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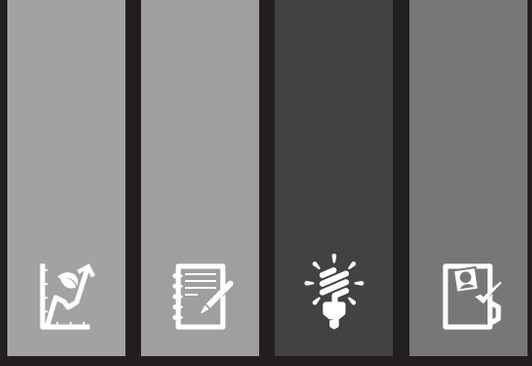

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ISBN:
978-956-8901-04-2
Santiago de Chile, 2013

PROJECTING DESIGN – CUMULUS 2012

Projecting Design 2012 is an international summit of Design and Communications. For the first time in Latin America and under the support of Cumulus International Network representatives from these two areas gathered in Chile to review and discuss about the new challenges and opportunities for the coming future.

The event was held in November 2012 and it was a unique opportunity to build a strong relationship between northern and southern hemisphere countries. The exchange of experiences and visions from the present and the future enabled us to trace a map showing the key professional qualifications of the new generations.

Building a "Global Design Bridge" to look into Design and society for new scenes, chances and challenges what is happening in the global design community and arena through four windows or gates to facilitate the face-to-face interaction among stakeholders of education, promotion, profession and corporate. This exchange experience was an opportunity for Design in Chile, to learn about the differences and similarities amongst emerging economies and developed countries.

The purpose of Projecting Design is to look for new challenges that allow us viewing Design from different perspectives and scenarios. Review what is happening in the global design community through four main windows or doors that allow face-to-face interaction between the education stakeholders, promotion and corporate businesses. This international experience was a great opportunity for different stakeholders linked to the area of Design to understand, share and learn about the differences and similarities amongst the emerging economies of developed countries.

Globalization, understood as the dynamic capacity to transfer experiences, knowledge and skills from a variety of latitudes, is a fact that comes from the mists of time. Certainly today, transmission channels and response time have undergone significant changes in this dynamic.

Furthermore, the variables that shape this exchange are not only focused on economic, cultural or commercial issues, but also on the role played nowadays by society and in the construction of a reality centered in handling social, environmental and economic balances.

The current scenario presents advantages and challenges for the Design and Communication industries. "Projecting Design 2012" was intended to search for opportunities in order to address the above through four different and complementary perspectives and/or pillars:

Sustainability
KNS Ezio Manzini
Sustainability is defined today as the ability to create sustainable development in time and resources. Relying on Design and Communications as active agents of change, it is defined both in the economy and society, as well as on the environment.

Professor Ezio Manzini, International Coordinator of DESIS Network, opened a space for discussion regarding the role of Design in building a clear position around sustainable development and on our ability to take on specific actions in order to innovate in what is important. This does not from own intentions, but with the participation of a collaborative partnership, resilient to changes in the environment and based on a new framework of rules of quality, such as: social confidence, human scale, orientation towards a job well done, but above all, in a participative society.

Education
KNS Kalevi Ekman
The dynamics of higher education in emerging economies entails significant challenges to balance the quality criteria, the equity in access and accreditation, among others. The possibility to articulate such experiences between countries from the Northern and Southern hemisphere will be a major challenge for Latin America.

Prof. Kalevi Ekman, Director of Aalto Design Factory in Finland, introduced one of the greatest innovations within the Finnish model of education: interdisciplinary education platforms, especially designed to deal with the dynamic of change in the learning environment. These platforms highlights the role of soft skills in professional training and are particular critical in designers training. Aalto Design Factory is an experimental co-creation platform for education, research and application of product design, present in Finland, China, Australia and Chile.

Innovation
KNS Luigi Ferrara
Innovation positions itself as an idea of strength in every process of creation of significant value and as a mechanism to promote change and evolution in the way society and markets adapt themselves to a changing environment. Design and communications are key players in the process of articulating innovative responses to the needs of the developing world.

It's was directed by Luigi Ferrara, Director of George Brown College Design School and Institute Without Boundaries, who presented and analysis of an innovation model centered on criteria of social development and sustainability. On particular, by the review of the theory of change and innovation ecology, it is possible to recognize concrete formats where design can promote a significant change on constructing a better world.

Professional practice and market
KNS Peter Zec
The evolution of professional markets, globalization of services and offshoring technologies amongst many other variables, determine the performance of the professional practice. Laying the foundations of how our professionals perform at the labor market is within the responsibilities of an educational network like Cumulus.

New designers professional performance comes together with the value creation process for markets and companies. Today, more than ever, companies are sensitive to the role of design in creating forms and messages that captivate the market, increasing the value and making it a good business. Prof. Zec shows that companies that invest in design are much more profitable than others, through the Red Dot Design Index which compares standard indexes with the performance of companies that have won the famous Red Dot design award.

Along with master presentations of keynote speakers, presentation of local experiences and academic papers, Projecting Design sought to build a message, oriented to educators of new generations of designers, based on the management of variables that determine the competitive dynamics and sustainable development that the new era demands of us.

We hope that the work done by the academic committee, chaired by Prof. Carlos Hinrichsen, and especially the contribution of each of the researchers who submitted their papers, are a significant contribution to the discussion on Design and the challenges of teaching.

Andrés Villela
Director School of Design Duoc UC

INDEX

SUSTAINABILITY

EDUCATION

INNOVATION

PROFESSION

SUSTAINABILITY

SUSTAINABILITY

A New Understanding of Energy. The Role of Design in the Creation of a Sustainable Energy System.

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Abstract
Denmark has the ambition that in 2020 half of the country's electricity production should be derived from sustainable energy sources, mainly wind energy. This creates a new set of challenges since you cannot control when the wind blows the same way you decide when to burn fossil fuels. Instead the user has to become involved in managing the system by adjusting consumption to production. This situation creates the need for a new understanding of electricity as well as a new set of habits concerning the way we use it.

This paper investigates the potential role of design in changing the conception and use of electricity. It takes its starting point in two design projects made on Kolding School of Design as part of the national Danish Smart-Grid Project iPower1, a video called 'Passing Through' and the 'e-watch' a tool for visualizing the relationship between time and energy and planning energy consuming activities. These projects investigate in different ways the relationship between science, aesthetic communication and social systems. They are used as examples in order to draw a general outline of the role of design in the sustainable transition of energy systems.

The problems addressed are rooted in the Danish case but the overall problems concern every energy system that aims at incorporating fluctuating energy sources and may serve as inspiration for including these aspects in the global development of sustainable energy systems.

Keywords: Sustainable energy systems, visualization of electricity, Smart Grid, science and aesthetics, communication design.

1 The iPower project is supported by the Danish government via the DSR-SPIR program 10-095378

Introduction: Fluctuating power sources and new ways of communication

All over the world the climate crisis are prompting countries to exchange fossil fuels with different forms of sustainable energy sources. Denmark is approaching a double strategy for reaching a fossil free energy system in 2050. Firstly the energy used for sectors like heating and transport should be exchanged from oil based power sources to electrical power (through heat pumps and EV's) Secondly the electrical power generation should be based on renewable sources, mainly wind energy. Renewable energy sources like wind and sun power share however a common problem – they fluctuate in ways that are beyond human control. Since storing energy in large portions is both difficult and expensive this creates a need for balancing the consumption to the production instead of vice versa as it is today. This can be obtained by different measures; some of them automatized some of them demanding active participation from the users. All of them will however affect the users' everyday life in different ways. We cannot take electricity for granted anymore; we must learn to see it as something that varies throughout the day.

The paradox related to electricity systems in highly developed societies like the Danish is that from a user perspective it works almost flawlessly. Whenever we want to use power it is automatically delivered and shortage or burnouts are almost never experienced. From an environmental point of view it does not work however since the environmental impact of the system is affecting the climate and our common wellbeing. We are starting to experience the consequences of climate change but we do not directly experience the connection between energy consumption and climate changes. Danish philosophers Peter Kemp and Lisbeth Witthøft Nielsen defines in a report made for the Danish Climate Ministry about 'Barriers of Climate Consciousness' invisibility, complexity and intangibility as the three major physical barriers for connecting knowledge and action about climate change. (Kemp & Witthøft Nielsen 2009 p. 13-14) The challenge will be to integrate an understanding of energy and its interplay with nature in our daily consciousness and actions in order to make us accept changes in our everyday routines that can be conceived as challenging our sense of convenience.

From a design point of view the physical barriers described are interesting in the sense that they do not have to do not with what is there but with what is not. It is the abstractness and lack of physical presence that makes it difficult to relate to the connection between energy consumption and climate problems. The same thing goes more specifically for the concept of electricity as well. Electricity is conceived as an intangible and self-evident prerequisite for the function of other things and activities. This establishes the problem as a design problem, since design is occupied with shaping physical presence and representations. Design has the ability to create visibility, tangibility and 'simplexity', which is exactly the approach we have chosen in our work with electricity at Kolding School of Design.

The challenges are not only technical then, but also connected to the way we as users think and interact with the system. We need to rediscover and understand electricity as a physical phenomenon; we need to understand the connections between electricity use and the environment and we need to be able to integrate this knowledge into our actions and everyday habits. In order to do so it might be relevant to look at a different set of barriers, namely the

ones connected to the way electricity is being conceptualized, communicated and used today. If we look at the system today it is mainly conceived as an expert system both by its users and its managers. As users we are used to someone else managing the system for us in ways we do not even notice, and the electrical engineers are used to manage the system without communicating to the users – in many cases not conceptualizing them as users at all, but as 'load'.

In Denmark the need for flexible consumption combined with an ongoing liberalization of the energy market has created a need for communication and a reshaping of the relationship between energy companies and their customers. The two processes of liberalization and sustainable transition may be coinciding but are not in any way logically connected meaning that they may interact in different ways and that the situation might be different in different countries. This interaction lies outside the scope of this paper, but it should be noted that at least in the Danish case liberalization is at least as strong a driver for the current changes than sustainability.

The scope of the paper is to investigate the role that design could play in making electricity visible in the public consciousness and reshaping the relationship between the system and the user. It takes its starting point in two design projects made on Kolding School of Design as part of the Danish Smart Grid-project iPower. The aim is however to reflect the role of design on a general level. The leading thought is that design on the one hand has a special role to play through its ability to combine visualization and use – aesthetic representations, concepts and user interfaces. But on the other that it has to tap into existing social systems and knowledge in order to make new functions intelligible.

'Passing Through'

The problem of making electricity tangible as well as the division between scientific and aesthetic language form the background of a video created by interaction designers Olafur Haraldsson and Kristian Ulrich Larsen called 'Passing Through'. The pictures in the video consist mainly of landscapes shot on Iceland. Through timelapse technology and digital manipulation the viewer follows how different forms of energy travel through the landscape and enter the manmade grid. The full video can be watched at https://vimeo.com/44193401

Figure 1: Still from 'Passing Through'

The text used for the narration of "Passing Through" is part of a speech "On Light and other High Frequency Phenomena" Serbian scientist and inventor Nicola Tesla delivered in 1893 at the Franklin Institute in Philadelphia.

The text reads as follows:

> *Nature may reach the same result in many ways. Like a wave in the physical world, in the infinite ocean of the medium which pervades all, so in the world of organisms, in life, an impulse started proceeds onward, at times, may be, with the speed of light, at times, again, so slowly that for ages and ages it seems to stay, passing through processes of a complexity inconceivable to men, but in all its forms, in all its stages, its energy ever and ever integrally present.*
>
> *A single ray of light from a distant star falling upon the eye of a tyrant in bygone times may have altered the course of his life, may have changed the destiny of nations, may have transformed the surface of the globe, so intricate, so inconceivably complex are the processes in Nature. In no way can we get such an overwhelming idea of the grandeur of Nature than when we consider, that in accordance with the law of the conservation of energy, throughout the Infinite, the forces are in a perfect balance, and hence the energy of a single thought may determine the motion of a universe. (Tesla 2006 [1893] p. 5)*

It adds a certain historical significance to the quote that it is delivered by the father of among many other things the European electrical system based on alternating currents and the principles of wireless radio communication. Besides its high level of abstraction the quote may seem somewhat enveloped for the reason that it refers to a set of contemporary scientific and philosophical ideas not commonly known today. The 'medium that pervades all' refers to the 'ether' which at the time was believed to be an omnipresent undetectable substance in the physical world. Furthermore Tesla was at the time deeply influenced by the Austrian physicist and philosopher Ernst Mach, believing that the world should be conceived as a whole where everything is interconnected influencing each other. (Seifer 1996) And that energy is a force that runs through everything be it inorganic matter, organisms or human consciousness. According to this line of thought every single action has universal consequences. This thought is not completely foreign to us though since it has strong similarities to what the father of modern chaos theory Edward Lorenz in the 1960's termed 'the butterfly effect'.

While Tesla viewed electric energy as an integrated part of the universe, he also realized that the present sources of electricity were finite. In the same lecture he rhetorically asked: "What will man do when the forests disappear, when the coal deposits are exhausted?" (Seifer 1996, p. 105) There is a historical irony in the fact that one of the chief inventors of the present electricity system foresaw its limitations more than a hundred years ago. Tesla himself believed in water- and wave power having great plans for

exploiting the energy of the Niagara Falls. This way there is a link between Tesla's philosophical views on energy and the present concerns about sustainable energy production.

One of the interesting things about the quote is the fact that even though it is delivered as part of a scientific lecture it reads more like poetry to the reader today. One of the inspirational sources for conceptualizing the video 'Passing Through' was an exhibition of pictures by the Danish painter Harald Moltke depicting auroras. Though exhibited as art these pictures were actually commissioned as scientific documentation of auroras made on two expeditions in Iceland and Finland in the period 1899 - 1901.

Figure 2 and 3: Harald Moltke,:"Aurora, October 4th 1899, 21.30 hours. Towards West" and "Aurora, December 29th 1900, 00.17 hours". Reproduced with permission of the Danish Metereological Institute.

Moltke himself writes about the aurora as phenomenon:

> *Auroras are not like anything else on our planet. They are mysterious. They go beyond the human imagination to the degree that you instinctively resort to expressions like 'supernatural', 'divine', 'miraculous'. (Harald Moltke: Livsrejsen, p. 70, quoted from Stauning 2011, p. 78)*

Here we once again find a close connection between scientific observation and aesthetic experience. There is an aesthetic 'surplus' that seems to challenge the boundaries of scientific language – at least by our 'post-positivist' standard. And this is linked to a certain wonder about the 'grandeur of nature' as Tesla put it. Moltke describes directly in the quote how everyday language and imagination is insufficient and that he is left with only religious concepts.

It seems to be a common historical pattern that the aesthetic experience of natural phenomena is somewhat 'forgotten' when they become commonplace and self-evident in a certain culture. This means that working with an aesthetic approach could be a way to re-discover things that have fallen out of our common consciousness. In the fall of 2011 Kolding School of Design held an international DesignCamp exploring the task of making electricity tangible named 'From intangible to tangible. From tangible to wonderful.'2 This theme might be seen as a reaction to what German sociologist Max Weber has famously termed the 'disenchantment of the world.' The two examples by Tesla and Moltke shows however that even though the modern scientific world view plays a part in the disenchantment process, scientific investigation may also lead to a 're-enchantment' or a renewed sense of wonder and that there may be a direct connection between scientific thought and documentation and aesthetic experience – in this case in the form of poetry and painting. By connecting the historical reference to Tesla with modern digital visual technologies the video tries to make such a connection where the visual sense of wonder is linked to a deeper understanding and respect for nature.

The video has been circulated on the internet via Vimeo and similar platforms. During the first month it had more than 1.2 million loads and reached more than 100 countries. The video has furthermore been linked to a Facebook-page on Sustainable Energy. This way an integrated part of the project has been to investigate how it is possible to create a global community around sustainable energy through artistic means and social media – a community that goes beyond the purely technologically interested.

The 'e-watch':

In the 'Passing Through' video aesthetic and artistic means were at the same time the vehicle and the very point of the project. In the 'e-watch' project aesthetics is made to serve a functional purpose. This project is at the same time more closely related to the 'Smart Grid'- issue of fluctuating energy sources. The aim of the project has been to develop a tool for the energy user to navigate the system using the renewable energy when it is there. If we picture a future Danish energy system with 50% wind energy and the demand pattern is not changed there will be long periods with overproduction of renewable energy. In order to use this excess energy the task is to move consumption from periods with low wind production to periods with high production or low demand.

The solution developed by designers Anne-Mette Clausen and Ole Prinds in collaboration with the author of this article is a clock depicting through red and green phases when to use electricity. It is based on a prognosis of the co2-intensity of the Danish energy production for the next 12 hours.

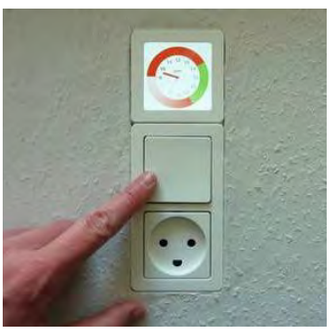

Figure 4 & 5: The 'e-watch'

The clock is made as a display that can be placed as part of the electricity plug or placed directly on e.g. the washing machine or the dish washer. While a lot of the everyday energy consumption cannot be postponed, activities like washing and tumble-drying clothes, running the dish-washer or charging electrical appliances like computers and mobile phones can be planned to periods where there is high production of renewable energy or low total demand on the system.

The e-watch works as a display that through graphic visualization 'translates' abstract data derived from energinet.dk, which is the public manager of the main electrical 'highways' in Denmark, into a practical guideline for action. Red and green works as signals signifying 'stop' and 'go' and in the practical situation we do not need to know the exact reason why (even though it of course should be accessible). An equal important part of the concept is that the e-watch is placed in a way so it presents the information when and where we need it. The e-watch is not a webpage or an app (even though it is today accessible as a web-app on ewatch.etrans.dk) because the information it provides should not have to be sought out actively. It should present itself to the user. It is very likely that the e-watch in the future might be built in as a display in 'intelligent' washing machines or dish washers that processes the information themselves and automatically sets a time, which may then be overruled by the user. But one of the reasons for making the e-watch as an 'add-on' or 'parasite' is that we do not have the time to wait for all our appliances to be exchanges with intelligent ones before we can start gaining the full benefit of fluctuating renewable energy sources. This might be a problem in Denmark but even more so in less technologically developed countries. (The e-watch will require some form of wireless communication though, in order to be able to update the information regularly.)

One of the challenges we met in developing the visual design was how to communicate that it had to do with electricity. We tried different options among others exchanging the arrow with a lightening symbol. We experienced however in our user tests that the conventional symbolism of electricity had an alienating effect on the users. The lightening symbolized high voltage, danger and technicality. The solution was not to explain the use through symbolism but through the context. By placing the e-watch display inside the frame commonly used for electrical switches it is understood as part of the interface between the electricity system and the user. The second feature was to place the logo of the electricity company in the space normally used for the manufacturer of the watch. (In the present version we are using the logo of the iPower project) this way also visualizing the choice of Electricity Company.

The e-watch functions as a clock depicting the actual time, but mainly the clock is chosen as a visual metaphor. In one sense the clock is an omnipresent visualization of the abstract concept of time. In another sense it might even be misleading to call it a visualization of time, since the clock quantifies and structures time creating a common network for social interaction. As shown by Norwegian intellectual historian Trond Berg Eriksen in his 'History of Time' (Tidens historie) it has taken a huge amount of social learning and disciplining to establish the modern concept of time as an underlying structure in the modern societies. (Eriksen 2004). Today representations of time are everywhere, in computers, mobile phones, television screens etc. leaving the clock as an aesthetic design object, which primarily functions as a piece of jewelry or a sculpture. This means that the clock is at the same time a socially structuring communicative object, a well-known an instinctively readable display and a design object.

In Denmark we have since the 1970's been taught the importance of saving energy. The new issue that is introduced along with the renewable energy sources is the importance of when you use energy. We are used to think of energy as a steady flow which is always available; the challenge is to picture it as fluctuating. The strategy has been to tap into already existing knowledge and socio-technical systems. Since the task is to communicate a new relationship between time and power consumption, we have tapped into the clock and the switch as the visual touchpoints of the two interlinked social systems.

Campaigns and navigation design

It can be fruitful to distinguish between two different kinds of communication design. One is the kind of communication you find in commercials, public campaigns, posters etc. This has to draw attention and have a massive impact for a short period. The other one is what can be termed navigation design. This is the type of communication that enables you to navigate abstract social systems. A lot of modern design icons like the London Tube Map have this character. This type of design is genuinely modern in the sense that it depicts a shift in mapmaking. What you need to map is no longer the sea, nature or even the city but instead the cultural infrastructure that makes the city work. You need a graphic overview and a time schedule in order to plan your train travel.

The reason why the energy system up until now has not needed this kind of communication has been its ability to provide a train whenever somebody needs it, so to speak. When this kind of service no longer can be sustained, there will be a classic design task in providing tools for navigating the system. The interesting thing if we continue along the lines of the train analogy is that systems like metro trains often has a high visual public presence through the design of stations, signs, maps etc. This means that even though you do not use the system you are still aware of its existence and importance. In contrary the electricity system has up until now been an invisible system, which is expected to provide the preconditions for a lot of other systems and actions that occupies our conscience.

The e-watch concept is at its present state designed for private households as a tool for the private consumer to be able to play an active role in the introduction of re-

newable energy sources into the system and as a tool for the energy companies to guide their customers towards an effective use of renewable energy. If we look at time as a social system it is present however not only in the private sphere as watches or kitchen clocks but also in schools, train stations, churches etc. The clock is almost everywhere in the public sphere creating a coherence between individual and collective actions. In the same way the e-watch should be made part of public communication signifying sustainable energy both as a common good and a common responsibility.

2 For more information about the DesignCamp see Boel 2011 or visit http://www.designskolenkolding.dk/designcamp2011/.

The role of aesthetics and communication in a sustainable energy system.

The aim of this paper has been to point out how the changes in energy systems in order to base them on renewable sources also generate changes in the relationship and communication between the system and its users. And that these changes open a new set of design problems that might not be less important than the technical questions.

These design tasks manifest themselves in three areas:

1) We need a new language of electricity. Electricity is normally conceptualized and visualized via a set of representations rooted in a techno-scientific epistemology. The common notion of the electrical system as an expert system is closely related to the way electricity is communicated. The task is not however to create this language anew. Historians of culture and design like David Nye and Adrian Forty have shown how the aesthetic side of electricity – the massive cultural and symbolic impact of the electrical light and the connection of electricity with modernist design – has achieved a symbolic meaning as symbol of modernity (Nye 1990, Forty 1986). This history contains however a close connection between electricity and progress, which needs to be critically reflected and nuanced. Even though the aesthetic presence of electricity in the highly developed societies goes largely unnoticed, it does not mean that it has lost its symbolic value at a subconscious level. There is a task in re-using and re-shaping the aesthetics of electricity in order to support a sustainable transition of the energy system.

2) We need a graphic mapping of the system that enables the user to navigate it. The system needs a visual identity that it does not have today. This does not coincide with the branding efforts of the individual energy companies even though this probably will help raise awareness too. On the contrary the energy companies find it hard to get their customers attention exactly because they do not understand what electricity is on a more fundamental level. The visual identity of the system needs to work across the division of the society into public and private spheres.

3) We need a way to integrate knowledge and awareness of electricity into our daily routines concerning electricity consumption. Working with the conceptual side of electricity is not enough if the actual use of electricity happens through unconscious routines or is part of overreaching social practices. One of the strengths of design is that it can work both with communication and interaction thereby creating coherence between what we think and what we do. A design object or a user interface has both a use function and a sign function which both have to be considered in the design process.

The two projects made during the iPower-project investigate this field in different ways. The video ‘Passing through’ directly confront the invisibility of electricity fusing historical references and new visualization techniques in the process. It is a conceptual piece of art/design intended for aesthetic contemplation and through its dissemination through social media it is used for creating interest and communities around the subject of sustainable energy. The e-watch on the other hand is a practical project aimed at creating a user interface for an energy system based on fluctuating energy sources that makes it possible to integrate the awareness of the energy system into ones daily routines combining two interfaces that are already routinely used – the clock and the switch.

This way the two projects supplement each other in the sense that they cover the tasks described and work both with conceptualization and interaction. As such they concretize and exemplify the approach outlined in this paper, but they of course in no way exhaust it.

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Designing to Lead More Sustainable Behavior – Case Studies for the Sustainable Challenges and Opportunities in Environmental Graphic Design

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Abstract
This paper looks at the sustainable challenges and opportunities in Environmental Graphic Design (EGD) projects. EGD helps to create direct communication between users and the built environment through information transmit. Suitable information to users lead to a better behavior, not just to let them act in the right way, but also to influence their behavior choices, helps to create more sustainable lifestyles in different situations.

This paper is to analyze the information connected with EGD and the users, thinking about potential possibility to suggest the best of the behaviors. Discuss from the information available in the wayfinding system to the signage design, the goal will be showing in which way should designers act for the more sustainable EGD, not just to create the best design, but also the best use and result of it.

Through design and research in sign programs, wayfinding consulting, this paper discussed sustainable challenges and opportunities in two EGD projects in Shanghai each focus on indoor and outdoor spaces.
The conclusion is that the properly and purposed research and design of EGD can lead to a more sustainable behavior and deliver significant environmental and economic benefits.

KEYWORDS: Way-finding research, Signage Design, Behavior, Sustainability, Urban space.

Introduction
There are two EGD projects discussed in this paper to reveal the sustainable challenges and opportunities. The first project - redesign the wayfinding and signage system for the Shanghai South Railway station - looks at how passengers find their way in the complicated transportation building, and considers how people can be encouraged to take public transport through clear and conscious signage guiding. Through the research and design process, a new signage system combined with the existing system in Shanghai south railway station was put into use in 2010. The result appears positive that the redesign improved the flow circulation status and made a beneficial impact on the transportation system.

The second project - Tourism signage design of Shanghai Xujiahui scenes – is focus on how to encourage the option of better behaviors through the improved information design and signage system design. The project finished implementation in the beginning of 2012. And the result proved that good EGD provides sustainable benefits including: lead to a better behavior, greater use of public transport, healthier lifestyles and even promoting the history and culture spread.

Case Study 1 - Redesign the wayfinding and signage system for Shanghai south railway station

Background
Shanghai South Railway Station occupied sixty hectares of land and serves most trains to the Southern provinces of China. After extensive renovation finished in 2006, the station features a modern circular design, the first of its kind in the world. The ground area of the station is 58,145 square meters, 122,916 square meters underground. The station area is a huge transport hub integrated with railway station, coach station (40,000 square meters), 3 subway lines (one line still in plan), 14 bus starting stations, taxi and private car. Above that, a shopping center of 60,000 square meters underground make this site a commercial center of the surrounding area. (YU Wei, GU Ying-qi, 2010)

After the station put into use in 2007, daily average passenger flow reached around 300,000 people. At the same time, a lot of complaints against the legibility and the way-finding of the space appeared. The volunteers who help people to find their way were asked around 100-200 times/day/person, besides them the security and cleaners are also carrying the duty of guiding passengers (ZHANG Hai-ye and YAN Ke-fei, 2007). Passengers were frustrated by the complicated space and unclear signage system, this not only affected the efficiency of traffic circulation also had a negative impact on passengers' emotions.

For the 2010 Shanghai World Expo, the south railway station will be the most important transport center and the estimated passenger flow will reach 400,000-500,000 persons/day (In fact the highest passenger flow even reach to 600,000 persons/day). Methods of this traffic flow evaluation for such a large numbers in the shortest time will give huge challenge to the area traffic and the way-finding system.

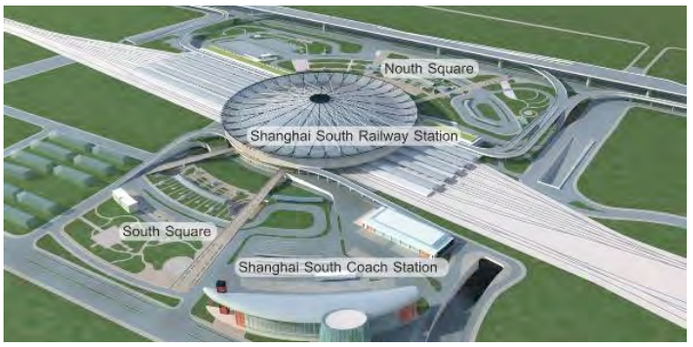

Figure 1 Shanghai south railway station.

In this context, the Construction and Transportation Committee of Xujiahui district and the South Railway Station Management Committee invited our team to do the research and redesign project for Shanghai south railway station area way-finding system. The Research and design took place from September 2008 and finished implementation in April 2010.

Research and Consultations

We have studied the site and the existing sign system, reviewed similar design and research cases to identify the major issues. In the course of our research we have met with officers from the management committee of the station and interviewed many passengers to build up a balanced overview. The results of the main problems are summarized as below:

The site

- The round shape of the building makes people lose the sense of direction. (Figure 2: F)
- The exits of the station are underground, which increase the difficulty to navigating. (Figure 2: A)
- Many passages and gateways, easy to be confused.
- Huge instantaneous flow reduces the readability of common signs.
- The passages and gateways are different from daytime and nighttime.
- The bus stations are located on north and South Square, the connection of them is underground and not easy to find.
- There are totally 16 entrances and exits with different destinations.

Figure 2 Photos of the existing signage system for Shanghai south railway station

The existing signage system

- The hierarchy of way-finding information is not clear. (Figure 2:A.D)
- Lack of ground public traffic information at the exits of underground spaces. (Figure 2: C)
- Most of the signage using the standard size of fonts and icons, the readable distance in the site status is too short. (Figure 2: B)
- The location of signs needs to be developed.
- The readability of the sign maps need to be improved.

Objectives

As Fewings stated the principles of wayfinding are simple; the practicalities are very complex (Fewings, R. 2001). Our aim is to identify a practical solution to better way-finding and outline the principles of a train station signage system that helps rapid circulation. Through this solution not only make the site easier to understand for users but also encourage passengers to take public transport.

To redesign a signage system, we must be mindful of what matters to the different kinds of users in Shanghai south railway station, and take into account the needs of the railway passengers, coach passengers, subway transfer passengers or shoppers. All of these have legitimate concerns that must be reconciled to make a system work.

Figure 3 Illustration of passengers' behavior analysis

Before we redesign the system we must take full account of what is there at the moment to decide what needs to stay, go, or be improved. The defining characteristic of the present situation, viewed as a whole, is that it is provider-led and not customer-led (YIN Zheng-sheng, 2008). As Patricia Brown noted we know from the worlds of commerce and industry that this is not the best way of meeting the needs of the very providers who, by default, have had to institute these systems. In other words, if we think about the needs of passengers who are willing to take public transport we will be more effective in encouraging them to do that than if we focus primarily on our own need to promote a particular route or destination.

Through our interview, many passengers avoid taking public transport if it requires them to navigate through an unfamiliar territory. The sense of the unknown – how long will it take, where a street leads to – creates 'risk', especially of getting lost or increase journey times. In contrast, taking taxi will be an easier choice even they may have to pay more, wait in line or encounter traffic jams. This situation enlarged the needs for taxi and self-driving or parking, burdened to the Shanghai south railway station's taxi and public parking supply. (Figure 3)

It is for this reason that the management committee of the station cooperated with us to redesign the signage system, aimed to not only a more integrated way-finding system but also guide a more sustainable and economical behavior.

Methodology

Customer-led method

Putting the needs of users first, requires that we appreciate the many different kinds of (potential) users: railway passengers, coach passengers, subway transfer passengers and shoppers. Their needs are not met well at present. Even if one signage system is excellent in meeting its own brief, it will have to work harder to guide behavior than a common way-finding system (Applied Information Group, 2007).

If we consider the needs of users in general, we may extrapolate some principles on which everyone can agree as the starting point for a common agenda. All kinds of walkers want to:

- Know where to look for way-finding information when they need it.
- Understand the way in which the information is communicated.
- Obtain the information they want quickly, intuitively and without fuss.

It is in everyone's interest to make the user's experience a positive one.

As designers, we may, in addition, want to service specific requirements, such as:

- Promote / drive people to a particular destination (e.g. bus station or subway station)
- Promote the character / identity of the space
- Reduce vision clutter
- Reinforce awareness of the space
- Encouraging the better option through signage guide

Through our research, people are willing to take the public transport if they feel the transfer trip is manageable and reliable. This means we can achieve a considerable benefit from providing information about the alternative public transport option instead of taking taxi at the point at which users are making decisions.

Showing large-size signs at the exit of railway station that the metro line direction is next to it, the close bus station is just on the upper floor, and the taxi waiting point is another direction, is likely to have a significant impact on the route choices of users– encouraging people to take public transport instead of taxi or private car. This approach can be maximized and supported with a hierarchy of information support, including direction signs, site maps and route signs.

Figure 4 The redesign process and outcome

Data and findings

By April 2010, totally 241 sign panels were redesigned or newly added into the signage system. During 2010 Shanghai World Expo, the highest passenger flow reaches to 600,000 persons per day and was evacuated successfully.

Statistical data

We choose the statistical data in the condition of same flow/day in 2007 and 2011, and compared the approximate data of passengers taking subway, taxi and self driving.

	2007	2011
Subway passengers (persons/day)	90,000	100,000-110,000
Taxi	500-600	600
Self-driving parking	100-150	100

Table 1. statistical data comparison between 2007 and 2011.(data sources: the management committee of Shanghai South Railway station), (the subway data is also influenced by the improvement of the network coverage)

User research data

In collaboration with the Shanghai south railway station management committee, we conducted field research questioning passengers as they left the station in March 2011. The findings are summarized below.

Respondent profile:

- 192 people were surveyed.
- 67% were railway passengers, 27% were coach passengers, 5% were subway transfer, the remainder were shoppers.

Key findings

- 73% of railway and coach passengers had looked at signs or maps inside the station before exiting.
- 98% were comfortable with signs in the station.
- 86% of railway and coach passengers intended to take subway or bus to their destinations.
- 87% could correctly identify the direction to the subway or bus station.
- 93% think the direction sign of subway and bus sta-

tion is clear and easy to find
• 65% of visitors think the map on the sign is easy to understand and 74% said they will read the map for navigating.

Case Study 2 - Tourism signage design of Shanghai Xujiahui scenes

Background
Today, Xujiahui is mainly a famous historical district of downtown Shanghai with many scenic spots. Numerous splendid historical buildings are located in Xujiahui, including the Xuhui Middle School, Xujiahui Bibliotheca, the 100 year old Xujiahui Christian Church, an observatory and the Shanghai Film Studio etc. There are around 30 scenes located in this two square kilometers area and most of them are free open to visitors. According to the Xujiahui Tourism Bureau, since 2010 Xujiahui start to working on becoming the first urban tourist attraction in Shanghai and will apply for 4A National Tourist Attraction designation.

Statistical results shows that by the year 2010 more than half of the tourists' destination is Xujiahui Christian Church while the other scenic spots adjacent to it such as Xujiahui Bibliotheca and Xujiahui observatory seldom has visitors even the distance is only around 5 minutes by foot. Less visitors aware the existence of those scenes not to mention find them through the complex downtown streets. In this context, how to give such area a holistic and systematic wayfinding and signage system to attract and guide visitors is at the crux.

From June 2011, Xujiahui Tourism Bureau and the Xujiahui street management committee invited our team to do the environmental graphic design including way-finding and signage system design for the scenes of Xujiahui. The project finished implementation in January 2012.

Figure 5 Shanghai Xujiahui district

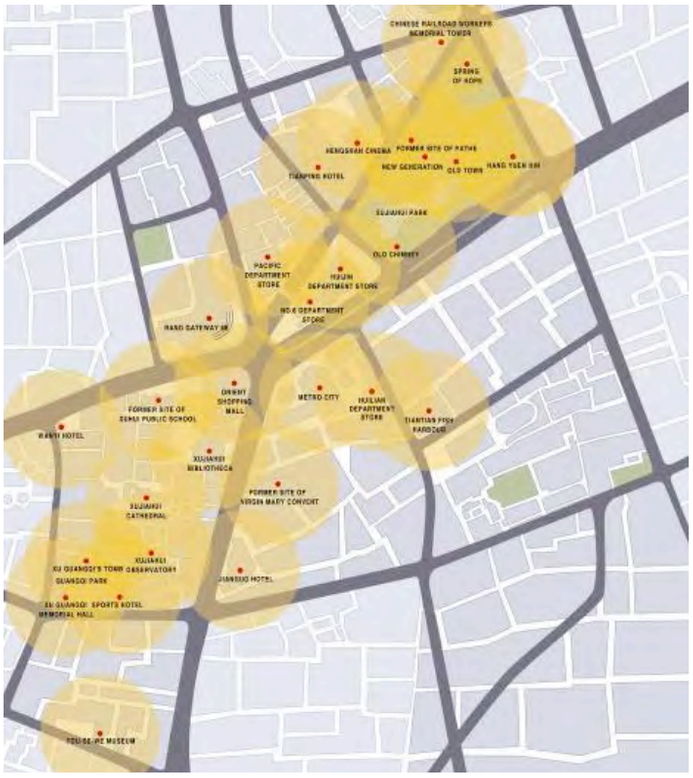

Figure 6 The circles on the map indicate the 5 minutes walking distance. The red dots indicate the scenic spots in site.

Research and Consultations
We have studied the Xujiahui district and the scenic spots, reviewed similar design and research cases to identify the major issues. We have met with officers from the Xujiahui Tourism Bureau and interviewed many tourists to find the crux of the site.

According to our research, it is generally agreed that Xujiahui historical district is a wonderful place to explore on foot or by bicycle. A 15 minute walk is considered a walkable journey in Shanghai; through our test, the distances between the scenic spots are suitable for walking or cycling (figure 6). In the interview, when showing the distance map of Xujiahui scenes, most of the travellers would consider walking or rent bicycle instead of using other transportation.

While there are numerous barriers to getting more people to visit Xujiahui scenes. The first one is lack of information connection, whether scenes introduction or wayfinding information. Many people avoid searching and visit the scenes if it requires them to navigate through an unfamiliar territory. Patricia Brown states that the sense of the unknown - how long will it take, where a street leads to -creates 'risk', especially of getting lost or increased journey times. (Patricia Brown, 2006)

Besides the distance, the culture connections of those scenes are very closely linked to each other. A good environmental graphic design will invite and encourage more people to discover the history and culture behind them.

Objectives

Legibility

Information on signs or maps should be readily legible. Also, the layout of the site should have a high degree of 'legibility', which aids in the formation of a clear mental image of the space to be recalled later so that we can locationally visualize ourselves (Malnar & Vodvarka, 2004). It is crucial that the kind of information people perceive matches what they can see in the actual environment in order for people to easily find their way (Miller, 1999). Legibility or visibility is the key aspect of signage (Berger, 2005).

According to Carpman and Grant, "successful wayfinding depends on reading the physical environment as well as on reading signs"(Carpman & Grant, 1993). An environmental image of a site could play an important part in dealing with wayfinding tasks. Lynch's five elements—paths, edges, districts, nodes, and landmarks—increase a human's ability to see and remember patterns of an environmental space. If people have a legible and visible map in their mental space, they can easily navigate through a certain environment. (Lynch, 1960)

Coincidentally, the scenes in this project are mostly eye-catching landmarks which help the users read the environment, create mental map and navigate themselves. When designing the wayfinding system, we emphasis the scenes on the signage maps as 3D buildings which provide both a literal representation of key landmarks, and make the reading of maps more intuitive. People, who struggle to read maps, including people with learning disabilities, will also benefit by 3D buildings on the map. With these maps with 3D buildings showing the major buildings of the scenes, the signage system will help people to find the Xujiahui scenes and even more attract travellers to continue visiting. (Figure 7)

Figure 7. the real building and the 3D building of Xujiahui cathedral

The signs and maps use high contrast colors for optimum legibility; a dark brown background with white or yellow text is used in conjunction. As there are many red brick buildings in Xujiahui's historical area, the brown color will help the signage system fit the environment well. (Figure 8)

Figure 8. the lay out and colors for optimum legibility

Sustainability - Lead to a better behavior

It is important to pay attention to the sustainable produce and manufacture process, while how to lead more sustainable behaviors through design is worth much to discuss.

Walking has reduced a lot in cities over the last decade. Reversing this trend would have a major beneficial impact on the transport system, as well as delivering benefits for the street environment, the economy and public health. Besides walking, cycling is also seen as green transportation. The number of bicycles in Shanghai has exceeded 12 million and most of the roads have retained the bicycle lanes. Regardless of road conditions or number of users, Shanghai has the advantage of promoting the public bicycle system. (GUO Min-hui & ZHONG Ming, 2009)

Figure 9 the public bicycle system in Shanghai

As discussed above, the scale of the site and the distance between the scenic spots are particularly suitable to walk

or use a bicycle. However the lack of orientation in an unfamiliar environment can lead to physical exhaustion, stress, anxiety, and frustration, all threaten users' sense of well-being and limit one's mobility. People feel safer if they clearly understand the layout of the site and can easily navigate through the space. People also feel comfortable if they know where they are without being disoriented.

A good Wayfinding design is not just about assisting people from point A to point B, but also bringing them the better choice of behavior. So the objective is to create a unified system that provides visitors with a set of measures that helps them to do so with ease and confidence.

Learned from the reference case of Legible London project, we added 10 and 20 minutes walking distance circle onto the map to orientate the user and show how close the scenes are to each other. In addition, we added the exact distance of directional information onto the sign panel especially the public transportation such as metro line or bicycle rental. It provides the user with the information needed to navigating in the area and the confidence to attempt walking or cycling journeys. (figure 10)

Figure 10 the information layout and map of the signage design

Overall, the improved information and wayfinding system design aims to provide benefits including:

- encouraging the option of continue visiting in Xujiahui scenes
- greater use of public transport
- healthier lifestyles
- a better environment
- promoting the history and culture spread

Methodology

A methodology was developed to analyze the navigation issues of the Xujiahui scenes using a range of wayfinding and visual communication criteria. These criteria were based on the literature review of previous studies or concepts from professionals as well as the knowledge gained from previous wayfinding research case studies.

Learning

We have completed a site analysis, including data collection and photo-documentation in the Xujiahui scenes. Data collection included learning from the site conditions, the users' feedback and also from successful cases.

Options

Different options came from constant adjustments to find the right balance between appearance, form, function production and cost.

Testing

Trialling different options and appearances design during development to get feedback from practice.

Evolutionary design

Many design details are considered and tried against each other to develop the 'fittest' design.

Placement

It is one of the most important steps for the effective wayfinding system. Through prototype test, users' feedback study and the holistic control, the appropriate locations were fixed.

While the analysis is limited to the Xujiahui scenes, the methodology can also be applied to all other tourism signage design that has similar site scale and transportation conditions. As the project has just finished implementation in January 2012, the testing and refining is still an ongoing, cyclical process that takes insight and patience.

Data and findings

In collaboration with the Xujiahui Tourism Bureau and the Xujiahui street management committee, we conducted field research questioning visitors as they visit the Xujiahui scenes. The findings are summarized below.

Respondent profile:

- 92 people were surveyed.
- 61% were visitors，46% were first time visitors，39% were Shanghai citizen.

Key findings:

- 94% of the visitors had used the signage and wayfinding system during their visiting.
- 71% of visitors think the map on the sign is easy to understand and 74% said they will read the map for navigating.
- 86% of the visitors could estimate the distance between destinations and intended to walk or ride bicycle to their destinations.
- 81% could correctly navigate to the next scenic spot destination.

