that brings us to throw away fashion of Zara and H&M. If we want to go in other directions we need to use a different logic. If scales are small, it becomes necessary to work immersed in a network, otherwise it's too hard and you are pressed by issues that you can't solve if you are isolated. We need to understand which kinds of networks and skills we need. One thing is buying underwear, another is buying a more complex garment, designed and created for a defined customer target. It is harder because we need to understand how to match demand and supply. Surely, I look at the local level as a strategic field to be developed, similar to when you buy bread next to your house because you know and you trust the work of the baker.

“Made by hand. Searching for meaning in a throwaway world”.

An Interview with Mark Frauenfelder

TXT: Bertram Niessen

Mark Frauenfelder is co-founder and editor of the seminal technology blog Boing Boing and editor-in-chief of Make Magazine, the DIY journal that has been at the core of the US makers movements in the last years. He is author of several books, the last of whom is “Made by hand. Searching for meaning in a throwaway world”. We have interviewed him about the Makers scene and its social and economic consequences.

Bertram Niessen (BN): DIY comes as no surprise, but in the last ten years a lot of things have changed. New technologies have reshaped the ways we conceive both material and immaterial forms of production and circulation. What do you think are the main changes from the point of view of everyday culture? Is there a shift in the perception of ordinary people about the relationship between mass production and DIY?

Mark Frauenfelder (MF): Yes, with the new technologies (rapid prototyping) and access to information (the internet) ordinary people are able to make stuff that just ten years ago would have been very difficult and expensive.

BN: In the last few years the term “Makers culture” is getting more and more popular. Do you think it makes sense to call it a “culture”? Is it a scene that really share some values and not only some practices?

MF: I would call it a “movement” rather than a “culture,” because there are so

many different kinds of enthusiasts involved. They don’t all share the same skill sets and interests.

Bertram Niessen: In Europe there is a quite clear distinction between the DIY grassroots attitude that came from social movements of the ‘90s (i.e. in the case of Hacklabs) and a more “neutral” one that is related to the start-ups movement of the last ten years. Do you have noticed something similar also in the US? Do you have the impression that it worths while to talk about political connotations of DIY?

MF: The DIY movement in the US is not really politically motivated. I have seen makers together who are of opposing political sides and yet they get along very well while working together.

BN: I think that one of the most interesting phenomena related to the new DIY is that there is the tendency to create organizations and networks that not only group DIYers but also provide them services (I’m thinking about websites like Ponoko or 100k Garages). Do you think that this can be considered as the emergence of a new kind of grassroots economy? How do you see its development in the future?

MF: Ponoko, Shapeways, and those kinds of services, along with hacker spaces, are opening up all sorts of new possibilities for entrepreneurs. 20 years ago the software pioneers were changing the economy, and I think the next 20 could be about physical makers changing the economy.

BN: Open source and P2p are common references in the world of DIY, but they are not mandatory. How do you see the connection among these three worlds?

MF: In my experiences, makers are very generous with their ideas and inventions. It very much goes against the stereotype of the secretive inventor who is afraid someone will steal his or her idea.

BN: What are the main differences between the lonesome garage geek and more structured processes of co-design and co-creation?

MF: The lonesome garage geek is at one end of the spectrum. Most makers I know like to at least stay in touch with others in their field.

BN: DIY technologies and fields are increasingly cross-fertilizing: tools made with the RapRap are used for DIYbio; Arduino, that has been conceived for interactive art, is now used for flying drones. What do you think about it? How do you see the future from this point of view?

MF: It’s exciting to see cross-pollination like this. I believe we are in for some real surprises in the next few years.

The renaissance in the world of craft

An interview with Becky Stern

TXT: Bertram Niessen

Becky Stern is a US based artist, crafter, blogger and journalist. She is associate Editor/Video producer for Craft (the on-line journal “dedicated to the renaissance in the world of craft”) and for Make.

Bertram Niessen (BN): The approach of Craft is quite unique. If we compare it with other communities and websites, Craft’s appeal is definitively geeky. Can you tell us something more about this specificity?