From above we find broad agreement not only about the benefits of sustainable transportation modes, but also that good design could increases them. Good environmental graphic design could to some extent lead to better behavior.

Figure 11 Photographs of the final completed signage

Conclusion and recommendations

From the studies, research and considerations set out in this report have led us to conclude that the properly and purposed research and design of environment graphic design can lead to a more sustainable behavior and deliver significant environmental and economic benefits not only for transport building but for all the public spaces.

To guide users' behavior requires an integrated interdisciplinary cooperation and research, such as the above projects' design team has integrated team members from the architectural design, transportation engineering, industrial design, visual communication design, environmental design and other professional designers.

As many fast developing cities, Shanghai is still continuing to build and improve the urban infrastructure and is an emerging worldwide travel destination. How to circulate instantaneous huge number of passengers, how to guide a more sustainable and economical behavior, these will be worth to research and will make the studies worthy of popularization. The research and design projects discussed in this paper had got many good feedbacks both from the users and the managers. This means we can achieve a considerable benefit from good environmental graphic design and will encourage us to continue the research.

Acknowledgments

The study was supported by the Chinese Fundamental Research Funds for the Central Universities.

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Environmental impact of Fast Fashion

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Abstract
The tendency "Fast fashion "is the new thing between the big marks of the world of the fashion. This one consists of changing the offer of their cloth's shops every fifteen days, with a stock of new collections in very brief spaces of time of which we were traditionally used. Previously the fashion periods were known spring - summer or the autumn - winter collections, these ideas have rethought for a changeable fashion, on having placed new products with major rapidity, at a more obtainable price to the pocket of the consumer, which allows to a wider public to come.

The devastating consequences for our planet of this tendency of fashion that hurts it, increases in the achievement of the processes of finished textiles because they are staining the water of the planet.This article what it wants to achieve is to realize a reflection to analyze the problems that is appearing and that little by little is destroying our natural resources.

KEYWORDS: fast fashion, Inditex, Zara Case Study, contamination of textile industry, textile waste, JIT system.

What is understood as Fast Fashion?
Fast-fashion is a form of clothing production that allows for shorter times in creation and realization of a given product, making its sale process faster. Great brands all over the world observe collections from the most recognized designers, interpret their tendencies with a style of their own, apply modifications for market adaptation and produce garments in a shorter period of time, achieving faster product placement, more affordable prices and reaching a wider audience.

Enterprises dedicated to fast-fashion have modified the idea of annual collections and launched their own version called live collections. Garments are designed, fabricated, distributed and sold almost as fast as the client changes taste. It's even the enterprise itself that promotes these accelerated changes, stocking its stores with new designs weekly, creating an environment where a client must understand that if he likes a certain piece its best if he purchases it right away because he may not find it next week. This is the immediate shortage and opportunity environment that these enterprises have created with their live collection concept.

How can these collections be finished in such a short time?
Ever since 1990, the concept of client oriented market is refined, and products begin to be created with particular individuals in mind, with the use of complex information systems capable of identifying specific clients and their concrete needs. Segments get reduced to the point of highly determined groups, almost concrete persons.

In order to understand the how these collections can be finished in such a short time, this text will study the case of the Inditex Group, owner of well known stores such as Zara, Pull&Bear, Massimo Dutti, Stradivarius, Bershka, Oysho, Zara Home and Uterqüe (Inditex, 2012). Their singular management model, based on innovation and flexibility and their way of understanding fashion, creativity and quality design, along with a fast response to market demands have turned it into a well known group worldwide. Creativity and creation go hand and hand, production and fabrication are done through outside providers, which allows a short time between collections (Agulló, 2010).

The production process is met with machinery and outsourcing in order to achieve shorter times and lower prices. The network enterprise (in this case Inditex) fragment and disperses the industrial productive process throughout the world, from Portugal to Morocco, from Eastern Europe to Asian countries. Then, when the garments are ready, they're sent to the offices in Zaragoza and Arteixo (Spain) to give them their final touches (ironing, labeling and bagging). Once finished, they're finally sent to the stores. Shoes are made in the International Center in Elche (Alicante), that designs and distributes footwear that accompanies the products of every brand.

Zara: The chain's main brand. Covers very different styles, from daily and casual wear, to dresses and suit for parties and events. It works with men, women and children's fashion. Some of the stores use the brand Lefties (with no reference whatsoever to Zara), dedicated to selling clothes from past collections or in general low price garments.

Bershka: The style of the Bershka stores is youthful and casual, but inside, you can find different styles and tastes.

Pull & Bear: It focuses on youth fashion with an urban edge. Mainly directed towards teenagers, boys as well as girls.

Stradivarius: Focused on a young feminine audience. A style in the middle of Pull & Bear and Bershka, although closer to the last one.

Massimo Dutti: Outstanding for its elegant designs, classic and studied; daily wear, suits and cocktail dresses. It characterizes itself for having higher prices. It works with women and men fashion; and recently children.

Oysho: Lingerie and feminine underwear (although it also covers pijamas, accessories and bathing suits) It also works with girls and baby clothing (Bombin, 2004).

Zara Home: Interiorism, household items, decorations, accessories, kitchen items and Zara Home Kids (for kid's spaces).

Uterqüe: Last store to join the Inditex Group. Focuses on sophisticated accessory design: shoes, bags, jewelry, glasses and leather products, among others. It holds a sober image, in wood inspired on English clubs, while maintaining a modern and diaphanous feel.

The Inditex model is based in five principles:
Variety because it provides customers with a wide spectrum of products. Clients feel they're taking with them a personalized product given the diversity of choices.

Speed which means instant gratification and capacity to answer the needs of the client. With a flexible production system, that allows for responses to market demands. The Just In Time (JIT) system makes it possible to receive the desired quantities and varieties, achieving competitiveness given that only what's accepted by the costumer will be produced, with no storage (stock zero), avoiding unnecessary textile purchase, all because "the costs of the processes are determined before the product's launch and marketing, making the price what determines the product, and not the other way around" (Inditex, 2011). To make the production process more flexible and implant the complete JIT system, during the nineties the group came to an agreement with Toyota having multifunctional parts and machinery that make it possible to quickly change production, allowing flexibility and speed given the changes and tendencies in fashion.

Giving without losing strategic control in order to streamline their workflows and to speed responses to customer demand, use sweatshops but that means losing strategic control.

Information management, this is done in real time. Everyone involved in the production chain must have access to information throughout the chain when needed.

Super service and perfect orders in the areas that customers consider critical, such as fast and reliable delivery of products, since it is provided where requested, within the time stimulated, in perfect condition and ready for display (Lefcovich, 2009).

For the production of the company Inditex are basic pieces that are consumed around the time of the year and are combined with items that come and go quickly, which have short periods of life, ranging from two weeks since its creation to its location in the stores is clothing that is easy rotation, which follows the production according to customer demands. This fashion flash, as can be called, is done by throwing small productions as a test of consumer acceptance, if this trend is well received, the product is launched on a larger scale, which allows the company to develop only the clothes according to the preferences of its customers, which supports a flexible, production and distribution.

He previously managed the concepts of seasons, Fast-Fashion has changed the logistics of carrying out design and production, which can receive the items in terms ranging between 24 and 48 hours, accompanied by the computer, which has provided the information between the stores are those that capture consumer preferences and production, avoiding the accumulation of stocks that incur monetary losses to the stores with the return of the garments that were not market acceptance.

All this flexibility and the continuous changes of clothing, make it likely to end up having from 6 to 8 seasons in the year, unlike what was previously there were two or maximum four seasons a year. The JIT system which ZARA (Inditex belongs to the group) is a pioneer makes it very competitive in the market as an independent producer in short periods of time.

According to the group Inditex, the customer is the center of their business, landmark business model and its chain of production. All processes are designed to provide the best service to the store and the customer, due to its integrated model where the consumer is the main decision-making in all areas of the company.

Designers further information provided by the outlets with consumer reaction to fashion proposals also do a street-vision in clubs, streets and universities to monitor trends to come. Also take information on the latest trends that display fashion houses worldwide. This ensures the supply of a product desired by consumers selling points are the means by which the company uses to listen to customer feedback so sellers are reporting that highlight the wishes and needs of customers. as a dual purpose allows constant adaptation to the demand and avoid saturating the market of a particular model. He quotes one of Zara's marketing executives say, "The success of the model is to be prepared to adapt what is offered - in the shortest time possible - what customers want."

The outlets are also carefully selected, as the store location turns out to be a key point of the business, taking account of urban mobility and potential buyers, also follow the criteria of easy access and visibility products, to make it possible to arouse consumer desire to enter the store to take a turn and see "if there is something new."

The Inditex group is evident, is that the relationship he has with consumers is given in the stores themselves, but "not invest money in advertising, only in exceptional cases when it announces its sales in the early and mid-year."

What are the consequences of fast-fashion?
All fast fashion trend has flooded the market, more and more rapid fashion, just as the way people are buying or buying new clothes, fashion is changing and that although the garment will last a lifetime, will to be used at most

ten times and then be kept in the closet for the rest of life because they went out of fashion. Sometimes due to the change of seasons, in some countries, you cannot wear these clothes and left without putting up with tags on, so assaulted a question, what's with all these clothes in our closet? Where are you going to stop these clothes? What is the social responsibility of these companies on all out items that consumers do not want to use and need out of your closet?

The corporate social responsibility of fashion products based solely on the principles of ethics, accountability and just treatment. The CSR goes beyond compliance with laws and regulations, assuming their respect and strict compliance. In this sense, labor legislation and regulations related to the environment are the starting point to environmental responsibility. Compliance with the basic rules does not mean compliance with social responsibility, but with the obligations that any business must meet simply for the fact to do business. It would be difficult to understand allegation by a company CSR activities have not completed or does not comply with the legislation referred to his activity. "Promote the study and development of corporate social responsibility understood as the commitment of companies to apply standards of good corporate governance, sustainable social development and environmental protection"

When talking about corporate social responsibility CSR, not wants companies become charities, as companies are made to be profitable, you want to achieve is that they take an active and responsible about the impact of their activities. This culture is a way of doing business, helping to ensure more sustainable over time to the business and economic growth. (Polo, 2010).

What CSR wants to accomplish is that companies aiming for sustainable development, working for the balance between economic growth, social welfare, development and environmental conservation. The companies are committed to achieving this balance, must become an active part in solving the challenges then the society, in order to achieve a more stable and prosperous.

The textile industry has been characterized as one of the most polluting because of the waste generated and the high consumption of water, energy and chemicals. Textile processing plants employ a wide variety of dyes and other chemicals, including acids, bases, salts, wetting agents, dyes and other finishing auxiliaries. Many of these do not remain in final textile product they are discarded after serving a specific use. Therefore, the combined effluents textile plants may contain any or all of these components. "Since many textile processes are handled in a discontinuous way, the concentrations of residual materials can vary significantly. Some processes require highly acidic conditions while the other is highly alkaline. Accordingly, the pH of the waste water can also vary over quite a period of time."

The pledge of the jean is one of the more polluting the environment, pollution in the dyeing process, but most originate in the process after this, when performing the laundry or finish including bleaching of these garments, but also of the stages of drying and finishing. Given the variety of fibers, dyes and products used, these processes generate effluent of great diversity and chemical complexity, which is not treated at a plant in conventional wastewater treatment. The chemical composition of textile effluents is rapidly changing as a result of different consumer preferences and fashion, which makes more difficult the job of removing contaminants. Some companies have their own processing plant wastewater, but unfortunately very few.

Water is a non-renewable natural resource essential to the social welfare since it is a vital fluid to humans, plants and animals due to their uniqueness. All finishing processes to be performed, such as being contaminated degree in a short time may not be used by humans.

What can we do to solve this problem of waste textiles?

That is the question as inhabitants of this planet, which has gotten more and more consumers of new fashion trends is needed to formulate, ¿that WILL be done to no longer to produce textile waste and doing so with the waste already have?

There are several techniques for the reuse of these items that are being implemented in many parts of the world, one of them is the vintage shops, which specifically refers to the use of clothing worn and old but not just any type of garment, but those exclusive nivelque high combined with new or renewing to add accessories or current element is a kind of recycling clothes.

"In London in search of clothes go first, so be it second hand. The trend of using secondhand clothes, vintage clothing as it is called. "To make the style work is to mix vintage clothing with current pieces can be combined, something old with something new, this has become a trend of the season, which is wear a vintage clothing and cheer with a touch of modernity. In this way, is revitalized by sepia colored outfit with the goodness of Vintage clothing and today. "People living in London do not buy clothes, collect. Having lots of weird looks, buy lots is crude, tasteless" (Pastrana, 2011).

There are many shops Vintage worldwide, international clothing houses and a lot of independent designers have adopted the practice of recycling garments are processed into products palatable to an audience eager to novelty. International brands like Prada or Channel, historic designs have been reissued to ensure it is not copies, but original models, so that clothes are not to say that prices are cheap, there are at every level. The good news is that more and more people know how to value these types of garments: you will never be the same going to a party such as a Zara dress to go with a vintage, the customer pays exclusivity and quality, there will never be the pos-

sibility of finding someone wearing the same dress you wear.

Many companies also make designs with recycled materials, in order to help the environment, waste is a valuable resource, but often poorly understood. Textile recyclers have developed a series of socio-technological practices that allow transformation of materials, but often remain invisible to modern economies.

The use of natural fibers is a good option to preserve the environment, is reinforced by the finding that they are organic, which means that its production is free from chemicals such as fertilizers or insecticides, and the dyeing of the fibers and fabrics using natural products and colorants free of toxic elements or contaminants. In particular, it has established an international offer organic cotton is now produced in various countries, including India, Syria, Turkey, China, Tanzania, USA, Burkina Faso, Uganda and Egypt. Meanwhile, several Latin American countries including Peru Brazil, Paraguay, Colombia and Nicaragua, have been working organic cotton, spurred by benefits associated with this material, as the natural stimulus to agricultural practices that reduce pollution of land, and improving health conditions for both growers and producers and users of garments made from organic fibers. International companies such as Holf & harrison, using organic cotton fiber because it is a strong, versatile, can grow in most climates, does not require pesticides.

Natural fibers such as cotton, flax, bamboo or wool as starting material for the manufacture of fabrics and garments, instead of synthetic fibers such as polyester, since the latter is a petroleum derivative, and is rapidly degraded, offers better care for the environment, as these natural fibers are easily decomposable. There remains a question, is it necessary to buy all that many clothes? If the pace continues to be consumed as is being done today, the planet would collapse!

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Service design: definition and perspectives for an emerging field

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Abstract
Research activities on Design for Social Innovation and Sustainability have discovered service practices that could broaden our vision of what a "service" is, and consequently how service design could be defined. Relational and collaborative service models have been identified that, together, open up new perspectives for service design theory and practices. These service models rely on interpersonal relations and new organizational models which are strongly based on people's capabilities, knowledge, competences and autonomous initiative, charac-teristics that point to a convivial reconstruction of our societies. These perspectives could have important implications for how the emerging discipline of service design may be defined and developed, particularly in the scenario of a sustainable society.

Design has widened its field over the years: from the design of industrial products to the design of services and product service systems (PSS). The Product Service Systems research com-munity was born considering the issue of sustainability, particularly in terms of the dematerial-ization of the economy: "reducing the material flows in production and consumption; creating products and services that provide consumers with the same level of performance, but with an inherently lower environmental burden" (MONT, 2001). The research community growing around Service Design (MORELLO, 1991, MANZINI, 1993; MAGER, 1994, 2004, PACENTI, 1998)has inherited the research on Design for Sustainability (MANZINI, VEZZOLI, 2002, MANZINI, JEGOU, 2003, MANZINI, 2004) - particularly on Design for Social Innovation and Sustainability - but has also been influenced by other research fields, for instance, in Italy: Strategic Design (ZURLO, 1999), Interaction Design (ANCESCHI et.al, 1993, MONTEFUSCO, 1993; SUSANI, 1997), Experience Design, which can be considered an integration (CEPPI, 2004) of what has been called Primary Design (PETRILLO, TRINI CASTELLI, 1987) – as a "sensorial" approach to design practices, and the Experience Econ-omy (PINE, GILMORE, 1999).

Service Design began as a convergence of all these studies and practices and is continuously expanding through research groups, consultancies and graduate/undergraduate courses estab-lished all over the world. Reinforced by these emerging practices, Service Design is a "rapidly growing field that has since been given a thorough theoretical and methodological basis" but is also a "young discipline that contains many exciting, undiscovered lines of research and con-tinues to invite us to explore the unknown and pursue exciting experiments" (MAGER, 2007)

However, the theoretical and methodological basis of Service Design is still seen by some as an open question, i.e. work in progress. In placing the terms "design" and "services" side by side the definition of what a "service" actually is becomes of primary importance to an understand-ing of the very nature of Service Design. Let's take as an example the following definition, ex-tensively divulged on the Service Design Network, the largest international research commu-nity in the field:

> *What exactly is service design? Service design addresses the functionality and form of services from the perspective of clients. It aims to ensure that service interfaces are use-ful, usable, and desirable from the client's point of view and effective, efficient, and distinctive from the supplier's point of view. (MAGER, 2007)*

As we will see in the following lines, the definition above presupposes and defines "service" in terms of a specific service model that we could call "standard", in which the "client" (or cli-ents) and a "supplier" are well defined. This definition does not consider other possible service models, as the research activities on Design for Social Innovation and Sustainability have demonstrated.

In the few lines of this paper we do not intend to set out a definition for Service Design. Its main objective is to illustrate how, in many aspects, there are emerging service practices that could broaden our definition of "services". As we will see, this also has implications for how the emerging service design field could be developed.

Service models

Standard service model

In this model, [agents] and [clients] are performing predefined roles. The service activities sub-sist in the performance between the two. This is the image that usually comes to mind when we think about "services". The "point of intersection" of the service performance occurs when the two distinct areas of provider (organization) and client meet. The paradigmatic example of the "intersection area" or interface is the "service-counter" and the usual example is a bank. This example illustrates how in these services, the encounter between persons is intermediated and firmly based on a designed apparatus. The interpersonal relations between the participants are not considered an essential requirement to a satisfactory service performance. Pacenti (1998), in one of the first studies on Service Design, proposes an analogy between service design and interaction design, considering this provider-client intersection as the interface to be designed.

This widely used service model was developed according to an industrialization process which promotes rationalization, optimization and control over interpersonal interactions in service performances (LEVITT, 1972, 1976).

Unlike the other service models considered in the following paragraphs, standard services promote an idea of "comfort" and well being that is identi-fied with "inactivity" and a passive attitude on the part of users/consumers, i.e., comfort as "re-lief" (MANZINI, 2008).

Relational and collaborative services

Some research projects1 looked for social innovations for sustainability, i.e. people creating so-lutions outside the mainstream unsustainable patterns of production and consumption.

> *Given that the capability of re-organizing existing elements into new, meaningful combinations is one of the possible definitions of creativity, these groups of people can be defined as creative communities: people who cooperatively invent, enhance and manage innovative solutions for new ways of living (MERONI, 2007).*

These research activities - based on a collection of social innovation cases collected initially in Europe (Meroni, 2007), but later also in Africa, Brazil, China, India - have identified the emer-gence of a particular kind of service configuration known as collaborative services: "services where the final users are actively involved and assume the role of service co-designers and co-producers" (Jegou and Manzini 2008, p. 34). Most of the services produced by creative com-munities present this characteristic: they are solutions based on a collaborative approach, where participants co-produce a recognized shared benefit, together seeking to solve problems posed by their everyday life. Considering these characteristics, this specific service model has also been defined – in organizational terms - as collaborative services. (JEGOU, MANZINI, 2008). The collaborative approach is also based on open source and a peer-to-peer spirit, i.e. service-oriented networks where users are co-producers of their own services and contents (i.e. blogs, podcasts, wikis, social networking websites, search engines, auction websites), generating non-hierarchical and network-based organizations (BAUWENS, 2004).

Recognition of the collaborative service model led to the coining of another term: relational services (Cipolla 2004, Cipolla and Manzini 2009). It emerged from the analysis of a group of social innovation cases that distinguish themselves by a very special characteristic: the intensity of interpersonal relations required to enable these particular services to operate. Relational ser-vices are a particular kind of collaborative service in which participants need not only to be operationally active and collaborative, but also well-inclined and willing to relate with others in a personal manner. Relational services are services but with a particular architecture, unlike that of the standard service model, i.e. instead of being passively served by suppliers/providers, people are actively interacting and relating in order to produce shared benefits. These services are defined as relational because the interpersonal relations are an essential component of these solutions. These relations are not an involuntary or spontaneous consequence of the solutions: the quality of interpersonal relations are intrinsically required by the service operation itself

The service model we see behind the solutions produced by creative communities - the collabo-rative and relational service model - differs from that commonly associated with the idea of "services". Examples range from childcare to care of the elderly, from looking after green spaces in urban contexts to alternative forms of mobility, from the building of new solidarity networks to the realisation of new housing typologies (MERONI, 2006).

The service called "Living Room Restaurant" is considered as a paradigmatic example of a re-lational service model. It is a service in which a family runs a restaurant in their own living room. After reserving places via email or a phone call, complete strangers can literally come and sit at the dining table with them. After a short chat and getting acquainted with all the guests, dinner is served. Guests can choose the background music they want and help by clear-ing the table between each course. The members of the family sit at the ends of the table and between courses they change places so they can talk to everyone present. The "client" even helps lay the table. In this situation, is the family promoting the restaurant a "provider" or a "host"? Can the "users" be defined as "clients" or "guests"? Certainly, the roles between agents and clients are not clearly defined. It is a service based on interpersonal relational qualities. First of all, it is conceived to run in a space that is traditionally considered to be private, even "intimate"—one's own home—which is made available to others. Opening your own space also means opening your own intimacy.

"Jardin du Ceres" is another example (MERONI, 2006): the consumer purchases – paying in advance – all the food that will be produced and supplied by the farmer, becoming his "part-ner". This includes an approach - based on the Slow Food Movement (PETRINI, 2005) - on which consumers and producers are considered as "co-producers". This characteristic also changes the interpersonal interaction between consumers and producers.

Collaborative and relational services have been found beyond the European context. "Ecologi-cal Network" in Rio de Janeiro is an example. Born in October 2001, It consists of groups of consumers who make purchases in through a direct interaction with producers. This enables the supply of agro-ecological/organic products in an affordable way and, at the same time, supports initiatives of small producers who follow the same principles:

> *"The service provides a direct distribution model for ecological food purchasing. The model encourages healthier nutrition and lifestyles, which also benefits the environ-ment by reducing the use of pesticides and other chemicals in food production. The ini-tiative is locally based, at city level. There are currently six centers across regions sur-rounding Rio de Janeiro with over seventy partner organizations. Ecological Network not*

only supports a healthier lifestyle but also allows consumers to purchase biological food products at lower prices than in supermarkets." (UNEP, 2009)

Another example is "Reviverde". It is a service organized autonomously by a group of people in Rio de Janeiro. They observed that the services of collection of waste were not working properly in the city and decided to autonomously collect and find the correct destination for the waste produced in their condominium. They have structured a solution, that it is now offered to any other condominium. The development of this solution presupposes a coordination and in-terpersonal interaction between condominium members that is not usual and even rare.

The observation and analysis of these and other initiatives shows that these groups of people have set up a particular service configuration: from services provided mainly by organiza-tions, to self-organized models, from services based on anonymous performances be-tween participants to those based on very personalized and mutual interper-sonal relationships.

These services are based on active people and are strongly rooted in their local contexts. They are considered "signs", prefiguring a sustainable future in which people will rediscover their own abilities to set up autonomously the solutions they need based on their local resources and common goods.

Ivan Illich: conviviality and service models

I believe that a desirable future depends on our deliberately choosing a life of action over a life of consumption, on our engendering a lifestyle which will enable us to be spontaneous, independent, yet related to each other, rather than maintaining a lifestyle which only allows to make and unmake, produce and consume - a style of life which is merely a way station on the road to the depletion and pollution of the environment. The future depends more upon our choice of institutions which support a life of action than on our developing new ideologies and technologies. (ILLICH, 1973a)

This citation from Illich, written in 1973, is still relevant and challenging, particularly consider-ing the effort to find alternatives to the unsustainable models of production and consumption. It expresses the need to change our ideas of well being, which materialize in products targeted to satisfy passive users, towards an idea of well being based on access and activity (MANZINI, 2007). This has been one of the main issues in the approach based on creative communities, manifest in the studies and practices relating to relational and collaborative service models.

The process of unlimited institutionalization, manifest in standard services, has dominated modern societies:

[…] great swathes of the way we live our lives become institutionalized. 'This process undermines people - it diminishes their confidence in themselves, and in their capacity to solve problems. It kills convivial relationships. Finally it colonizes life like a parasite or a cancer that kills creativity" (FINGER and ASÚN, 2001apud SMITH, 2008).

Illich (1973b) analyses how the major social agencies have, over time, been reorganized ac-cording to scientific criteria Education, postal services, social work, transportation, and others have all followed this evolution. In brief: services have been orga-nized as industrial institutions.

He also describes how the industrialization of medicine led to the break-up of the network of interpersonal relations in which people had always found relief and support in their everyday lives:

"the exclusion of mothers, aunts, and other non professionals from the care of their pregnant, abnormal, hurt, sick or dying relatives and friends resulted in new demands for medical services at a much faster rate than the medical establishment could deliver" (ILLICH, 1973b).

The key question is the "abundance" of industrial tools and experts – including service provi-sion – that suffocates people's freedom, creates dependence on producers and providers, and stimulates the development of an individualism that can go beyond personal realization and reasonable self-interest, to become closure and indifference. Against the enslavement of man to all these tools, Illich proposes the concept of "conviviality", expressed nowadays, for example, in relational and collaborative and service models:

I choose the term 'conviviality' to designate the opposite of industrial productivity. I in-tend it to mean autonomous and creative intercourse among persons, and the intercourse of persons with their environment; and this in contrast with the conditioned response of persons to the demands made upon them by others, and by a man-made environment. (ILLICH, 1973b)

The Design discipline does not remain unaware of the power of conviviality. It was expressed by the research activities on design for social innovation and sustainability which have devel-oped the issue of creative communities and have identified the service models described here as a perspective for a more sustainable future. But not only: the experience of the RED Unit at Design Council, from 2003 to 2006 is another example, using the term "open welfare":

This paper proposes a radically different approach for the 21st century: open welfare. It argues that many of the biggest improvements in public services will come from mass, participatory models, in which many of the "users" of a service become its designers and producers, working in new partnerships with professionals (COTTAM, LEADBEATER, 2004)

Service Design perspectives

The research activities on Design for Sustainability have not only contributed to setting up ser-vices as an object of Design activity, but have also opened the discussion

about what kind of services we could imagine and promote in the scenario of a sustainable and knowledge based society (JEGOU, MANZINI, 2008). On the other hand, increasingly complex social and eco-nomic problems are requiring solutions beyond the classic tools of government policy and mar-ket solutions. The emergence of a social economy that "[…] melds features which are very dif-ferent from economies based on the production and consumption of commodities" and on which there is […] an emphasis on collaboration, care and maintenance rather than one-off consumption" (MURRAY et al.,2010) is more than ever requiring the exploration of new serv-ice models.

Relational and collaborative services have been presented here as examples of alternative models to the process of service industrialization and concentration of knowledge power. From a theoretical point of view they have been presented in the perspective of a convivial recon-struction of our societies, and in tune with the emergence of the social economy (MURRAY, 2009, 2010) and the demands for a more sustainable future (MANZINI, 2008).

One important step in establishing the scope of Service Design is to consider the enlargement of the concept of "service" itself, based on the consideration of other service models, beyond the industrial or standard one. The central role of interpersonal relations, or non-hierarchical and networked-based organizations that relational and collaborative services are inspiring, are some examples of practices that exemplify the possibilities for setting up alternatives to the mainstream ways of production and consumption, particularly new services architectures which are based on people's capabilities, knowledge and competences.

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SHIFTING MINDSET: Towards sustainability at Linnaeus University Design Programmes

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Abstract
The School of Design, part of Linnaeus University in Sweden, has been focusing on new design thinking in our education. In the Sustainability specialization within the Design Programme we have been striving to increase the awareness of sustainability concerns (environmental, social and economic) instead of being traditionally focused on aesthetics.

We have developed a programme in line with the increasingly problematic world, where climate change is just one incitement for proposing attitudinal changes. The process of shifting our own and our students' mindsets has been successful. As soon as the students come to grips with the actual situation they are more than willing to change from the romantic dreams of figuring in glossy magazines to developing new fields for their research. Design education can have an impact on society while working closely and together with society to explore what design can do. We are proud of what we have achieved and are heading for a future where the design discipline takes a leading role in transforming vital parts of our society.

In my paper I will present one of the projects where the focus was on collaborating with a municipal housing company and a Swedish migration institution. It will include some of the extraordinary ideas developed by our students. My aim is to exemplify 'design in action', which might mean a changing and expanding view of the design of today and tomorrow. Shifting Mindset.

KEYWORDS: Shifting, sustainability, social innovation

Introduction
The School of Design, which is part of the Linnaeus University in Sweden, has during the last seven years been focusing on the connections between design and a sustainable society, paving the way to a new kind of design as well as of design thinking. This pervades all of our educational praxis, as transmitted by theoretical courses but also in the more practically oriented ones, as for instance the Sustainability specialization of the Design programme. Henceforth we have been striving for increasing the awareness of sustainable concerns (cultural, environmental, social and economic) instead of hanging on to traditional concerns about aesthetics and commercialism.

During the last few years we have been able to develop a program in line with the increasingly problematic world, where climate change is just one incitement to proposing an attitudinal change. The process of shifting our own and our students' mindsets has been successful. As soon as the students come to grips with the actual situation they are more than willing to change from the romantic dreams of figuring in glossy magazines to developing new fields for their research. Design education can have an impact on society while working closely together with different actors within society to explore what design can do to their special fields. We are proud of what we have achieved so far and are heading for a future where the design discipline takes a leading role in transforming vital parts of our society.

Design and sustainability in the past
As we are all well aware, the function of design has been shifting over time. 150 years ago, in the infancy of industrialization, John Ruskin claimed: That country is the richest which nourishes the greatest number of noble and happy human beings. William Morris and the Arts and Crafts movement were inspired by the socialist movements of the time and wanted to create artefacts which would by combining functionality with beauty increase the feeling of happiness among the population. The problem was that the majority never got access to these goods, as they could never afford to buy them

In Sweden we have something like a tradition of thinking in sustainable terms, even if this never permeated design thinking. Notabilities like Ellen Key advocated the usefulness of combining function and beauty in order to create a better society, and 100 years ago Svenska slöjdföreningen ["The Swedish Society of Industrial Design"] mounted an exposition where the publication, Vackrare vardagsvara [" More Beautiful Things for Everyday Use"], by the architect Gregor Paulsson, was distributed. He argued that artists should cooperate within factories in order to increase the quality of the products. The purpose was that all people should be in touch with beautiful things and through this beauty become beautiful human beings. At the time there was no discussion of what beauty is or what it can mean in different contexts to different people.

After World War II there was great trust in the future. Society was to be rebuilt and there was a happy future waiting for everyone. Factories were producing artefacts which seemed to be needed to build the future of people's dreams. Dreams were created by cool male PR and advertising people, and suddenly everybody felt the urge to own a toaster, a vacuum cleaner, or why not a blender? Prices went steadily down and it became realistic to buy and keep buying your own versions of all the things the PR people flagged for. They were working for industry, and so did the designers who were in charge of making the artefacts functional and aesthetic. Some decades later, Rachel Carson stated in her book Silent Spring that the use of pesticides in farming would kill animals and the result would be deadly silence. The environmental movement was born. The movement had very little impact on society at the time but was an important starting point for the on-going work with changing how we in society treat

the environment for growth. We know the rest, with meetings in Rio, Copenhagen etc., but sadly enough not much has happened. Economic values win over sustainable solutions.

As we might learn from history, there are Swedish designers who have been motivated to work for a more sustainable society through their profession. The famous Victor Papanek had an impact on Swedish design, culminating in what still exists as Ergonomic Design. The majority of the designers were heading in another direction, to improve industrial artefacts, all for profit. So, what do the Swedish design organizations say about design taking responsibility for a more sustainable society in 2012?

Mapping the field

The Swedish Association of Designers does not, sadly enough, discuss the role of design for a better society on their website. We could notice the criteria for Stora Designpriset [in translation: the Grand Award of Design]. The jury rewards products where design promotes commercial success. The Grand Award of Design is directed towards a Swedish company and its design supplier. If my interpretation is correct, a prize winner should be produced by a company that collaborates with a designer, the most important role for design being to turn out a commercial success. We are not satisfied with these criteria.

Things are changing, though. Another Swedish association, The Swedish Industrial Design Foundation (SVID), collaborates with what is called the Natural Step and its Sustainability Guide. On its website SVID declares: In this guide, SVID, the Swedish Industrial Design Foundation, aims to plant a seed that will grow into an understanding of the role of design methodology in moving society towards sustainability. This means that their intention is that designers should take part in and responsibility for a more sustainable society. We are satisfied with this statement.

Looking beyond Sweden, in 2005 Hilary Cottam was named the UK Designer of the Year, hosted by the Design Museum, London. She works in the field of social entrepreneurship and has been developing solutions to social issues like prison systems, ageing, and families in chronic crises. If we compare her efforts to the Grand Award of Design in Sweden and the Designer of the Year award, the UK conveys a signal to us that we are working in the right direction. We applaud that!

What then is sustainable development? What do we mean by the term, so commonly used and misused? In the report Our Common Future, more known as the Brundtland Report and today criticized and considered as an incomplete but still important resolution, the conclusion reads:

Sustainable development is development that meets the needs of the present without compromising the ability of future generations to meet their own needs. It contains within it two key concepts:

> *1) the concept of 'needs', in particular the essential needs of the world's poor, to which overriding priority should be given; and the idea of limitations imposed by the state of technology and social organization on the environment's ability to meet present and future needs.*
>
> *2) Thus the goals of economic and social development must be defined in terms of sustainability in all countries - developed or developing, market-oriented or centrally planned. Interpretations will vary, but must share certain general features and must flow from a consensus on the basic concept of sustainable development and on a broad strategic framework for achieving it.*

The founder of the Natural Step organization, Karl-Henrik Robert, thought the definition of sustainability was laid on a too high philosophical level for providing a good practical guidance. He therefore created a consensus dialogue with several researchers, and identifying the four principles for sustainability that can guide concrete action. These principles state that, in a sustainable society, nature is not subject to systematically increasing:

> *1) materials drawn from the earth's crust;*
> *2) substances produced by society;*
> *3) degradation of natural systems by physical means;*
> *4) and in this sustainable society, people are not subject to conditions that systematically undermine their capacity to meet their own needs.*

These principles should be natural, especially to enable every human being to fulfill their basic needs. When did we stop choosing that as a starting point?

The Swedish Design Faculty, with members from all Design education departments in Sweden, drew up a strategy for research on July 10, 2011, proposed by the chairman Peter Ullmark. The strategy describes design as going from being an aesthetic practice, like industrial design, to become an innovative part of the process of change in general. This is important, even if it must be admitted that it might be hard to visualize an implementation on a broad scale. It is easier to identify the "business as usual" paradigm in the work of Swedish designers.

Social innovation is one way of forming the process of change and the development of society. The MEDEA, the Collaborative Media Initiative group at Malmö University is working with collaborative processes, stating that the process of design is well suited to pursue development that will respond to social needs. Design processes which are based on including users and stakeholders in participatory design and rapid prototyping have proved useful for social innovation. One project is Herrgårds kvinnoförening (HKF), a women's organization working in a neighbourhood called Herrgård, which was started eight years ago by five immigrant women who felt excluded from Swedish society. They worked with activities like cooking and textile design. At a reunion with the Design faculty in October 2011 Anna Servalli presented their project and explained

that it has been very exciting, but not easy. Union representatives complained that the activities by this group competed with ordinary jobs. Another issue concerned when a woman, coming from a culture where the husband is usually the head of the family, after a successful project gets a position in society that her husband has not. As her husband lost his position when coming to Sweden, this created a new situation in the couple's balance in life and marriage. So, although starting out with the best of ambitions, such projects might end up in more ways than prognosticated – who said it was easy?

MEDEA has been inspired by Young Foundation in the UK. This is how *Young Foundation introduces itself on its website: The Young Foundation brings together insights, innovation and entrepreneurship to meet social needs. Social innovation is defined as: New ideas that simultaneously meet social needs and create new social relationships or collaborations. Innovations that are both good for society and enhance society's capacity to act. Geoff Mulgan, former head of Young Foundation, describes the limits of design in projects concerning social innovation. Designers do not have enough knowledge of economics and organizing. He adds that designers lack the ability to implement the projects, and as their fees are high they seldom get, or are granted, a long-term commitment. Therefore designers should collaborate with other disciplines working with social innovation and use their methods to reach more robust and long-term solutions.*

Ezio Manzini and Francesca Rizzo wrote an article in 2011 called "Small projects/large changes". The main questions discussed in the article are: *What could citizens' active participation do to promote and support large-scale sustainable changes? What can design do to stimulate and support this process?*

Having analyzed several projects, the authors arrived at the conclusion that to be successful in large scale projects, like those comprising cities or regions, social innovation and participatory design have to be integrated. The function of the designer will be as tutor, mediator or initiator. Designers could work with end users and together realize meaningful projects. Ezio Manzini is a professor at Polytech, Milano, and the founder of DESIS, Design for Social Innovation towards Sustainability.

In an interview with Experientia, a global experience design agency, Manzini describes an on-going project, Nutrire Milano, in cooperation between Slow Food, Politecnico di Milano and Facoltà di Scienze Gastronomiche. The goal of the project is to regenerate peri-urban Milanese agriculture (that is agriculture near the city) and, at the same time offer organic and local food opportunities to the citizens. To do that implies promoting radically new relationships between the countryside and the city, in other words, creating brand-new networks of farmers and citizens based on direct relationships and mutual support.

This is a good example of how design can interact with other disciplines and reach sustainable solutions for citizens living and working in a region.

This year a new and interesting network started in Stockholm. This is how it is introduced on its website: Green Leap is a network for design and sustainable development and a part of CESC, Centre for Sustainable Communications, at KTH Royal Institute of Technology in Stockholm Sweden. Our mission is to become a catalyst for change by engaging design in sustainable development. In February, Green Leap had a reunion with teachers in design and sustainability, and we discussed how to work with sustainability in our schools of design. It became more than obvious that the actors within the field have different interpretations of the topic 'design & sustainability'. Very few design schools in Sweden have an overall programme strategy for sustainability with theory integrated. We have been striving for an increased awareness of sustainable concerns (cultural, environmental, social and economic) instead of being traditionally focused on Aesthetics.

Design program at Linnaeus University, Sweden
In the syllabus the following is highlighted:
Societal and cultural changes require a new approach to design and new roles of a designer. Therefore, the Sustainability specialization of the Design Programme is grounded on a humanity and social science basis. It involves a holistic approach, which assumes that method and theory meet today's challenges with the highest standards of sustainable development. Education focuses, therefore, on promoting the design processes under cultural, ecological and long-term economic conditions, on the basis of theories aimed at human welfare in every sense. The programme is theme-based and focuses on the design aspect in social and cultural contexts. Through basic courses students acquire a general and broad theoretical-practical foundation in graphic design, product design and spatial design, while advanced courses allow the student's individual elective specialization within the framework of the given themes. The teaching takes the form of projects within both theory and practice. Design theory and practice are features integrated in the courses and provide insights that are both artistically and scientifically related. Inter- and multidisciplinary activities are made possible by the university campus. After completing the programme, the student is prepared for employment in the private and public sectors.

Another very important aspect is to have a plan for education in sustainability for all the teaching members of the faculty. We collaborate among others with the Natural Step organization, and our teachers participate in their courses. Why is this? Even if not all our courses are labelled sustainability, it is important that all feedback from tutor to students is based on such an approach.

A Case Study
So, how do we do this? The Bachelor programme has a sustainable framework throughout. The 5th semester we focus entirely on sustainability. Students have assimilated

design in practice and theory, so now it is time to deepen the sustainability perspective.

We start with a manifesto in Module 1. The tasks of the students are to articulate their general attitudes to design, visually and textually. After completing the course the students are expected to show an understanding of the designer's new roles in a sustainable society and reflect on their roles as a designer from a sustainable perspective. We continue in Module 2 by acquainting the students with a sustainable toolbox to help them understand the sustainable perspective as part of the design process. The students are expected to formulate a question in a given context, leading to a project where methods and tools for sustainable development are applied. We want them to be able to analyze self-critically their own view of sustainability.

Last year, in Module 3, we worked with a project called What can Design do for Torpsbruk? Torpsbruk is a small community with 350 inhabitants outside the small town of Alvesta in Southern Sweden. Today the community has no school, shops or restaurants. The buses into town are decreasing in number. There is a societal association, which is a forum for discussions of how people want to develop their community. In this project we worked together with AllboHus, a municipal housing corporation with ABF, an adult liberal education association, and with the Migration Office, as there are asylum seekers living in this community.

We started by staying on site for a couple of days, meeting the people living there in what we call Meet and Eat. We invited all people to the Café Torpsbruk, run by the ABF, to sit down and talk to us over a simple meal, one evening with the community association in Torpsbruk and the next evening with the asylum seekers. This was done by recommendation from AllboHus to make us realize that several people living in Torpsbruk found it difficult to have asylum seekers moving in and, after weeks or months, moving out again. After finishing our field study, we went back to the university. Now we had to try to analyze what kind of reality we had been part of. For two months students were working with this project, starting with formulating questions and a project of their own. Students continued visiting the site, going back and forth in order to get closer to the people and the community.

The overarching question was: What can Design do for Torpsbruk? Is design a tool for societal issues? In the end students presented very interesting and varied projects, because our Design programme focusing on Sustainability is a general education programme and our students choose their own approach to design. They identify themselves as designers, not graphic or space designers. We also invited people living in Torpsbruk to visit Linnaeus University for a presentation of the projects. Many interesting discussions took place with students getting feedback from excited citizens.

Three projects will illustrate what kind of work came out of this session.

Johan Ahlbäck worked with *Vizualisation of Statistics.*

Background: The political climate in Europe has in recent decades had a right-wing hue that has continued to grow in strength. This has not been seen since the time before Adolf Hitler's National Socialist Party took power in Germany in in the 1930s. The debate climate is strained and various media treat the situation in different ways. Some journalists are trying to focus on the question, while others are ignoring it. This is constantly used in the conspiracy-like theories of the right-wing media.

Project: This project is based on the Migration Board's responsibility to demonstrate transparency and participation. In our information age the Migration Board has the possibility to show correct information on its web site in a simple way to a great many people. It is therefore important that as long as we have a government, elected by the majority, we should be able to have confidence in them, not in xenophobic groups that seem to exploit the ignorance of the majority in order to create fear. Ahlbäck's design project was trying to increase the availability and transparency of governmental organizations in order to avoid suspicion. In this case it means increasing the understanding of important data concerning migration and integration by visualizing Migration Board statistics in a more appealing and understandable manner and making it into a basis for discussion and actual political participation.

Ahlbäck focused on info-graphics and experimented with vizualising statistics. His target group consisted of young men in their most vulnerable adolescence, before they turn into angry young men. He witnessed an information gap in society and tried to make a solution in his own way. His inclination as a designer lies within the graphic sector, which explains his interest.