Becky Stern (BS): CRAFT is the sister publication to MAKE, which is all about technology, and both are published by O’Reilly, famous for its computer and tech books. We celebrate the joy of making, whether it be with a set of knitting needles or a laser cutter.

BN: Your community has grown very fast. Do you think that it’s possible to say that participants share some common values? And which ones?

BS: There’s an overwhelming demand for places to share our creations online, and creative people are finding their niches by paying attention to information hubs like CRAFT. We all share a common curiosity and need to be inspired.

BN: We are very interested in the upcoming transformations of learning in crafting and sewing. Looking at your experience, what do you think are the main trends of development?

BS: Crafters are learning techniques from peers in knitting circles and storefront craft workshops instead of from their parents. It means there are a lot of enthusiastic amateurs out there who are thirsty for projects to inspire them and teach them more.

BN: What do you think are the main emerging intersections between crafts and technology?

BS: First of all, entrepreneur tech for running a small craft business (digital cameras, print-at-home postage software, etc). Then, technology used to make new crafts (laser cutters, 3d printers, photoshop). Finally, electronic crafts, incorporating electrical circuits into garments, papers, plush.

BN: Do you think that contemporary crafting is a sustainable choice for “quitting the daily job”? Do you think than people can live directly of their craft production or do they have to move towards other related activities, such as art or education?

BS: It’s pretty unrealistic to expect to make a decent living by purely making crafts, even if you are very skilled and make a product people want. The contemporary full time crafter has to be a businessperson, an editor, an educator, and a publicist all in one.

P2P, clothing and material production

An interview with Michel Bauwens

TXT: Bertram Niessen

In the last five years the Belgian theorist Michel Bauwens emerged as one of the main contributors to alternative visions on the relationships among technology, society and development thanks to the so-called peer-to-peer (p2p) theory. P2p can be defined as

“a specific form of relational dynamic, based on the assumed equipotency of its participants, organized through the free cooperation of equals in view of the performance of a common task, for the creation of a common good, with forms of decision-making and autonomy that are widely distributed throughout the network”.

As a writer, Bauwens published several seminal texts like “P2P and Human Evolution” and “The Political Economy of Peer Production”. He is “community manager” of the P2P Foundation, “an ecology of collaboration consisting of: A wiki which reached 7,000 pages which were viewed 6 million times; a blog with a Google PR rank of 7 and 2,000 readers per day; a Ning community forum with daily activity by 300+ members; and several mailing lists.”

Bertram Niessen (BN) and Zoe Romano (ZR): We are witnessing many examples of small, open enterprises that are becoming competitive on the markets because of their p2p approach. Fashion production lays in the middle between material and immaterial production; that's a great challenge from the point of view of new, open and p2p forms of productions and new type of business models. What are the main

issues at stake when material production becomes part of the activity?

Michel Bauwens (MB): There are several issues that arise when one moves from the production of ‘immaterial’ services, such as knowledge and software code, to the shared design for material products.

The first issue is that knowledge is immediately ‘consumable’ and that code is immediately executable. This means that the very act of creating it, is at the same time making it into use value for others. Creating knowledge and code, or even designs without production, requires the cooperation of human brains, and access to a socialized network such as the internet. This means that capital requirements will be generally lower, as people can also undertake this activity under different conditions, as long as they have some other form of income (unemployed, students and researchers, workers with a ‘cognitive surplus’, etc ...). However, once we move to the intention of actually making the objects that have been designed, whether those are fashion items, open source cars, or Arduino circuit boards, means having access to capital to purchase either the objects, or even the machinery to make the objects. Thus capital requirements became much more substantial, and the threshold of participation jumps up. I think there is also a difficulty in terms of the necessary embodiment between the design and the production, as designing objects requires embodied testing in the material world. Finally, this is not a substantive impediment per se but certainly a temporary difficulty, is the immaturity of the collaborative platforms for shared design. They are mostly not yet available in many sectors, but only at the very early stages of construction.