Erika Lindmark worked with a project called Our Stories.

Background: *In Torpsbruk there is a clear divide between those who live permanently in the community and the asylum seekers. The former have an inadequate knowledge and understanding of the situation which they find themselves in. There circulate many negative stories among the permanent residents about the asylum seekers as a source of anxiety and prejudice. Meanwhile, the asylum seekers living in Torpsbruk have no opportunity to get an insight into how the permanent residents live and no ability to integrate and become involved in the community.*

Project in the student's own writing: *Our stories are an integration project for children aged 10 - 12 years where the children are given the opportunity to talk about themselves to other children with photography as a medium. The idea is for children of different backgrounds to learn about each other to increase their mutual understanding, while they may express themselves and work with their creativity. I*

did a workshop with ABF in Torpsbruk with children living permanently in the community and asylum seekers. The participating children were given a camera to photograph glimpses of their lives. The material in the form of children's pictures and comments were then collected in a booklet that was placed in the Café Torpsbruk and distributed to the children who participated. The workshop then became the basis for developing a system for how the project can be applied in school with a manual describing the various stages of the project.

Lindmark focused on integration. Most students experienced this as the most important issue. Erika was working with a project with children to help them getting integrated in Swedish society easier and faster and by this also involving their parents.

Angelica Gustafsson worked with a project called Cooperation.

Background: *Cooperative integration is a project that is about just what it seems to be about - inclusion. Perhaps these questions have never been more relevant than now, in 2012, with a society that is more globalized than ever, thanks to the Internet and other media. Meanwhile, the Swedish people have for the first time permitted a nationalistic party, the Sweden Democrats, into our parliament. This demonstrates segregation rather than globalization.*

In recent years, Torpsbruk has started to obtain a bad reputation. According to several of the most committed residents of the community, this is because of the asylum accommodation and the conflicts that have arisen in connection with this. None of the asylum seekers seemed to have perceived this. In conversation with them they do not agree, and instead view inactivity as the biggest problem.

The Project: *Cooperation for Integration is a service design concept originating in the problems of integration in modern Sweden. More and more communities suffer from poor integration, mostly among immigrant Swedes and seniors. Cooperative integration is a concept for a platform between ABF, Tillväxtverket (the Swedish Agency for Economic and Regional Growth) and others, which aims at encouraging the emergence of cooperative movements in society.*

Gustafsson also spotted integration as the main issue. Her aim was to get the immigrants included in society, as soon as possible, and at the same time bring some services to this small community that would make life easier for residents as well for asylum seekers. Gustafsson worked with the system for cooperation and through her interest in graphic design she made an illustration of the system and the information material for the participants.

Conclusions

It is hard work making projects with external collaborators. A great deal of coordination is involved, and it takes plenty of time and meetings to get everybody to understand what we as educators want to achieve. The partners also have different agendas, wishes and views.Most of the time I have to inform them that our agenda is a school project and also that one of the criteria of the course is that the students are supposed to find an important question and make a project out of that. The collaborators often think that they know what the problems are, but they get impressed or astonished when the students present a totally different kind of view.

The opening of the exhibition to which we invite all the participants and residents to participate is a crucial event: students get feedback from people living there and working there. As teachers we can always give feedback and tutorials from the design perspective but not on the basis of whether the project "makes sense", i.e., whether it is relevant or not from the point of view of the target groups. They are all present participating collaborators, business perpetrators and residents. It is also a very good opportunity to make the community aware of what design can do. Our collaborators very often express the view that they used to think that design was something fuzzy. That our students are supposed to have acquired the ability of writing and verbalizing to understand the sustainability concept from a humanistic and societal perspective is in most cases a complete novelty to "the public". This makes it possible for the students to explain their project in a serious way and verbalize their ambitions. This collaboration educates our participants to see the new role and new way of working with design: that of design as a facilitator in society. Hopefully they will employ a designer to make the change. And hopefully enough: they have provoked the participants to consider some changes for the better in the system.

Design is a tool for societal development!

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Sustainable Branding and Social Innovation

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Abstract
Background: Products today have relatively short life cycles. While technologies and markets are changing rapidly, good brands are sustainable and are relatively stable in the mind of customers. However, conventional monetary concern could no longer dominate; it gradually merges into branding of social and environmental sustainability – to buy less, produce-and-consume locally. Aims: To study the relationship and effects of branding and the Creative Communities for Sustainable Lifestyle in Hong Kong. Significance: It investigates the potentialities of collaborative everyday life creativity in generating and diffusing new and sustainable ways of living in the urban HK environment where East meets West and traditions meet modernity. It explores the transferrable methods for future applications. Focus: Four case studies are investigated from the perspective of sustainable branding: (1) MAPOPO – Community support agriculture, anti-property development – organic farming, immersed commitment; (2) HK Honey – Rebranding of heritage, social design activist – cohabitation; (3) SO…SOAP – Local production of natural/handmade soap – collaboration of individuals, branding company and trade union; (4) HNDSME CO-OP – Reorganisation of skilful labours, local employment, committed skills to produce better offerings. Conclusion: Branding is no longer only a strategy to promote economic sustainability, but also a way to glue social and environmental resources to awaken people in re-thinking consume less and slower and think of themselves as an element of the global integral part – a user and producer at the same time. Branding helps products, services and experiences sustaining in the mind of people, and sustainable branding helps balancing the sustainability of social, environmental and economical dimensions, as well as enhancing commitment of users.

KEYWORDS: Sustainable Branding; Social Innovation; Sustain in Mind, Society, Environment & Economy; Strategy and Action of Commitment.

Introduction
Products today have relatively short life cycles. While technologies and markets are changing rapidly, good brands are sustainable and are relatively stable in the mind of customers. However, conventional monetary concern could no longer dominate; it gradually merges into branding of social and environmental sustainability – to buy less, produce-and-consume locally. Aims: To study the relationship and effects of branding and the Creative Communities for Sustainable Lifestyle in Hong Kong. Significance: It investigates the potentialities of collaborative everyday life creativity in generating and diffusing new and sustainable ways of living in the urban HK environment where East meets West and traditions meet modernity. It explores the transferrable methods for future applications. Branding conventionally is carried out by branding companies, agents or branding experts to help promoting action of consumption and capturing the minds and memories of customers. The term 'sustainable branding' emerges when sustainability in economic, social and environmental dimensions is a holistic concern in a balanced sense. Above all, the branding strategies and actions usually initiated by the one offering the products, services or experiences. Branding theories could be employed, automatically inborn or evolved during the creation process of the social innovation. No matter the initiators, owners, designers or participants consciously know branding knowledge or not, they are naturally creating knowledge and practice strategically by inviting action of commitment from all stakeholders. This reflects that, once there are values and commitment behind any action, including sustainable initiatives, methods and strategies will be evolved and applied. Conventional branding knowledge is enhanced with true-hearted commitment by the users-and-producers at the same time. Ostensibly, it looks like nostalgic to have farmers to promote their own produce, and ask bee keepers to sell their own honey in the village market. However, they are multi-talented and knowledgeable people in the modern time such as a product designer is running a bee keeping business using traditional Chinese bee keeping method, and the university graduates are running an organic farm with diverse activities to invite immersion of participants to reflect upon the idea of 'land' and 'development'. This is specifically interesting when East meets West and traditions meet modernity as mentioned.

Initiators of these social innovations resemble the 'Avatar', in which modern people go back to the nature and learn about her in various aspects and understand that she is immense and have a 'power' governing living things. We are in the inter-junction and conflict of modern and basic needs of ourselves. Sometimes we are blurred by more than one role in the society, economy as well as in the environment. By re-thinking, re-defining and re-assuring the roles of designers, producers and users, it will be much more viable in finding the ways for sustainable development in a holistic sense.

Sustainable Branding – Strategy and Action of Commitment
Branding helps products, services and experiences sustaining in the mind of people, and sustainable branding helps balancing the sustainability of social, environmental and economical dimensions, as well as enhancing commitment of users. Though branding is not just giving a name to a product, the name, resembling a basic identity of a human being, counts for the uniqueness and help understanding, distinguishing and remembering immediately an organization or a product without the need of detailed investigation of the vision, mission or the complex product features. Most brand experts agree that branding is a believe system in which core values are decoded,

accepted and internalized. In a broad sense, brand does not limit to a product or company, but also could extend to a community, a city or even a country. In the book of the Balanced Brand, John Foley (2006) observes that brand involves all stakeholders - the customers, designers, employers, vendors, shareholders etc. The expectation or aspiration of building a brand is to seek the support and commitment of all stakeholders; this may result in economical return or community synergy and commitment. Patrick Hanlon (2006) in the book of the Primal Branding, gives examples that leaders can create and sustain a company and mission that people believe in resembling the codes of religion, which are called the 7 primal codes - the Creation Story, the Creed, the Icons, the Rituals, the Pagans or Non-believers, the Sacred Words and the Leader. This is similar to the growth of a person with the balanced functions of every internal organ. He has analyzed that the power of a believe system is that it inherently contains relevance, vision, trust, empathy, leadership, vibrancy, resonance, and commitment. Brands are ideologies with their own universe of truths, iconography, history, heroes, and demons. They also echo with the classical theory of Maslow putting the metaphysical need of 'self-actualization' on top of the pyramid, and leaving the basic physical needs on the bottom part. Above all, brand is a value system of expectation, experience and projection. It becomes customers' reflection of judgment and values. All these values relate to emotion and internal self. The US chief executive of Saatchi and Saatchi Kelvin Roberts had once said, "for a brand to be truly successful it needs to become a 'love mark' rather than a 'trademark'". No matter in whichever approach, branding has been examined and illustrated in such a way that can be understood with humanity instead of just marketing cliché. In the cases of social innovation and sustainability, these ideas apply in a holistic sense with individual commitment and values on top governing brand strategies and response actions. Figure 1 illustrates the hierarchy of commitment and value on top of the 'theories of offerings' proposed by Pine and Gilmore (1999). They asserted that the offering of experience is the highest in the offerings pyramid. However, 'commitment' is also 'offered' for participation such as in churches, armies, fans clubs and social innovation organisations.

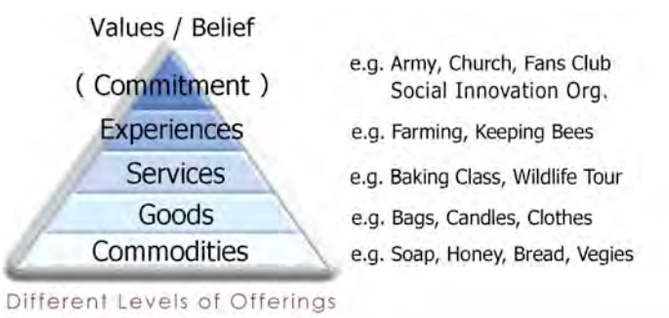

Figure 1 – Commitment as the Top Level of Offering

Research Examples

Traditionally, branding is a part of marketing, and it develops to knowledge of communication, persuasion, memory, reflection, experience and commitment in return. It existed in history as some touching stories, friendly business relationship and voluntary services. Nowadays, social innovations or enterprises possess a very strong brand story, value, statement, equities and above all contagious and self-propagating qualities, which make it a form of 'sustainable branding'. This is indeed an automatic phenomenon emerging from the crave of sustainable economy, community and environment. The research empirical examples here illustrate the detailed quality of building relationship with all stakeholders and materials in the different spheres which include the people, resources, land, transportation, emission, energy used etc. The concept as the ONE or the one planet is vital that is only a motto in the 70's and is now becoming eminent and substantial elsewhere in the world. Despite of this tremendous impact, the concept of sustainability, as agreed by many researchers such as Prof Manzini and Vezzoli of Milan Polytechnic, could be achieved by very small and local components. This resembles the structure of the biological system. Amino acid forms the cells; cells form the tissues; tissues form the organs; organs form functions and systems, systems co-ordinate to form the body. The units are small and simple, which on the one hand survive locally, and on the other hand supply the needs to the proximal and distal. This coincides with the prevalent trends or assertion of sustainability lifestyle.

(1) MAPOPO – Community support agriculture, anti-property development – organic farming, immersed commitment; (2) HK Honey – Rebranding of heritage, social design activist – cohabitation; (3) SO…SOAP – Local production of natural/handmade soap – collaboration of individuals, branding company and trade union; (4) HNDSME CO-OP – Reorganisation of skilful labours, local employment, committed skills to produce better offerings. These 4 examples include commodities, products, services, experiences as well as commitment, which are shown in Figure 1.

Ma Po Po Organic Farm

Figure 2 – Ma Po Po Organic Farm in Ma Si Po, Tai Po, engaging commitment of participants in various activities to understand the deeper meaning of 'Land' and 'Development'.

The outstanding point of Ma Po Po could be noticed from Figure 2. It is set up in the middle of several housing estates established by properties developers in Tai Po, Hong Kong. It is an anti-properties-developers item that uses

the expensive land for organic farming in a 'city' (in fact it had been the rural area before). The belief and value behind is to get people think deeper the definition of 'land' and 'development'. This sets up the brand story with a strong statement. It believes co-existence of rural and urban areas is not only possible but also sustainable with mutual benefits. Development of local agriculture is much needed in Hong Kong as a true alternative to property development. It has 7 staff members plus more than 20 teams of voluntary workers. Though a small community, it has a population of 310,900 since it is situated in the sub-urban area where buildings are very tall and densely packed together. It is really a typical case of hybrid of new and old living patterns. Recently, government and property agents have planned to use HK$60,000,000,000 trying to buy the piece of land and re-develop it for high-rise building and estates. We may also recognize the value of this piece of land from the angle of urbanization, as well as the cost for keeping meaningful and sustainable lifestyle and values at the same time.

Ma Po Po provides more than 10 kinds of activities including growing vegetables, making bread, wildlife tour, arts creation, children education programme etc. It has also set up its 'Organic Quality Assurance (QA) System' by abandoning the 'Community QA System'. The former is based on the trust between farmers and consumers, while the later is based on a third party that farmers and consumers do not know each other and can only rely on a mechanical system. Apart from trust among people, it also emphases on the communication between the land, environment and the people, so they will plant vegetables based on seasons and soil properties, not profits alone. Apart from farming, there are also bread classes, wildlife tour for fireflies, frogs. It also sells organic food and commodities which are produced nearby, e.g. the handmade soap in Figure 4. Community arts participation is also organised related to these activities. The multi-facet activities could foster and invite people's commitment in thinking about the definition of 'Land' and 'Development' in a deeper sense. Through fund raising in installments method, volunteer work and recommending friends, immersion and a social group is formed, which of course includes the residence of the nearby who live in a busy life but would like to enjoy a greener life and have 'holiday education' to their children. There is a 6-month campaign consists of a number of projects, including a planning issues booklet, a Ma Shi Po agriculture report, a squatter culture exhibition, a map of villagers' life stories, an ecology map, an oral history project, a social impact assessment, and village environment improvements. Whenever it has a chance, it will tell the government what kind of life Hong Kong people want and what the future of Hong Kong they would like to see! The branding strategy is clear, started with a statement, value, and engages stakeholders by all related kinds of organic commodities, products, services, experiences, commitment finally. Nevertheless, they are very light-hearted and executed in soft activities naturally.

Hong Kong Honey

Figure 3 – Hong Kong Honey, adopting traditional Chinese method of Bee Keeping without using veil and smoke for collector and honey collecting respectively.

Mr. Michael Leung is the founder and creative director of HK Honey. He also runs a multi-disciplinary design studio in Hong Kong called Studio Leung. Michael has worked with international companies such as LEXON, American Apparel, Corian, the Motorola Design Studio, Louis Vuitton, MUJI & Droog Design. The most outstanding point of this Hong Kong Honey is Michael has been the apprentice of 2 Chinese Bee master beekeepers, and learned the traditional Chinese method of Bee Keeping without using veil and smoke for collector and honey collecting respectively. This really resembles the 'Avatar' movie, in which modern scientist go into the world of rural nature and learn the tactics of living and merge with the scientific knowledge to solve complex problems. Michael together with a team keep the bees on rooftop of a high-rise building in a business centre area and sell honey to the nearby restaurants and brand it as the locally produced honey. However, this produces no nuisance to the nearby residence because honey bees will fly more than 20 miles to collect their nectar back to the beehive. In collecting the honey, Michael will leave half of the collection for the bees as 'mutual benefit'. He believes urban beekeeping is practicable and could be explored further in other part of Hong Kong. Of course natural and fresh food to be produced and consumed locally is also the aspiration and this dream really comes true. He has also been interviewed and reported recently by the South China Morning Post on this initiative. Sustainable branding with its voice, products, story, social benefits and economic return is again answered with commitment and immersion of an urban beekeeper who owns a team of different knowledge and capability. It is also a successful example of rebranding of heritage, and social design activist in cohabitation.

The area he is keeping the bees is Wanchai which is of a population of 167,200. The people living there are the group with highest range of income in Hong Kong. Since there are mainly commercial buildings, many people there are workers who just resemble the pilgrims that work, eat and shop there. Michael has 19 team members including 6 interns who love to learn beekeeping and related arts

and design activities. The other 13 persons are artists, designers, beekeepers and accountant, who work on candle design and making, art creating and connecting the local restaurants and supply for the fresh honey. By extending the beekeeping techniques to other district and remember the bees could fly more than 20 miles for getting the nectar back to the beehives, this 'small' business could really spread out the to other parts of Hong Kong, making urban beekeeping a viable and sustainable lifestyle.

So…Soap

Figure 4a – So…SOAP, 區區肥皂, in Chinese means simply soap and soap that could be found in many districts. Commodities are produced and consumed locally.

SO..SOAP is a local production of natural/handmade soap, which is collaboration of individuals, branding company and trade union. It all started with a mother aimed to create healthy homes and one organic soap at a time. A Hong Kong mother is hoping to make the world a better place by selling soap – using her all-natural, locally handmade products to help achieve sustainable ways of living and raise awareness of the need for a healthy community lifestyle. She came up with the idea of making soap in 2007, when she needed an income to support her family. But she wanted a job on her own terms and one that was "organic" – something, according to her definition, that does not harm the environment, does not aggravate social problems and supports a sustainable community economy.

The brand's name in Chinese is a double meaning, which means both "simply soap" and "each district soap", natural soap in a community-based, social-oriented enterprise. Her soap is made in batches at a community centre in Tai Po, where mothers work according to their household schedules. The soap is then sold within the district.

The soap is branded with austere graphics and up-cycled polypropylene plastic bottles. Discounts are given to customers who return for refills. The whole set of product that made the soap is even more interesting, which could be set up easily and is mobile to be used in different districts of Hong Kong (see Figure 4). Instead of selling the products or commodities, the production tools are sold and method and class of production is included. Above all, local employment is created simultaneously for housewives who have time and ability to do so. Sustainable branding here involves a branding agent, local participants who produce and use the products. Nevertheless, design elements are not compromised - product graphics, aesthetics and functions of the production tool production are well considered and designed. After all, it is again team work that makes it successful, and the cross-cultural name also adds to its popularity. At present, there are 21 branches spreading through 9 districts/communities of Hong Kong encompassing rural areas, new developed housing estate and commercial districts. In the commercial districts, these soap products are previously accepted to be displayed and sold in the high-class Lane Crawford Department Store, which marks the role and importance of this sustainable signature product produced by small social enterprises. It is interesting to note that, the 4 founders of this social enterprise are all women and the population covered by these 9 districts/communities is over 3,355,000, which is almost half the population of Hong Kong. Nevertheless, long distance transportation for delivery is unnecessary as they are all produced locally and fresh!

Figure 4b – The 21 branches of So…SOAP, situated in 9 districts of Hong Kong encompassing rural areas, new developed housing estate and commercial districts.

HNDSME CO-OP

Figure 5 - HNDSME CO-OP – Reorganisation of skilful labours, local employment, and committed skills to produce better offerings.

HNDSME CO-OP means Handmade Small Medium Enterprise Co-operation. Since modern and traditional crafts relevant were dying out due to large scale industrialisation; and most factories in Hong Kong had been moved to the Mainland China in the 90's; a lot of skillful craftspeople no longer had a proper job related to their professional skills. The HNDSME CO-OP tried to address and recognised the skilful labours as craftspeople, valuing high quality small production over low quality mass production. These craftspeople include seamstresses to shoemakers, and from watch makers to carpenters. It is believed that the skills are irreplaceable part of our glocal culture.

Traditional crafts relevant in this modern industrialised age are treasured, and sustainability in the social, economic aspects are addressed pertinently. With careful choices of materials and production methods, environmental issues are also tackled. Local craftspeople and SME are brought together to make beautiful designs which are HNDSME (handsome). Another brand promise is 'BE INSPIRED BY OUR NEIGHBORHOOD, find true beauty in our community and create surprises and joys for our everyday life!' Through the design of the products and community-based production line, beauty and creativity for the sustainable neighbourhood is re-defined. Ordinary/daily seen but forgotten objects/materials are transformed into unique designs and products.

In such sense, 'made-in-Hong-Kong' products could be used locally in Hong Kong or neighbourhood cities such as Shenzhen. The HNDSME CO-OP is a label for quality, worth for money, socially, economically and environmentally viable. With the value added by design and craftspeople, it could be a new mode of business in the future when Hong Kong is still a cosmopolitan city where East meets West, and traditions meet modernity. The number of staff members is the smallest, only 3 persons, among these 4 examples, but the strategy of this social innovation enables the products to cover the largest population of over 7,000,000 by connecting more than 5 Small to Medium size Enterprises (SME) as well as individual designers and craftsmen in the design and production process.

Conclusion

Branding is no longer only a strategy to promote economic sustainability, but also a way to glue social and environmental resources to awaken people in re-thinking consume less and slower and think of themselves as an element of the global integral part – a user and producer at the same time. Branding helps products, services and experiences sustaining in the mind of people, and sustainable branding helps balancing the sustainability of social, environmental and economical dimensions, as well as enhancing commitment of users. Traditionally, branding is a part of marketing, and it develops to knowledge of communication, persuasion, memory, reflection, experience and commitment in return. Nowadays, social innovations or enterprises possess a very strong brand story, value, statement, attributes and above all contagious and self-propagating qualities. With co-creation, transformation, strategic and holistic planning, sustainable branding may help the development of a balanced sustainability in the social, economic and environmental aspects in a prolonged life cycle. Though the number of workers in each organization is very small ranging from 3 to 19, the population covered by the selling is enormous ranging from 167,200 to more than 7,000,000. Apart from the main workers, volunteers, interns, participants - producers and users, SME are involved and committed in this arising business and affecting the whole Hong Kong resembling self-perpetuating cells division, which work in a lively and dynamic manner. All in all, it adds to a better living and happy life to the inhabitants and visitors of the areas.

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Sustainable Fashion Education: From Trend to Paradigm?

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Abstract

The fashion design industry is one of today's most unsustainable global businesses contributing to the depletion of fossil energy, deforestation driven by land and water use, severe pollution caused by chemical dyeing, and the non-ethical treatment of factory workers, among others. These negative impacts result in what may be viewed as a problematique: a meta-system of problems, pertaining to the economy, the environment, and society. In this paper I propose to address education in fashion design as one of the aspects that supports the current paradigm and therefore is part of the problematique. I will present a sample of contemporary trends in sustainable fashion design education that could lead to a future necessary paradigm shift. In addition, based on my research, I will present as an example of a sustainable fashion design syllabus created as a university course addressing issues and ideas presented in the paper. As a conclusion, I propose that fashion designers must learn to toil with holistic processes incorporating environmental responsible design, which does not negatively affect the environment, people and society.

Education in sustainable fashion design must be consolidated as a curriculum, and not only as a trendy course. I suggest that Latin American universities could be at the forefront of this paradigm shift as it has the resources both human and natural to contribute to the radical and collective changes that must be done to help solve some of the world´s direst problems. Fashion designers educated through a creative sustainability curriculum will see themselves as agents of change that can be part of the solution and stop being part of the problem.

KEYWORDS: sustainable fashion, sustainable fashion education, paradigm

Introduction

Today´s world requires fashion designers to integrate a holistic approach towards work and life. It is in this understanding that I find it important to provide a personal perspective as a background of this paper and the nature of my inquiry. The core questions and issues addressed in my research come from more than a decade of experience in all stages of the fashion industry and a journey of living that has taken me from Bogotá, to New York, Los Angeles and Helsinki.

The fashion industry produces a complex web of problems, local in nature but global in scope, including ethical working conditions in overseas production, wasteful use of materials to make numerous samples that would never be used. Designers, best address these problems and many others, when they are invested in the learning process. Though many holistically conscious designers are self-taught, I propose that forming future-oriented designers that have as their priority a concern with the environment; the society and the economy would be achieved through sharing and understanding concepts during their university education. Therefore, this paper discusses the areas that fashion designers need to be aware of and educated for in the twenty-first century. I have explored trends in sustainable fashion education in diverse locations in Europe and the US, where the most prominent educational trends in sustainable education are surging. This exploration and overview will inspire further ideas for collaboration between sustainable fashion designers, business leaders and educators and bring back the excitement and creativity to the field.

Problem: Unsustainability of fashion design

The situation we are now living has been referred to as a post-industrial environment (Vonderembse et al., 1997), or a consumer throw away society (Niinimäki, 2011), or a self-centred paradigm (Oshry, 2012) where the fashion industry and consumers have gone into a cycle of exploitation of each other, the planet, and the millions working in unethical conditions (Siegle, 2011). This paradigm is characterized by global competition, rapid market change, and shorter product life-cycles (Vonderembse et al., 1997). Approximately eighty billion pieces of clothing are produced globally in one year (Siegle, 2011). 40 million workers are employed in the fashion industry (Hurley and Miller, 2008). Consumers around the globe spent $1 trillion on clothes (Allwood et al., 2006). The use of energy and toxic chemicals in textile and clothing production contributes to climate change.

Throughout the supply chain different actors are involved in the production of clothing and textiles. Many concerns involve the quality of the jobs and their social consequences: child labour, "low skilled" or "unskilled" young women who suffer from unethical working conditions, pay of 'minimum living wage', precarious working conditions, and sexual harassment (Allwood et al., 2006).

The enormous problems posed within the fashion industry are closely linked to one another as found in design, education, business and social practices, which may lead to a new paradigm. . Fletcher (2008) argues that fashion and sustainability is best understood on the local level that, originates from local resourceful techniques and skills developed for incremental change in fashion and textiles.

These problems and the interconnectedness have been addressed linearly and separately, but sustainability sees to apply a more systematic thinking to this complexity (Fletcher and Grose, 2012). This systemic thinking has been defined by the Nordic Fashion Association (NICE) as a code of conduct for industry related to human rights, la-

bour, occupational health and safety, environment, ethical conduct, and monitoring and evaluation (NICE, 2012).

Following An Industrial Fashion Education

The system at this moment in higher education schools and universities is one that follows an industrial paradigm that has developed over half a century. (Ing, 2010). With the trend of globalized mass fashion industry fashion design students are faced with a world affected by an unstable economy, ecological devastation, faster production processes, unethical working conditions and a throw away society (Niinimäki, 2011). Conversely the current paradigm is reaching the end, an understanding of the world and new patterns of thought and have belief emerged, transforming experience, thought processes and action (Reason and Bradbury, 2001). The industrial revolution gave material welfare and control over people's lives (ibid.) Consequently this progress caused ecological devastation, human, social and economic fragmentation (ibid.).

Hence, an environmental aspect is the impact on finite resources by minimizing water use and efficiently reducing the carbon footprint of a garment is where sustainable designers have tried to optimize the fashion industry. On a societal level as per Fletcher (2010) addressing labor abuses, excessive working hours, forced overtime and poverty wages are social aspects need to be addressed in order for sustainability to happen. Moreover increase business demands as supply 'value' clothes and reduce lead times are increasing the level of impact of the industry (ibid.). This in turn affects the system, as factory workers are obliged to raise productivity in order to meet the demands imposed by lower lead times.

Fletcher and Grose (2012) agree with Banerjee (2008) design is at a curving point caused by the environmental, human and socio-economic damage the world is at. Bateson (1972) and Reason (2001) both argue as a crucial task in this paradigm is to learn to think in new ways. Moreover, an emerging characteristic in a new paradigm would be a participatory worldview according to Reason (2001).

Non-Linear Fashion Education.

This paper establishes fashion design students are to be encouraged to follow a nonlinear curriculum where sustainability in the environment, business, social and ethical areas are studied in theory and in practice. A fashion designer can influence positively the mainstream business model (Fletcher and Grose, 2012), therefore as an agent of change, requires the knowledge to do so. Consequently innovative design skills must be taught where designers may act as sustainable mediators that might combine the economic and environmental interests (Vezzoli and Manzini, 2008).

"…Introducing system innovations within design for sustainability requires new skills. First, it means that we have to learn to design integrated products and services. It is not so much the technical details of the products as the relationships between different stakeholders that have to be designed" (Vezzoli and Manzini, 2008).

It is crucial to gain more knowledge and educate fashion designers on: eco-materials, eco-efficiency in production, and ethical manufacturing, consumer's relationships with products in the context of sustainable development (Niinimäki, 2011).

On first instance, sustainable design aims at creating value by meeting the triple bottom line: economical, environmental and social-ethical benefits (Charter and Tischner, 2001). Sustainability defined as "…development that meets the needs of the present without compromising the ability of future generations to meet their own needs" (Brundtland, 1987).

When added to design, Mazini and Vezzoli (2008) agree that environmental requirements are considered form the first stage of the design process, as well as cost, performance, legal, cultural and aesthetic requirements. Therefore the designer works with preventive terms rather than end of pipe solutions (ibid.). Niinimäki and Hassi (2011) points out in the past the fashion industry has focused on technical and cost related aspects such as low price of a garment and increase efficiency in production.

Fashion education has not only adopted corporate social responsibility (CSR) courses but has delved into opening strategic classes which allow the student to explore through the use of recycling and up cycling materials developing collections from unusual things. Niinimäki (Niinimäki, 2011) outlines "…consumption, person-product relationships and values within sustainable design." Today there is a growing trend of the consumer acquiring an active role, where the role becomes a co-creator in sustainable transformation processes (Niinimäki, 2011). Within this in mind corporations are working closely in some cases with schools where the participation process is complete addressing the designa as well as the final consumer.

Although there is increase awareness to sustainable issues, an overall gap is felt in the educational curriculum. Fashion students are to connect on a wider scope of the design profession to understand the triple bottom line (Charter and Tischner, 2001). As professor Vibeke Riisberg outlines (2010) "…we need to address the problems of how to create a more sustainable future. Design is key to this process, because its inherent nature is to create visions for the future." Thus, as educators ideology and presenting idealistic ideas to students is abstained from, teaching design responsibility is to create awareness of how designers may be part of building value and meaning in people's lives through product and services (ibid. cited from Margolin, 2002; Riisberg, 2006).

Developments have taken place in masters programs caused by growing awareness and interest. The trend in the United States, the UK, Finland, and Germany is to incorporate courses in the curriculum for graduate studies. Even though experts agree on the need to change the

trend, a new paradigm is yet far to be seen within fashion education.

Whereas in the United Sates Bachelors in Arts degree is a four-year degree program or students in fashion may also study an Associate in Applied Sciences two-year degree. Moreover the master's degree is regarded as an all-purpose degree and was originally a model from Great Britain (Herubel, 2005). Conversely the primary degrees given in the US have commonly been bachelors and the doctoral degrees (ibid.). Therefore, American design universities grant a fashion degree at the undergraduate level, where the master's degree in fashion is an unusual option.

Within the world of sustainable fashion and academics, Kate Fletcher founder of the Slow Fashion movement, author of Sustainable fashion and textiles: design journeys. The authors suggest that education works best when it not confined to a classroom. Most importantly, they continue, building knowledge is best achieved through experience, bringing real world knowledge and academia to the community, where they can become catalysts for discussion. Fletcher supports collaboration with others can change fashion from its root.

Sustainable fashion is a necessary component of the fashion curriculum, Fletcher points out that the most effective efforts in education are being made today at "… London College of Fashion and Parsons The New School of Design in New York City." When asked if young fashion design graduates are lacking a proper sustainable education, Fletcher agrees, "absolutely." Are graduates seeing sustainable fashion as a trend? In addition, do they understand the complexities of a change of paradigm? Fletcher adamantly responds, "I don't imagine they even see it as a trend. They see it as a "serious" and optional set of choices to make within the structures of their current practice, largely around materials and production. They fail to see it as a different way of thinking" (Fletcher, 2012, 19:03).

For young fashion designers, it seems the only way to adapt to the market is to design for a traditional fashion house or company. To start a collection is not only very difficult; it may, at the same time, add more products to an already overstocked industry. On this note, Fletcher laments, "The many challenges associated with working in a big company philosophically, you don't agree with ... just like there are for designing a small collection." Designers seeing their skills differently can constitute a catch-22 for those who want to change things. Fletcher continues by saying to look for opportunities to design by facilitating change or to design by educating people, rather than using design skills to create more products. (Fletcher, 2012, 19:03).

Fletcher reinforces the use of design in closed-loop systems, such as Cradle to Cradle, instead of Cradle to Grave, but she says, "It doesn't acknowledge we need to make sacrifices. We need to steer cradle to cradle projects, direct them with tough moral questions."

In Europe, Central Saint Martins - University of the Arts London- offers short-based courses, such as Sustainable Fashion, given by designer Nin Castle, who works with upcycling materials. London College of Fashion offers masters in fashion and the environment. The master's looks at major impacts of the industry and how to tackle them within a sustainability frame. The concept evolves towards generating design professionals who will be able to work within the field and design future concepts by interpreting the major influences in the fashion industry. The school is linked with the Centre for Sustainable Fashion, working with theory and practice. Researchers and master's students collaborate in reinterpreting fashion design.

The first international one-year Master's Program in Sustainable Fashion commenced at Esmod Berlin in Fall 2011. The course structured to investigate social, ecological, ethical, and economically sustainable fashion practices. The Master's Program focuses on: sustainable knowledge, sustainable design strategies, sustainable production and textiles, and sustainable marketing (ibid.).

While at Aalto University School of Arts, Design and Architecture, the commitment to a sustainable fashion education is one yet to be seen included in the curriculum, students at the master's level can acquire studies within the Masters Creative Sustainability program as minor studies. Although the European Union is tightening legislation in producer responsibility and waste issues, students need professors and teachers who have the most updated and newest information in the area, is desperately needed. Created in 2010 for students who have a true interest in sustainability coming from design fields such as industrial, product, interior, graphic as well as architecture. The program suggests the importance of connecting creativity with sustainability tools such as: responsible business activities, strategic corporate responsibility, and sustainable production practices.

In the United States however, some schools like the Fashion Institute of Technology, in New York City, offer in the continuing education program Sustainable Design Entrepreneur. The program is only offered as an added competency and not included in the core studies of fashion design. California College of Arts (CCA), started in 1999 course in sustainable design, devised by Lynda Grose, the fashion designer behind Esprit's e-collection (Furst, 2012). Now, CCA offers its Sustainable Seminar as a requirement in the four-year fashion design program, as well as having a New Materials Resource Center, which offers a wide range of sustainable and interdisciplinary library of new materials.

Parsons the New School for Design, offers a zero-waste garment course. Although sustainability fashion courses are not offered within the core four-year bachelors program, nor in the masters, the school has a platform for sustainability issues, its Rethinking Fashion Series.

Clearly, it's crucial to include a sustainable fashion education within the status quo: a shift in paradigm, a shift of mind related to how fashion designers in the present relate and understand the environment. To do better is to be better and exceptionally educated in all fashion fronts, from the environment, to manufacturing, to processing and finishing, to the materials, and most importantly to the people who are actively working for collections to become a catwalk reality.

Universities face an interesting moment of how to address the necessities of future fashion designers. Environmental, social, and business issues, from the beginning of a designer's education, are where it can start. Universities could take into consideration the impacts of fashion designers as a whole and generate creative solutions in the classroom. Through partnerships with business and society, resourceful solutions can be fostered for the crisis at hand (Hansena and Lehmannb, 2006). Graduates, who can participate in these new educational initiatives, will fill key positions in fashion industry jobs and can be new leaders in the change of paradigm.

Sustainable Fashion Syllabus

The fashion syllabus is presented as an attachment with the suggested course named: Fundamentals of Sustainable Fashion.

Conclusion

Students of design, given the opportunity to comprehend the full process of creating, marketing, discarding clothing, and consumerism, will be in a stronger position to build best practices into the departments and companies they will work for in the future. "Designers and design educators should respond to the call for sustainable development in terms of what design can do" (2010). From looking at the educational trends outlined, future educational initiatives should explore and examine different ideas from members in design, manufacturing, and non-profit organizations (Lee and Regni, 2009). Fashion designers, as well as academics, agree in creating a full curriculum within sustainable fashion. The lack of current support by educational institutions is bound to adjust. The trend is slowly shifting into a new paradigm, however it must occur quickly and become radically integrated into the regular fashion design curriculum.

Working within the realm of sustainability and creating a platform for fashion designers to come up with their own real solutions can be a manner to engage learners. First, the fashion program should include a compulsory course in 'Sustainable Fashion.' In this course, students will receive all the real background and up to date information on why sustainability is such an urgent concern.

Mcmillin and Dyball (2009) argued sustainable education is best taught by not seeing it as a "grand abstraction" or an isolated problem to be solved, it's best that it be tangible and real. The importance lies in reflexive learning, where students understand that what they do in their everyday lives will affect the environment, according to Carpenter and Dyball (ibid.). Increasing awareness of environmental impacts can create responsible environmental behavior (Wals, 2007).

Wals (2011) recommends a range of new forms of learning within emerging practices such as: trans-disciplinary learning, transformative learning, anticipatory learning, collaborative learning, and social learning. On the other hand, these models may be oversimplifying the real situation, since people's environmental behaviours are quite complex and must be played into the curriculum (Wals, 2007). Focused on "real" issues for engaging students, learning is viewed as trans-disciplinary, where interaction with others and with the environment is common, several perspectives are considered, and learning goals can change or shift as learning progresses (Wals, 2011). A crucial aspect of sustainable education is the ability to cope with uncertainty, which represents a challenge for higher education (ibid.).

The foundation course will pave the road for the more intrinsic and hands-on courses to follow. It has been suggested, "…design shapes our lives, and designers must consider the impact of this process – the desired as well as the undesired" (Leerberg et al., 2010). According to Leerberg (2010) design education should prepare students for the realities of the design profession, in turn understanding what happens outside of the classroom. One of the most important aspects is to create awareness of the effects of design, and the ability of the designer "… to influence the design process from an idea to an end product" (Leerberg et al., 2010).

Sustainable fashion is viewed as an added competency, rather than as a core element within the different fashion education programs. Value systems and traditional design skills must be revaluated.

"For a designer to continually learn about materials is not extracurricular, it's absolutely essential" (hipstomp, 2010). As noted by iPhone designer Jonathan Ive, it is necessary to continue working on the development of sustainable materials, in hopes of further educating and inspiring other designers who can contribute with their knowledge to ongoing research. By working with a multidisciplinary approach, product, textile, and fashion designers can benefit from practical learning and research, developing innovation within design.

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The design management as source of innovation in sustainability and social responsibility

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Abstract
The objective of this paper is to expose how design management can positively influence business strategies and promote sustainable innovations in organizations. The integration of design in the company is able to generate innovative solutions in terms of sustainability and increase the value of its product, meeting the new demand of market characterized by the appreciation of environmental and social responsibilities. This demand meets the design premises, which are intended to develop products in its broadest form, considering from the production, the use, until the discard. In this sense, the data collected during the research are organized in two sessions: the first outlines the bibliography data to theoretically justify the relationship between design management and sustainability in the fashion industry; while the second exposes the results obtained by the case study, analyzing the effective actions of design management implemented in the Brazilian company Macassá Dreams and Aromas, which produces articles of nightwear. To illustrate the implications of the social, innovative and sustainable actions in the company, a diagram was developed to elucidate the points of strategic operations of design management in Macassá's production chain, such as the placement in an environmentally responsible building, the collection development with ecological fabrics, the transformation of residues into new products, the development of a partnership with a NGO, among others. The results reveal a significant contribution of design management in the creation and adoption of consistent strategies with regard to sustainability and innovation in its broadest form.

KEYWORDS: design management, sustainability, social responsibility, fashion industry.

Introduction
The profound transformations that the world is passing in the environmental, economic, political and social contexts are demanding new studies, new thinking and new practices from enterprises that seek the implementation of actions within a broader context of sustainable and socially responsible development.

In this context, design is as a professional area that seeks to solve problems by adding aesthetic and functional value to products and services in a strategic manner, taking into account social, cultural and environmental factors. In this perspective, it seeks to enhance the aesthetic value of products and services with a new sustainable behaviour that transmits to consumers all the quality and reliability of products.

Koupoulos (2010) defines innovation as the result of a sustainable process with countless repetitions intended to refine the product and bring it to the market needs. In this context, the aim of this paper is to demonstrate how innovation can enable the sustainable and socially responsible development and growth of a company considering the potential that market demands.

In the development of this paper, it is presented the case study of the Brazilian fashion company called Macassá Dreams and Aromas, which produces nightwear articles, like pyjamas and nightshirts, with a differentiated design in the local market. It is a company that seeks to stand out in the design of its products, converting waste material in new products, generating more revenue for itself and for social projects.

The objective of this paper is to expose how design management can positively influence business strategies and promote sustainable innovations in organizations. To achieve that, the management premises of the cited company are mentioned, with emphasis in its innovative approach in its sector, aiming to demonstrate how innovation can enable the development and growth of a company. With a qualitative approach, trough interviews and a "diagnosis of innovation" developed with the company's proprietary, and a research in the company's website, were selected and analyzed the resources and actions that have led the main sustainable and social strategies of Macassá. To first corroborate the data collected, a bibliography research was realized pertaining the fields of innovation and design management with focus on sustainability and the fashion industry.

Design management as a factor of innovation
Design, as well as other human activities, is a maker of artefacts. These artefacts, which are not only objects, but also methodologies, processes and services, reveal values, knowledge, human habits and needs that allow the understanding of the process of humanity transformation. But currently, design, in addition to "doing" is passing to "think", strategically connecting the two points to create innovation.

The International Council of Societies of Industrial Design (ICSID cited in Mozota, 2010, p 16) offers the following concept of design:

> *Objective: the design is a creative activity whose aim is to establish the multi-faceted qualities of objects, processes, services and their systems in whole life-cycles. Therefore, design is the central factor of innovative humanisation of technologies and the crucial factor of cultural and economic exchanges. Tasks: design seeks*

to discover and evaluate the structural, organizational, functional, expressive and economic relations with the tasks of: promoting global sustainability and environmental protection (ethics and global); offer benefits and freedom to the whole human community (social ethics); support cultural diversity despite the world globalization; provide products, services and systems in forms that are meaningful (semiotics) and coherent (aesthetics) with its own complexity.

It is considered that design works with much more than aesthetics, making use of factors that involve planning, production, management and commercialization of products and services. Many companies are already aware of its importance and bet on design as a competitive advantage for improving its positioning, using strategies to generate cost savings and promote innovations. These are fields of design management acting within the companies.

Design management can be considered the management of the design process or action. For some authors, the role of design management is limited specifically to the project, for others, however, design may act in a broader approach. Anyhow, researches in this area are of great importance. Deserve highlight the works developed by research institutes such as DMI (Design Management Institute) in the United States, ICSID (International Council of Societies of Industrial Design) in Canada, CPD (Centre of Portuguese Design) in Portugal, DDC (Danish Design Centre) in Denmark and EID (European Institute of Design) in Italy.