BN and ZR: One of the main features of p2p production is the use of WWW and its tools. In our project, we are experiencing the great importance of local, face-to-face connections. Do you think that this is one of the main differences between collaborating in material and immaterial production?

MB: Yes, this is the sense of my remarks in the previous answer, i.e. the need for embodiment is greater for shared design than shared code. Nevertheless, this is a soft rather than hard polarity. A few years ago, voices could be heard saying that it would be impossible to conceive of peer production for circuit boards or open source cars, yet both have now operational projects. We should not forget that even the shared production of code, actually takes place in communities that have developed all kinds of ways to meet physically. Free software is a very active physical community, not just disembodied cooperators that only work from vast distances. So, it's really a matter of degree.

BN and ZR: In the communities related to content and code production the efficiency and efficacy of open and p2p approach has been clearly visible since many years. At the same time, in the fields of material production positive aspects are still a bit ambiguous (especially in the less “geeky” ones, like fashion) because personal work is still tangled with the myth of individual creativity and the aura of authorship. How could we accelerate the steps toward toward a more clear vision of the benefits of p2p production?

MB: I think this is mostly a generational issue. Established designers from previous generations have been habituated to a mode of gaining success and recognition that is based on this myth of individual creativity. But the new generations are not only steeped in the new culture, but, as yet unproven individuals, have everything to gain by sharpening their experience in creative and collaborative communities. So I think that this cultural shift will take time, but it will take place. This being said, peer production modes should not be expected to be the only alternative possible, but will be part of a mix, consisting of modes of production between a continuum of individual vs. community. There will be collective kitchens, but there still will be 3-star restaurants run in a very authoritarian manner, just as there will be movies run by strong directors. The only thing I would insist on is that generally speaking, the core of value creation in knowledge, code and design, will be produced in commons-driven environments, but saying that this is the new core does not make it a claim to being a new totality.

BN and ZR: One of the main characteristics of clothing is that it's mainly based on implicit knowledge related to crafts. Such knowledge is sometimes very difficult to share through technological means. At the same time, such kind of communication is a fundamental milestone for future developments of material p2p production.

What's your opinion about it?

MB: I think the evidence is already out there to see, i.e. there is a undoubted revival of crafts and craftivism, that happens locally through affinity communities, but at the same time, intensively uses online tools for both community building and sharing designs. I actually think the revival of crafts is directly linked to the networks. We really have to step out of the physical-virtual dichotomy. We have one body and one mind, and it uses both the physical and the virtual, in a continuous mixing, and different human practices require different optimal mixes. But fashion and crafts are optimally suited for a very strong online collaboration component. I think our perception of this might be skewed if we only look at the traditional fashion business, but there is a whole alternative counter-economy that is growing around online collaboration, that is already very strong and parallel with the old practices.

BN and ZR: Interdisciplinarity is the field where most of the innovation happens. For example when programmers meet with fashion designers, or crafters meet with fablabbers. One of the main challenges that we are facing though, is the attempt to find ways of communication beyond diverse cultural backgrounds, disciplines and educational levels. What are the positive and negative aspects that you experienced? How can we improve this communication?

MB: Cooperation across disciplines is difficult, period, and this is just as true in the offline world than online. It requires substantial physical and immaterial cooperation in order to create the kind of culture that will allow for smooth communication to occur. There is nothing magical about technology that somehow would obviate for the hard cultural and intersubjective work that needs to occur for cooperation to be possible. But I would suggest that we are seeing a needed shift from inter-disciplinary, where disciplines are playing hardball to preserve their respective domains, a stance which is very counterproductive to cooperation, as we can witness everyday in academia, to a new vision and practice of trans-disciplinarity. In this vision and practice, the object of cooperation is primary, and around that object to be created, equipotential individuals with various skills and capabilities self-aggregate to see what their most optimal contribution can be. In such a object-centered mode, cooperation becomes much more easier.

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