The Design Management Manual (1997) released by CPD exemplifies the existence of the design management action in two levels: project and business. The level of project is more restricted and operational, and concerns activities that take place during the process of turning an idea into physical product. In another way, its function at the business level is broader and more strategic, and stands out by fostering the culture of organizational design for the creation and development of new products and services, providing systems and conditions for this process to occur effectively within the company.

For the understanding of design management, DMI (2011) states that design covers the management processes, decisions and strategies that enable innovation and the creation of products, services, communications, environments and trademarks designed effectively, improving the quality of life and providing organizational success. On a deeper level, the design management aims to connect design, technology, innovation, management and consumers to offer competitive advantages.

Borja de Mozota (2010, p 95) defines design management as the implementation of design as a program of activities within the organization, with the design being able to coordinate the company's goals in long-term at all levels of the corporation, so it can achieve its goals.
Definitions of design management seem like an attempt to better explain the strategic role of design in the innovative development process of a company as a whole. The next section relates the design management with a sustainability approach.

Sustainable strategies in the fashion industry

In the current social, cultural and economic context, to know and work for the reduction of environmental impacts is becoming an integrant part of the independent activities of the design professional. In design, the project activity that generates consumption goods to satisfy necessities and solve problems, to dismiss the importance of thinking sustainably is no longer an option as in the past, when extracting the maximum of nature was a requirement for progress and development. To have a global view and know what steps should be taken to make the planet a healthy and sustainable environment is now obligation and duty of all design professionals.

The world sustainability has quickly become one of the keywords of the recent years. Despite its meaning has been extended to all kinds of subjects and interest groups, the core of the concept remains to be the preservation of the society and everything that surrounds it, so we can leave future generations if not a better world, at least an equal to the one we inherited (BSCD, 2009).

According to Manzini (2008), a sustainable solution is the process by which products, services and knowledge are articulated in a system that aims to facilitate to the user the achievement of a result consistent with the criteria of sustainability. It is a result that has the effect of transforming a given system and generates a new one that is consistent with the fundamental principles of sustainability.

Manzini and Vezoli (2008) claim that we are living a period of transition, when the concern with the final destination of the disposal, by means of recycling alternatives, eventually finds its best solution in the reuse and development of new products. These products have a new life cycle, which creates a path to new strategies for sustainability. This change may be even more effective when there is a strategy of methodological approach toward the concepts of eco-efficiency. Trough an evaluation of the life cycle of a product (from the acquisition of raw materials until the disposal) it is possible to match environmental implications and economic factors with creative solutions (Andrade et al, 2009).

In the context of environmental concern, fashion designers have developed products and services that meet the basic needs of sustainable developments, creating the awareness of the necessity of recycling or reusing the final disposal of the clothing industry. New ecologically friendly fabrics are also being launched to create new products that meet the new habits and needs of the contemporary consumer, with higher comfort, quality and environmental balance, taking into account also other requirements of the fashion market, like style and innovation. In addition, it also grows the concern about the treatment of the chemi-

cal residues resulting from the processes of dyeing and printing.

Designers, capable of mediating theory and practice based on a multidisciplinary approach, can help to generate creative solutions in the fashion industry, for lasting impact, promoting the practice of sustainable design and improving environmental conditions for present and future generations. In this sense, not only the fabric used in the products design should be environmentally friendly, made of renewable raw material, for example, but even the fabric wasted in the production needs to be taken into account, perhaps recycled or reused in new products.

Macassá dreams and aromas

Macassá Dreams and Aromas (Macassá Sonhos e Aromas, in Portuguese) was founded in 2010 from the owner's wish for having a brand that might be desired by people who really want the comfort of the nightwear combined with elegance. According to the owner, the name Macassá came from an herb from Africa brought to France in the sixteenth century, where it became knew for its soothing and attraction power. It has a remarkable scent that, according to popular belief, enhances the deepest senses, awakening feelings and power of seduction.

Inspired by this herb, Macassá Dreams and Aromas was created with a concept of underwear and nightwear that propitiate easy and freedom to modern life, investing in the pleasure of being at home, in moments of relax, and in the well-being at bedtime. The whole company history is available at http://www.macassa.com.br/quem-somos/a- empresa/ (accessed at 06/03/2012), a page at the company's website, informed by the owner during interview.

Macassá is a small business, and attends the local public (Florianópolis, the city where it it is located, and nearby). The company´s proprietary is the business administrator, having academic training and also work experience in the area. It has five employees: two in the administrative area, a marketing manager and two fashion designers, responsible for the clothing articles creation. The research and planning, the design, purchase of fabrics and their cutting is realized inside the company. The confection is made by two subcontractors. One of them produces exclusively for Macassá. The company has contracted a press office.

The design management is developed and realized by the owner with the participation of the marketing manager, in collaboration with the whole team and with the consultancy of local agents of innovation from SEBRAE, the Brazilian service of support for micro and small business (Serviço Brasileiro de Apoio às Micro e Pequenas Empresas). Many of the innovation agents have graduation in design. The decision processes are co-creative, and the design methods and tools, learned through research, reading and participation in events, are applied with the counselling and supervision of the consultants.

The Macassá clothes convey comfort, elegance and life quality. The brand has a very distinct product mix, with differentiated design, which provides ease to its consuming public: female, male, teen and pregnant women.

The brand objective, informed by the proprietary, is to convey comfort and elegance, providing quality of life for clients and employees. In addition, the company has strongly applied the concepts of sustainability and social responsibility, acting as a collaborator in supporting institutions that are concerned in developing the human being. The company also encourages social projects in the community.

Macassá innovation diagnosis

Was developed with the collaboration of the enterprise, a Diagnosis of Innovation, which includes interviews with the company directors (in the case of Macassá, the proprietary) and the application of a questionnaire. The objective of this procedure is to diagnose the organization level of innovation.

The methodology applied in Macassá was developed by Bachmann and Associated (Bachmann & Associados, in Portuguese), a company that provides management consulting services, with focus on the comparative analysis of performance indicators. This methodology, called Diagnosis – Innovation Level on Micro and Small Business [Diagnóstico – Grau de Inovação nas MPE (Micro e Pequenas Empresas) in Portuguese], is even applied by SEBRAE.

Is consists of a questionnaire with 42 items divided in 13 dimensions: 1- Offer; 2- Platform; 3- Brand; 4- Clients; 5- Solutions; 6- Relationships; 7-Adding Value; 8- Processes; 9- Organization; 10- Supply Chain; 11- Presence; 12- Network; and 13- Innovative Ambience. Each item must be answered by marking one of the 3 alternatives that attributes a value from 1 to 5 for each item: 1 if the company doesn't made that kind of innovation in the last three years or its entire existence; 3 if it did once; and 5 if it made multiples innovations in that field.

After the company directors finish answering the questionnaire, a diagram of its Innovation Level is generated, in the form of a radar chart, like a star with multiple edges, the longest ones represent the dimensions in which the enterprise is more innovative and the shortest the dimensions in which the company needs to improve. The Macassá Innovation Level Diagram stood out in the fields of offer, presence, relationship, solutions, clients, relationship, brand, and platform. In the field of the offer, deserves highlight the aspects of new products, environment and design, as it is exposed hereafter.

Macassá case: innovation strategies with positive results

Innovation is an emerging and key issue in the current scenario presented in the business world. "Innovative companies are those that make innovation a systemic activity, focusing on their core competences" (Koupoulos,

2011, p 65). The referred author also adds that innovation is not creativity, innovation is not invention, innovation is a management process, and when properly applied the results are explicit.

In this context, the company Macassá Dreams and Aromas has constantly been concerned with factors that envision a culture of innovation within the company, whether in products, as in services or marketing, so that its brand may be a differential in the market.

The brand was already been conceived differently in its domestic market, with focus on its own scent, what is still an innovative initiative in Brazil. Is was developed by the company an essence which can be breathe in the air of its concept store, the show-room, as well as be acquired in the form of cologne and air freshener. Lindstrom (2007) states that "you can close your eyes, cover your ears, avoid touching, reject the flavour, but the smell is part of the air we breathe. [...] We smell every time we inhale, and it occurs around 20.000 times per day. It is also the sense that we most take for granted".

Besides the cited distinction, some other factors contribute to the positive assessment of the quality of products and services by Macassá consumers, as it will be cited. The information conveyed by the company provides transparency about the features that aid the identification of the brand differentials. The design, as an activity that develops innovative and sustainable solutions, is an important ally to approach consumers, demonstrating the social and ecologic quality of products and services and strengthening the resulting values of the process of production and consumption.

The perceived quality of a product or service is the result of a set of strategies undertaken by the design management at the company, like in the case of Macassá. The brand strategies make the company be a reference in innovation in the domestic market, since the enterprise keep up with the best in the market in terms of sustainable solutions, to offer to its customers.

To illustrate the process of application of design management in the company Macassá Dreams and Aromas, the following diagram was created. Each cloth button represents one point of action of design management in the enterprise, considering the innovation, social and sustainable issues.

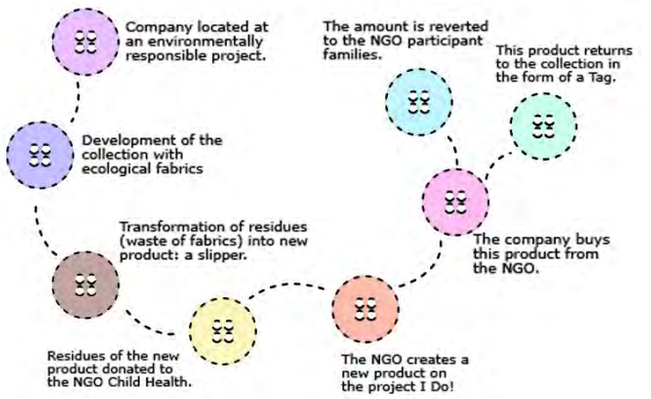

Figure 01: Points of action of design management in Macassá's business strategies.

Macassá and sustainable strategies

Location

The company is currently installed in the Corporate Park at Florianópolis – SC, Brazil, an environmentally responsible project that houses several companies from various segments. In the conception of the project, all the legislation details, especially the environmental ones, were studied. Starting with the approval of all Brazilian environmental agencies. In its structure, the Corporate Park includes its own sewage treatment station, consisting of septic tanks, activated sludge, infiltration and disinfection construction site, which allows the reuse of the liquid for further application in garden irrigation, fire reservoir and toilets. The rainwater is also collected for this purpose. Even in the finishes, the concern with the environment is present. In common areas, toilets utilize automatic faucets to prevent water wastage. Small attitudes that together make a big difference for future generations.

Collection development

The design of fashion products, such as pyjamas and nightshirts, is always carefully considered in every collection, from concept, theme, colours, prints and specially fabrics. The product mix is featured by normal and expanded sizes, which range from basic to more sophisticated articles, offering a style differential for consumers. Besides the aesthetic, quality and comfort attributes, the company is concerned with environmental issues, using "viscolinho" and eco-modal fabrics, that are ecologically friendly fabrics, in most of its articles of clothing, not only to provide greater comfort to the user, but also to offer the consumer market products ecologically-responsible.

Transforming waste into new product
Once the brand first articles of clothing began to be developed, it was realized that the fabrics remains were many, and they were being wasted, both as cash values and as residues disposed in the environment. Thus, the company team developed a new product, made of the fabric residues, a slipper. This product accompanies the articles of nightwear, and effectively represents 5% of sales. Whereas it would be something wasted, now, in addition to complement the company's product mix, it also generates revenue.

Waste of new product sent to Child Health NGO
Even after the development of the slipper, there were still some remains of fabric. As minor part of other fabrics that remains from the production of other little articles of clothing, like underwear, there were not sufficient to be used in the slipper. These scraps of fabric are donated to the NGO Child Health, which develops a project called "I Do", carried out by the children parents. "I Do" is a project for income generation and increase of self-esteem of the participant families, through the production of colourful and creative handicraft articles. Mothers and fathers concerned with the project participate three times a month, being trained by an artisan and creating with other participants the articles to be produced. In this project, the Macassá residues are transformed into new products, normally "fuxicos", pieces of fabric sewn in a way that look like a flower.

Company buys from the NGO
After the new product is developed by the NGO Child Health, with the fabric wasted by Macassá, the company purchase the products "fuxicos", and uses them as complements to the tags that accompany the brand articles of clothing. At the NGO Child Health, the money earned from the sale of these products is reversed to the parents that participate in the project "I Do". The transfer of the income for the participant families of the project and their training process help to contribute to the self-esteem of the community.

Macassá and social reponsibility
Florianópolis Child Health is a non-governmental organization that supports families with sick children in situations of social vulnerability, to achieve healthy and sustainable living conditions. The aid is provided using a methodology established in 1991 in Rio de Janeiro – RJ, Brazil, and has already benefited over 10.000 people in the country: the Family Action Plan, or PAF (Plano de Ação Familiar, in Portuguese). The PAF is built together with the family, as it arrives at the Child Health, sent by hospitals or health centres. The plan lasts two years and provides improvements to the family in five areas: health, education, income, housing and citizenship.

By going through this process, with the support of Child Health multidisciplinary team, the families begin to put the plan in practice, and get into a virtuous cycle of change in their lives. Each month, families attend to a monitoring of their Family Action Plan and participate in projects such as of healthy eating, psychological support, dental care, education, and income generation. On the days they visit the organization, they also receive a basic food basket, powdered milk and transportation vouchers.

The Child Health from Florianópolis has the support of people and organizations to mobilize resources to continue its actions. Macassá Dreams and Aromas is one of these organizations. When choosing a product of the brand Macassá, the consumer is also contributing to the success of the NGO Child Health Florianópolis and the participant families, since the company is a contributor to the organization. The paper that explains the contributions of Macassá to social projects and the referred organization is available at http://www.macassa.com.br/quem-somos/responsabilidade-social/ (accessed at 06/03/2012), page at the company's website, informed by the owner during interview.

Macassá and health concern
Macassá actively participates in the project "Pink October", worldwide popular movement that symbolizes the fight against the breast cancer (Pink October Brazilian website). To call the attention of its clients and friends for the importance of carrying out preventive exams of breast cancer, in the brand's blog there are the following information: a) how a woman can perceive the disease, b) how to discover the disease early, c) what is the clinical breast examination, d) what is mammography, e) what may increase the risk of getting breast cancer, and f) how the self-examination can prevent the disease. Questions about all these topics are answered and explained with text and illustrative images for a better understanding of consumers.

The tag that accompanies Macassá products of night and underwear, have an explanation about the self-examination, so all women that acquire the brand's articles of clothing, have easy access to this information, and become also aware that self- examination is fundamental to the woman's health. To turn this important subject even more attractive, the company performs the following campaign: "Pink October deserves Macassá raffle", when the company conducts the raffle of a beautiful pink nightdress. On the company's blog, informed by the owner, can be found more information about this campaign: http://www.blog.macassa.com.br/2011/10/outubro-rosa-vamos- prevenir-o-cancer-de-mama/ (accessed at 06/03/2012).

Final considerations
This paper presents the case study of the Brazilian company Macassá, where it was possible to identify the innovation capacity of an enterprise when the design management is positively applied to generate sustainable and social innovations. Through the offering of differentiated products and services, the referred company is obtaining positive results in the market, from the belief and investments in quality and design. The enterprise became known for its authenticity in the product's design and

brand's strategies.
In analysis, a company that values sustainability and health and social responsibility, represents a multifaceted answer to the current environmental, social and economic context, consistently making positive changes and resulting in innovative processes, products and services. Therefore, the design management in this context is not only justified, but necessary, for being a tool that transmits the brand concepts, values and concerns into sustainable, socially and healthily responsible strategies, processes, products and services.
The diagram model presented in this paper: "Points of action of design management in Macassá's business strategies", aims to demonstrate how a fashion company can: a) optimize resources, b) better position itself in the market, c) offer differentiated values in products and services to the consumers and general public, d) contribute to the environmentally and socially responsible development.

The company, since its establishment, has adopted many innovative strategies for sustainable growth. Through this diagram was possible to discern how much the company cares about the environmental, social and health issues: since the choice of its location, during the entire process of design until the discard and reuse of waste. Can be stand out, also, the partnership developed with suppliers, and the whole process of creation, production and logistics, that enable the delivery of products with the least possible impact.

In summary, the company grows in an environmentally secure manner, and has been emerging in the nightwear market presenting differentiated products, not only in fashion design, but especially in values and concerns attached to it. At the moment Macassá harvest the fruits of its strategies, the company still has great potential in brand development and expansion.

The fashion industry in general mode, is innovating in collaboration with design management, offering products made of ecologically friendly fabrics, recycling or reusing its remains and caring about the treatment of the chemical residues resulting from the processes of dyeing and printing. Macassá is an example of Fashion Company that is gaining prominence in the nightwear market due to the ecological concern, aligned with health and social responsibility. It serves as a design management model to other micro and small enterprises that want to innovate according to the new demand of market for responsible and sustainable solutions.

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The importance of a research at the time of using ethnic reference in design, to enhance innovative ans sustainable products, adding value to the local and foreign national country image perception.

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Abstract
The purpose of this paper is to research about situations that could sustainably enhance innovative product designs starting from the original, delivering added value to the ethnic design in order to create ethnic identity reference country image, reinforced by the importance of a good research.

The motivation of the subject is given, from a reflection supported by classroom experience, associated with the observed behavior of students when designing products with ethnic themes, and the low value they give to the research.

The procedure includes a general analysis of the problem, in addition, a register obtained by a measuring instrument, survey, to find ethnic references that could strengthen the country's image both locally and abroad.

First, there is the importance of research at the time of efining quality products, and then address these issues in the classroom, especially if territorial issues are taken into consideration such as groups of indigenous peoples and especial icons that could contribute to create value in the country's image, enhancing further consideration of the global community with respect to a given location from the exposure of innovative products, improving the perception and reception of these with his own label, unique as are the roots of a nation, so the visual story with original seal, as a way of presentation when interacting with the rest of the world, it is absolutely necessary, because it will be the cover letter when promoting Chile abroad, in addition to attracting potential customers interested in purchasing local products, helping with in a way to Chilean Economyh the economy.

Secondly, we present the results obtained in a research process where issues related to the Inca culture were discussed.

Keywords: Ethnicity, country image, indigenous.

Introduction
For most of us here, the word design is already part of everyday vocabulary, many people associate the term to the time when the man slammed his hands on a primitive wall, some others associate the term to Raymond Loewy with his picture on a pack of cigarettes Lucky Strike (1940) and others, to the development of theories of Ruskin and William Morris.

Nikolaus Pevsner states in his book Pioneers of Modern Design (1963), "Morris tried to raise the social status and aesthetics design"

Although it is not a subject of this investigation to arrive to a consensus and identify from whom, or at what stage the design emerges, it is pertinent to quote Morris when he says "all art takes time, trouble and reflection" He makes clear the altruistic thoughts he had with respect to work, the same thought will give the starting point to the development of this paper.
While the current design has spread rapidly in the nineteenth-century thought of Arts and Crafts, the bases remain the same, we understand that design is basically a new way of relating the world and its needs, where observation, research and reflection of different facts are involved, and they make, that those primary objectual realities be reinterpreted to meet the needs, desires, tastes and aspirations of those who require them.

I. - The line as a starting point.
The word design, which comes from the Italian disegnare, which means drawing, or Latin signa which means to signal and that is what nowadays we know as design, means more than a few lines that show a well done draft, a single stroke it has a major importance for any area of it, so as to make the difference between one object and another.

A line can arm or disarm completely an object, changing concepts and ranges, a clamp or a cut on the bias, for costume design, may exacerbate or simply cancel a silhouette, that simple line can make us immensely successful or send directly to the most resounding failure.
To avoid this, we must necessarily be more interested in those stages of the design process to provide greater coherence, with major research methodologies, asking questions, clarifying questions, formulating hypotheses, and so on., All that to get to results that can affirm or refute a problem, in short, it requires a great effort, and as suggested by Morris, time, hassle and reflection. Nobody said design would be easy.

The importance of the investigation
The purpose of the article is to provide data to help with the collecting of background, to understand better the importance of investigative processes when designing products, especially when dealing with very particular and specific issues such as the ethnic issues associated to the rescue of a country image, which enhances its relationship with its own environment, and also contribute in strengthening the perception of Chile abroad, especially when covering such topics.

We know that without proper research and thorough observation of different fields that bombard the market segments, we could not get to good product decisions.

Then, when we nvestigate in a thoroughly way, we can see the clues that our ancestors left us, those characters who left us signs and symbols, they were able to create objects and iconography, some of them very simple signs and others very rich formal expression, images, and colors materialities and those signs talk about languages that we are not still able to recognize and decode safely, and even more under the pretext of "the new design look" we use and abuse to create product proposals, often without a clear awareness of what we actually are doing.

Country image or images?
If, consciously or unconsciously we are using all kinds of reference resources to design, tangible and intangible assets such as images and objects found in archaeological excavations, in petroglyphs, or traces of textiles and pottery found in burial sites, and we are also using other references as varied as, typical food, people, representative icons, etc.. In short, property, material, natural and intangible heritage and we are using them as ethnic issues in the design of products, because it seems that we are understanding the added value added which may have the creating of innovative designs with heritage character.

However, with such a variety of resources, options multiply in such a way that causes a double standard. On one hand, so many choices, all of them with great potencial development, and on the other side everything concerning this boom causes confusion and as a resulta not always the right Choice. Could we enhance our country's image with a single proposal? The task is difficult, we first should come to an agreement and that is really difficult when there are so many different possibilities as varied as the Chilean geography.

Scanner identity.
According to Chile Image Foundation, an autonomous institution created in 2009 to ensure the generic promotion of Chile, and give value and prestige to the origin, the Nation Brands Index (NBI), an organization that conducts surveys to obtain global data on perception, positions Chile in 39th place out of 50, raising the perception of most aspects evaluated taking as a barometer six categories (exports, governance, culture, people, tourism and immigration). In exports item, Chile is still perceived as a country with an unsophisticated offer, with little incorporation of technology, science and innovation.

Blas Tomic executive director of the Chile Image Foundation, explains, "These results show the enormous space that Chile has to improve in all these dimensions. It is a task that interests every Chilean. A better international image is.

If you are acknowledging the need to create innovative products, then we should give more importance to the issue of design with sense, and an interesting possibility to it, would be contributing from the ethnic look.

Creating a product that is able to talk about Chile, and to be recognized in it the attributes of a country, and moreover have the capacity of differentiate its quality from other countries just by looking at it, seems a daunting task or a panacea, especially if we understand that this long and narrow country is full of contrasts, influences and contributions of all kinds, which undoubtedly makes it a more difficult task.

Despite much information, I tried to reach to any consensus, something that could give me light of what was the perfect reference to state it properly, and that referente that was able to combine all the features to be recognized both locally and abroad. Then I created questions that apparently would help me with this work, I chose 2 out of 7 questions and that was more than enough.

The universe of respondents was quite varied. The questions were made to a diverse age group, some words surprisingly agreed in the collective imagination regardless of any rank.
In this list, it shows tangible and intangible heritage articulated perception when trying to define identity.

In this small scanner identity, it appears a brief narrative that shows us clues of how we Chileans perceive ourselves, and the perception of how we are seen abroad.

Survey:
Total respondents: 100 people
Age range: from 7 to 70 years old
Genre: male and female
The results were summarized and only those remarkable points concerning repetition or recurrence are displayed.

Questions:
1. - Local Image. List 6 words that you consider as Chilean identity icons.
The most repeated word was "Cordillera de los Andes" present in the collective imagination without limits of age or sex.

Cordillera de los Andes

Empanadas (typical food from Chile)

Map of Chile (long and narrow)

The South of Chile

Pueblos originarios (Mapuches, Aymaras)
"La Piojera" Typical Chilean restaurant

Craft (weaving loom and Pomaire)

Copiones (imitators)(everything seems interesting to imitate)

Idioms. Al tiro (immediately)

Huevón (Stupid, idiot, bad word which has already become a cliché to address friends)

Ya po, (derived from “pues” (then)

Workaholics (who spends too much time working)

2. - Do you think Chile is recognized abroad?
As for recognizing Chile overseas positively, the repeated ideas were:
Sportsmen: Ivan Zamorano, Alexis Sanchez, Chino Rios.

Goods: Grapes, associated with pisco and wine.

Copper (associated with the 33 miners rescued in Atacama Mine)

Important People: such as Michelle Bachelet, Pablo Neruda, Don Francisco.

Positive concepts: The warmth of people, caring people, Chile is valued for its economic stability and low crime rate.

Landscapes and Places: South of Chile (Torres del Paine, Patagonia, Chiloe)

North (Desert Bloom, San Pedro).

Valparaiso, the churches of Chiloé, Easter Island

Some less fortunate but also repeated concepts were: The Pinochet dictatorship, thieves, and earthquakes.

Among the words that were not repeated so much, but worth mentioning are:

Condorito (typical cartoon character)

La cueca

Hot homemade bread with butter

La Tirana (Religious festival in northern Chile)

The Moais (from Easter Island)

We all speak in tiny form

We are stressed out and we dress in gray.

We are fighters

We are unpunctual.

We Chileans say, “Chileans are”, we are not responsible for anything.

We are generous and explosive people at the time of holding a small but intense success in any field, from a beauty queen to a “number one” sports winner.

“Chaqueteros”. That basically means envious of someother person´s achievements.

Our country’s image undoubtedly has to do with our own roots, with heritage, the heritage that began in the pre-Columbian reminiscences, starting point of local historiography, revealing the magical worldview of our native peoples or the incorporation of all types of influences

If we could choose a word or concept to define identity, it could leave out other words, equally or more important than the chosen ones.

The real contribution, as a developing nations would be the enhancement of the origin, there are some designers who are serious about this new paradigm, the design based on ethnicity and heritage rescue.

After this picture, and looking for identity icons, I concluded that in fact, the perception of each of the respondents was as variable as unexpected, because in a country where its longitudinal central axis line is articulated by people, marking it from end to end, with a varied range of climates and their own characteristics of each region, all making it unique and unrepeatable, with people who make a difference, differences that state the idiosyncrasy of this country as the backbone that separates two opposing dualities such as a sea and a range of mountains, it would be impossible to try to define it even in one word.

With or without an identity?
Perhaps the most interesting fact aroused at the time of the Surrey. They were the different approaches that each respondent gave to the questions, reflections from stories that happened around them, different points if views as opposed and varied as the geography of Chile.

For some people, Chileans are a hybrid species, without identity, people, who aborbs all kinds of foreign influences, influences that although they did not come to stay, they settled forever, and they are so ingrained that we no longer have clear the origin, we own them, we are people unable to be responsable of our acts, we are always making excuses for everything, eventhough we are very supportive.

For some other people, it is precisely those various influences th eones that give great value to our character, they make it rich in artistic expression, like a gold mine, or in this case, a copper mine to be exploited.

How to address the importance of research in the classroom, even more when developing ethnic issues in the product design process?

Although knowledge of the investigation process is critical

to create design products, it is not subject of this research to address these issues in depth, but rather to highlight the importance in the use given to these issues in the design process, especially when they have ethnic caharacter, so the issue will be addressed from the perspective that it is the job of every teacher to be aware of the investigation process and show them to the students in the classroom in order to achieve their optimal development.

Under this assumption and assuming that students have some knowledge in the investigation process, the issue focuses on students to use this knowledge consciously stressing the importance of inquiring deeply into our roots, re-creational formula, it is to re-create the own ideologies of native people, in a respectful and informed manner. This knowledge can only be achieved by means of a thorough investigation.

A good research will develop collections that in the future appear unified, this will be reflected in a product line, which is appreciated with full connection between items or objects, in some or all of its attributes, both in terms of forms , color and materiality, the proposal will be distinguished by consistency in the product line. By having all the facts correctly stated will prevent the uncontrollable desire that manifests of adding extra ítems or things in which more than helping to the design, they make it difficult by adding unnecessary details, which usually happens with our students if they do not understand that, if there is good research in the previous phases of design, when delivering the design guidelines during the development process-and in its final phase, the collection will be clean and consistent.
If we can understand the immense capital that we have in our hands, being able to create sustainable products in time, recognizable as country image, and above all, achieving not only to export raw materials that are sold at low prices and then buy finished products to a much higher price, but, staring from our own raw materials to create products of excellence, bringing us closer to actually being a developing country, a country that does not lose sight of what we must never forget, our roots, and not be obsessed by competing in international fashion couture show, especially considering the European tradition from the English couturier Charles Frederick Worth who laid the foundations of high fashion in the second half of the nineteenth century, unless it is high fashion ethnic, which identifies us as a country, We all do the country, without excluding or being excluded, it seems to me that that is the Ideal thought we should all teach our students, idiosyncrasy of a country is not made by some people but all peoplel, no matter how different we look like.

Universal research, design with sense.
To conclude this first part, reinforcing the importance of research in creating products with an ethnic design, being them innovative and sustainable, it is vital to always keep one of the original character of the heritage object of study, whether material, or natural heritage, considering not to focus only on the object of study but also on the subject involved, and especially in context, because without the subject there would be a gap of intentions for which it was created, then to understand the reason why and what for was it created or used, who used it, what were the parameters that made it unique, and so on. Those facts will help us become conscious of their real value. When we are interested in something, we make questions and when we make questions, we need answers, and that's when the investigation really starts, if we do not ask questions it will be difficult to get involved beyond what is necessary, making objects look limited, distant and even stranges. That is why we must avoid the temptation to design objects, which might even be interesting, but have lost all real sense of the rescue of the same, creating innovative products maybe, but with no heritage intention of assets, if we are to make sustainable products with ethnic themes and responsibly, and in addition creating innovative products, pursuing the rescue of the own culture, that even could be in danger of extinction, as our living human treasures, making rescue efforts as done by The National Council Culture and the Arts (NCCA), which "seeks to rescue those traditional popular knowledge depository farmers and communities of endangered, to recognize and then devise strategies for the dissemination of its work" (cultural policies and contingency challenges Collection Observatory of Cultural Policies 2011, pg 227) contributing to maintain strong roots of people from the design, so we must necessarily investigate responsibly and proffesional.

Valuation of origin through the design with sense.
The big challenge is then to recover the source and re-create it with senset. To achieve this wemust start from the beginning so we can reach assertive conclusions, first observe the creation parameters of the objects of study, and then add to that so slippery identity innovative design proposals, proposals full of content, which help revitalize heritage, giving new impetus to the parent object, evolving and enriching each other, becoming more interesting and appealing to the younger generations, there is the real value of ethnic design, avoid immobility which may cause the confinement of the object reference in a local museum, or kept it by someone as a relic, or even worse, as something that no longer serves. To show primitive product, but with an innovative presentation, re-created but without forgetting that this product represents the recovery of our national identity to be presented in a new format, as an export good, which in turn will serve as a link for Chile to be recognized abroad, another side with the power of what represents us. Design with sense.

Finding ethnic theme for design and creation of sustainable products is a great opportunity to revitalize our diverse national heritage, whether material or immaterial nature, there is the rescue and the great value of this new design proposal author with an ethnic reference, a refernce able to go abroad as a mark of quality and innovation, as an introduction of a proposed new country image from the design but with a heavy load on the assessment of the origin, final design identity.

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Part II
Formal links between architecture and incas fabrics

The second part of this paper provides a summary of research on the Inca culture and the possible links between Inca walls and fabrics.

This unpublished research, is related to a previous research I conducted for a Pre-Colombian Searching Seminar for the History of Art Master's Degree at Universidad Adolfo Ibáñez.

Only the final results will be presented. Details of the research will not be exposed because of the scheduled times and delivery requirements stipulated for this paper. When I started my research on Inca architecture, there was something that came to my mind every time I saw the walls of pre-Columbian ceremonial buildings, and it was the way that stone, cold but at the same time constantly expanding infinitely divided places were distinguished . Such illusion created at the time of observing one of the rectangles reproduced to form a grid, which in a sense gave warmth to the inert plane.

Subconsciously, I linked those forms with flat textiles, perhaps, the influences of my profession, Costume Designer, forced me to reset these possibilities.

I struggled to concentrate on what I should study, the task was clear, Inca Architecture, but my mind kept wandering, when the changing courses concern aroused, I had many problems trying to explain the sudden change because I had no valid argument, I was led only by intuition, after facing several problems, I managed to reframe the issue, but without neglecting the main requirement which was architecture, and I not only investigated the monumental Inca architecture, but also I tried to link it with the fabric field.

The problem would focus on whether: Will be there other links apart from the visibly formal ones relating the two structures? The results led me to conclusions that somehow confirmed my hypothesis which stated possible links.

The procedure used for this investigation, considered: formal analysis pre-existing in stone structures and natural fibers, first, they were compared under a general visual inspection and, secondly, they were analyzed in context based on their worldview, both they were related in the study of Euclidean geometry.

A first assessment, after the results of the analysis was that the comparative links effectively exist, coincidences supported by the own arguments grounded in the Andean vision and geometry. The present linear attributes make each materiality has value in itself, even more, if considering the differences between such dissimilar raw materials as stones and natural fibers.

Accordingly based on information provided by the analysis, we can say that the most important formal link is related to the symbolic and the hierarchical issue in a global sense, this basically referring to the political and expansionist order of the Incas.

Keywords: Tocapu, Cumbi, Uncu, Cosmovisión.

The first purpose of this paper is to link from the primary formal observation walls (Picture 1) monumental Inca architecture, textile materiality, uncu clothing specifically (Picture 2) from existing forms in cumbi fabric (Picture 3) with the presence of tocapu units (Picture 4).

The second purpose is look for those connections that could link the two structures from another point of view. To better understand the linkages, we define some important terms from the study objects.

Uncu.
Rectangular form, item of clothes, commonly used by the inhabitants of the Inca civilization. (Picture 1)

Tocapu.
In modern scientific literature tiny square drawings, colored, forming rows and columns are called Tocapu (Picture 2) in quero, llauto, uncu of cumbi chumpi and Inca.

Cumbi.
Refers to the tissue from weft and warp. Only the top representatives of the empire could wear cumbi tissues, the finest for the highest dignitaries. They were worn by the Inca and the army only. (Picture 3)

Architecture.
We will recognize the monumental architecture in stone work in buildings and temples built for the Inca or their gods, specifically the walls, which we will look for the links to the tissues.

Links
Geometrical Divisions
It can be said that geometry is present in the plans of the Inca constructions, the use of space, to distribute the units and locate their facilities, they are consistent with the quadrilaterals shapes and it is reflected both in kanchas, patios, plazas, stairways and corridors of buildings, and its buildings with polygonal blocks, trapezoidal openings and niches. (Picture 5).

The geometry is also observed in the weavings, which tocapu group units are related visually from the formal space, then, from this analysis some linear aspects are recognized and they are repeated in both representations, being in this way, possible to see that both weaving and architecture following the same pattern as regular consistent geometry, expressed in successive grids.
This division coincides with the spatial and formal Inca thought about the division of the empire "They divided the empire into four parts called Tawantinsuyu, which means the four parts of the world, according to the four main parts of the sky ... they placed as center point the city of Cuzco, in the Incas particular language it means navel of the earth "Garcilaso. Aranda 1997: 230

Symbolic links
Rather than the simple desire for notoriety, the builders in stone and textile artists worked for a truly superior goal, the goal of transcending to the most sacred, perfect techniques for guardian deities and their Incas, in both cases there are coincidences of the reason why of these works, the symbolic fact, appears as a unifying term, being in the collective context of the Inca world view.

Weaving also played an important symbolic role in Andean socio-political life. Murra (1978:105) reiterates this point when he argues, referring to the weavings "Beyond its merely utilitarian and ornamental uses, they were offerings of common use in the sacrifices, they also served at different times and occasions as a symbol of high social position or as a sign of citizenship status, they were also used as burial equipment, as trousseau or to seal an armistice. No political, military, social or religious event was complete without offering or yielding of burned, slaughtered or exchanged weaving items"

Conflicting dualities, simplicity versus complexity
In the Inca architecture, where priority was teamwork, builders of such magnificent buildings, had not translated their personal concerns to shine in the constructive field, but favored functionality over decoration. On one hand almost completely stripping ornaments, where the clean and sober structures are shown and on the other hand the technical accuracy, provide a comparison contrasted, emerging concepts of duality, so typical of the Inca world view. Humility in ornaments, versus its magnificent polygonal stones assembled perfectly, adjusting millimeter stone unturned without mortar, united only by the accuracy of their cuts without leaving voids that may interfere with the building. The lines gather stones together, enclose each stone ring in units, but at the same time, this line allows progress, locking in successive grids all quadrilaterals indefinitely. Austere quadrilaterals, yet refined complexity of their assembly, which is the aesthetic value of the building, also associated with the symbolic political hierarchy established by the state.

The simplicity in the weaving items is not reflected in its technical prowess, but in the simplicity of technical instruments for such great works, basically using back strap looms and needles made of ciracuna thorns 10 cm. lengths approximately.

Structures and assemblies
Similarities appear again, connections and assemblies through grids intervened by themselves, the pressure to join the fibers to each other, pushing and setting the structure does not allow gaps between the wires that may interfere with the construction of spaces, this condition causes swelling in the central part of the thread, exactly the same to what happens with the padding of the architectural blocks. These tissues do not require additional seams to complete or enhance the stability of the structure, as in the stone without binder assembly, the assembly of textile fibers, does not have extra connectors, rather than its own material.

Enclosed squares
Weaving artisans contain their work in independent squares, neatly framed, in their apparently equal equidistant sections, just because of optical illusion, but looking closely to it, no space is equal to another, because of the forms and drawings contained within (tocapu) and where a square by itself is not greater than all the units collectively presented.

Weavings also contain each unit tocapu in successive and infinite grids, as in the stone walls

Hierarchy and symbolism
Hierarchies in our objects of study from the perspective of the materiality principle gives support to the construction and then, along with the techniques used, give additional value to these structures, increasing the high symbolic price in themselves, to create structures for eternal and infinite deities.

Its buildings and weavings were made to the Incas or to their gods, so they had a higher purpose.

Both in weaving as in buildings, social class classification category was very marked, for example, Cumbi weaving in the presence of tocapu cumbi were where craftsmen wanted to leave implicit the myriad technical arguments were only used by nobles with privileges, by some outstanding characters of the army and by characters of royal blood.

The hierarchical structures associated with these studies, is associated with the reputation as a common language.

Contextualization
The Inca world view is directly connected with the Andean way of thinking, where concepts are born all transmitted concepts in its iconography, and their way of seeing the world and their surroundings with their beliefs and rituals, parallel worlds where people interact, the materialities and their deities.

Then in their structures are always implied other intentions that go beyond the merely aesthetic, formal, conveying ideas and concepts as well.

Duality
In Inca society time was conceived cyclically in a constant succession of periods of order and disorder in the world. The space, in turn, was conceived on two levels, the vertical and the horizontal plane and it is here where the concept of duality appears.

Basically, as the Andean conception, duality is an imaginary horizontal line that divides a plane into two halves, up and down, and that in turn will again be divided into two halves, forming the quadripartite conception, this understood as complementary, opposition and reciprocity. These dividers attributes are present both in weavings as in architecture, whose shapes are opened in eternal subdivisions like reproducing cells, lines that are free exposed to when admiring the Inca walls, from duality to modular infinite cuatripartition.

In this dual principle seems to be of equal merit the feminine and masculine facts, as well as heaven and underworld, day and night, sun and moon above Hanan, masculine, feminine and down Hurin (Hocquengheim. 1997:229-242) and so on. As the organizing and generator principle of the cosmos and organized by the successive division into halves, its pair of opposites and complementary. “In a broader sense, duality is like a reciprocal cooperation, a work together or contemporary action” (Lajo 2005, Platt 1986)

Gender dualities in these cases also share constructive tasks present in both structures, the weavings were made by preferably manufacturing female called mamacunas, women who were chosen and engaged to that work, They tailored Inca dresses, Inca’s family, nobles and clothing for ceremonial purposes, but there also were existed cumbicamayos, men who were skilled weavers who wove some pieces of clothing as llicllas, ACSUS-Shirts (uncus)
As for the rock work force, predominantly male, it also appears as duality when the Pururaucas myth, when magic stones, in the war against the Chancas become soldiers, male and female, fighting both on equal terms.

Divine Origin
According to the chronicle of Pedro Sarmiento de Gamboa in his book Tales of the Incas, the Ayar brothers, sons of Inti were the men who taught some jobs to people, Manco Capac taught men war-related activities, how to build houses and how cultivate fields, while Mama Ocllo, taught to all women to spin and weave, and to prepare food.

The art of weaving and construction are linked here, both with a divine origin.

The square, cross and the number four.
The square and the cross, have both been present in the Inca iconography, but they do no have the meaning we give to them.

A square is a geometric shape enclosed by four sides. Number four matches, with the quadripartite of their worldview (Hocquengheim. 1997: 230) which in turn coincide with the four Incas Suyos, and with a possible quadripartite god, Viracocha, the creator god who appoints each place where they settle Inca culture.
Viracocha has the power to order the suyu and clothing sorted by ethnic identity and social role within the village, separating the people according tor their textiles and their garments, as well as to distinguish each ethnicity and relate directly to their own Huaca we can assume that the square could mean order or boundaries. Viracocha as a sorter, the bounding geometry as linear order, one of the quadrilateral shapes present in tocapu and also present in each of the stones that form the Inca walls, Viracocha the unifying deity has the ability to unfold and then return to reunify, thus cyclical reinvention, we appreciate also the weaving structures and walls where a unit is split into other indefinitely to form one unified plane from the multiplicity of elements.

The Chacana or Andean cross, (Picture. 6) Also called squared, or Southern Cross, whose name means “ladder” also comes from the square that is divided into four equal parts. This cross, as mentioned by Garcilaso de la Vega, existed before the arrivals of Spaniards, it has in his chronicle that “had the Inca kings in Cuzco a fine marble cross (...). I leave the year of 1560 in the sacristy of the city (...) the cross was square as wide as long (...) was integrally in one piece, very well dressed, with the corners very well taken, very even, carved square stone was polished and glossy. They had it in a real home, in a section called the Huaca, which is sacred. They did not worship in them, more than that they had in veneration due to her beautiful shape or some other connection that can not say “(1973: Book Two Cap. III).

Taking as a reference the cruciform shape, they erected buildings, temples and cities.

We understand that these symbols were decision makers in these cultures, and they can be associated even with the outline of the city of Cuzco, dividing it, as we already mentioned, in four parts its territory Tawantinsuyo which means “the four regions joined together” let us say forming four angles, the Suyos are four and four are his four cardinal points, therefore the space bounded by four points in a cross crossed. In the center of the imaginary cross is Cuzco, the “navel of the world”

There are four brothers and four sisters who walked the earth for the place to found Cuzco.

There are four sides of a square, and four in all quadrilaterals.

The Chacana Cross enclosed in a square.

The Chacana Cross symbol of the ruler or Viracocha.

The square delimits a tocapu graphically, so that may mean something that concentrates in itself.

The square delimiting spaces, as well as the defined Inca hierarchy.

Pre-existing Inca quadrilaterals present in the walls are limited by lines that in turn form four sides.

Tocapus and walls supported by geometric shapes of quadrilaterals.
From the squared cross the grid can be indefinite as it is the grid in a weaving also associated with the grid that appears in the Inca stone walls.

The art of weaving and stone work done by the Inca culture, became a basic task of the utmost importance, as a first-class exercise. Both drew on pre-Inca cultures, acquiring for themselves, and all the ancient knowledge in this melting pot of identities associated with these languagessyncretism aesthetic, to formal and ethnic languages acquired in the later conquests. In this way they got together, all the best of each region, drawing on their cultures and heritage, resulting in cultural exchanges, enhancing the expansionist goal, but also inclusive and unifying Tawantinsuyu.

Textile techniques and the skills involved in the architecture, shown a high sense of neatness communicating not just one type of aesthetic formal beauty but also invaluable information associated with the, social, political and religious Andean Worldview.

We can deduce then in both cases, textiles and architecture, even though their primary function was to protect, after identification of roles and social classes, grant or no prestige, even in some cases the mere ornament, over the years, became an essential language in the values, symbols, and worship of deities and iconography associated with them, They certainly gave those magical and mythical religious signs which are not yet able to ascertain with absolute safety and certainty.

Expansionism
Both the textile plane as the stone walls, keep this constant constructive opposed duality, the space divided into sections but at the same time give extension in the plane from repetitive modular sections, This language also represents this expansionist thought expressed in his prolific expansionist thoughts and whose recurring conquers reflected in the “checkered” uncu mostly worn by the military.

Geometric duality.
In Inca society it was conceived time cyclically in a constant succession of periods of order and disorder in the world.

The space, in turn, was conceived on two levels, the vertical and the horizontal plane and it is here where the concept of duality appears.

When a person makes a research, we know that the possible scenarios that possible sated hypotheses may be accepted or refuted, but the most interesting part is when new edges are oponed based on the same issue, and that’s when you can support ideas, the starting point is important but more interesting are the changes that can happen on the road, paths that can lead to unexpected materials, if a student really cares about research it can start a doctorate search from a single tiny button. Imfluences, tastes, sensitivity, intuition, etc. are clearly ultimately facts that will make us take one path or another The geometric lines are present throughout life , and the source from a line, is undoubtedly the beginning of the design.

Galleria the imagines
Imagen 1

Muros Incas

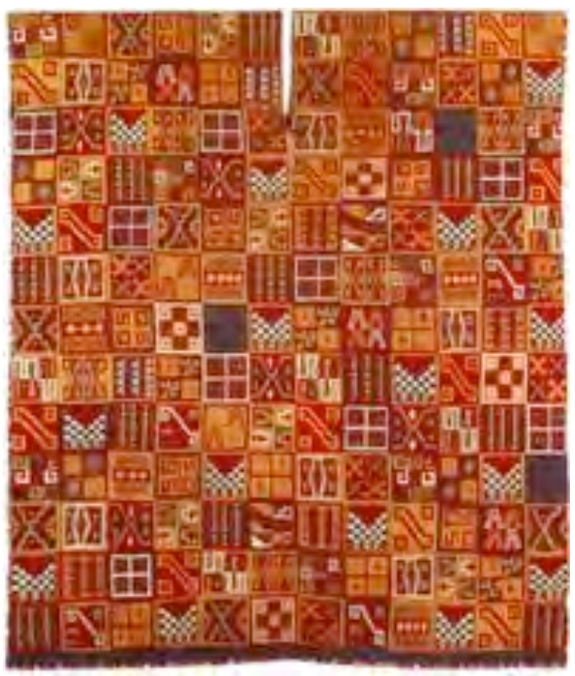
Imagen 2

UNCU

Imagen 3

Tocapu Inca

Imagen 4



Cumbi con tocapu

Imagen 5

Arquitectura inca

Imagen 6

Chacana

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EDUCATION

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Confluence and affluence in Design ambiguity scales

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"Vuelvo al Sur, como se vuelve siempre al amor,
vuelvo a vos, con mi deseo, con mi temor.
Llevo el Sur, como un destino del corazon, soy del Sur,
como los aires del bandoneon.
Sueño el Sur, inmensa luna, cielo al reves,
busco el Sur, el tiempo abierto, y su despues.

Quiero al Sur, su buena gente, su dignidad, siento el Sur,
como tu cuerpo en la intimidad.
Te quiero Sur, Sur, te quiero.
Vuelvo al Sur, como se vuelve siempre al amor,
vuelvo a vos, con mi deseo, con mi temor.

Quiero al Sur, su buena gente, su dignidad, siento el Sur,
como tu cuerpo en la intimidad.
Vuelvo al Sur, llevo el Sur,
te quiero Sur, te quiero Sur."

Music Astor Piazzolla and lyric of Fernando Solanas (n.d).

Introduction to ambiguity

Ambiguity in Design education needs to focus in a 'glocal' perspective, tracing the paths and confluence circumstances that creativity exposes in particular different domains at the present time. If one world is literally being transformed into subsistence mean's, as a predisposal sense of surviving confined in ecology of 'freedom', giving a reuse (re)interpretation of realities with limited resources predisposal. The first symptom in the research regards the work presented by Pénélope Bozzi and Ernesto Oroza (2002) based in the unknown design in Cuba. The other world uncovers another similar undeniable freedom questioning do way we live, transforming simple ideas in low/high tech products and confronting them to the world by the perspective of Droog Design. Comparing these different scales, different goals and approaches but the same proceedings related to the ambiguity of form and function, we do feel that both have a lot to learn from each other. The rites and costumes of living and the correspondence from this two universes contain a certain 'pattern language' (Christopher Alexander, 1971) behavior in the way people/designers do process their living, creating structures that challenge time and mimicry.

This articulation or this dynamic tense fringe, reinforces that distinction between centers and periphery, between north and south, between the ones who live in the Box or the ones from the South or Sur (remembering the music 'Vuelvo al sur' from Astor Piazzolla and Horacio Ferrer (n.d)) giving us unique opportunities to see that this comparative research can provide fundamental symptoms for future convergence.

In every place there are creative individuals that only depend in there structures to fulfill needs for the others or for themselves. And this needs that can be local or global give us positive challenges to design without frontiers, but also reinforce the idea of Victor Papanek (2000) and Gui Bonsiepe (1992) that we must recognize the significance of a particular/local identity regarding geographic needs. This is the capacity to embrace a new commitment before transport the anonymous 'design' into a mainstream product (or vice-versa).

Processing design incursion

Design today has difficulties to be an alternative inside of his ethical and moral original propose (Enzo Mari, 2000). The continuous transformation of our society and the unsustainable paradigm creates an urgent repair for the established economic market mechanism. This flow does not permit a subsequent analysis and reflection; we have profound difficulties to control our anxiety and the megalomaniac levels of communication that appears every day reorganizing and readapting unceasingly: taste, knowledge, objects and services, increasing a culture of hybridism and uncertainty (cf. Zygmunt Bauman, 2000; Andrea Branzi, 2003). Subsequently we understand the advantages and disadvantages of all this continuous metamorphosis but also sense that social scales and dichotomies between cultures, overcome a vision of non-human scenarios and unsteadiness in design methods (Bruce Mau, 2004).

The mechanism of correspondence in – 'Ok computer' (Radiohead, 1997).

The actual domestic landscape in major societies derives from an architectural tradition proposed from Modern typological dense structures (Stefano Marzano, 1993). These living spaces still are structured in logics of efficiency and mechanics or as we still reaffirm a house that (should) 'protect the dreamer ' (Gaston Bachelard, 2005). These spaces as Ezio Manzini refers (1993a) become shelters embedded in a vast quantity of ephemeral suggestions and gadgets. But today has we can observe we focus more in a correspondence between what we see in images and the real world (Manzini, 1993b). In this perspective the unknown is to be viewed and corresponded as a checklist, confirming the identity via virtual sequence. This correspondence between worlds does not live space and time for the unknown or informal tangible knowledge. In fact, today the body reaches dizzying speed information, losing further the notion of space-time but also the propensity for losing cultural identity (cf. Derrick de Kerckhove, 1997; Manuel Castells, 1999). Instead we build miscegenation dialogue knowledge

which processes information, usually without understanding his origin (Mari, 2000). But this fluid and flexible is the nest for continuous predisposition for download, copy ctrl 'c' and copy ctrl 'v' and instantaneous mechanism with particular confluence of opponent paths. In such a way, we can imagine only compulsive copy between cultures and individuals and an excessive freedom for similar correspondence, on the other way, we can also observe that this affluence can be transformed into creative substance and the copy can be transformed into 'insight'. The future legacy of processing information is now instantaneous and frequently anonymous, being continuously opened to be recycled, reprocessed and reconverted in an age of (no)correspondence. Meanwhile the house or the space where we live starts to lose his influence (cf. Iñaki Abalos 2005; Josep Maria Montaner, 2001). The focus prevails in ephemeral social interaction and in the correspondence between individuals witch is undeniably connected with urban and virtual space. The dwelling living comfort his being taken by incessant process of social interactions, the web provides emphasis to this predisposal and transforms his magnitude into an ecranosphere making and processing mechanisms of correspondence between cultures, individuals and communities (Gilles Lipovetsky, 2007).

We realize a man total dependent in image, as regards Paul Virilio (1993) in his book Critical Space. The dissemination of information from distance showing us a new nature, but also the (in)balance of a new cognitive metabolism. This immateriality and dematerialization is replacing the classical notion of morphological wisdom and the pixel representation of men is intuitively connected with the ideas of a cyborg (William Gibson, 1984), or Cyberflâneur (William Mitchell, 2003) or the digital nomad (Stefan Rammler, 2004). All these concepts are extensively provocative, transferring our design sensibility through the concepts of fluidity, flexibility and mobility (cf. De Kerckhove, 1997; Castells, 1999; Bauman, 2000; Branzi, 2003). Impatiently we move in a world from everywhere, jumping from 'node to node', mapping and researching in the network structure but still don't really know the sequences from this passion, or even do have a critical stance, as Bonsiepe refers to the employ of technology and hiper "visuality" (1997, p.6). In our mind we have the possibility to socialize other views, other lives, other spaces and costumes, objects and anti-spaces more than ever, the distance to other world in a single touch. Tangibility and corporeal spectrum is clearly overshadowed by entropy of his perception transforming distance, knowledge and information "in the new medium and nothing can stay the same in human behavior witch inevitably will be transformed" (Manzini 1993a, p.189).

The age of correspondence, the construction of new rites, artifacts and patterns through'virtues' of insight mimicry

These web distances sprayed the weight of what is identifiable, permitting to breathe the subject of the similarity (cf. Neil Leach, 2006; Judith Buttler, 2006). The identity of the person who inhabits any connected house is more focus in the neighborhood on the other side of the planet then in the place where is living: a structure of thought that languishes compulsive irrational gift of being like 'a', image mirror 'of' or 'from'. Man in some way always pursued the similarity, the web besides is intense plurality is a culture and a reaction for tense mimicry. Despite all the supposed differences between peoples, cultures and individuals we increasingly feel the absolute presence of mimesis and likeness (cf. Renny Ramakers, 1998; 2002). But these are not a key anchor detail for the any existence of growth or origin, supporting an inseparable way of structuring the probability of construction where design culture will rigorously be trapped in their foundation, research and argument.

The confrontation between Droog and Cuba Design incognito's, here presented assume a direction, fixed by the look on the construction of mimesis but also transport a relation between models. Western center world always was intensively influenced in every scales by the periphery countries of the 'South'. With respect to the center we must consider that this center as a major figure but also the one who usually imposes a centrality (Bonsiepe, 1985, 1992; Boaventura de Sousa Santos, 1994), suggesting that the dichotomies exacerbated in between distort the perception of logical patterns of trying to reach precise models or ideas: social and cultural adjustments. Thus as a country (Portugal) that belongs externally to a center we also must reinforce the idea of an interior territory completely linked with the south or the periphery. So, as we can be in the fringe of this two scales, we must rearrange our tributes not only to the circle of recognized designers but also to the magnificent 'Unknown Soldiers', or 'unknown designers'. Those who seek their own identity in procedures of unpretentious and humbled process of designing to the common people, inherent to in(formal) knowledge. This is the age of correspondence where the pattern language built a few years ago has at his predisposal the tools and methods to creativity. Design now has the capacity to understand these patterns, transforming them into knowledge, inspired by mimesis and analogisms, design can make a difference to 'insight'.

Escaping to no surprises with no 'ausência' but full participation

It must be remembered that globalization is an irreversible process in the sense that what is done today corresponds to a witness in another hemisphere of symmetry, the figuration of tomorrow. The issues raised and clearly identified and analyzed in their locality interpenetrate finally in the challenge of a full scale. The problems created by the industrial revolution in developed countries, and 'a posteriori' delocalized in the 80 and 90 for Eastern Europe (post- Perestroika) and now the emerging countries of Asia, match a stigma sweep under the rug where problems will sooner knock on ours doors. The problems set to the countries of the periphery, perceptive environmental degradation, population growth and the widening gaps in well-being are translated at the base of inequalities

between ‘winners’ and ‘losers’, “which can result in giving up precious natural resources, human and moral throughout to world system” (Boaventura de Sousa Santos, 1994 p. 19). We can thus define that periphery has little to learn from the center, especially in the dialectic of mimesis. These arguments are important factors in design and designers of the periphery. But it’s a false statement. We do need to understand both and it’s completely impossible that the center will not influence the counterculture or the periphery and vice-versa. But instead we also must know that this ‘designers’ are much less contained in a box of formal knowledge permitting to realize connections and probably better insight mimesis. On the other side designers from the center have in their intrinsic habits the opportunity to act has predators establishing creativity inputs that transcend quickly by their own total perception the tiny and humbled process of the periphery. This fringe here connected is the same with the Picasso and African sculptures at the beginning of the century. The process is near the same. Meanwhile there is an enormous difference, first we are speaking about design, second we live in an era where this message can be problem-solving by thousands in a glimpse, and by that, we hope that this mimicry in between only can bring not only mimesis, not even other astonishing ‘surprises’ but a correspondence of perception.

Today we are all interconnected, relations are based in a world ever more fluid, flexible and volatile, underlying the idea of unlimited progress, a production structure for many ‘unquestionable’ and unlimited (classical principle of the cycle of production, consumption and economic development). The desire copy, comparing the industrialized world with the world said ‘underdeveloped’ or between north and south, may not make sense because models in which the West has grown post-industrial revolution are in certain way not recognizable to the challenge of environmental sustainability and social needs (cf. Boaventura de Sousa Santos, 1994) The comparative synthesis here presented may not be interesting for a new design development, but instead can be an important initiative as way to depart, in which designers from both worlds can process confluent integrative knowledge connecting a direct link with local and global scales permitting a wider vision.

The design emerges as a promoter of a development based on technology and innovation in the creative process, but rarely truly questions his own role. This systemic interdisciplinary vision of confluence and plural mechanical thought, scratches design as a maestro orchestra proposing a jump to identifying the real needs and substance (Bonsiepe, 1985). These requirements must promote scenarios of analogisms, metaphors, images to recreate process and transform ‘visuality’ into knowledge. We assume this compare initiative as a curiosity. Design as to have the capacity to observe himself creating an ethical and moral problem of his presence that is not only destined for the implementation of something that is the ‘result uniquely of a simple commercial transaction’ (cf. Mari, 2000). William Morris (1882), Papanek (1971), Bonsiepe (1985), Mau (2004) are different time schedules for the same visual presence, the indulgency error of design proposed into no unsustainable surprises (Radiohead, 1997). Designers have a retina opportunity and capacity to observe these new sensibilities proposing with instrumental skills possible paths for positive space contamination: viruses to symbiotic action in between, creating antibodies barriers to this “culture of circularity” (Castells, 1999, p. 487) redefining his apolitical role and his ‘ausência’ (Music from Cesária Évora and Goran Bregovic) with continued presence and participation.

VDesign thinking proposing a commitment spring in the age of flexibility.

The designers in which we are included still focus in a search for identity, and this implies that we can combine very well different pieces but the final form is still very similar, besides the different colors that we assume. Also we move quite well in this sphere of ‘technofetichism’ (cf. De Kerckhove, 1997), despite we are many, and we still have a long path to travel to transform our tribal complexity fixed in images from the pass which focus too much in acts of excess and individualism. Meanwhile we can be compared to ‘smooth operators’ that have the tools to deal with this media flexibility and witch can become fundamental tools for this charge of content (change of knowledge). We know how to crystallize a memorandum, to be indulgent, to postponing a message, to deliberate and fixe an image and to create not a Silent Spring has Rachel Carson (1962) nor an Arab Spring (2011) but a ‘Commitment Spring’. The web is the liquid medium of a new domestic sustainable mechanism and designers are the equilibrists in the middle of an intense crossfire. The market will be just a toy for capitalism where there is always the possibility to transform creative ideas into symbolical and significance acts.

Matching analogy:

The analogy here presented can be just a simple glimpse for what we can consider a small place to ‘keep breathing’.

Affluence of correspondence: Case study

This little comparative syntax serves to illustrate the possible nuances in two parallel realities, in which symptoms seam so paradox but where we fell that besides the technology and scenario spectrum there is an affluence of correspondence. Also we observe that informal knowledge made by unknown people have a powerful way to become potentially creative when their medium scenario becomesa question of moral resistance as Ernesto Orozza e Pénélope Bozzi (2002) refer. On the other side we stay ‘perplex’ when Droog Design and their designers confront the collective sense converting the common artifacts and our western reality into question. Easily the counterculture becomes the place where formal knowledge accept this ‘unconventional’ designs transforming there process and way of questioning statement into a ‘sacralization’ correspondence.

fig. 1 - Analogisms between design in Cuba, regarding the research done by Pénélope Bozzi and Ernesto Oroza, 2002 and the Droog Design approach.

fig. 2 - Analogisms between design in Cuba, regarding the research done by Pénélope Bozzi and Ernesto Oroza, 2002 and the Droog Design approach.

The medium here established permit also other questions about influence and affluence or between the creativity in two distant poles regardless the symptoms of identity and nonidentity. In comparison on possible ways or fields as their diversity in geographic, socially and culturally, develop cognitive and perceptive inflows to challenge the

fig. 2 - Analogisms between design in Cuba, regarding the research done by Pénélope Bozzi and Ernesto Oroza, 2002 and the Droog Design approach.

'establishment', redesigning a system in a parallel world. The objects found in the book Objects of Réinventés from Pénélope Bozzi and Ernesto Oroza (2002) from (always and curiously at left), illustrate the ambiguity of surviving through design and their anonymous state prevail unknown until someone publish their efforts and transform these insights into a statement. This research diagnosis and this emergency has changed from what was invisible into visible, informal into 'formal'.

The 'substance' idea and the analogisms presented only propose a confront or an affluence of correspondence permitting a reflection or a 'mirrored hope' for dialogue.

Which of these groups of objects should be presented in Milan Design Week?

- Probably both, because either do reply in different ways for different spectators and different fields of organization, and also have different perspectives to survive.

The question now is why do we have to make this analysis what this will bring about?

- In reality nothing will change, and this will only be a simple curiosity for some of you. As usual, and after Papanek (1971) referred almost forty years ago, most of the designers still work in the same way working for their survival and their 'star system', excluding from their proposes to transform the way to design into higher perspectives besides a precise market. Also we do not pretend to diminish the concepts and very interesting proposes from Droog design Designers and the ideas from Ramakers. Instead we just want to establish that the values created in Cuba, Brazil, Chile, Bolivia, Africa or Asia and others have the same capacity to be integrated in a global perspective since creativity and informal knowledge still remains with persons and their skills to survive. Detecting these poles perhaps we

> can activate via observation and contamination a web fluid organism predisposal for these cultures increasing values and intense focus of creativity, identity and correspondence in between. Or as Bonsiepe (2007) usually says we do have to give value to what is quite near from our own eyes, and we should not only see the 'old' Europe and Western ideals giving them the similitude of eternal truth, but at the same time we must confess that they do know how to sell ideas, products and transform fragments into beautiful stories that we buy.

This reference assumes a turnout between direct and inevitable realities temporally synchronous but with policy frameworks, social and cultural distance. The Cuban reality inhabits the margin, emerging on the precariousness of its existence, the Netherlands, insinuates itself but as a counterculture subverting his role leading the market and quickly becoming the same market (counterculture goes mainstream). A hypothetical comparison of these two realities, summarized in the set of images presented, invokes the existence of asymmetries. In this analysis we see that both flow about a moment in time on the reactive medium, responds by an inner necessity, linked to the urgent needs of the day, the house, the constant improvisation: an a hostile reality and unknown identity. The other vision is more accurate, taking possession of the means subverting their rules and entropy, leading and transforming the pieces of a parallel culture counterculture, urging the senses, 'sacralizing' objects that were not targeted by the automatic processes of a market, but at any given time, have a face, an author and a greatest 'macrocephalous' (extrinsic) market.

> 'The betrayal of thought, sometimes expressed by the treason of the objects.'

If in the 'Lost' Cuba we found fragments of a lost 'Revolution', this feeling of smallness cosmic ubiquity 'constellations' developed an active creative brilliance, taking into account the technical and sensitive materials that they possessed. In Droog Design we realize a redefinition response to collective problems which is being reinterpreted. Both involve us collectively and plural in their diversity, we see ideas that are inextricably immersed in objects forcing us to rethink the question of the medium and the system itself builds a social dominant culture.

This valuation can also identify routes from opposite scenarios. In Cuba we feel a pulse of a people with limited resources, which builds on the margins or peripheries of collectiveness, transforming the houses as centers of production and self-conception, unlocking the needs from day-to-day in a spontaneous and casual effort. The Droog Design group based is thinking and quickly is absorbed by the 'system'. In Italy, the Netherlands, the United States, the brand becomes a cult that develops its interpenetration on a market or a medium, in a manner that nothing has to do with their own significance of "dry". Their intrusive centrality attitude (1998) states that the relationship between design and marketing is being processed with the market but at the same time confronting the conventions from the majority in design culture. Certain intrinsic values are a stand point on their goals and as any other model as advantages and disadvantages to legitimize their views and the 'mainstream':"(...) the goal is not some ideal culture. That short distances itself everything from the mainstream has to offer. On the contrary, it is surrounded by it, and participates in it is even inspired by it. "The mirror image culture amid develops and in parallel with the mainstream. It is in fact the coexistence of extremes that meet occasionally, as in the Benetton advertising campaigns. The mirror image culture is predictably doomed to a marginal existence" (Ramakers, 1998, p.75).

Ramakers (1998) also transcripts the logic achieved by Ettore Sottsass (2000) . We can and must create a parallel system where the values of marketing are transported to an image of built quality. The project design undergoes a productive promiscuity complacent about the world we live in, and the Dutch design group served or serves as a motto of changing the paradigm for the construction of a design once lost in schizophrenic and claustrophobic ideas of the left and beat the teeming a 'dominant system' greedy in a hyper-capitalist society. The Droog Design Group assumes that rethinking the inertia ideas, or stereotypes continuously 'recycled' in past messages and transmissions from backgrounds poorly digested, and therefore insufficiently clarified into a new hierarchy, can be branded and more important can be steam mechanisms for new thinking. The brand wanted to replace a system by another in a clear adaptation of ideas of affluence and confluence of images, systems and worlds, which becomes in a certain way a reflection of anthropological and ethnographic artifacts that have been forgotten. It's urgent that this self-identity created based in simple morphologies also can be a reference in the idea of dialectical social questioning from a world so avid for the new and for a change. However in the countries form the south or SUR as we usually called them, evoking the music from, there is a propensity to digest sameness and mimicry in excess (Bonsiepe, 2000) proposing the same models that bring indifference and no sensibleness for the humbled and anonymous popular 'designers'. And in this way is difficult to see the change summarized by Stuart Walker (2004, p. 45) "Sustainable development can be seen to our modern myth, emerging from the culture of science, technology and reason."

According to Bozzi (2002) this phenomenon of constant improvisation does not become controllable by their spontaneity and essentially intangibility. The stimulus for nostalgia, the internalization, the resistance of what people stand for and represent, identify a society that only can be considered during a permanent search of creativity and non-uniformity. The international embargo has transforming the daily lives of these people on a scale never before considered. There is a deductive and cognitive assimilation of 'similarity' with the Dutch case, and with some more examples in their expressions of epidermal equiva-

lent, a genesis that may be typological. The Dutch group plays this role in the equation of an emerging contemporary design. We cannot draw a correlation demystifying the creative capacity of these two discrepancy poles. If the 'insignificant' objects made from recycled boxes for televisions in Cuba condition predicates in the invention of the spoils of the streets and markets a popular anonymous subjectivity, then the correlation 'achieved' between products of a peripheral world and a developed world, identifies the memories of the rack reused drawers by Tejo Remy surrounding a deep tension in an attempt to organize ideas and criteria for a 'new' design project.

> "Our culture is indeed diversified but it is more based on the diversity of almost the same. The diversification is brought about by minimal variations of form. (...) Functional differences, in so far as they exist, are disguised. (...) The diversity of our culture is pseudo-diversity. In reality we're heading towards a monoculture, the culture dominated by just one ideology: to make much money to quickly as you can. Marketing managers decide what will be manufactured. " (Ramakers, 1998, p.75).

VIII. Small actions for a creative commitment

We now propose designers, the resumption of practice to reinvent the passion of refining the everyday, looking for the simplicity of improvisation and the unexpected where confluent qualities that arise from the popular world, local and unknown (George Agostinho da Silva, 2003), can be the significance of acquaintance and correspondence. The project design as an anchor for incognito design must recognize the subject not by indifference, but creating strategies for social innovation communities, supporting local prospects with local participants with institutions derived from the milieu, capable of new procedural peculiarities, including the systematization of the various instruments with a view to organizing interactive and confluent dialectic with the social, cultural and economic environment which by means should act local and global, but also the influence to merge periphery with the center and vice-versa.

Sometimes we need to think small in order to be creative, this is just a simple analogical exercise without special substance but which can introduce in both perspectives a sense that both do have and do need an intersection.

Maybe it's time for remember the music from Compay Segundo, Ibrahim Ferrer and Omara Portuondo that unfortunately we only knew when Wim Wenders has made the film Buena Vista Social Club (1999). The dynamic vision needs only 'visuality', the possibility to create a creative commitment (cultural/social). Design is the tool that can embrace this new orchestra, emerging and proposing in this mechanism of market an age of ethical sustainable substance working with new methods and tools that he dominates so well and passionately.

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CREATIVE CULTURAL DISTRICT; Co-Creativity for the ComOn Design industries

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Abstract
The future of the global market and of the society we live in is increasingly influenced by creativity and the ability to generate ideas, knowledge, innovation.

The term “Creative Class” includes the following categories: entrepreneurs, public and private executives, managers, researchers, and professionals.

ComON Design was launched by initiative of the Como section of the Confederation of Italian Industries to allow young European creative talents to get to know the territorial industry and has laid the basis for a systemic cooperation between local enterprises on the one hand and training institutions on the other.

The project therefore transfers knowledge within the design sector and creates networks capable of promoting the strengths of the local area.

To this purpose, the best performing students of Milan Polytechnic’s course in Industrial Design, divided into pairs, were assigned to several companies of the Como District (DESALTO, LEMA, LIMONTA, LIVING DIVANI, POLIFORM, RIVA 1920); the goal was to implement a joint design project that would involve market experts and harmonise production constraints and fresh creative energy. All the prototypes resulting from the projects were then displayed at the Triennale Design Museum of Milan.

The paper presents all the main aspects of this experience, creating a teaching model that integrates with the reference local manufacturing industry; a training model that has made to transfer the expertise and practical excellence of the local districts / clusters of creative companies.
KEYWORDS: Co-Creativity, Creative industries, Cultural district, Design Innovation.

Introduction, Creativity and Territory
The Como and Brianza district is characterised by strong design and textile industries, whose production stands out for its high level of creativity.

This “colourful” culture “contaminates” the people living in the area that extends north of Milan – hard-working, resolute, proactive people.

The resulting industrial landscape is a close-knit network of dynamic companies capable of experiencing a spectacular development and where competition can be extremely challenging, but also ensures the district’s constant evolution and competitiveness.

It was just from this creative-industrial “fabric” that ComON was born in 2008, with the aim of allowing young creative talents to get to know the design and textile professional sectors. We decided to open up, to show young people our world and to offer them a range of opportunities to express their creativity.

The result was really impressive, and we had a chance not only to teach, but also to learn a lot. This project documents this wonderful experience, mainly as regards the ComON 2011 Design section. It is meant to convey an optimistic message in a period of crisis like the one we are going through at the moment. Change is needed, we cannot resist: this is a challenge we have to, and want to, take up.

This project documents this wonderful experience, mainly as regards the ComON 2011 Design section. It is meant to convey an optimistic message in a period of crisis like the one we are going through at the moment.

Change is needed, we cannot resist: this is a challenge we have to, and want to, take up.

Creativity Research/Actions:

DESIGN_ To this purpose, the best performing students of Milan Polytechnic’s course in Industrial Design, divided into pairs, were assigned to several companies of the ComON circuit (DESALTO, LEMA, LIMONTA, LIVING DIVANI, POLIFORM, RIVA 1920); the goal was to implement a joint design project that would involve market experts and harmonise production constraints and fresh creative energy.

FASHION_ In parallel, similar initiatives were launched in the fashion sector. The students of the Fashion Design Laboratory of Milan Polytechnic’s School of Design created 150 “travelling garments” in line with ComON’s leading theme - Nomad Culture - using the fabrics made available by the textile companies of the Como district. The clothes were presented at the two exhibitions in Como and Milan.

WORKSHOP_ The various pairs, supported by the companies, developed the concepts of several prototypes in line with the leading theme of ComON 2011 - Nomad Culture. Every company selected and implemented one of the projects, under the supervision of an outstanding tutor, a designer and a Professor at Milan Polytechnic.

EXHIBITION_ The joint activities involved not only the individual projects, but the entire communication strategy as well as the promotion and dissemination of the results achieved. All the prototypes resulting from the projects were then displayed at the ComON Design.

Exhibition, which was held on the occasion of the launch

of the fourth edition of ComON. The exhibition was then moved to the Triennale of Milan, allowing for a cultural / geographical cross-contamination and further promoting the project and its important achievements.

Creativity Sharing

The future of the global market and of the society we live in is increasingly influenced by creativity and the ability to generate ideas, knowledge, innovation.

The currently on-going transformation revolves around the crucial role of human intelligence, knowledge, creativity. It is a change that has been going on for years now, and will continue for many years to come. It is transforming not only our economies and our society, but also our life, our tastes and our preferences, as well as the geography of global and local competition, the structure of our cities, our land, and the processes that take place, develop, produce and are shared there.

Against this background, it is vital for the "local communities" not only to invest in and focus on their weakest and most threatened sectors: equally important - for all the stakeholders and the surrounding district as a whole – is not to act alone, but to join together in networks based on common and coordinated approaches and strategies, and to establish and strengthen relations and synergies with nearby districts and communities.

This project analyses the many different aspects of development and competitiveness in the Como area and the latter's relations with the world of education and research. The goal is to highlight the need for an innovative, multidisciplinary approach capable of providing a better understanding of our time, a useful investigation tool, and interesting food for thought to entrepreneurs, researchers, local authorities, politicians, and citizens alike.

This is obviously no perfect tool, and certainly leaves room for improvement. For this reason, it should not be considered as a goal met, but, rather, as a starting point. The ComON project team will keep studying, examining, sharing and cooperating with all the new players, organisations, universities, and companies that will be willing to join it.

Creativity Network

The term "Creative Class" includes the following categories: entrepreneurs, public and private executives, managers, researchers, and professionals; through this term, a series of contradictions and difficulties is analysed, stemming from an economic system in which the knowledge and skills required "to be successful" are increasingly wider and higher and, consequently, within the reach of very few people.

The final objective is to achieve a system that recognises and enhances the social and economic value of knowledge and creativity, without, however, ignoring any potential negative sides implied by this type of growth. Far-sighted policies are thus required, aimed at a balanced development drawing inspiration from diversity and using the latter as a creative lever for innovative applied research, the final goal being to promote the local area and its players, their stories and experiences.

ComON Design 2011 is set against this background: the ability to observe different cultures ("Nomad Culture"). The capability to share them as they constantly evolve becomes a vital element, a lever capable of developing, promoting and enhancing the local economic and cultural context in which experience develops, through a tangible, innovative, applicable research/action process.

The result is a totally new approach, whose innovative features also lie in the interaction between and among different cultures, in an attempt to establish a shared communication channel, with the final goal of being prepared to operate on a complex, dynamic and integrated market.

In this respect, Design implements the model of integration and - being a product innovation tool – it is expressed in the transfer of technology to products and from products to society, thus promoting interaction and creative sharing.

Creativity System

The vital role played by technology in terms of growth and development has been recognised for a long time now. Technology offers people and companies the tools required to express and develop their ideas at best, to create new products, new services, new opportunities. Nowadays, no aspect of creativity can be "competitive" unless it is sustained by the best available technologies. It is therefore crucial to foster the technological and business sectors and the local innovative potential. Businesses, therefore, play a fundamental role in the development of a certain area, significantly contributing to its development through the promotion of existing excellences, the exploration of the most innovative solutions, and the enhancement of the experience sharing and the contamination between different cultures, thus opening up to new opportunities at an international level.

The relations between and among the stakeholders operating in a certain geographical area are constantly evolving and may be compared to a "complex living organism". With this project, the Como district aims to "absorb" the needs, suggestions and proposals of the local community, so as to contribute – through new ideas - to the development of innovative projects and to offer an outstanding example of experimentation. This project consists in a research/action process that – while relying on the typically Italian "do it yourself" approach (a strength that, however, often turns into a constraint for the companies' growth and competitiveness) – favours the cooperation with the university and research sectors. The constant search for innovation and cultural contamination aims to open up new perspectives and promote the development of new opportunities and new creativity.

This is an ambitious project that keeps evolving year after year. It represents an effective method combining cultural, social and business excellence in a scientific, systematic, efficient way, capable of creating a new fruitful cooperation with the local institutions and business world. This bears witness to the will and ability to find a new approach and to promote networking, which is an innovative tool capable of attracting professionals and creative ideas from the outside, thus opening up new perspectives and synergies at an international level.

It would be too easy to develop and "patent" a winning recipe capable of ensuring that the companies resorting to it and adapting it will be successful. This is why this project mainly aims to highlight the need to prove the dynamism of the Como industrial sector, which is still capable of operating effectively and work on the development of local strengths by sharing creative ideas and integrating new processes and methods taken from the design world, while increasingly strengthening the relationship between product and services.

This project therefore embodies the Polytechnic's concept of "Design", which means: experimentation, research, the use of new materials and new technologies, a focus on more experimental, polytechnic design, including all those sectors in which design does not only imply creativity and inspiration, but also research, experimentation, and the harmonisation of technologies, craftsmanship and business.

Creativity Culture

High-quality training in the design field, drawing inspiration from international ideas and proposals and a design stage reinterpreting the theme of Nomad Culture to create contemporary design objects: this approach gave both students and young designers an opportunity to specialise and to find out about specific local cultural aspects which they would never have discovered by working alone. The result was a new design community characterised by high added value that can be implemented and multiplied.

A teaching and research method, a path capable of integrating the knowledge of the academic world (the formal method), the know-how of workshops (the learning-by-doing method) and the technical knowledge typical of the manufacturing industry – a knowledge that can only be transferred by directly involving the companies into the training process: all this has allowed these young designers to grow, not only by developing new ideas, but also by taking part in all production stages within the companies, from conception to design, all the way to final prototyping.

ComON Design thus also means creating a teaching model that integrates with the reference local manufacturing industry; a training model that has made it possible, on the one hand, to fill the existing gap between the needs of the manufacturing system (which requires technical skills) and those of the academic world (increasingly oriented towards advanced design) and, on the other, to transfer the expertise and practical excellence of the local districts / clusters of creative companies.

The ComON Design project therefore transfers knowledge within the design sector and creates networks capable of promoting the strengths of the local area. Against the current complex global scenario, introducing innovation into products and services is an absolute must in order to sustain, in the long term, the new challenges posed by global competition by seizing the opportunities offered by emerging markets.

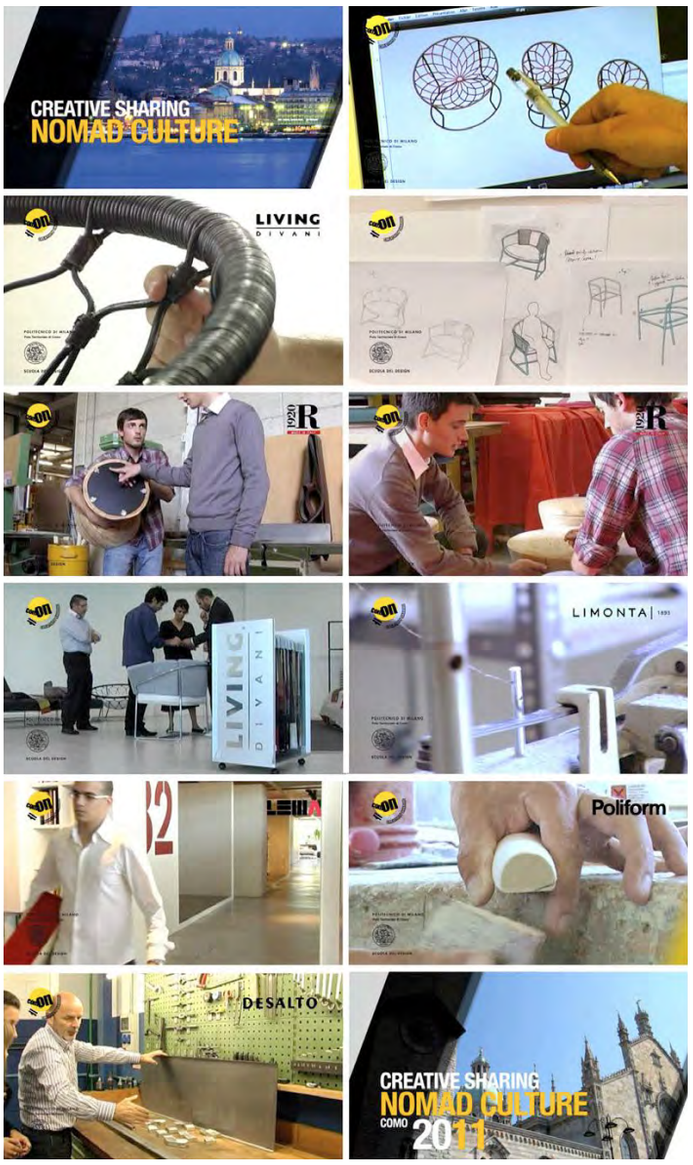

Fig. 1. Creative industries:
Riva 1920, Desalto, Limonta, Lema, Living Divani, Poliform.

Creative Communication

Another essential aspect was the exploitation of all the new communication channels that have appeared following the evolution of the media and of communication languages in general. A multi-channel communication system was thus established which, by gathering a wide ran-

ge of documentation regarding the project's development, allowed to draw up an interesting reportage that does not simply describe the project, but can also be used to replicate its most significant and successful aspects.

The material gathered provides detailed information on various products and services, it shares stories and individual/collective experiences, and features a wide range of documentation on the entire project, its subsequent steps and the players involved – everything in a new fast and easy-to-share communication format, following the various project stages, meetings, and presentations step by step and describing them by directly involving the main actors: the designers, companies, the project team, and the institutional representatives involved.

Its production was entrusted to professional studio and to Milan Polytechnic's Movie Design Laboratory, which have also produced a multimedia product, putting across the complexity of a project like ComoOn on different types of media.

These promotion and dissemination channels have dramatically increased the visibility of the initiatives carried out and their results, benefitting both the participating designers and, particularly, the entire local district and the companies taking part in the project, which have thus strengthened their image and synergy with the local area, opening up to new international contaminations.

Conclusion: develop industrial district, develop collaborative network.

The challenge for all industries is to think creatively and re-invent themselves constantly. Today's enterprises need more innovative forms of management, marketing, problem- solving, and greater use of design inputs. One way to advance creativity and innovation is by promoting collaboration and convergence among different industries. These convergence centres enable the co-location of various organizations and individuals working in different but related sectors, breaking down silos thereby fostering 'collisions' that inspire new processes, ideas, products and companies. Such environments foster collaboration among different sectors and encourage firms to think creatively. Nascent creative talent and enterprise plays an important role in job creation, wealth generation and other social and economic spin-offs. By addressing the challenge facing the creative sector, a territorial district can reap the full benefit of its creative entrepreneurs and enterprises.

The project shows at last that to fill the distance between industries and technology trough design means to fill the gap between industries and design itself trough an involving learning experience where concrete action and activities intersect and produce real action, the project aims o improve the actual model of generating innovation and promoting education in design, developing, managing and supporting new knowledge -sharing processes. This is a concrete example how generating a collaborative self-fed system keeping the research system and the industry closer and ready to face together any future challenge of the international context.

The design sector is an obvious strength of the regional economy with the potential both to contribute to the region's productivity and to become as internationally recognized needs:

- Strategic promotion of local design, locally and internationally.
- Promotion of the value of design to key industries.
- Promotion of design-related professions in schools.
- Inclusion of design in public sector innovation and commercialization strategies, where the current focus rests heavily on R&D and technology.
- Provision of incentives for incorporating design services.
- Strategic placement of designer-consultants in business incubators, convergence centres, and science and business parks.

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I just want to design a sexy flying car! Teaching design-led innovation to designers

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Abstract
Many international management programs have capitalised on the value design can have upon potential business solutions and strategies (Martin, 2009 & Brown, 2008) as well as many international design programs introducing designers to business theory and curriculum (Manzini & Rizzo, 2011). This paper presents the findings from structured interviews with undergraduate design students and design industry professionals. Current literature surrounding design led innovation and the role designers' play is also discussed and the challenges facing designers in this emerging design era are presented. The findings from this study indicate that most designers enter an undergraduate program not wanting to become the business leaders of tomorrow. Instead, they enter in the hope they can humbly help people and to make a difference in the world. There are contentions with this perspective, felt by industry, academia and students around why designers need to be taught business theory content. This paper provides the first step to overcoming this challenge by providing insight into the attitudes, perceptions and challenges designers face in this new design era.

KEYWORDS: business strategy, design education, design-led innovation

Introduction
Traditionally, the role of design within companies has been confined to manufacturing and production – or – as a styling afterthought. Increasingly, design is being viewed as a vital and important strategic business resource (Dell'Era et al., 2010) and consequently companies worldwide look to design to help them innovate, differentiate and compete in the global marketplace. The role of the designer as professional is developing to a point where they are needed and wanted for much more than as specialists in the manufacturing and aesthetics of an artefact (Wrigley & Bucolo, 2011).

Whether this development of the design profession could have been predicted, is an argument of historical trends to consider. For example, William Morris in his time would consider a designer as an artist (Gorman, 2003). However, advancements in technology have enabled mass-production to take place, and designers have indeed become specialists in manufacturing, ergonomics and aesthetics. We are now coming to a time when it takes more than new technology for a design to be truly innovative. Designers are now being brought into the design process, not as a late stage add-on to make products or ideas attractive to customers, but at the stage where they can create products and services to successfully meet the customer's needs and desires (Brown, 2008).

More and more business are starting to see the value design brings as a different way of thinking, doing and tackling problems from outside the box. In practice, design is key to greater productivity, whether by way of higher-value products and services, better processes, more effective marketing, simpler structures or better use of people's skills. Design is no longer a niche market luxury. It is the most pervasive method for businesses to solve problems, ensuring long-term sustainability and gaining competitive advantage. This is done by properly employing, carefully evaluating, skilfully managing and soundly implementing design throughout all aspects a company's business strategy.

Design led innovation, broadly refers to a set of methods which allow the designer to consider and evaluate their design development from multiple perspectives, typically spanning user needs, business requirements and technology demands. The final design solution is not presented as an artefact in isolation, but an integrated product and service concept. As the design profession moves from servicing a manufacturing economy to a knowledge economy, the role of a designer assisting their clients has also evolved and new approaches to design are being used. Design led innovation is a strategy that aims to radically change the emotional and symbolic characteristics of products through a deeper understanding of broader changes in society, culture and technology. Rather than being driven by user needs or technological developments, design led innovation is pushed by a firm's vision about possible new product meanings and languages that could diffuse in society (Verganti, 2008).

Design Led Innovation Literature
Design led innovation (Bucolo & Matthews, 2011; Wrigley & Bucolo, 2011), or "design driven innovation" (Verganti, 2008), or even "design thinking" (Beckman & Barry, 2008; Brown, 2008), is a strategy that encourages businesses to think about their products (or services) in new ways. Using methods central to the discipline of design, design led innovation pushes change in products, technologies, services and strategies; where the final solution is "not presented as an artefact in isolation, but an integrated product and service concept" (Wrigley & Bucolo, 2011, p. 232). The design led innovation process is defined by Bucolo & Matthews (2011) as having a vision for growth in your business based around deep customer insights, then expanding this vision with your customers and stakeholders in order to map these insights to all aspects of your business.

Unlike the linear problem solving approaches of other disciplines (such as accounting and mathematics), the design process is iterative. Designers employ tacit knowledge and intuition during the exploration and development of

potential solutions. Using divergent and convergent and integrative thinking, design teams investigate concepts through brainstorming and rapid prototyping. This process is intended to be quick and cost effective. Central to this is a subjective consideration for the user; as such, storytelling, narratives and experience mapping are used to generate deep customer insights and identify latent needs (Erickson, 1996; Shostack, 1993).

In applying these tools, the design led innovation method collectively considers the perspective of all stakeholders and key components of a firm's business model – the process "reflects both the construction of innovations... and their reception by the public" (Hargadon & Douglas, 2001, p. 499). The design led innovation method aims to alter a firm's vision about the 'meaning' and use of its offering to create growth and sustainable competitive advantage. Ultimately, it changes the customer value proposition (Bucolo & Matthews, 2011; Verganti, 2008; Wrigley & Bucolo, 2011). While the process is not fail-proof and not every concept will be realised, it is intended to be a process whereby knowledge gained in each iteration is used to inform the next, by challenging and re-framing the idea constantly.

Design led innovation describes a managerial approach to culturally embed design within a business and to enable strategic and radical innovation to occur. It is this difference that affords design led innovation a unique opportunity for radical innovation in business value propositions. This is achieved by using the designer's sensibility and methods to match people's needs with what is technologically feasible and what a viable business strategy can convert into customer value and market opportunity (Brown, 2008).

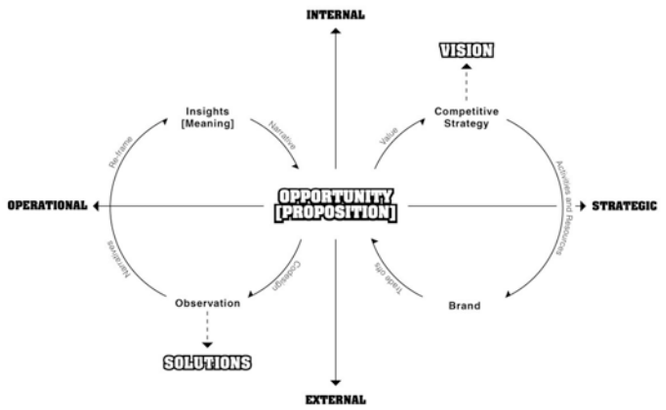

Figure 1: The Design Led Innovation Framework (Bucolo & Matthews, 2011, p.8)

The design led innovation framework (Figure 1) as developed by Bucolo and Matthews (2011), allows designers to integrate the tools of their profession into the framework, while revisiting and relating the observational solutions to the current company strategy. The framework can also be related to Brown's (2008) discussion outlining that design projects must ultimately pass through the three spaces of inspiration – opportunity, ideation – solutions, and implementation – competitive strategy. "Projects will loop back through these spaces more than once as ideas are refined and new directions taken" (Brown, 2008, p. 35).

Design led innovation places the designer as the catalyst for developing, evaluating and managing the implementation of change within the organisation. The application of a design led innovation approach challenges socially constructed perceptions of the role of a designer within industry. While the role of the designer will evolve, the key activities of a designer remain largely unchanged with the practical development of a design led innovation approach (Bucolo & Matthews, 2001). The changing role of the designer has also created a new research landscape for how design led innovation is applied within industry-based projects. This study aims to explore these new opportunities by exploring the following objectives and research questions:

- To better understand the attitudes in the industrial design industry and student cohort towards the design led innovation as a new role for design.

- To better understand the perception the industrial design industry and student cohort have towards the theory and process of design led innovation.

- To unpack the challenges facing the industrial design industry and student cohort in regards to the field of design led innovation.

Methodology

This research investigates the perceptions, attitudes and challenges that current design undergraduates and design industry practitioners face in adopting design led innovation principles into their work practices and skill set.

Participants

Twenty participants were recruited to participate in this study. This included students (n=10) and design professionals (n=10). Students were invited to participate based their enrolment in the Industrial Design course at the Queensland University of Technology. Industry design professionals were recruited nationally. The participant's level of industry experience varied, and spanned a variety of roles including; service design, design director, studio manager, product manager and consultant. The sizes of the businesses in which they were employed varied, from 3 to 200 employees.

Procedure and Protocol

Data were collected through structured in-depth interviews, asking questions pertaining to participant's current understating of design led innovation, the designers' role and their attitude towards a shift in the design industry. Each interview took approximately forty minutes and were conducted face-to-face and over the phone.

The questions asked of the industry professionals pertained to their role as a designer, their understanding of

design led innovation and their opinion of whether they saw design led innovation as a form of design.

The next stage of the interview involved a case study of an Australian company and it's transformation using a design led approach. This case study was explained and shown visually through an adapted framework outlined in Figure 1 (Bucolo & Matthews, 2011). Questions were then asked to find out if the participant's perceived the design led innovation process in this case study as the role of a designer, or not, and why. Practitioners were also asked if they would want to offer this process as a design capability inside their business, and students were asked if this was a skill set they would want to perform in industry.

The final stage of the interview sought to identify how well the participant's education prepared them for this type of role. Participants were also asked if they believed they were missing skills or capabilities that they feel are needed for this new design role. Additional questions were asked of the student participants pertaining to; why they wanted to study industrial design, what they saw as their ideal job in design, and what they imagined the future role of design to be in their profession.

Analysis and limitations
The interview transcripts were thematically analysed to identify key categories and themes within the data. The results were filtered into the two different groups of participants (students and industry professionals).

This study is not without limitations. The authors' capacity to generalise the findings more broadly is limited by the sample size of this study. The findings presented in this paper are specific to the interview cohort in this study - 10 students and 10 design practitioners in Brisbane, Australia; and are not intended to represent designers generally. The findings of this research are presented in the following section.

Results
The objectives of this research project were to identify the attitudes, perceptions and challenges of industrial design students, and design industry professionals regarding design led innovation. These results varied between the two participant pools and the following outlines the results of each.

Design Industry Attitudes and Perceptions
The attitude of most practitioners was generally positive regarding their perception of this new field of design led innovation. Designers indicated they would generally embrace this new undefined role. They perceived this new role as a more strategic thinking approach to how they pitch their services to clients. They were inquisitive and curious to know more about it and how to facilitate it in practice. One participant stated "this new form of design can have maximum impact on the return of investment for my clients". Design practitioners perceived that design led innovation allowed the broader field of design to have a greater impact on businesses beyond the creation of products and logos. One participant stated "design led innovation acts as enabler to allow innovation to occur within every aspect of the business. Making design fundamental to a business's success".

Some practitioners, however, were a little hesitant, they were concerned that those who had not been taught how to execute the design led approach, did not know how to produce measurable outcomes from the process, and expressed concern about being involved with it. As one participant states "at this point I would not feel completely confident in facilitating this process, I probably could but I am not an expert and mistakes will be made". One practitioner even went so far as to say he did not want to "make a fool of myself in front of my boss when I propose new methods".

Additionally, many established designers are uncertain about this new role. They indicate that it appears hard to offer as a service to clients, because they do not know what the business model would be. A shift in thinking is needed regarding how designers charge for an intangible outcome, solution or advice. One practitioner claimed "how do you make money from this, it is very difficult to get paid for something where there is not a defined or tangible outcome".

There was a common misunderstanding in practice about the theory of design led innovation and it was often confused with "design thinking". Also, there was a common misunderstanding as to how the set of skills and tools are used by designers differently in the design led innovation process, as opposed to current methods used to generate different thinking styles such as design thinking.

Most practitioners held a basic understanding that design led innovation involved "people focused approaches" (participant) instead of "deep customer insights" (Beckman & Barry, 2008). The participants referred to these in various ways and only some had the extended understanding that it requires the designer to look beyond the end user instead of focusing on all stakeholders involved. Additionally, the cultural transformation that occurs within the company was not mentioned or recognized to be apart of the design led approach until after a definition was provided. At this point, one participant mentioned that, "cultural issues are an important element that I did not raise in my understanding, possibly because it is the hardest thing to do".

Design Industry Challenges
Challenges were outlined by practitioners most of which pertained to the articulation of measurable outcomes to clients and dealing with an outcome that is not tangible. This was expressed as a concern in the process itself and then communicating it to clients, and, more importantly selling it as a service. "From a business leaders perspective, design led innovation can seem somewhat vague and ambiguous with limited tangible and measurable outco-

mes seen at the outset of the project" as one participant stated. This relates to issues many industry professionals face surrounding how to deal with a clients expectations and what evidence is needed to show that this service has value.

Another challenge for the design professional was the language barriers designers experience when conversing with businesses and their needs. One participant articulated this well by admitting that they "would benefit from more exposure to conventional business thinking to be able to speak the language and understand the viewpoint of those who I would be helping". Design professionals were also unsure of how to produce a convincing delivery to influence clients to engage with this process – which is different to the traditional product projects they are used to working on. The issue of how to create a good client rapport and getting them to trust and put faith in something that was new to the design professional. The challenge of how to 'sell it' to them if you do not know what the outcomes will be. One design professional stated:

> *…how do you deliver it, convincing clients to engage design without knowing the results that they can expect. We know the process works but the results are not known at the start of the project, so essentially we are asking the client to place a lot of faith in the design process…*

One of the biggest challenges for the professional design industry is learning how to re-train their approach, by not jumping to solve immediate solutions like small more tangible design tasks at the beginning. The challenge lies in taking the focus away from the end user as the central variable; this is difficult for designers to do. "I was taught to understand user in terms of ergonomics which has led to a culture of always understanding end users in this way" was one design professional's statement in regards to making this shift in thinking.

Design Students Attitudes and Perceptions

In contrast to the design industry professional only a small portion of the industrial design students expressed a positive attitude towards design led innovation. This is because it was mainly seen as a means to create more job opportunities for them when they graduate. From the explanations and definitions and case studies given in the interview, design led innovation was characterised by students "as a process that uses design skills, but it just executes them on a different level". They also saw it as a way to differentiate themselves to other graduates and recent graduates competing for the same jobs, "It will differentiate you as a designer and as this new designer you will have more impact and a chance to span every aspect of the business not just product design".

Many students expressed negative perceptions and attitudes towards the design led innovation approach. This was centred on their strong social ideals about the reasons why they decided to study design in the first instance. Most design students undertook their industrial design degree wanting to contribute, even if slightly, to a cause and to solve the worlds humanity problems. Problems such as better drinking water capabilities in Africa, products made from sustainable materials, a new walking frame that assist the elderly in a better way or by helping blind people cross the road, etc. The students interviewed indicated that they are ambitious to sink their teeth into humanities problems and are genuinely interested in helping people through their designs. The need and demand for a design led approach to innovation is to increase Australia's GDP and to obviously increase profits of the company engaged in the process. Students, however, indicated that they had issues with this perspective. In fact, they did not want to be linked to an outcome such as top line growth.

In contrast to this there were also a number of students who embarked on an industrial design degree to design aesthetically pleasing physical products that they can touch, feel and create, like crafts. The drive to be more of an artisan and invent as well as create futuristic luxuriously styled products is evident in first year students. These students have the ambition to become the next Philippe Starck and design the next Apple iPhone. Or, they wish to be famous and their brand becomes their product and takes centre stage over the design. One student indicated that he was adamant that "I just want to design a sexy flying car!"

Design Students Challenges

Like the design professionals, students also struggled with how they would articulate an intangible outcome to themselves and to clients. The student's inability to detach themselves emotionally from their tangible product designs was evident. This was seen when they moved to an intangible solution using the design led approach, students tended to detach emotionally and invest/care less about the outcome. Additionally, their perception of who they are as a designer was seen to be a large challenge. One student stated that talking about money in a design class is just not done and "can be considered as selling out or going over to the dark side".

Students were also challenged by how this approach is executed from within design firms. They are confused as to how they would do this in the workplace, and certainly do not understand how this new business model will work. Their understanding to date on a designer's business model has been based around the traditional approach that the designer exchanges designs, concepts, models, prototypes, manufacturing details for money from a client. The idea of the intangible and how you measure worth, value and trade it for money appears to be too complex. This brings uncertainty and disengagement from students waiting to be involved in the design industry after graduating. One student stated that it "is breaking through our own perception of who we are as designers, what we can offer and our value to business. If we can break through this understanding as more than pure aesthetic and CAD associations than we can over come such stereotypes as what would I know about business, I'm just a designer."

Another challenge facing design students is the language barriers that are obvious when conversing with businesses. Students were open about the gaps in their knowledge and lack of understanding regarding the drivers of business and how to communicate their messages to the business world. Businesses and designers have different drivers and they appreciate different things. Businesses are constrained by the laws of reality and designers appreciate innovative ideas – not simply thinking as far out of the box as possible. A final year student indicated this in their response to the educational question, stating:

> *…the teaching of design in relation to business world needs to be integrated into the curriculum from 1st to 4th year rather than one unit at the end of the degree. This way, students are learning and cultivating their definitions of design as a skill and a role with the business facets exposed. Come 4th year many students have already cultivated their expected role as a designer and lose faith in the business level of design and its importance.*

The final challenge, identified through the case study questions in the interview for design students, was how they take the focus away from the end user and the end product solution. Too often they jump-in and start solving the immediate design problems, such as a brand redesign, new website etc. Design students are taught to solve problems, answer briefs and do exactly what the assessment item asks of them – they are not encouraged to challenging it. Nor are they challenging if these are the right problems to be designing for in the first place. This is a crucial re-frame technique in the design led innovation process.

Implications for Education and Industry

The practice of design has seen a rapid transformation over the past decade (Wrigley & Bucolo, 2011). As part of this transformation, the profession of design has also evolved to meet the growing expectation of clients. In recent years, designers typically have formed part of a larger eco-system of professionals, which develop innovative sustainable products and services for a wide spectrum of clients. To meet this changing demand, the knowledge and skills of a contemporary industrial designer have expanded to compliment their existing expertise in manufacturing design, but to also consider the experiential, business and supporting services of a final design solution. Often designers are brought into a project at an earlier stage and it is expected that they assist in defining a product strategy rather than solely defining a one off solution (Behrendorff et al., 2011).

The knowledge and application of design led innovation is rapidly becoming a foundational skill for design graduates all over the world. As this content continues to evolve so must design education and industry practice in its perception and engagement.

As design led innovation experiments with the traditional role of an Industrial designer, this new area remains not for everyone, student and industry. Yet as this theory and application is emerging as a new global trend in industrial design education, the opportunity is to capitalise on the establishment and opportunities granted – especially in Australia, there is current high demand for this new designer. Yet, the challenge still remains – to change the mindsets of educators, academics, design industry professionals and especially the design students in their attitudes and perceptions as to what exactly this new role involves and requires.

The recommendation from this study is that designers need to become experts in defining the design led innovation process and executing this new task. By setting a strong path with clear objectives and measuring the intangible milestones of the project, the design profession will be one step closer to overcoming the issues outlined by practitioners and students. The key to overcoming these challenges will involve people skills not just design skills. The end goal is not to convince designers to become business leaders or to change who they are as designers, but to integrate the two so that they are able to communicate better with the business world.

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INNOVATION

INNOVATION

Artistic design in a competitive world

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Abstract
To achieve competitive advantage in order to survive on a globalized market, industries and companies perceive an urgent need for innovation. Design is increasingly considered a success factor of innovation, and accordingly governments are devising design policies to harness design for 'driving' innovation, and hence boosting competitiveness. Thus the design community finds itself under increasing pressure to meet new requirements. There is evidence to suggest that the predominant political discourse in terms of competiveness of nations and their industries, may lead to design policies that are neither entirely rational, nor beneficial to the design community and to community at large. From our vantage point at a Danish academic institution for research-based artistic design education, we review some of this evidence, analyse the problems connected with design policies, and suggest how the design community might respond to design policy-making in order to help prevent its detrimental effects. We find that while obviously policy makers carry a heavy responsibility, so too the design community should use whatever influence it has to ensure rationality and legitimacy of design policies, and to encourage policy makers to create framework conditions for design that will unleash its true potential for contributing to the society of which it is part.

KEYWORDS: globalization, competitiveness, political reform, innovation, design policies, artistic design.

Introduction
Means of transportation and communication have reached a stage of development that allows people, goods, information and capital to travel around the world at unprecedented speed and scale. The Iron Curtain is gone. Former developing countries have gained technological and economic momentum and are becoming significant players in global markets. Globalization, though not a new phenomenon, has accelerated over the last few decades, and has become a worldwide political–economic project. According to Pedersen (2011, pp. 45, 48), globalization is not oriented toward a particular purpose, but proceeds through multifarious conflicts, and is driven by a set of neoliberal ideas (ibid, pp. 18-30) that have led international organizations and national governments to act, since the late 1990'ies, 'as if they are engaged in a global competition among nations' (ibid, p. 48, emphasis original, our translation).

As a consequence, the role of the state has changed (ibid, Ch. 2), at least in Western societies such as the United States and the EU , from ensuring the employment and welfare of citizens, and protecting the 'home market' against international competition (through import regulation and subsidizing of national industries), to quite a different role of stimulating international competition (through financial deregulation and international agreements about open markets) and ensuring competitiveness of the nation (through policies designed to ensure the most efficient utilization of labour, capital and other factors that affect productivity).

The notion of competition among nations has gained such currency, and the political discourse about it such dominance, that a growing number of institutions are publishing indices and ranking systems, purportedly measuring and comparing the competitiveness of nations; and governments can now justify the necessity of reforms by appealing to the national position in the global competition, and in what areas the nation is 'lagging behind', according to the indices (Pedersen, 2011, p. 61). Such reforms pertain to all levels of society, it would seem, down to and including research and education, whose ability to enhance competitiveness through innovation and creativity must be put to good use (ibid, p. 58).

On this background it seems fairly obvious that design and design education are very much in the searchlight of political reform, and there are signs already that they will be harnessed to serve the quest for competitiveness. From our vantage point within research-based design education at an artistic-academic school of architecture and design located in Denmark, we seek to gauge the possible effects of such a development on design and design education, and to suggest responses that are both politically viable and true to the academic and artistic ethos of design. Because our personal experience happens to be in architecture and industrial design, our view may be biased towards design of material artefacts; but we recognize that nowadays design has many other fields of application. We will mostly draw on examples from Europe, and in particular Denmark, but we believe that since the political quest for competitiveness that we are discussing is concomitant to globalization, our considerations may apply, by analogy, to other countries undergoing similar developments.

In section 2 below we review some evidence of how the discourse of competitiveness pervades the context of design and design education, and has given rise to specific innovation and design policies that may or will affect our professional field. The effects of design policies very much depend on their perceived legitimacy; an issue discussed in section 3. Based on that, section 4 offers a discussion of how political reform for competitiveness, unless carefully adapted to existing professional culture, may affect artistic design and design education in ways contrary to the intention. In section 4 we also consider the possible responses to this challenge. Finally, section 5 summarizes our main findings about the pros and cons of design poli-

cies, and puts them into a larger perspective.

Competing for competitiveness: the arms race of policy-making

To understand the pivotal concept of competitiveness, it may be instructive to consult an authoritative source. According to the glossary available at Europa.eu (the 'Official website of the European Union'), '[a] competitive economy is an economy with a sustained high rate of productivity growth' (EU, n.d.-a). Note that to make the economy competitive, it is not (only) productivity itself that must maintain a high level, but its rate of growth. A commentary accompanying the definition explains that '[t]o be competitive, the Union must outperform in terms of research and innovation, information and communication technologies, entrepreneurship, competition [sic], education and training.'

To us, the considerations on competitiveness made by the various political bodies of the European Union concerning artistic education are of particular interest. For example, the European Parliament issued a resolution on 'artistic studies in the European Union' (2009). In the preamble to the resolution, the Parliament observes that '[…] schools and centres for art and design education help to develop philosophies, to create new artistic styles and movements and to open up different cultural worlds, which strengthens the European Union's image in the world'. To a faculty member of a European design school, this seems a gratifying recognition of the value of his contribution to the greater scheme of things. However, in the main part of the resolution, where the formal decisions are described, the Parliament (somewhat reluctantly, it seems) admits that 'this is a matter for the Member States', but nevertheless 'considers that policies on artistic education ought to be coordinated at EU level, particularly in relation to […] the link between artistic education, creativity and innovation […]' (emphasis added). Furthermore (among many other decision statements expressing views, reminders, and proposals concerning artistic education at all levels), the Parliament '[c]alls on the Council, the Commission and the Member States' to honour a long list of requests, some of which are about adopting a certain attitude rather than about taking actual action: For example, the Council, Commission and Member States should 'recognise the importance of promoting artistic education and creativity in the context of a knowledge-based economy, in accordance with the Lisbon Strategy'. However, as attitudes go, this one, if taken at face value, has far-reaching implications in terms of actual action: The Lisbon Strategy (launched March 2000 by the European Council meeting in Lisbon), posited the goal of 'making the EU the world's most competitive economy by 2010' (see e.g., Eurostat, June 30, 2010, emphasis added). The resolution does not specify explicitly how 'promoting artistic education' in the knowledge-based economy will contribute to bringing about the desired level of competitiveness (but see further to this in the next paragraph below); it only rather mildly advises the Council, Commission and Member States to recognise 'higher arts education at all three [academic] levels […] (Bachelor, Master, Doctorate), thereby improving the mobility of artists within the EU'. Presumably on the assumption that such increased mobility will encourage prospective artists to seek out the education (in Europe) that best equips them to work at 'making EU the world's most competitive economy'.

However, examples of more explicit proposals for change in design education and research, abound in a 'Commission staff working document' entitled 'Design as a driver of user-centred innovation' (Commision of the European Communities, 2009). Starting from the working hypothesis 'that design is a driver and tool for user-centred and sustainable innovation and differentiation, complementary to technological R&D, and that increased use of design could increase European competitiveness' (p. 7), the authors set out to analyse 'the importance and potential of design as a tool for innovation'. Thus, compared to the parliamentary resolution just cited, the goal is much narrower, and it is made clear from the outset that the conception of design is purely instrumental: design is a 'tool' for innovation, and the idea that design (or design education or design research) might serve other purposes than those of innovation (say, artistic ones), does not enter into the analysis. However, innovation is seen, not as the ultimate goal, but as a means to achieve further ends: '[i]nnovation is a key driver of competitiveness and economic growth, and part of the solution to environmental and social challenges' (p. 5). Quite in accordance with Pedersen's observation that the quest for competitiveness brings research, education and creativity into focus (2011, p. 58), the report goes on to make specific recommendations of reforms in these areas, and ends with an 'annex' listing a variety of (divergent) 'international design rankings', of which the Design Competitiveness Index is mentioned as 'the most commonly cited'. Again, this is quite illustrative of what Pedersen says (ibid, p. 61) about the emergence of index-producing institutions, and their role in the justification of political reforms (see section 1 above). As for the specific reforms proposed (or hinted at as desirable) in the working document under scrutiny, examples include the following (interpretations in italics added by us):

- Design research should be integrated with innovation research: 'Design research is still a comparatively small discipline, often insufficiently integrated with the more established discipline of innovation research' (p 53).

- The state should change design education so as to ensure designers with the right competitive skills: 'The lack of designers with the right skills […] is another area where the state could have a potential role to play. The role of design education cannot be overestimated as a driver of design excellence and competitive advantage' (p. 56).

- Designers should be skilled in strategic user-centred design (etc.): 'The challenge is the lack of designers with the right skills and experience in view of recent developments in the area of design, such as strategic

user-centred design, eco-design, 'design for all', design management and computer-aided design. Design consultants who lack for example basic business and management skills may have difficulties convincing industrial clients' (p. 57).

As for the latter problem, we note with some unease that the report ignores the alternative solution: changing business and management education so as to provide the industrial clients with 'the right skills' to understand their design consultants.

Despite the high level of detail and specificity exemplified above, the report ends by concluding, somewhat surprisingly, 'the efforts that will have the most effect on the use of design as a tool for innovation and competitiveness are not those of the European Commission. These efforts will have to come from policy makers at national, regional and local level in Member States, from design associations, design councils and design centres, from educational institutions, from design buyers — consumers as well as institutional buyers — and, not least, from companies' (pp. 59 f). So, contrary to what the European Parliament contended (viz. 'that policies on artistic education ought to be coordinated at EU level') this report ends up recommending that policies be developed more locally, in the Member States. (Since there is no logical connection between the body of the report and this recommendation, we might suggest as a plausible explanation, that the latter was added out of prudence, rather than conviction, in order not to violate the Principle of Subsidiarity.)

And indeed design and innovation policies are being developed locally, at various levels in the Member States – as well as outside the EU. In a recent paper, Hobday, Boddington and Grantham (2012) trace the history of innovation and design policies, comparing the two lines of development. While focusing mainly on the UK, the EU and the US, Hobday et al also note that 'there is evidence of a wave of similar policies within East Asia and China with competition from the latter used to justify policies in the West' (p 272). Quoting a 2010 UK design policy as an illustrative example of this, they remark that 'foreign competition and the existence of foreign government policies are often cited as a rationale for domestic government intervention' (p. 274). So, just as indices and rankings, if taken as warnings about the superiority of one's competitors, may be used to justify a specific policy intended to bring one's own nation or industry or sector or institution to the front of the race for global leadership (cf. Pedersen, 2011, p. 61), so it would seem that the existence of such policies may be used, in a similar manner, but now at a metalevel, to justify the need for making further policies. As Hobday et al say, using a striking metaphor, '[t]hese perceptions of external competition and leads and lags in policy can lead to a 'policy arms race' with policy groups competing to outdo each other in claim and counter claim' (p. 274; examples of competing 'policy groups' might be EU vs. Asia vs. US). In other words, the all-pervasive idea of competing nations, by a highly persuasive logic of its own, similar in nature to that of warfare, engenders as its equally powerful offspring the idea of nations or regions competing for competitiveness.

The issue of legitimacy of design policies

So the artistic design world finds itself (as indeed many other parts of society) at the receiving end of an unwieldy, but potentially very influential, system for the exertion of power. How should we face that challenge? The answer, we believe, very much depends on another question that we shall therefore consider first: does that power system possess enough legitimacy for us to (be morally obliged to) abide by its rulings?

As briefly noted in the above analysis of the EU report 'Design as a driver of user-centred innovation' (Commision of the European Communities, 2009), its appendix cites a number of international rankings of nations with respect to their design competitiveness. As also noted, these rankings show divergent results: the same nation may achieve a good rank according to one system, and a bad one according to another. Prima facie, this does not speak in favour of trusting such rankings. Obviously, the ranks accorded to a given nation in a given ranking system depend on what evaluation criteria are used, how they are used, and what the methods of data collection are. Going into a deeper analysis of this is beyond the scope of the present paper. Suffice it to point out here that for a ranking to carry any authority that may justify its use for policy-making, convincing arguments must be provided for its underlying methodological decisions. That there are methodological difficulties of defining ranking systems (and problems of comparability among them) transpires from the following passage, taken from the Korean 'National Design Competitiveness Report 2008' (note that we do not thereby mean to pass any judgment, positive or negative, on the method or quality of the actual ranking reported):

> *Design-competitiveness evaluation depends on how the concept of competitiveness is defined, but no appropriate definition has been proposed. […] When creating a design-competitiveness index, it is important to fully take into account a nation['s] willingness to promote its design industry as well as ensuring objectivity. That [is] why this study has garnered a collective wisdom from the Ministry of Knowledge Economy, the KIDP and the design community in order to select variables (Korean Institute of Design Promotion, 2008, p. 4).*

Furthermore, some rankings are based on interviews with professionals and other stakeholders. Given the widespread use of rankings, the opinions solicited from these informants may be influenced by earlier editions of the same rankings (or others), so conceivably an unhealthy causal feedback-loop may arise between the measurement and what it measures.

The above sceptical remarks about ranking systems – though tentative in nature – would seem to speak against according rankings sufficient legitimacy; especially when

we take into account that rankings are what is used to initiate and perpetuate the mechanisms of self-amplifying persuasion described in section 2.

However, just as during the arms race of the Cold War, presumably there were rational, well-informed and well-intentioned military and political leaders, who had respectable reasons for wanting to defend their nation or region and made non-provocative provisions to do just that – so among design policy-makers, there are rational, well-informed and well-intentioned individuals, who want to improve conditions for design to flourish as the art-form it is at its best, while ensuring sufficient competitiveness, and who propose political action to those ends, while eschewing paranoid appeals to rankings. As an example of this, let us cite a recent Danish Government report 'The vision of the Danish Design 2020 committee' prepared by representatives of academia and design practice, as a precursor for a new design policy (Roos et al., 2011). The Government's mandate for the committee requested the report to cover such familiar policy topics as 'design as a driver of innovation', 'competencies', 'research and knowledge sharing' and 'marketing'; and consequently the report addresses competitiveness, but expresses a soberly balanced view on design rankings: 'there have been efforts to create particular competitive design rankings, but such surveys are sporadic and the methods tend to vary over time. Therefore, one should not rely heavily on these rankings. That, of course, does not make measurement impossible', after which a number of significant factors are mentioned, e.g. investments, international media coverage, and others. (p. 53). Furthermore, the authors do not see design merely as subservient to business or competition, but repeatedly mention that 'Danish design is firmly rooted in an artistically-based material- and form-driven practice. It is, therefore, vital for Denmark – […] – to pay attention to sustaining and strengthening the position of design as an art form' (p. 30; see also pp. 34 f.).

So, whether or not the 'power system' as manifested by various design policies has legitimacy very much depends on the methods it uses, and the mind-set of the people behind it. If, as in the example just cited, judicious use is made of data, and a respectful and not entirely instrumental attitude towards design and designers is adopted, it seems likely that those at the receiving end will cooperate in bringing the policy to fruition.

Therefore, in terms of practical action, the makers of design policies should be careful to ensure that the policy receivers (those to be affected by it) will perceive the policies as legitimate. (Policy makers might find it rhetorically helpful to use the term 'commercial viability' rather than 'competitive advantage', to avoid the seductively belligerent connotations of the latter.) The policy receivers, on the other hand, should be critically aware of the legitimacy issue while policies are being made, and – in the best interest of policy makers and receivers alike – use whatever influence they can muster to ensure legitimacy.

The artistic design world vis-à-vis design policy

We now return to the question initially posed in section 3: how should the artistic design world (understood as the artistic design professions, and their respective research-based educational systems) face the challenge of the power exerted on it by policy makers? Let us consider that question under the assumption that, on the whole, policy receivers in the artistic design world perceive design policies as legitimate.

First of all, we have no reason to suggest that policy makers are wrong when assuming that design may be a 'driver of innovation' and, hence, be or become an important source of national income. On the contrary, Verganti (2009) has made a convincing case for the ability of design, as an artistic discipline, to foster 'design-driven innovation' through 'radical innovation of meanings' (p. 5): an alternative to conventional innovation by market pull (user-centred innovation) or technology push. So it seems only fair that the artistic design world should acknowledge its obligation to contribute to the society of which it is part, not only artistically but also economically. However, if the EU example considered is representative of current design policy thinking, we can expect the artistic design world to be required, more or less directly and in more or less specific detail, to acquire 'the right skills', as defined by non-designers, so as to create 'competitive advantage'. And this, we believe, may be a serious mistake. For, judging from our teaching experience with young prospective designers, what makes them such an asset in economic terms, are not business and management skills, but artistic skills, and an uncompromising zeal for excellent design.

Obviously, designers should not be commercially naïve, or unable to communicate with business managers or technical experts. But they should not necessarily themselves be business managers or technical experts. They should be designers, before anything else, and be trained, first and foremost, to think and feel like designers. According to Verganti (2009, pp. 237-238), 'many design policies aim to increase the business skills of designers', but this 'makes designers more aware of the constraints of business dynamics and less prone to explore radical patterns not yet demanded by markets' as they should to create design-driven innovation. Instead, based on his research, he recommends that design policies should bring managers closer to designers (op. cit., Table A-1 and p. 238). If furthermore, as suggested by Brown (2009) and Martin (2009), so-called 'design thinking' can be utilized by business enterprises for other tasks than actual design of products and services, that is all for the better. But to alert business managers to the versatility of designers and their way of thinking, and to ensure that the managers are trained to involve designers in cross-disciplinary teams for solving non-design problems, is not a matter of design policy; it is rather a matter of business policy and business management. Likewise, if 'design thinking' can even be utilized for making design policies, as suggested by Hobday et al. (2012, section 5), that would be an additio-

nal benefit of having trained designers to do what they are good at: designing.

But for design students to master their craftsmanship of designing, they need their 10.000 hours of practice, which, as famously stated by Sennett (2009 [2008]), is 'how long it takes to become an expert' (p. 172, drawing on work by Daniel Levitin). And if, as good academics able to explain themselves to others, they are to acquire a reasonable level of theoretical reflection on what they are doing and knowing, that does not leave much space in a standard five-year BA+MA curriculum for 'business skills' or other non-design skills that policy-makers might wish them to acquire.

Design policies that patronize the artistic design world by imposing alien requirements on it to boost competitiveness may thus turn out to be self-defeating and in effect destructive, even if well-intentioned and legitimate. Hence, the artistic design world should resist them, by suitable legal means, and thanks to Verganti's work, will be well prepared to do so.

Conclusion and perspectives

As we have seen, the artistic design world may well be subject to the power exerted through design policies, national or even super-national. These in turn are likely to be influenced by the currently dominant neo-liberal discourse on competition among nations or regions, and there is a danger that this, if allowed to escalate, will lead to an 'arms race' of policy-making beyond the limits of rationality. For design policies to be beneficial to design and to society at large, the policies must be perceived as legitimate by their receivers, and avoid patronizing them. Given this complex situation the artistic design world should use its influence to encourage policy-makers to avoid the pitfalls of an irrational 'arms race' that will jeopardize the legitimacy of their policy. (Perhaps a judicious change of terminology may help in a small but significant way, such as replacing 'competitive advantage' by 'commercial viability'.) Furthermore, we might appeal to arguments such as Verganti's in order to persuade policy-makers to create good framework conditions for, rather than patronizing, the artistic design world.

As these findings would suggest, design policies, like other instruments of power, can be used or misused in a variety of ways. While they may guide a nation towards greater prosperity (economically, or – conceivably – in other ways), they themselves are difficult to design, and they may, in unfortunate circumstances, do more harm than good. In a worst-case scenario, we fear they will become vehicles of an arms race that will quench artistic variety, cultural exchange and the self-confident joy of creativity – for fear of being outperformed by 'competitors'. Therefore, nations or regions of the world without such policies are not necessarily at a disadvantage. We imagine that Latin America, for example, might well find its particular cultural heritage and tradition a strong asset in a competitive world, even without the guidance of design policies. Perhaps indeed, design attitudes are more powerful in the long run?

Acknowledgement

Thanks are due to our colleague Ida Engholm for helpful comments on our initial thoughts about this article.

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Catalyze an Evolution: Design for Collaborative Practice in Contemporary Chinese Society

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Abstract
In contemporary China, social and political reality associated with a top-down model of decision making restricted people from participating in social reforms and restructuring. At the same time, the lost community value and social linkage need to be reconstructed. What role can design and curation play in facilitating such kind of social evolution? This paper looks at three projects at different levels. 1090 project addresses the issue of designer's social responsibility and work for the common goods of the general public; Marimekko Workshop project uses an alien element to stimulate local residents' re-imagining of their community connection; "Bishan Commune" project deals with the desire of elimination of Urban-Rural difference and uses design innovation to create new lifestyle for people from both backgrounds. In the three cases, design can be used for social innovation in a bottom-up model. It serves as the catalyst for social reform and restructuring. A lost community value and social linkage will be finally rebuilt through the accumulation of similar attempts.

KEYWORDS: China, Social design, Innovation, Collaborative Practice

Introduction
China has seen rapid construction in the past several decades, while most of the cities and spaces created are described mainly as short-sighted makeshifts, and the traditional space of Chinese human interactions are somewhat lost. Community value, which is taken as the core of traditional Chinese "DE"(德, Moral) cultural institution, has given way to indifferent, homogenous urban landscape of endless typical residential towers. Social issues like inequality, aging society, gap between the wealthy and poor, social unfairness and unjustness have been so pressing that there rises an increasingly louder complaints that the country had been going to the dogs for the last several decades.

At the same time, Chinese government announced main objectives and tasks for building a harmonious socialist society by 2020, determined by 17th national congress of communist party of China. While it seems a long way to go before social reforms can really achieve any radical change, a trend has been emerging that more and more intellectuals and professionals show greater social consciousness, and some designers are increasingly motivated to "do good for the society."

For designers, rather than waiting for the social evolution to happen in its own course, a more positive and active response to the social issues mentioned above may be figured out through the tools of design and curation. This article tries to focus on several case studies, in which design plays a critical role of catalysis for social evolution towards desired ends.

Revitalizing the Core Value
To be good, kind and humble, to care and protect ordinary people, to care for the lonely and disabled"

_SHANGSHU, WU YI (NO Ease)
《尚书· 无逸》：“徽荣懿恭，怀保小民，惠鲜鳏寡”

Currently, design is growing to be really capable of effecting and catalyzing the social issues. Here is a design and curatorial project called "1090". It is initiated by Tongji University College of Design and Innovation (D&I). "1090" defines a situation that designers spent 10% of there professional career time for the ordinary 90% part of the general public. The students feel unable neither to change the social structure, nor to stop the running amuck of resources throughout the whole world. But at least they could spare 10% of their own time to share the sunshine of designing onto all things, and enable more people to feel the warmth of design. Their target is to let 90% of the people can afford to benefit from the design.

Regarding the background of the project, students were making a number of questions to rethink the definition of design: What is the ultimate aim of design? What on earth is the aim of designing? Is it at all decent for us to design? Are we really privileged to utilize and consume the limited resources? Will the design become one means of chasing profit for the interest group? Will the design become the accomplice to oppress the vulnerable groups? Will the design let people become greedier? Will the design become a weapon to encourage people to consume more for their own desire? How many designs can benefit for the children who live in remote areas? How many designs can benefit for the old people, who live in the alley? How many people can afford to use the design? How many people can experience and enjoy design?

"Grandma's Origami" is an ongoing project under the "1090" program created by the group of D&I. It is an experimental social project, and proposed to change the image of the elderly and try to save the origami that is a traditional Chinese crafts skill through the design, raise living standards the socially vulnerable group, and more importantly the concern of the community, sparked new concern about the issues of the elderly.

After a preliminary investigation, the old neighborhoods, the elderly, old architecture, old craftsmen ...the research work let the students understand more deeply that they

are getting to know not in order to design for design. Aim of design is to allow more people to feel the design and something changed by design. Finally, they looked at an elderly lady, Yang Qingying, 79, as she sold her paper folding works at Wujiang Road and Maoming Road in Shanghai, attracting pedestrians from the Metro station nearby.

The students decided to help her as the starting point. They helped its packaging, even the brand, designed logos, stickers and foldable postcards for promoting her products and make more profit. The ultimate goal of the project, in the form of "carry forward the origami" and enhance the value of the elderly its own. Whether physical or spiritual, it undoubtedly improves the standard of living for Madam Yang, but also hopes to inspire more people through their own method of helping the elderly.

Designed to support and promote social innovation is a new proposition of the design disciplines, social innovation is become the future trend of economic and social development. So "1090" project is a design attitude, also the pilot actions. It will be considered as a tool for social design, exploring constantly thinking about design, designers, and social relationship. Designed for the people, focus on the design of social value. Designed focus on the places that have been forgotten, from whatever little things, start with 10% of the time, designed for 90% of the people.

Design for the society. It refers to social design as the creation of social reality. The younger designers had seriously thought about the influence of their design and also the motivation of learning design skills. They are trying to look at the bottom to the up and think hardly how can put their effort to make the change happen, think on designing for people's needs rather than their wants. Social design is increasingly describe their design aim. In this point of view, social design is inescapable and an emerging discussion for other social actors, cultural, political and economical instance by globalization.

Figure 1.Yang Qingying sells paper artworks on Wujiang Road. A volunteer sitting beside helps. Reported by Ni Yinbin, ShanghaiDaily.com, 2011-12-28. http://www.shanghaidaily.com/article/print.asp?id=491161

Figure 2,3. Logo and other graphic design for "Grandma's Origami". It makes the paper artworks more attractive.

Figure 4. More style of origami. Exploration for more potential style of traditional craft.

Global Reference as Intervening Tools

"A stone from another mountain can be used to polish the jade"(Chinese proverb)

_SHIJING·XIAOYA

《诗经· 小雅》：“他山之石，可以攻玉”

Design is getting proved to be an influential factor in social harmonious. Also within the Tongji university College of Design and Innovation, the designers and researchers tried to gain adequate experience and improvement that would allow designers to deliberately and effectively affect their design strategies. Sometime international references and tools are introduced. The project is collaboration between Marimekko, the well-known Finnish textile company, and Tongji university. It's a two weeks' workshop on the theme of "Small Changes, Big Difference", especially how people use color in their daily lives, and make the strategies for communities more connective". The main objective of the workshop was to identify people's needs and the relation with the material and explore the role of colour and emotions in the daily habits, traditions, personalities, and rhythms of everyday life in China, particularly in the northeast part of Shanghai.

The Wen Xin Xiao Wu community on which the team focuses is an example of an elderly community where people promote a well being among each other by organizing

different activities such as sports, game-playing, walking, dancing, cooking and many others. Living in the cold concrete building such activities help them to stay connected with each other and bring some light to their daily life. Seeing the success of this model, the initial focus of the students was to make this community visible to outsiders, to sparkle curiosity and inspire people to follow the example of this community. Then the intervening tool would be the colourful textile of Marimekko.

For the in-depth understanding and exploration of the selected urban environment and people's daily life, different research methods (interviews, probe kits, co-creation workshop) were applied in order to merge into people's daily life. Cultural probes were aimed to understand community member's activities and identify the most frequent places they visit. The probe kit included a disposable camera, a personal dairy and guidance on how to use the material. After three days, the probe kits were collected for the further exploration. A discussion with selected community members was organized in order to understand the meaning behind the pictures and diaries.

Furthermore, a co-creation workshop was organised together with the community – provided with fabric, paint, colours, cardboard and various other material, the community was asked to create useful everyday items. The aim of the workshop was not only to find out items frequently used as well as get inspiration for a brand symbol for the community. The activity of sewing and the workshop itself proved to fit very well to the initial aim – to use material as an emotional connection between people. By sewing, people built bridges inside the community and started a conversation based on the activity. Therefore, the outcome of this team shifted to develop out of the workshop an on-going activity.

One of the key insights of the workshop was that the people needed inspiration to start the activity, but not too much limiting guidance – as roles emerged during the workshop such as the sewing expert and the coordinator. Therefore, the students decided to create a book, offering inspiration and initial guidance as well as examples of work done by the community during the workshop. Curiosity has been raised among community members through the workshop, and the "guide book" is built on this. The book utilizes printed pictures and text, combined with the usage of the fabric and pattern from Marimekko. Each of the examples in the book comes with a pattern suggestion, a cutting pattern, a brief description and pictures of the possible result. The project has been an interesting learning for the students, especially in respect of conducting co-creation activities in the Chinese context and collaboration with Marimekko.

From this case, design is not to create a physical product but to build the ongoing process that the communities can share the skill and life experience together. This strategy created by reading the social environment, image of the city, spatial narrative and urban semiology. Through examining the perspective of the local context, students have required to discover the potential problems and value of people's daily life imbedded in the urban environment and put forward their ideas of future improvements, especially concerning the quality and sustainability of life. Of course the catalyst of the whole knowing process start with the tools introduced, Marimekko. The cultural difference that is clear though the presence of the colorful textile that are not typical of Chinese decoration gives people a chance to rethink about their routine life.

By shifting the perspective of design action towards to social problems, the operative
strategies are forced to pay more attention to local contexts. The existing methodological contributions from western development models may help the young designers in China play an important role in innovation processes with relevant social implications.

Figure 5,6. Co-creation workshop was organised together with the community – provided with fabric (Marimekko), paint, colours, cardboard and various other material.

Figure 7,8. People from communities were sharing their sewing skills together through the guidable pictures and texts.

Facilitating a Self-Evolution

Give a man a fish and you feed him for a day. Teach a man to fish and you feed him for a lifetime. (Chinese proverb)

_LAOZI

《老子》：“授人以鱼，不知授之以渔”

“Bishan Commune”, is a project initiated by artist, curator and publisher Ou Ning.
Curatorial strategies in design, within unique Chinese context and operational approaches, to improve quality of place and transform their communities, will be discussed in this case.

Bishan is a village located in Yixian Country, Anhui Province in the south of China. It is a up-to-one-hour drive from the Yellow Mountain International Airport, with a total area of 58.5 square kilometre. Huizhou has abundant natural resources, rural architectural and historic cultural resources. It’s a rare sample about the diversification of human life in China. The existing tourism model does not pay much attention to the rural natural ecological preservation and development, the tourists and investors’ involvement of rural reconstruction and commitment to cultural heritage and revival of traditional features were not there yet.

In the coming fifty years, the return to country life may become the trend for the middle class and urban dwellers in China. People who are tired of the hustle and bustle city life will hope to pursuit a new agricultural lifestyle – or a better way to put it, is to regain such a lifestyle. Bearing witness to this, the project proposes to build the “Bishan Commune” in Bishan Village. It mainly addresses the compelling urbanization reality in Asia and the crisis caused by the global agricultural capitalism, and tries to explore a way for rural rejuvenation.

“Bishan Harvestfestival” as the main exhibition of “Bishan Commune” programme took place on 26-28 August, 2011 in Bishan village. “Harvest Festival” in Chinese, this is a ritual of the traditional agricultural society, in addition to prayer to the ancestors of the gods, pray to bless the crops successfully harvest and wish good harvest for the coming year, drinking booming, rituals after dinner, dance, games and the evening campfire. The project borrow the ancient name of the ceremony of the “Harvest Festival”, hoping to restore and rebuild the village public life of this long-standing one, and give it new meaning. The same time, Bishan Harvest Festival takes intersection of the experiment as a globalization and localization.

The exhibition activities invited artists, architects, rural construction experts, writers, directors, designers, musicians, and a commitment to local culture and local scholars. In addition, local craftsmen and folk opera artists are also involved. As it is resident in the countryside, most of the participants related to the culture and the arts, and their integration into the lives of the rural and local. At another level, it also involves the issues and practice of rural construction. The project mobilized around the artists come to Bishan to embark on the experiment of living together, try the practice of mutual aid and self-governing society, but also focus on the survey and interviews for long historical, vernacular architecture, settlement culture, folk drama, and crafts. The spirit of Mutual Aid, it can reduce the prevalence of dependence on public services in the city in various ways for rural political, economic and cultural contribution to intelligence, re-empowerment of rural energy, recycling of the idea of agricultural homeland. On this basis, invited local people to work together, activation and regeneration, in addition to the heritage of traditional, more work into local productivity and bring new renaissance for rural opportunity.

The exhibition hold at the common shrine and countryside, the granary, and other public space cooperation to organize rural life, architecture, design of furniture and household items, video works of art and other arts and crafts show, organized rural construction academic study by the scholars researchers, and showed the local opera and dance performances, and so on. It proposes to be an annual event and much further integrate into local life and participation in local construction. Also want to explore the

possibility of the Huizhou rural reconstruction, and a new Huizhou historic preservation and cultural regeneration, expanding new urban transformation and regeneration mode.

The project selected the rich historical and cultural heritage area, using curating as the strategy to involve art and design in rural development, provide the chance to the audience with open perspective. This social design placed in intervention and interaction, Understanding and using social design processes contribute to the improvement of real community. Art is not just a critique. Not just a tool for shocking us awake. It is an enquiry into the nature of change. It is the open-ended and ungovernable part. They point out the attitude that makes the social health, in its widest sense.

More importantly, rather than simply bringing the local residents into a fancy art-and-event show, this project is unique in two aspects. One, it tries to mobilize the urban dwellers to move to rural life and live together with local rural residents. This gives a chance for people from both background to rethink about the existing lifestyle that they are used to, and work together to figure out a possible way to fill in the gap of the urban-rural dualism. Two, the project looks at finding new ways of job position and chances of new business by combining art and design, with local crafts. This in turn will generate a new cycle of positive process, involving more local labor and intellectual into the project.

Figure 9. Bishan Village, Anhui Province, China

Figure 10,11,12. Three posters for "Bishan Harvestfestival" exhibition and other activities.

Figure 13. A work of collaboration between artist Anxiong Qiu and local craftman.

Figure 14. People from Bishan village visited the exhibition and gave them a fresh view to look at their daily life.

Figure 15. CD package designed by Renke and A'mao, made by local craftmen.

Figure 16. The traditional cake making tool from Bishan Village, Times Museum, Guangzhou("Bishan Harvestfestival" exhibition transfer to this museum from 5 to 19 June, 2011)

Summary

In the three cases discussed above, 1090 project serves at Axiology level, rebuilds a new sensitivity of social issues, and integrate Art and Design into everyday life; In Marimekko Workshop project, a position of Instrumentalism was developed and design with global references plays the critical view that helps to connect and animate communities; in Bishan Community project, an Utopian community was conceived to help communities imagine their new futures, and an operative methodology was introduced to generate self-efficient system.

Although social consciousness and social responsibility have been closely rooted in the nature of design profession, today social design and innovation has wider implications and applications. Located within more diversified political, economical and cultural context, design and curation have served as mobilizing vehicles for generating new knowledge and educating local participants. Social design is a silent process while changes undertake and people are transformed to adapt to new way of life. The strength of design illumination develops while more heard interventions might fail in an already fragile social and community structure. Design helps rebuild the community linkage, encourage people to rethink about the social problem and adapt to new changes, create new job positions and resources for better living.

In China, although the political and social reality restricted the public from involving much in the social reform and reconstruction, a bottom-up model developed by projects like the three shown above has generated consciousness about even the smallest changes and possible ways of intervention into the new social structure. Here art and design act like a traditional Chinese acupuncture practice that a minimal act in the right place and right strength might create fluctuation of the whole body flowing system and change the inner structure of the body. Design can be the catalyst of social reform and restructuring. Step by step, a lost community value and social linkage will be rebuilt through the accumulation of similar attempts.

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Contribution to the integration of parametric processes as a method in conceptual and creative Design

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Abstract
With an experimental character, this article seeks to exemplify a approach to generative Design / parametric, interpreting the practice and purposing a new field exploratory in Design. With a great development in the practice of architecture, this new technology has tried to approach the discipline of Design, with a potential of reproducing geometries through complex processes of algorithms. As regards the discipline of design, these new technologies or Design tools, allow the diversity and creative freedom in the construction of forms apparently impossible, which has introduced antagonistic issues about his role in the practice of Design. Even in literary review, is possible identify through authors like Zubin Khabazi, that there is a latent discussion on this approach as a methodology or technology, it is necessary to reflect on the explorative examples that improved its applicability.

We present in this article a conceptual model that identifies a possible decoding for the encoding of symbolic elements and significant to use as a reference for parameterization, proposes to develop a process to explore the ways interpreted, with the objective of boosting the process of creativity in Design, making it the most experimental, explorative and interventionist scope for innovation of the forms.

Thus, we intend to contribute to the discussion on this new paradigm, centralizing on the evolution of the methodology and in the process of Design, providing these new areas of knowledge either on the stages of finalization of creative processes, either in conceptualization in the development of the idea.

Keywords: Sign, Model, interpretation, Design and Calibration

Introduction
The relationship that the designer has to explore forms is always relative to aesthetics, semiotics, culture, dynamism, corporative, the politician, among others, but the relation between the individual and creative artefact is direct, and technology the medium. It is intended to reveal the importance of generative or parametric design as a tool that complements the creative act as an extension of the human being. This phenomenon goes back to the nineteenth century with the invention of photography, the gramophone record and other analogic technologies. Novelty is the ability to transform the analogic into digital, and the creation of interfaces that connect the 'real' and 'digital'. (Bragança de Miranda, 2002)
The post-avant-garde defines exactly this issue, assuming the potential that the technique emerges in the creative act and as an extension of our physical limitations. How could Jackson Pollock assert himself and create an absolute definition for abstraction, if not for the extension of your body, a can of paint? The random performance associated with complex mathematical calculations and physical motor rotation, could make its work and validation as a creative act, but the technique is a humanistic and anthropological concept and depends on the determination of needs, objectives, intentions and uses.

"The integration of technology and experience matched by a concomitant mutation technique. His instrumental version tends to lose strength, it is not easy to find an alternative to this vision. This is explained by a kind of inertial motion of the technique that seems to have a proper course, as if it constituted a new "Organism". "(Bragança de Miranda, 2002)

The evolutionary system discussed in this paper identifies the parametric model as a tool that enables results that respond to problems that have specific structural construction. But essentially, it is important understand that any attribute can be parameterized and must be human, making it more practical the interaction and leaving to the designer the creative aesthetic value.

"The 'art' of designing in this mode is in mastering the relation between specification process, environment, and generated artefact. Since this is an art, there is the formal or instruction-based method that can be used to guide this relationship. The role of the designer human remains, with the conventional design, central to the design process. "(McCormack, 2004)

The parametric design has been more important in architecture but has emerged in recent years, a growing number of designer's interested in a parametric approach in creating forms and shapes that a emerge of the architecture and does not assume either as pure design. In the manifesto of Patrick Schumacher on parametric design, it is very clear his position: "The key issues that avant-garde architecture and urbanism addressing should be summarized by the slogan: organizing and articulating increased complexity of the post-fordist society. The task is to develop an architectural and urban repertoire that is geared up to create complex, polycentric urban and architectural

which fields are densely layered and continuously differentiated. "(Schumacher, 2008, p.1)

However in recent years have increased the number of schools of architecture and design, which has implemented the practice of generative and parametric design, in both contexts and that are reflected in the evolution of production itself, which is called the manufacturing Digital. What introduces new issues to the micro savings generated by these small manufacturers, verifying a necessary investment in research on the actual application of this knowledge as the development of theoretical framework, the gains of production scale and to practice impact to the area is a perspective designer manufacturer. The authors Schumacher and Krish propose a reflection on a training process that allows approximation of the philosophies and methodologies, through exercises that relate to the development of these tools and demonstrate their application as a method for the design and manufacture.

Design parametric / generative design

With regard to their definition is agreed that this is a software tool, which enables the designer in a more explorative, experimental and conceptual aspects. Targeting tools for computer-aided design, especially in the field of architecture, a mathematical perspective / algorithmic, can also be parameterized in the actions and the multiplication of forms, which gives rise to the generative design. In reality this parameter with predefined indicators, has been applied mainly in engineering, which thus simplifies the structuring of an efficient and replicable. Furthermore, also the input to the diversity of exploratory product, even if its user is not an expert skilled in the field.

From the viewpoint of research systems as can clearly take post-modernists and deconstructionists, that revolutionizes the way people think so, with the aim of articulating complex social and institutional processes, and instilling a need to practice more exploratory research design, listing the positives and negatives.

"The parametricism of heuristics are fully reflected in the taboos and dogmas of contemporary avant-garde design culture: Negative heuristics: avoid familiar typologies, avoid platonic / hermetic objects, avoid clear-cut zones / territories, avoid repetition, avoid straight lines, right angles avoid, avoid corners, ... and most importantly: the not add or subtract without elaborate inter-articulations. Positive heuristics: inter-articulate, hybridize, morph, deterritorialize, deform, iterate, use splines, nurbs, generative components, rather than model script, ... "(Schumacher, 2008, p.2)

Essentially these tools allow you to keep an aesthetic post - modernist, but absorbing unconsciously, more complex forms or push us in directions other more sensitive and objective, with greater emphasis on a conscious differentiation. Another issue is the use of these computational tools, which have gradually established itself as a design assistant in the creative process, the academic level has demonstrated how you can explore new ideas, possibilities and processes. But these experiences have to be used with any balance not to alienate the creative one key factor is the development of a method (framework) or the process of inspiration and creativity. The parametric design is not just an experimental stage, but a means to solve design problems. It is a mediator between the conceptual and implementation. Allows the designer to revise the original design, reconfigure, mix and recombine resources. Try, fail, and consider the boundaries of material and design. Maintain the structural / geometric construction projects for real generative. It is important to realize that these tools have a controlled application and must learn to comfortably use a non-controlled exploratory and creative direction.

"It is too early to predict, if work around generative process technology will converge or maintain the hallmark of design - the multiplicity of valid approaches." (Schumacher & Krish, 2010, p.4)

In turn, if the generative design is applied as a revolutionary approach to design, exploitative and evolutionary; allows you to redefine the role of designers in the construction of genetic models, reflecting on the designers to manufacturing, immersed in creativity, family production, application in co-creation and mass customization. The impact of the emergence of technologies for rapid prototyping, direct digital manufacturing, parametric modelling and generative software, you can change the entire production line of product to reach the final consumer, as it becomes part of the process.

But in addition generative design is a controversial factor in relation to what is conventionally as a design methodology, the logic of random and chance mutations or variations in shape and has raised questions pragmatic design and creativity to the design, but someone has to make choices in this process so that there can be an end in the process (manufacturing) and this is the final act of the creative who designed and conceptualized the system. Atkinson, P., responsible for investigating Post Industrial Manufacturing Systems (PIMS), together with a group of experts, focused on the Project "The FutureFactories" used a CAD software to design a product that allowed the user to constantly see changes product without affecting but could decide the time to stop the mutation to create a single ask. After a 3D view of the piece, the product can be exported to rapid prototyping and later for their manufacture. The project raises questions, partly because of immersion in technologies that dominate the very processes of mediation. Secondly, the logic counter mass production, since the final product are the same, but are similar in shape, but noticeably different. This project led to another project called "Automake". It is a project where the technical factor is pre-programmed. The design of the blocks is set and you can join several blocks, create multiple modules with various mesh that define a shape, and in turn can be resized, rotated, cropped or aggregated. At the end are transformed into a 3D unit, sent to rapid proto-

typing and for the project Future factories. This means that the generative design responds to this new paradigm shift, making it an ongoing process that is constantly being validated, retention or discarding different options to archive specific aesthetic goals. The process itself, suggests a potentially changing and that is never done.
Another example is the work of Matteo Codignola University of Milan “Generative algorithms the engine for creativity: Digital Visions,” which demonstrates the application of a language parametric, generative representation to a representation that explores new ways reinterpretations of works, as the “Vase of Sunflowers” of Vincent Van Gogh. To create these forms uses interpretive parameters of shape, colour, movement, resulting in the original work reinterpreted. These experiments approach these tools of the arts, a first attempt to experience the creative act, exploring another dimension of the image and concept, as a demand for a revival of style through the 3D computer graphics.

Creativity in design parametric / generative
It is part of the process a number of features inherent to the practice. In fact this means is a representation / image of an object, which may be modular, variable, and generative automaton.

The designer / artist have to approach this through the creation of more complex shapes, more natural and more aesthetic. For this very question about the aesthetic and conceptual, it is crucial to establish a method to validate a systematic, encompassing the creative process for the designer. An important aspect of design parametric / generative is the articulation of individual perceptions that alter the mathematical probabilities and computational conditions; this because there is always an intention to make it happen. Even for the prospect of degenerative art, in which the object can be considered exploratory, interactive, experienced and reflected to the viewer, are really surprised by the unexpected happened, because in reality they are combinatorial procedures deliberately designed and executed with a specific intent which may not always match the expected. We can also associate the terminology of random gameplay in the digital age, since this is also not intentional. The game consists of the random groups of elements as words, music, shapes, colour palettes, photographs and videos, which are activated by a set of rules, defined in advance and are activated by a defined set of rules, and corresponding to each action of the player in accordance with the action of time and space. The same goes for artistic production in which the diversity of interpretations is part of the process and not questioned. We can associate the two variables as a generative system of order and randomness because both are part of the process. The traditional design has exactly this process. When the briefing is given to the designer, there are several ways to address the problem, but the answer selected results from the perception of the design that works the problem and seeks to respond to the complex and arbitrary.

The creativity in and of itself, it is difficult to define. C. W. Taylor identified 50 definitions for creativity, but then only one set is impossible to achieve a sufficiently illuminating. Authors such as H. Gardner and MA Boden, defend human-centered systems, but Csikszentmihalyi systematized a method in which the question does not focus on the question - what is creativity, but - where there is creativity? The Csikszentmihalyi model is developed under a system of dynamic behaviour of a creative system. This system does not focus in particular on individual creativity, but includes the social context of the individual. Csikszentmihalyi identified three important components of the creative system: the individual and his personal background, the field that reflects the society and the domain that reflects the culture. In conclusion, the interaction between these components results in production of something new. In detail, the bilateral interaction with the individual field, a transformation occurs in the information, in turn when the individual interacts bilaterally with the simulation results in the field of novelty and when the bilateral interaction between the field and the field results in the selection and implementation of the new. It is the individual’s behaviour and relationship with the culture / community that allows reflection and sharing of information in society for their validation as new to the culture, becoming a cycle. For the author it is clear that creativity is the interaction between the various elements and does not focus exclusively on the individual.

Creativity is in fact the action to respond to a problem, to which “I” find multiple solutions based on information, meaning that there is a great randomness in the connections. If the process to go through a basic co-creative and collaborative design of a parameterized mathematical point of view is the way that easily allows you to equate and project ideas. With the new paradigm of bidirectional communication, self-referral, networking systems, it becomes crucial to change the behaviour of static objects and questioning a new role for the design, more exploratory, more interactive and more customizable and co-creative. Using combinatorial and improvisation are two random logic as applied to computer media, constantly changing, but for the parametric design / generative method can be interactive or combinatorial or both.

According to the model Laurel Flying Webge model, the principle of sequence generative is completely open, ie, possible. But with the progressive course in a specific state, it is clear, in other words it is the probability. And last is finnalized by the decision previously made, which meets the need. (Laurel, 1991)

Conceptual Model - Generative Design DNA
Based on the previous model of Laurel we developed a conceptual model for the generative design principle that we call Generative Design DNA it represents a open sequence and evolutionary In this Model the core is the interaction, the stimulus is the need and the result is the Combinatory. The interaction is a result of immersion between generative mathematical order of the sequence

(programming) and chance (random). This process is not closed in itself but can be a constant-processing structure influencing procedurally according to the need of the individual.
The DNA sequence is validated by - Order, Chaos, Programming, Randomness.

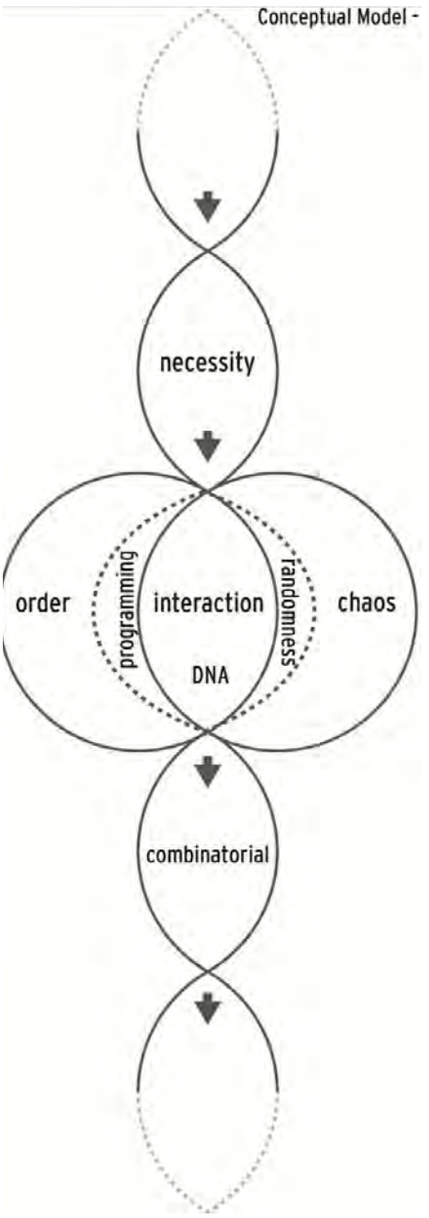

Figure 1 - Conceptual Model - Generative Design DNA
Source: The Authors

Co-creation in the design parametric / generative
The role of design is new rolls, rather than simply responding to consumer desires or the validation of a cooperative ideology, has to innovate technologically and become semiologically consumable. Systems parametric / generative methodology that can provide a concept allowing a more dynamic processes and with greater results, which in short is a paradigm shift from static artefacts.
The concept will change once the simplicity of the primacy of objects, are transformed into systems, processes with interactive components and invasive. They can even use interpretations of DNA to solve design problems using a single unit. The logic of a generative system is coupled to an evolutionary system, combinatorial and adaptive procedures that result in communication that adapts to the interpretation and replicates itself at the hearing. (fig. 1) Is a perspective of media macro or micro-or independently of its range, the objects are increasingly pervasive. These processes can be applied in various types of media such as dynamic images, animations, textures, shapes, music and typography. This new approach has brought a new approach with even more multicultural and approached the design of common sense.

"Ideas of evolution, breeding, cross-fertilization and adaptation may be Applied to the design process to generate alternative design practices or Applied to non-digital design" (McCormack, 2004)

The biologist Humberto Maturana rejects that if the design of a living system does not exist, then the question must have a larger design to include the nature of our existence and implies a rethinking of the epistemological and ethical relationship between humans and technology. (Maturana, 1997)

That's why a cultural system can be conceptually an ecosystem where we can identify variables according to fashions, trends and ideas that can hold hearings, becoming ecosystems with particular characteristics and recognizable by its significant communication or product. This evolution is clear in the new immersive digital media such as WWW, given its characteristic globalization and speed of information propagation, in which audiences are confronted with information increasingly ephemeral and adapting to this new behaviour.

The authors McCormack and Innocent, identify the properties that they consider to be directly linked with this methodology generative system:

- (Skill) Extended Data, complexes and aggregates, are increasingly used to understand behaviours and generate new interactions, which in turn add more sophistication and complexity, resulting in dynamic range resulting in an ecosystem.

- (Complexity) Increased involvement, adaptability and relationship between different organisms (inter-and infra species), resulting in a constantly changing ecosystem.

- (Skill) Reconfiguration of the forms and structures as appropriate (self-Maintain and self-repair), but ensuring a stable environment.

- (Skill) Generate new structures, behaviors, outcomes and relationships allows us to reconstruct properties resulting in new results, original and different (innovation). Artists and designers can take advantage of generative systems to generate ideas emerging. One problem is the issue of control because it depends on how the designer organizes and provides the results.

The production of objects in brand co-creation or with the participation of an end-user, is not new. In the seventies it was common printing articles, thereby allowing objects to be personalized. Today with new technologies for prototyping and digital manufacturing, you can expand the customization of products.

Celeste Soddu has developed projects in parametric design since 1989, still with a logic applies Metadesign and where artificial DNA. In his work the designer is the producer of an executable idea (algorithmic code) and the consumer is choosing one of the possibilities. The creative process is the set of base object that will allow the generation to change the variables of the client. For other developments could result in the exploration of ways to full participation in the creative process. In this process generative model, the subject based on modified and may be different if the designer wishes, since it is the one who has access to database parameterised. (Soddu 1998)

Since the project developed by the authors McCormack and Innocent, reinforces the idea of do it yourself (DIY) but from a collaborative perspective, exploratory and random for the parameterization of these inputs for generative design. The project consists of three experiments carried out on objects of paper provided with a logic of user interface, connected to readers that transform sensory information into digital three-dimensional shapes, the resulting behaviour of the paper submitted to variables such as sound, vibration or Light. These forms are then made available in 3D format (mesh) and 2D to be flattened and coated (skin) for cutting. These projects feature a different approach that demonstrates the level of immersion systems, allowing more designers to use software that complement and introduce the co-participation of other peripherals. What can be seen in the present examples is an increased accessibility to software platforms and co-creation, which allows greater freedom for consumer participation. But these platforms are still closer to another factor, the role of the consumer as creator and producer, changing the centralization of the designer's creative act.

"(…) consumers should realize that they are important developers of really novel products and services. (…) consumers should realize that it is getting progressively easier to design and make what they want for themselves. Maybe it looked too difficult to design what you wanted the last time you needed something not on market. But if you look again, you may find it much easier. The cost of computer based design tools is rapidly drooping, and today many adequate ones are available on the Web at zero cost. (…) it is getting progressively easier to build what you design. (…) Different companies specialize in different computerized production technologies, ranging from laser cutting to 3-D printing. Today the production process you need is available to individual consumers to make even a single copy of a part." (Hippel et al (2011)

Project Caldas da Rainha

We present here a pilot project that identifies a possible decoder for encoding symbolic and significant elements to be used as a parameterization referential, it is proposed to develop a procedure to explore the ways interpreted forms with the aim of enhancing the process of creativity in Design , making it more experiential, exploitative and interventionist forms for innovation.

Also to test the link between the process design and co-creation process applied to the territories, where the aim is to create a brand identity communication of Caldas da Rainha, was developed a conceptual model with the use of Parameterized Design and Generative Design technologies to translate the values of DNA into interactive and relational points. These indicators result from the field application of a co creative methodology, with the participation of stakeholders representing the territory, called IDEAS(R)EVOLUTION that is based on Design Thinking and Creative intelligence knowledge and science(Mateus et al, 2011).

The identified values through DNA process (Gomes et all, 2009) will be the influences to the creative stakeholders that will participate in a workshop where this inputs, that represents the actives and assets of the region, will be shaped in clay. Our Aim is to reach several formal languages which were inspired by the previously identified values. This is the co-creative Humanware stage (fig.2).

Later these tridimensional shapes are parameterized in a virtual environment using different software's and tools such as 3D scanners, by re-creating and subtracting different surfaces, forms from the clay objects. After, they will be transformed into basic parametric design elements that will be the foundational signs used to the next interactive stage.
These design elements will then be processed in order to become mutable and generative. In this stage our goal is to design the interface were we will put this elements available for all community members interaction on the institutional communication platforms of the Brand..

By monitoring, through a specific parameterization of the generative design integrated tools, all possible interactions with the design elements on the different platforms, we aim to:
1 –To identify and analyse the co-created variables regarding the possibilities of the interaction available to the stakeholders, meaning to understand the creations made by the users.
2 – To identify the constants and the preferences, meaning to more used design elements by user's interaction,

From the analyses of the previous stage, the experimental project aims to provide a daily recombination of the design elements into a different form for the visual brand iconic language. All of these processes will be technological based.

The final stage of this experimental model is to apply the recombined daily brand icon on all digital brand communication supports, such as: website, social networks, digital outdoors, mobile platforms and also on all internal departments digital based supports such as: cloud based brand elements storage were the daily brand icon could be downloaded.

The main goal of all this process it's to create a first participative brand program on real time supports and interaction.

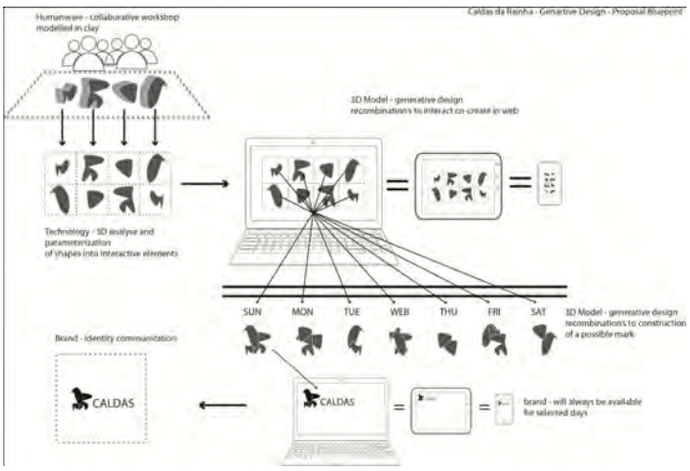

Figure 2 - Caldas da Rainha - Generative Design - Proposal Blueprint
Source: The Authors

Conclusion

The project identified herein results from the literature review that validated the development of the doctoral thesis project that is on-going. This proposal for the future focuses on the interpretive study of aesthetic and symbolic of Portugal, through a methodology composed of a matrix developed from a qualitative and quantitative study, interpretation of different means and media to characterise cultural identity elements of Portugal in the Post on April 25. This project focuses in particular on the public communication demands used in the promotion of Portuguese identity and analyse the contribution and history of the building design in Portugal. The parametric design, it will be a means to develop and explore the application of the matrix, with decompositions of shapes, colours, textures through the data collected and made available through a generative plugin to be explored by designers. This new territory is an exponentially globalization means for the exploration of ways and in new product design. The variety of results and applied a validation of their behaviour in terms of materials, production and performance is substantially enhanced in view of traditional processes. Thus, the trial of the signs identified in previous stages of the project can quickly identify constraints, but which can quickly be changed and developed as a variable product. This means that the subject of this thesis is the sharing of information to disseminate these values identified through a parametric approach and accessible to the community. In summary, the design is still in a stage of development and testing, the first phase of inspiration literature, for the development of methods. Right now develop the first pilot tests for qualitative analysis, to define the array analysis and further processing for surveys. The variable is the use of digital information in a digital platform for simplifying the process and diversity, i.e., a parameterized system design and generative.

Future Proposals

Proposals for the future are running more pilot projects, applied to local context and business, to validate the process. The rate at which these resources are developed, it is anticipated the need for constant updating of the methodology and its conceptual frameworks, technological and creative co. It will be of interest to the submission of proposals for possible processes and providing a platform to exchange experiences with other designers as an archive of the possible variables resulting from the experiences.

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Creative industries for the sustainable growth in Europe. The best practice case of the European Project "CCALPS"

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Abstract
Sustainability and Creativity are modern levers for sustainable growth, considered fundamental assets to enable behavioural changes and innovation processes. Cultural and creative industries, as Europe 2020 (http://ec.europa.eu/europe2020/index_en.htm) and Creative Industries Green Paper recommend (http://ec.europa.eu/culture/our-policy-development/doc/GreenPaper_creative_industries_en.pdf), have a central role for growth and competitiveness, because of their capacity to improve innovation, employment and interconnection in industrial sectors. This paper wants to present this general scenario with the contribution of the European Project called "CCALPS Creative Companies in Alpine Space" developed by Lombardy Region and Milan Polythecnic with other 8 partners in Europe (Piedmont Region, CCI de Lyon, CCI NCA, Université de Haute Alsace, MFG Baden Würtemberg, Innovations &Technologie transfer Salzburg GmbH, Agence d'urbanisme Slovénie, SUPSI University). The project put creative industries (CCI) at the center of policy recommendations and innovative pilot actions (Creative Camps) in Europe.

KEYWORDS: creative companies, creative camp, European project, hub

Introduction
Sustainability and creativity are two important factors in innovation processes. Sustainability is a key social issue, seen as behavioural change and technological/technical improvement. Creativity is a modern lever to sustainable growth, considered a fundamental asset to enable a behavioural change. Social and economical development aimed at sustainability values highly connectivity: locally it links material and immaterial resources to all of the actors of a territory; globally it considers the influence of other cultures and accepts new knowledge to establish a strategic vision.

A socio-economical sustainable growth is a strategic objective to increase the competitiveness of the Europe (the central area in particular). In this territory the production systems is economically strong, because characterized by areas of excellence and important clusters. In this context there is an increasing number of SMEs aiming at addressing a sustainable change by renewing their approach to innovation, using knowledge and creativity as strategic levers. The emergence of creative industries is therefore related to the rise of cultural industries, the significance of knowledge to all aspects of economic production, distribution and consumption, and the growing importance of the services sector. It is linked to the dynamics of the 'new economy', whose form is increasingly informational, global and networked (Castells, 2000). Cultural processes such as design and signification impact upon all aspects of everyday life, particularly those related to the consumption of commodities. Culture is something that permeates everything from the design of urban spaces, offices, means of transport and communication (we think about the design of cars or mobile phones), the ways in which clothing signifies an identity to both its users and those who see the user, and the promotional strategies of corporations and, indeed, governments in an era of 'promotional culture' and electronic commerce. Similarly, creativity does not simply reside in the arts or media industries, but is a central- and increasingly important- input into all sectors where design and content form the basis of competitive advantage in global economic markets (Flew, 2002).

These new trends for the European economic growth in the field of cultural and creative industries collides with the elements of fragility of the traditional system of SMEs: a population mainly made of small firms – encountering major obstacles in R&D investment, a lack of medium size significant firms, a low rate of internationalization for small companies, a reluctance of companies to network with universities and research centers, a poorly developed entrepreneurial and managerial culture – especially in small businesses. These structural weaknesses slow down R&TD and market innovation in all regions. Nevertheless these are essential elements to ensure competitiveness in global markets. To promote a competitive growth in the central area of Europe for the traditional sectors (furniture, mechanics, etc) and for new sectors (ICT, biotechnologies, renewable energy sector etc.) it is important to bet on the connection with creative industries, because of their capability to trigger transformation in a territory. The growth of new creative companies could help develop networking skills and pathways to new opportunities. Collaboration can promote innovation through development of new product/service systems and by focusing on creativity, design, sustainability, and enhancement of R&D and innovation processes. The development of creative companies and their links to SMEs could enhance local economies through service development, that is increasingly a central instrument for Europe Space.

New value for the economic growth in the European Regions
For Europe and other parts of the world, the rapid roll-out of new technologies and increased globalization has meant a striking shift away from traditional manufacturing towards services and innovation. Factory floors are progressively being replaced by creative communities whose raw material is their ability to imagine, create and innovate. In this new digital economy, immaterial value increasingly determines material value, as consumers are looking for new and enriching "experiences". The ability to

create social experiences and networking is now a factor of competitiveness.

If Europe wants to remain competitive in this changing global environment, it needs to put in place the right conditions for creativity and innovation to flourish in a new entrepreneurial culture (EU COM 2010).

This opportunity could be for Europe's cultural and creative industries a real potential occasion to respond to these challenges thereby contributing to the Europe 2020 (EU COM (2010) 2020) strategy and some of its flagship initiatives such as the Innovation Union, the Digital Agenda, tackling climate change, the Agenda for new skills and new jobs or an industrial policy for the globalization era. These challenges need to open the possibility to value of culture and creative industries to Europe's economy. Until recently, the two essential parameters of competition for the European SMEs were price and technology. But today a good product can easily be copied at a lower cost. The first answer to this situation was to shift a significant share of value-added and labour-intensive production activity abroad, allowing for the production of the same products at lower costs. But today the most important empowerment strategy for the European economy is based on the optimal use of "creativity". What increasingly matters today, and constitutes a distinctive competition parameter, lies in the immaterial dimension generated by creative people, skills, ideas and processes; in other terms, creativity.

The cultural sector, its entrepreneurs, its employees and artists which are the main sources of this creativity, therefore deserve closer attention and initiatives and projects that enhance the impact on SMEs (KEA 2009).

Creative and cultural industries

The contribution of culture to the economy has gradually been acknowledged, in particular with the development of the cultural industries. Culture contributes directly to the economy as it provides products for consumption, namely the cultural goods and services embodied in books, films, music sound recordings, concerts, etc. It is also increasingly acknowledged that the benefits culture brings to European economies are wider than the mere consumption of cultural goods: culture is indirectly used by many non-cultural economic sectors as a source of innovation. "Creativity" is a complex process of innovation mixing several dimensions such as technology, science, management, and culture. Culture provides tangible as well as intangible assets consisting of artistic heritage, processes, references and skills that interact with other skills and resources to foster innovation. The importance of culture in triggering innovation is connected with the question "should we be creating a Europe of art, or a Europe of science?" the European Commission's President recently stated:

> *"Certainly both are important, and particularly since the Renaissance, Europe has excelled at both. Constant innovation in art and science has helped Europe to enjoy rapid development and unparalleled cultural wealth (…) For Europe it must never be a question of art or science, but (…) art and science are the legs on which Europe stands" (Barroso, 2006)*

Culture and creativity, that are the strategic resource for creative and cultural industries (CCI) on which to base your business model, combining technology and the bent for innovation are therefore for Europe the new assets on which to build a new model of economic and social sustainable growth.

"Creative and cultural industries" is a quite recent category in academic, policy and industry discourse. It can claim to capture significant 'new economy' enterprise dynamics that such terms as 'the arts,' 'media' and 'cultural industries' do not. An early recognition of the distinct contribution of the creative industries came in the Creative Industries Task Force Mapping Document (CITF (1998) 2001) in the UK. This document defined creative industries as activities which have their origin in individual creativity, skill and talent and which have the potential for wealth and job creation through generation and exploitation of intellectual property. It mapped into the creative industries sector the following activities: Advertising, Architecture, Arts and Antique Markets, Crafts, Design, Designer Fashion, Film, Interactive Leisure Software, Music, Television and Radio, Performing Arts, Publishing and Software. This eclectic list includes the resolutely analogue (arts, crafts, antiques, architecture), established commercial business sectors (TV, radio, film) as well as all-digital new economy sectors (software, interactive leisure software) (Cunningham 2011).

But the European Commission through a Green Paper on Creative and Cultural Industries has adopted a working definitions of Cultural and Creative industries that all Europe can use as a first level of work in this field:

> *"Cultural industries" are those industries producing and distributing goods or services which at the time they are developed are considered to have a specific attribute, use or purpose which embodies or conveys cultural expressions, irrespective of the commercial value they may have. Besides the traditional arts sectors (performing arts, visual arts, cultural heritage – including the public sector), they include film, DVD and video, television and radio, video games, new media, music, books and press. This concept is defined in relation to cultural expressions in the context of the 2005 UNESCO Convention on the protection and promotion of the diversity of cultural expressions. "Creative industries" are those industries which use culture as an input and have a cultural dimension, although their outputs are mainly functional. They include architecture and design, which integrate creative elements into wider processes, as well as subsectors such as graphic design, fashion design or advertising. At a more peripheral level, many other industries rely on content production for their own development and are therefore to some extent interdependent with CCIs. They include among others tourism and the new technologies sector.*

This new category of actors in the match of economic growth for the European countries need opportunities in order to offer their capability to produce innovative solutions for the exit from crisis:

- Easier access to funding and the right mix of skills;

- Help in the local and regional environment as to improve a global presence, through increased exchange and mobility;

- Facilitate the transition to a creative economy by catalyzing the spillover effects of CCIs on a wide range of economic and social contexts;

- To value creativity in terms of economic dimension and in a measurable way for entrepreneurs in traditional sectors.

These needs and this new European guideline have been the starting point of the work done by the Lombardy Region, Milan Polytechnic and other European partners for the production of a transnational project funded at the end of 2011 on a call of the Interreg Programme: CCAlps Creative Companies in Alpine space.

CCALPS European Project

CCALPS – Creative Companies in Alpine Space is a project co-financed by the European Union's Alpine Space Programme , focusing on the competitiveness and attractiveness of Alpine Space economies. The main idea of the project is that to promote a competitive growth in the Alpine area it is important to bet on creative industries, because of their capability to trigger transformation in a territory.

The project, which started in October 2011 and will be completed in July 2014, wants to create an international network where Creative and Cultural Enterprises can fulfill their highest potential with the help of support networks (such as incubators, institutions, universities, research centres) and connect with each other and their markets, also in view of developing new products and services to support the competitiveness of the European economy. The main objective of the project is therefore to create a "metacluster" in the Alps, that puts creativity and innovation at the centre and that is able to focus on specific issues and opportunities for local and transnational development. The project aim at increasing the participation of Creative Industries in the socio-economical development of the area. Moreover the project will connect and create collaboration between Creative Industries, SMEs and R&TD institutions, to promote scientific research and to build knowledge exchange and technology transfer tools, but still using a bottom up approach (typical in collaborative networks of creative industries). This involves at the same level research centers, universities and SMEs, that come together to activate innovative pilot projects (that we called Creative Camps). Finally it wants to support the acquisition of new skills for the creative industries, the promotion of SMEs services and their improvement by identifying technological and financial needs, the raising of awareness in policy makers and the promotion of rules/regulations that capitalize on these experiences.

Overall this intervention aims at answering few overarching objectives:

- Strengthening the presence of the Creative Industries in the Alpine Space;

- Encouraging the development of innovation through the connection between creative industries, SMEs, research centers and other important actors in the territory; improving the accessibility to knowledge resources and research services within the Alpine Space;

- Promoting a sustainable development by improving the immaterial system offer and connecting it to creativity and research;

- Promoting strategic partnerships including relevant stakeholders for addressing the main challenges of territorial development.

The project will connect and create collaboration between CCIs (cultural and creative industries), carriers of ideas, producers, policy makers and universities, for promoting and realizing innovative pilot projects (Creative Camp) and new policies for their growth.

The Alpine Area, located in the very heart of Europe, feels a particular need to create and strengthen its network of urban and peripheral areas, in order to take its creativity to a new level. Creative and Cultural Enterprises are very well equipped to make a significant contribution to the economy by both fostering innovation and driving creativity and inventiveness.

The project aims to achieve these objectives trough three particular actions:

- First the creation of a network of "HUB", or rather structures that are present in the territories partners of the project that are working for the development of CCIs and for their support;

- Second the creation of a virtual platform that will connect HUBs, CCIs, SMEs, policy makers and research centers in the Alpine Space for the promotion of the innovation, the transnational collaboration and the diffusion of best practice cases regarding policy support for the growth of CCIs;

- Third the development of seven pilot actions called "Creative Camp" where we will develop international collaborative projects between CCIs, SMEs and research centers.

The project is structured in eight work packages that combines on field research and action research activities with real impact in the territories and in the competitiveness of CCIs and SMEs involved.

Transnational approach

The evolution caused by the emergence of a knowledge economy affects SMEs particularly. Networking phenomena, due to hyper-connection possibilities, are an interesting challenge for these companies, that are consequently looking for new ways to engage in collaborations. Economical growth requires an open and collaborative attitude as well as rethinking governance structures, innovation models, production cycles. To be globally competitive, SMEs need strong international openness and the ability to act in network-like configurations.

CCI's need special help to establish such connections and promote their activities outside their area. The transnational cluster that this project aims at establishing wants to facilitate the dialogue between industries inside and outside the Alps, supporting knowledge exchange and networking, educating to the right tools for marketing studies and for building a shared identity.

Moreover relationships and interdependencies will be fostered between cities and regions, creative industries and other sectors. Overall this will also help promote the Alpine Space as an attractive living and working area.
Methodological approach

The approach of the project is multi-level, constantly confronting a macro and a micro perspective. The macro level is addressed through a virtual platform. This will enhance the possibilities of relationship building and expand the exchange of knowledge to reach easily all of the partners and the companies in the Alpine area (and in the future it could be a European point of reference in this field).

The micro level will be addressed in a twofold manner. Hubs will be established (or identified) in each of the geographical areas involved. These will be developed as service centers where creative industries, SMEs, research centers, institutions and citizens can meet and share ideas to find opportunities for collaboration and innovation. These centers will be the points of a flexible and stable network between CCIs, SMEs, research centers and policy makers. The network of HUBs will be tested by developing local pilot projects (Creative Camps), that will also generate best practices and the beginning of an economical growth in the Alpine Space.

Events will be organized both on a transnational and local level, to disseminate the results of projects as well as to launch new opportunities.

The idea of "HUB"

Charles Landry (2000) has drawn attention to the significance of a creative miliex to the development of creativity in modern cities and regions, which he defined as a combination of hard infrastructure, or the network of building and institutions that constitute a city or a region, and soft infrastructure, defined as "the system of associative structures and social networks, connections and human interactions, that underpins and encourages the flow of ideas between individuals and institutions" (Landry, 2000).

Just this idea of "hard and soft infrastructure" is based on the concept of hub and network of hubs that CCAlps wants to explore and develop. The definition of hubs is quite controversial because there isn't a unique and shared meaning. In particular, someone talked about "hub" in the creativity and knowledge economy, identifying the cities themselves as real incubators and attractors of the "creative class" that is composed of creative and knowledge workers. Increasingly we however talk of hub such as physical or virtual place. In fact the main difference between a hub and a cluster and between a hub and incubator lies in a physical location for work activities. The hub allows its users to access information about a specific sector and eventually to market opportunities. In its literal definition, the hub is the administrative center of a complex of activities, it is the pivot of a network of different realities that thanks to the support of the hub can run individually. In general HUB is identified with specific activities in the field of the creative and knowledge economy, and the reason is related to the youth of the creativity sectors.

To try to define the idea of HUB in the context of CCALPS we tried to map the characteristics and situations that seem like similar the concept of hub linked the creative economy. We have identified different types of structures:

- Incubator: a business incubator is an organization that support the creation of new businesses by providing them a wide range of integrated support services that include physical incubator space, support services to the development of business and opportunities for integration and networking (definition of the European Community)

- Service center: it can be a public or a private structure that provides services for professionals or companies. The services can be: orientering for job, advice on law and roules, specific training activities, advice in technical area, support in the fund raising activities, promotion of territorial activities and specificity, promotion of specific activities in collaboration with agencies and even private facilities;

- Virtual platform is an online space (site or blog in general) on which companies or professionals can find information, find answers to specific questions, related to its field of work and possibly to share competences and work;

- Development agency: it is the union of different public and private actors, that aims to promote the development of the territory in which grows up.

- Co-working center: It is a physical space t where people go to work for the time they need and where they can find shared tools. Members may have equipment and technological infrastructure (desk, internet, etc..).

- Cluster: it is a group of companies, businesses and institutions connected and geographically close that has reached a sufficient scale to develop expertise, services, resources, suppliers and know how.

- District: the district is an industrial group of companies, typically SMEs, that are placed in a limited geographical area, specialized in one or more phases of a production process and integrated through a network of economic and social relationship.

This typological classification were then associated with the filter of observation that were used to map European and international structures that already provide services and activities for creative businesses. The filters of observation are:

- The relationship with the CCI;

- The relationship with the territory;

- Activities and services offered.

Respect to the activities and services we therefore have defined a range of possible categories of services:

- Physical space: space for co-working, office equipment, conference space etc.;

- Virtual space: the web site where companies have a dedicated space;

- Promotion / Visibility: promotion through marketing activities and B2B events;

- Tutoring / Training: continuous learning, lectures, seminars etc.;

- Network: creating events, providing an extensive network of contacts at international level;

- Prototyping - technologies: availability of rapid prototyping technologies, 3d printing, analysis and testing, production technologies shared etc.;

- Information: about calls, conferences and initiatives useful for companies and enterprises participating in the network;

- Know how: orienteering desk, business advise (investors, patents, intellectual property protection, etc..), availability of data and best practices etc.;

- R & D: research activities within the hub (or incubator, or agency, etc..), involvement in research projects and publication of results;

- Originality: special distinguishing elements of the hub that not are in the previous list.

Based on the presence or absence of services activities listed above we have mapped 100 cases in Europe and internationally in order to verify which of them represents our idea of HUB.

This activity is the first step for the definition of a reference model of HUB for the promotion and the development of creative companies in Europe. On the basis of this activity of mapping it will be realized a common handbook that will include guidelines useful for all the States partner in the project (and that will be share internationally after the end of the project) for the start up of the hubs. The guidelines will include: service typologies, organization and business model (for the hub and the local network of hubs), guidelines for the start-up and the realization of the main activities called “Creative Camp”. Creative Camp will actually be the innovative model for pilot activities that all the hubs can use to connect CCIs, SMEs, policy makers and research centers in the international framework of European innovation and growth.

Creative Camp: a new model of pilot action for the empowerment of creative companies

In the general scenario of CCAlps, all the partner involved will organize a Creative Camp in the own State (France, Austria, Germany, Slovenia, Italy). But what is a Creative Camp? It is the main important activity of the CCAlps project, because It represents the phase with concrete actions with real impacts in the territories involved in the project.

The 7 Creative Camps (in Nice, Lyon, Salzburg, Milan, Turin, Stuttgart, Ljubljana) will create the connection trough different subjects in the field of international actions: creative companies, SMEs, universities and policy makers with the aim of developing innovative projects focus on specific issues. All the Creative Camps will have a common organizational pattern, which will be used by every partner for his local activities. The test on the first creative camp will be the first activity for the start up of the hubs focus on creative and cultural industries.

The methodology set up for the development of the creative camps is composed of eight steps of work:
PLANNING: in this phase it will be defined criteria for selection and scouting of creative enterprises. An open call will be presented on the web and media tools, to directly involve CCIs in the camps;

BRIEF describing the content of the camps (which will be different in each region): each partner will set up a document containing his project brief, with the scenario topic and sub topics, the aims, the results and the participants provided;

SHARING of the brief among the partners: each partner will present his brief to the other partners, making sure that at least a CCI from his territory can participate to the other partners’ camps;

SELECTION: each partner will select CCIs and the other

subjects to involve, who took part of the open call: SMEs, policy makers, research centers and stakeholders;

CAMP MANAGEMENT: definition of location, material, agenda and creation of a team of experts for the realization of the workshop;

REALIZATION: the realization phase (workshop activity) will last seven days for each camp. These seven camps won't be realized simultaneously and each partner can choose one of the present modalities: a) seven days in a row, b) seven work days distributed in more weeks (in any case they all will be closed in one month). The period of time in which the creative camps can be realized is from April 2013 to September 2013. Furthermore the camp will be carried out following this agenda:

- One/two days of seminars and deepening on the brief and on the main topic of each camp,
- Workshops testing the structure and service plan of each hub,
- Summarizing the results of the workshop;

DEVELOPMENT OF COLLABORATIVE PROJECTS: after the workshop activity will be a development phase where each hub will support collaborative projects between CCIs and SMEs involved in the camp. In this phase there will be an activity of results implementation for the realization of innovative services, strategies or products;
DISSEMINATION: a transnational event for the project knowledge and communication activities, with involvement of the press. The results will be collected in a report, which will be the contribution for the policy recommendations.
Each camp will hold the selected CCIs related to the country involved, together with some CCIs coming from other partners' countries, according to the similarity of fields covered in the camp.

Based on the same methodology and tools shared each partner will carry out in its territory a Creative Camp, open to an international dimension thanks the presence of creative companies from all States involved in the project CCALPS. In 2013, we will realize in 7 European cities as many Creative Camp each focused on a theme well-defined:

- Lyon: "Scenario Building" in the fields of fashion, film and audio-visual and urban design

- Ljubljana: New strategies for the design (service design, experience design, informational design, etc..)

- Milan: New design strategies, new products and services (also linked to areas of multimedia, fashion and cultural) for Expo 2015

- Nice: Valuing the film and audiovisual industry, to promote the French Riviera as a shooting area

- Salzburg: Think Tank Design & Media

- Stuttgart: Valuing start-up business in the field of creative enterprises (with a focus on video game)

- Turin: Innovative systems for restoration, green building and energy saving for the promotion of cultural heritage.

Conclusion

At the end of 2013, after the pilot actions, we could define a methodology with the synthesis of the results and the projects developed during the collaborative projects between CCIs, SMEs, policy makers and research centers. It could be the first point for an international discussion in the field of empowerment of creative companies and their support to traditional sectors and new economy. The project would support the relationship between creative companies, SME's and all the stakeholders involved in the innovation processes. How can we support creative companies in their work for the development of "new sustainable ideas"? Sometimes when a creative company has a "big idea" it doesn't find a SME's willing to develop. The project would create tools and services that can support this relation in the general framework of sustainability.

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Design led innovation in a developing economy

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Abstract
Design is increasingly seen as a transformational power and basis for innovation. Design methods, design attitudes and approaches are being looked upon as tools to create and deliver sustained value. Commercially motivated Businesses see design as source of competitive advantage to innovate; socially motivated organisations are increasingly using design thinking as holistic problem solving tool and governments are exploring how design make their systems and process effective.

All the three sectors are important constituents of a nation's economy. However, the challenges and opportunities of developing nation are different from those of a developed economy. Therefore, even though design is already making inroads in the developing economies, a serious thought needs to be given to what role should design play in such scenario.

This paper explores the rationale and objectives of developing nation's design policies, the way design is adopted by the business organisations and the use of design in the social sector. The paper further discusses the capabilities approach and the concept of external capabilities. A framework based on this approach is proposed. This framework outlines the relationship of design with the constituents of the economy. Separate recommendations for academic institution in developing nations are proposed.

KEYWORDS: design & development, developing nations, capabilities approach

Introduction
That which exists may be transformed; What is non-existent has boundless uses-LAO-TSE.

All men are designers. All that we do, almost all the time, is design, for design is basic to all human activity. The planning and patterning of any act towards a desired, foreseeable end constitutes the design process. Any attempt to separate design, to make it a thing-by-itself, works counter to the inherent value, of design as the primary underlying matrix of life (Papnek, 1972). After so many years the words above are still relevant and underline the need to look at what role design has to play in society. Businesses all around the globe are showing interest in Design. There are attempts to integrate design in business and in some cases the organisations have benefitted by making use of design. But Design has lost much in this deal with business. Moreover, with rhetoric starting from likes of "good design is good business" (Watson , 1950) to the more recent one like "design as a source of competitive advantage"(Martin, 2009) Design is truly reduced to a slave as stated by Peter Merholz (2009) in " Design thinking is trotted out as a salve for businesses who need help with innovation".

Any domain that interfaces with Business gives away to the structure and "process orientedness" of Business. Whether it is Research, Quality or CSR, all gets "templatised" into a set of steps that can be repeated over and again to achieve the desired objectives. This attribute gives business its key characteristics of scalability, reliability and predictability.

Since the industrially developed nations were the ones to identify Design as a means to improve the nation competitiveness, a majority of design policies are industry-focussed. Following the footsteps of industrially developed nations, the developing nations also joined the bandwagon and started formulating their design policies which had little or none relevance to actual needs of the nations. There is quite an inspiring academic work that proposed a developmentalist role of Design for a developing nation right from Papnek (1972), Gui Bonsiepe (1991), H. Alpay Er (1997) and Amir Sulfikar (2004)

An important milestone about developmentalist role of design was the publication of the Ahmedabad Declaration in 1979. The declaration was result of the joint meeting of Meeting the United Nations Industrial Development Organisation (UNIDO) and the International Council of Societies of Industrial Design (ICSID) for the Promotion of Design in Developing Countries. The Declaration recommended promotion of craft skills for economic advantage as well as the integration of contemporary technology. However, after three decades the situation at the ground level has not changed.

> *Design has emerged as a high-profile activity, indispensable to quality in sophisticated sectors of manufacture and communication. Yet the original inspiration for bringing design to this land—to lift the quality of life for millions living at the margins of existence in villages and urban slums—remains virtually untouched (H. Alpay Er 1997)*

Governments across the globe have paid only lip service to the real problems of the developing nations. Design is reduced to an activity that is be practised in the sophisticated sectors of Industry and is centred on promoting consumerism in rich and high-income groups.

Given below are some observations about the Design policies around the world.

- All leading design nations do not necessarily have a national design policy

- An increasing number of countries are developing or considering national design policies

- Design policy is more and more becoming an

integrated part of the industrial policy to promote competitiveness.

- Awareness raising and design promotion to a broad audience is the most basic level of design policy and generally the first initiative that a government engages in to support design.

- At the next level of design policy, design support is targeted at design educations and design research institutions.

- At the same level of design policy, design support is targeted at companies (usually SMEs).

- The design policy or strategy is usually linked to a greater vision.

- Most of the design schools are still focused on traditional design disciplines.

Contribution to the development process of developing nations in terms of reducing poverty and satisfying the basic needs of the poor masses has not been the focus of design. Design is still largely used by Industry for commercial interests. Hence, in terms of its principal aim, industrial design in developing nations is no different from design in the industrialized market economies. (H. Alpay Er, 1997)

In such a bleak situation the social has shown a possibility of Design being used to its optimum potential. Many initiatives by organisations and associations like IDEO, DESIS, Grameen Creative Lab etc and academic institutions like Stanford D-School and other leading Design institutes in developing nations(NID-India, Federal University of Rio de Janeiro, University of São Paulo-Brazil, Jiangnan University, Tongji University, Tsinghua University China etc) are addressing the issues in developing nations. Sectors like healthcare, sanitation, agriculture, community development, sustainability, financial inclusion and education are some of the areas that get the ample attention and funding.

However, Design for social change requires long term initiatives. Design firms from the developed nations who are looking for faster turn around and quick results are often disappointed and can't sustain the extreme social and political and cultural conditions of developing nations. Also humanitarian design is often equated with design imperialism which lacks the participatory and co-creation approaches. Because of this serious lack the pilot projects that show success in short run can't sustain the test of time and ever changing dynamic conditions in developing nation.

With all paths of realising the goal of design for development apparently meeting a dead end, again going back to Papnek's thought of "What is non-existent has boundless uses" needs to be revisited. Good design is as little design as possible. (Dieter Rams, 1980). This non-existence of Design is possible if design is looked upon as an inherent capability of an Individual. Since this is inherent, no attempt will be needed to separate Design as an activity and hence its intrinsic value will be preserved.

Design and Development

The conventional indicators of development like income, consumption, asset ownership etc have undergone a sea change to reflect the changing dimensions of development. UNDP has also adopted the Human Development Index as a more holistic indicator of development of a nation. Hence taking capability approach for Design will bring focus on "human development" and not only on economic development.

Andy Dong (2008) in his paper The Policy of Design: A Capabilities Approach has proposed a capability set for design as the foundation for ethical principles in design policy. However, the paper dealt with urban spaces and architecture and did not consider design in its entirety. To extend upon this work the concept of external capabilities is introduced. The external capabilities concept enables to place design as function of external and internal capabilities of person. This placement does away the need of separating the design activity, making it non-existent and making it boundlessly useful.

The Capabilities Approach

The capabilities approach; developed primarily by the economist Amartya Sen and legal ethics philosopher Martha Nussbaum evaluates well being in terms of person's ability to achieve certain outcomes, doings and beings. It measures human development by the freedom, which is the "capabilities" of people to lead the kind of life that they value.

The Functionings is the key concept and consist of "beings and doings" of a person. So, living is essentially a set of interrelated functionings. Therefore, being healthy, having a good job, being safe, being happy, having self-respect, and being calm are all examples of functionings.

Sen (1999) defines a capability as a freedom that enables one to choose a lifestyle one wants to live. Capabilities are a person's real freedoms or opportunities to achieve functionings. For example, travelling is a functioning; the real opportunity to travel is the corresponding capability. Hence, capabilities denote a person's opportunity and ability to generate valuable outcomes, taking into account relevant personal characteristics and external factors.

Going by one the definition of Design; Design is devising courses of action aimed at changing existing situations into preferred ones." by Herbert Simon we can now place design in context of the capabilities approach. The ecosystem in which Design exists is a result of many factors, of which the country's Design Policy, adoption of Design by business and by the social sector are the most important ones. But as seen in the section above, all the

three sectors are struggling to embed to design in their systems and process. Each sector has its own limitations which stops design from realising its full potential.

Since much of the action takes place in the developed nations, developing nations who simply follow the same path are bound to fail in marrying design and development. To add to the damage the developing nations have their own set of problems like corruption, land reforms, terrorism, inflation that make it even more important to take a very different approach towards Design.

However, most of the developing nations especially the Asian and Latin American ones have evolved from some of the oldest civilisations of the world. This long spanned evolution and constant adaption to the changing environment has made these nations resilient. This has also created specific capabilities in the people of these nations to come up with ingenious solutions to the problems. Centuries of validation and refinement in these solutions has ingrained this knowledge, skill and attitude in the lifestyles of the people. It is these states of beings and doings has enabled these people to survive through centuries and constantly devise courses of action to change existing situations into preferred ones. This is close to Gorb and Dumas (1987) termed Silent Design and is one aspect that is often overlooked in the ongoing discourse of Design. Silent Design is one such casualty of the deal between design and business. Silent Design is high jacked by the Business thinking and only identified as an activity that non-designers (people from marketing, production, service etc) do within an organisation. No doubt that Silent design is unheard of in the discussion of Design and Development. A vast literature exists on how this traditional knowledge can be leveraged for solving the problems of developing world. Many domains like Healthcare, Sustainability, Agriculture etc have successfully used traditional practices and organic farming, Ayurveda, Yoga etc are testimony of this. John Thackara (2008) in his post "We Are All Emerging Economies Now" quotes some examples that demonstrate this very fact. One example that makes the point very clear is that of how in Bengaluroo, India, chickens are used to clean a locally grown grain ragi. A wide patch of ragi is spread thinly over the road in a neat circle. Chickens are allowed to eat up the grain. Instead of feeding the grain in a bowl the chickens are fed in such manner because the chickens are eat tiny maggots, smaller than human eyes can see, which need to be removed from the grain before it can be stored. It's a smart, low-tech solution to a practical issue faced by farmers everywhere.

There are numerous examples of how problems are solved by common people around the world. But none of the design policies of the developing nations acknowledge this. As a result this huge contribution to the economy goes unrecognised and unsung.

> *Half the world's economy is informal — and that proportion is growing. And yet every time a new wave of development is unleashed, the informal economy is either ignored by planners or, if the poor get in the way, they are routinely swept aside, along with the ways of doing things that have served people well for generations. (Thackara 2008)*

Capabilities Approach, External Capabilities and Design Policy.

As a basis for design policy, the capabilities approach would be focussed on what people need to realise outcomes that they value.

For the purpose of discussion let us consider two capabilities that are often discussed in the context of capabilities approach. The two capabilities are the ability to achieve health and be well-educated. Here the individual is the basic unit of analysis in the capability approach and, indeed, many of the capabilities described in the literature, such as the ability to read, can be viewed as somehow belonging to the individual. These capabilities obviously exist in a socio-political and socio-cultural environment. So some capabilities depend on what the government and other organisations provide in terms of health care, schooling, mobility etc.

Thus capabilities take two forms – individual and socially created. James foster and Christopher Handy (2008) in their paper external capabilities propose a new form of capability -External Capability. External Capabilities are the ones which enable a person to achieve additional functionings through a direct connection with another person. The capability approach acknowledges the role of institutions and policies in the creation of capabilities. But it overlooks the fact that the individual's relationships can influence greatly the capabilities.

So when the capability approach is used as a tool for analyzing policy, it is likely to catch, for example, a person's expansion in capabilities from becoming literate, but likely to miss the next step, wherein the person's literacy can enhance the capabilities of family and friends. (James Foster and Christopher Handy)

Building further Nussbaum (2000) classified the individual capabilities in ten categories as follows

> *- Life- Being able to live to the end of a human life of normal length*
>
> *- Bodily Health- Being able to have good health, to be adequately nourished and adequate shelter*
>
> *- Bodily Integrity-Being able to move freely from place to place; to be secure against violent assault, including sexual assault and domestic violence*
>
> *- Senses, Imagination, and Thought- Being able to use the senses, to imagine, think, and reason—and to do these things in a "truly human" way*

- Emotions- Being able to have attachments to things and people outside ourselves;

- Practical Reason-Being able to form a conception of the good and to engage in critical reflection about the planning of one's life

- Affiliation-Being able to live with and toward others, to recognize and show concern for other humans, to engage in various forms of social interaction

- Other Species-Being able to live with concern for and in relation to animals, plants, and the world of nature.

- Play-Being able to laugh, to play, to enjoy recreational activities.

- Control over one's Environment-

Political-Being able to participate effectively in political choices that govern one's life

Material-Being able to property rights on an equal basis with others

Now we will discuss how these categories can be used as a framework for evolving the role of design in a developing economy. The ten categories can be still further combined and a new category be added so as to better integrate design in the framework .The author proposes following classification:

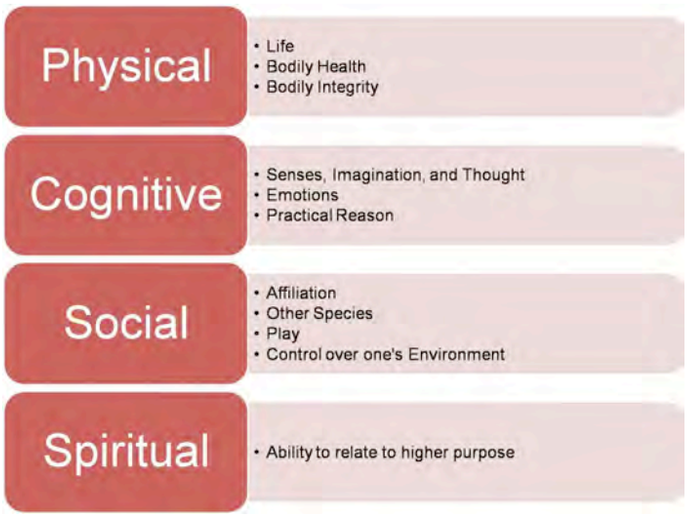

Figure 1: Proposed capabilities categories - Focus areas for design in developing economy.

Since capabilities are a form of freedoms and opportunities that one has in a given socio-cultural setting, a Design policy that is based on Capabilities Approach should first and foremost be focussed on creating and nurturing these opportunities and freedoms. Typically, a Design Policy largely reflects what the Policy makers think will be good for a nation. As we have seen, how Industry has overpowered and driven the Growth-based rhetoric for development, most of the Design Policies have been formulated to cater to the needs of the industry. This shifts the focus from the actual needs of the society at large to serving the interests of Industry. Although Industrial growth directly (employment, purchasing power) and indirectly (through taxes) contributes to the so called development of a country-this path leads to a capitalistic-consumerist society.

The Capabilities Approach would call for a more holistic as well as a more detailed analysis to identify the priority areas that a Policy needs to cater. An Individual or a group of people will need different opportunities and freedoms based on their geography, cultural background, historical legacy and existing skill sets that they posses. This also means that each of the factors mentioned above has the potential to be leveraged to create opportunities/freedoms for the people locally. The role of the policy maker is then to aggregate these local opportunities and synergise it with larger goals that the policy needs to address. Depending on the current stage of development and the direction that a developing nation wants to grow the above categories can be used to identify which opportunities and freedoms should the policy address. For e.g. Countries which face problems like poverty, food scarcity, disease and where basic substance is a problem the policy should be formulated to build the Physical capabilities. If the inherent social structure of the country is strong enough it can be leveraged and capabilities that fall under Social category can be built to enhance the Physical capabilities.

With the proposed framework it is possible to use Capability Approach to inform the policy making process. Following the model for Design Policy proposed by Gisele Raulik-Murphy (2008) following recommendations can be made.

Figure 2: Elements of a National Design Policy

Promotion

- Conducting workshops, seminars that call for participation of representatives of general public from all walks of life to expose them to larger role of Design in society

- Establishing channels and touch points that go beyond exhibitions and publications to communicate the benefits of Design

- Develop mechanisms and feedback systems to identify and assess the opportunities and freedoms that need to developed

- Creating formal and informal counselling support by which people can take informed decisions about their life and development

Education

- The Policy should spell out a rationale of Design Education such that the Designers coming out from the institutes can facilitate the process of creating and nurturing the opportunities and freedoms

- The Policy should provide flexibility and autonomy to Institutes to integrate Design education with arts, science, technology and business education

- Develop executive education programs that are divided in the Design specialisations (Product Design, Graphic Design etc) treat Design as unified discipline of study. Such Programs should have focus areas (For e.g. Design For Business, Design For Development, Design For Sustainability etc)

Support

- Develop an ecosystem in which large organisations can identify and map their business interest with the larger societal needs and priorities. Develop programs to assist such organisations adopt Design as means to contribute positively to the triple-bottom-line(profit-people-planet)

- Incubation support for innovations that take place at grass roots level (by small entrepreneurs, individual inventors/innovators, students etc)

Conclusion

Whether it is the government, industry or the social sector if their objectives and plans are aligned with these capabilities the outcomes are will be far more relevant and useful. It's not that the current way in which Design is adopted by the governments, industry and social sector has not produced desired results. However, as we have seen there has been a systemic flaw in the process and it undermines the very nature of design. It is high time that attention is drawn towards this degradation of Design by all sectors of economy. The framework above is based on one of the widely accepted framework that is adopted by UNDP for formulating the Human Development Index (HDI). Using this framework possibility of achieving a sustainable holistic growth can be increased.

Design Institutions in the developing world have the prime responsibility of instigating this spark in the design learners and future designers of tomorrow. The philosophy, pedagogy and delivery of Design education needs to more aligned towards this new role of Design. Institutions in developing world can't be simply adopting the concepts, approaches and methods of the Institutions of the developed world.

At such a critical junction when the world economy is witnessing hitherto unseen lows the developing nations are like the silver lining in the dark clouds. Moreover, the major sectors of economy are looking at ways and means to sustain in this troubled waters and innovation is the key for this sustenance. Can Design rise up to the occasion and deliver the much needed impetus to the world. Can Design help the world-both the developed and developing change the perception of development? Can Design stop being the ends and be the means to achieve this holistic development? These are some questions that need to be raised and answered.

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Design of organizational innovation scenarios. Results of an action-research within a security doors company

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Abstract
Due to the special way designers know, think and act, managers turn to them to better understand special aspects of competitive contexts in which their companies perform and to develop new organizational scenarios and products. For this reason, during the last years researchers and professionals have been focused on comprehending how design works and how it can contribute for innovating companies. Despite the effort, design literature lacks in studies of the experiential dimension in design processes situated at organizational strategic levels. Therefore, the paper presents a design experience developed within a security doors company, using action-research strategy. Besides having academic and corporate actors, the experience involved young designers (students of Undergraduate and Graduate Design Courses). This paper presents the metadesign approach we used during the experience, focusing especially on scenario thinking. Finally, this paper discusses how design scenarios can orient conceptual design activity and organizational strategic development as a whole.

KEYWORDS: Design process, Design-Led Innovation, Metadesign, Scenarios, Action-research, Organizational Learning.

Introduction
Design is today considered a fundamental asset for the innovation of organizations. In design driven companies, it is even assumed as an innovation paradigm. Therefore, the relations between design and innovation have been intensively analysed and now we are able to rely on an impressive theoretical framework on the strategic potential of design – counting on important contributions from Latin-American authors (Magalhães, 1997; Morales, 2004; Leiro, 2006). During the last few years, design literature has been empowered by an impressive number of design process models, techniques and tools. However, few studies face the development of a design-led innovation process using a participant approach in order to understand its experiential aspects – by experiencing such models, techniques and tools, and not creating new ones. We cannot, therefore, rely on investigations that are meaningful for the design discipline evolution (Cross, 1999: 5-6).

Following this direction, the paper presents the results of a five-year applied research developed within a medium-size enterprise - a security door manufacturer - and that involved several designers. The goal of this research was exactly to foster innovation in the organization through design.

An action-research strategy was applied along with various consecutive research-assisted design processes. By adopting a metadesign approach, a common design process model based on Kolb's learning cycles (1984) that organizes four main phases (research, analysis, synthesis and development) (Jonas, 2007) was used, resulting in an effectively helpful action-research experience.

The metadesign approach is strictly related to scenario thinking (Celaschi & Deserti, 2007; De Moraes, 2010). To that end, this paper discusses the central position of scenarios in metadesign process, stressing their importance for the analysis and interpretation of design research data. Besides focusing on the relevance of scenarios for orienting conceptual design activity, this paper illustrates how design scenarios can orient the organizational strategy as a whole.

Metadesign: a Design Driven and Innovation Oriented Process
According to Stefano Marzano, CEO and Chief Creative Director of Philips Design, a meaningful relationship between business and design must seek a general advance of our civilization, not merely profit purposes:

> *[Business and design] need to be able to find a common goal, an idea or objective that lies beyond the present, beyond the temporary – a goal that goes beyond a single transaction or a specific product. […] In other words, design and business need to connect not just at a commercial level, but at a higher level, as well (2007, p. 2).*

The management of a company can certainly develop innovative products and services through a strict connection with design, but it could also reconsider how it affects market and society. As metadesign processes aim to associate new angles on organizational competitive contexts and on building alternative scenarios, they might also aspire to the identification of feasible innovative trajectories that allow the organization's strategic development.

Designing new products derives from such scenarios and occurs throughout such trajectories, so that new products and services are consistent according to what the organization suggests. As stated by Alberto Alessi, Alessi's CEO, *«working within the metadesign transcends the creation of an object purely to satisfy a function and necessity. Each object represents a tendency, a proposal and an indication of progress which has a more cultural resonance» (apud Verganti, 2008, p. 442).*

The metadesign approach entails a reflection on the design process, throughout and beyond its steps, that motivates and justifies the activity itself, regarding its initial context and its destination scenario. It implies deepening the design problem and goals in order to define a good process to reach a satisfactory solution (De Moraes,

2010). Most of all, such approach leads to the extreme consequences of Donald Schön's (1983) principles, considering that metadesign stimulates an ulterior reflection, responsible for making the agents aware of the design process' meaning – in addition to promoting the "reflection-in-action" that is proper to design activity.

In this sense, metadesign is particularly appropriate for developing organizational processes oriented to completely reconsider how companies operate and how they define their future strategies in order to innovate them. The model presented in Figure 1 describes a metadesign process aimed at innovating from David Kolb's (1984) experience learning cycle. Kolb's work is relevant to our research as it intersects writings on learning processes (Dewey, 1938; Lewin, 1951; Piaget, 1970) with writings on creative processes (Wallas, 1926), decision making (Simon, 1947) and problem solving (Pounds, 1965). Besides considering issues that are key for studies on learning and organizational development (including Kurt Lewin's action-research experiences), the author also acknowledges specific concerns on organizational practices.

As suggested by Lewin and Piaget, Kolb states that experiential learning is strongly affected by four cyclic polar dimensions: concrete experience for abstract conceptualization through reflexive observation and abstract conceptualization for concrete experience through active experimentation.

A number of authors agree that four macro-phases can be found in Kolb's dimensions: research, analysis, synthesis and achievement (Kumar, 2004, p. 3; Jonas, 2007, p. 199-201; Cautela, 2007, p. 62; Celaschi, Deserti, 2007, p. 56, 129). Such model introduces the concept of innovation, which is the main goal of the processes and, therefore, is central to what is proposed in our paper. Design acts as a centripetal force towards innovation, "distorting" the experiential learning cycle in a design-led innovation spiral (Franzato, 2011).

Metadesign processes do not aim to be conclusive, but restless as they require constant innovation-wise questioning (from the organization) that does not seem to be translated into a single, clear request to designers. Even when such anxiety is summarized into a briefing, it may be understood as a pretext for innovation through design. Designers, who are able to critically read the briefing, can reopen it, scan it, interpret it to then discuss it along with the company. This initial activity that Michele De Lucchi (1999) calls "Counter-briefing" redefines the meaning of the process within the organization. The process can then start to follow the steps below.

In phase one, researches destined to feeding the design process are done. While some of these researches focus on the organization, its market and its target audience; others point to developing an original and broad referential system for the design activity (examples of achievement, creative stimuli, tendencies and so on).

In phase two, research results are analysed and reinterpreted for the projection of alternative scenarios in an organizational competitive context, identifying innovative trajectories.

In the third phase, different concepts are designed. We can see them as embryos of new products that are accountable for creating innovative trajectories. In this phase, designers express their distinguishing way of synthesis by virtually shaping, modelling and visualizing new products.

In phase four there is effective implementation of the results obtained. It starts with the planning of organizational actions in order to capitalize knowledge and make progress throughout innovative trajectories. In this step, some of the concepts are detailed, prototyped and eventually produced and sold.

After developing a metadesign process, it is necessary to start another cycle. Therefore, it is important to point out that the products developed should not be considered final outputs of the metadesign process, but intermediate outputs as they serve as inputs for the beginning of a new process cycle. Such processes seek for continuous innovation – and that can be reached through the development of increasingly conscious and effective cycles, as shown by the spiral's form. Organizational learning is reached, then, by the series of cycles.

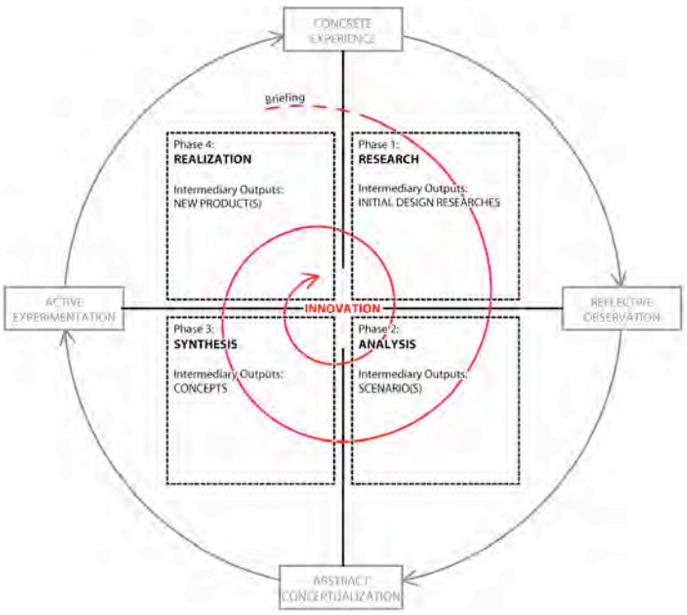

Figure 1 – Design-driven innovation spiral (Franzato, 2011: 53)

Scenarios and concepts in metadesign

Metadesign processes are developed by design networks that articulate the organization vertically and horizontally and that connect it to outside actors. Only by sharing knowledge about the organization, its competitive contexts and outside stimuli, it becomes possible to build con-

temporarily plausible and original scenarios. The actors' different disciplinary backgrounds and their distinct levels in the organization may be challenging for the pace of the tasks. Paola Bertola and Carlos Teixeira explain that designers play an essential role to make team work flow easier as their competences.

> *are usually applied as the activity responsible for codifying into tangible material reality the ideas and abstract concepts defined and negotiated by many different areas of expertise. In this case design […] is responsible for representing abstract concepts through synthetic images, metaphors, and models that facilitate the communication of ideas (2002, p. 186).*

In these types of processes, designers work as mediators specially while building scenarios. Scenario thinking is a military technique from the 1960s used to foresee long-term organizational competitive context evolution and analyse the best political economy circumstances to follow for minimizing risks and maximizing opportunities (see Kahn, Wiener, 1967).

As design is concerned, such tool becomes peculiar. Ezio Manzini and François Jégou (2004) discern scenarios aimed to guide an organization's economical policies ("Policy-Orienting Scenarios") from scenarios elaborated by designers and determined to guide the design process ("Design-Orienting Scenarios"). The authors define them as:

> *Set of motivated and articulated visions, finalized to catalyse the energies of the different actors involved in a design process, to generate a shared view between them, and to desirably converge their actions toward the same direction (ib., p. 193, trans. by the author).*

By summarizing the introductory researches, scenarios assert a number of doable hypotheses for – usually – short-term organizational development. They are discussed, selected and eventually reinterpreted by the actors involved in the process in a way where they are able to share strategic goals and identify the best ways to achieve them. Therefore, the main objective of a scenario is to instigate discussion between the actors who are part of the process so they can make shared decisions.

Design-Orienting Scenarios are easy-to-read, visual representations. Even if formal scenario characteristics are not predetermined and can take various forms and shapes, they are all visual, as they must support, stimulate and favour discussion.

The scenario – chosen and redefined by discussion – nests the concepts that may be developed in the synthesis phase in the metadesign process by inspiring, guiding and articulating the design of new products and services that are coherent to what the companies offer and to their strategies.

On the other hand, concepts explicit the scenario in an authentic designerly way and are useful to delineate it. A connection between scenario and concepts is noticeable, where both parts complement and enhance each other.

By the end of the synthesis phase, concepts are evaluated and the most reasonable ones are chosen for implementation in the next phase. In metadesign processes, concept implementation is not as substantial since the most important elements are how much the company learns about itself, what their competitive context is and what are the possible scenarios - representing innovative trajectories to be followed.

> Not applicable concepts may turn out to be the most relevant for organizational learning as designers can use them to reflect on issues brought up during the metadesign process. At IDEO, an innovation and design-consulting agency, such proposals are called "sacrificial concepts":
> *A sacrificial concept is an idea or solution created to help understand the issue further. It is a concept that doesn't have to be feasible, viable, or possible since its only purpose is deeper understanding. A good sacrificial concept sparks a conversation, prompts a participant to be more specific in their stories, and helps check and challenge your assumptions (IDEO, 2009, p. 42).*

Other concepts may not be immediately viable, but can become doable in the future when there is change in the referential context. Such concepts can be part of a project portfolio that, according to the shelf innovation logic, may be used by the organization later on (Corso, 1998).

In the third phase, different concepts are designed. We can see them as embryos of new products that are accountable for creating innovative trajectories. On this phase, designers express their distinguishing way of synthesis by virtually shaping, modelling and visualizing new products.

Research Method

This article is based on the results of a research developed for Gardesa, a security doors manufacturer. Our research aimed at defining new organizational strategies and innovation on processes, products and business, exactly through a metadesign process.

We used action-research strategy. We have cyclically promoted a number of metadesign processes in order to reflect on the organization and start an organizational learning process.

This article aims at discussing the first metadesign cycle, as it is considered to be the most intense one in terms of work amount and the most significant one in terms of organizational learning. It was the first time the company was part of a metadesign process, which served as basis for the following processes.

On the next chapter, we retrace the phases of the metadesign process model.

Gardesa Metadesign Experience

Gardesa is one of the biggest security doors manufacturer worldwide. This market is progressively expanding, which discourages companies to seek for innovation: security doors have not evolved much since their emergence in the market, suffering only small incremental innovation. Many of Gardesa's main competitors are persistently investing on branding, looking for more visibility in the market. Besides that, other companies are introducing quite low-priced products.

Therefore, Gardesa has decided on investing in innovation, but has chosen a unique way to do so: through design, in collaboration with Politecnico di Milano. The team consisted of two leaders and three graduate students. From the synthesis phase on, the team counted on twenty-one undergraduate and graduate Design students who were invited to take part in a workshop.

Research phase. The contextual research was developed throughout two months and focused not only on the company (market offerings and competitive context), but also on the required standards for security doors in various moments of their life cycles.

At the same time, a referential research focused on style, technology, society, anthropology and market was undertaken regarding doors and domestic environments. The following researches were accomplished:

- The door in the design history;

The door in the cinema;

- Door evolution throughout history and geography;

- Exploration of the automotive and marine industries, where cars and boats may be interpreted as a person's second home;

- Exploration of creative industries, particularly of fashion, studying current and unfolding trends;

- New technologies and materials.

The collected data was shared among the participants of the process, who later on critically analysed and organized it in a dossier.

Analysis phase. The next step was to summarize such researches and group them up in a scenario where the entrance door should be resignified and valued into the home environment. Interior doors represent the link that allows the passage of the security doors from the building industry (a technology-driven area) to the furnishing one (a design-driven area), as figure 2 illustrates.

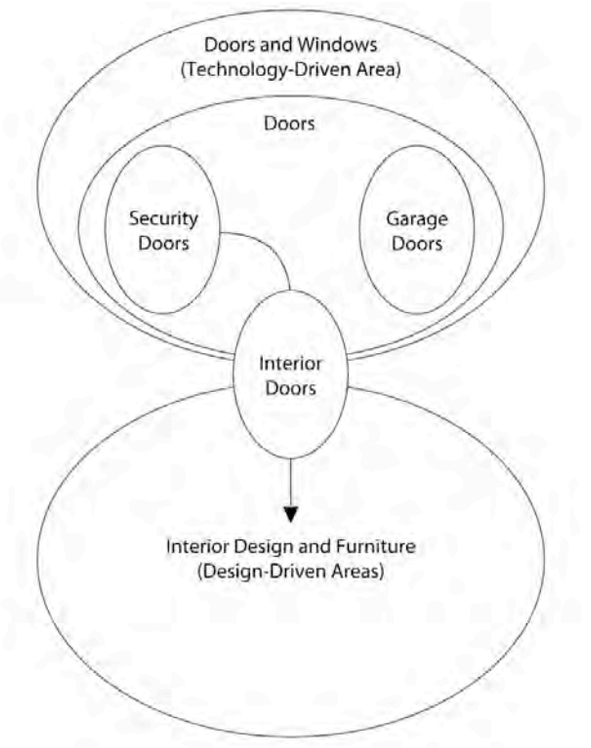

Figure 2– The passage of the security door from the building industry to the furnishing

Context research was essential for that conclusion, whose reflection was determined by thoughts about the object "door" considering a triangulation between companies, retailers and consumers. The following innovative trajectories came up:

- From door as an object to door as a place;

- From door as a construction element to door as a décor element.

As for Gardesa, this resignifying process should consider safety, as their main products are safety doors. By analysing the research results, it was possible to question the reasons behind the need for such product, on whether it should focus solemnly on safety or if it should consider safety only as one of its key conditions – leaving the process open for more insights. For that reason, referential researches became essential. While researching sectors highly related to design, significant references came up, such as the Xelibri and the Nokia art deco-inspired phones. These products go beyond their primary functions since they became fashion accessories and identified their users' lifestyles.

Accordingly, as it reaches humanistic culture (specially while considering Freud's "Civilization and Its Discontents" theories), it was decided that the link between "safety" and "freedom" would be taken into consideration. New innovative trajectories arose from this link:

- From safety as the focus to safety as a key condition;

- From safety to safety-freedom.

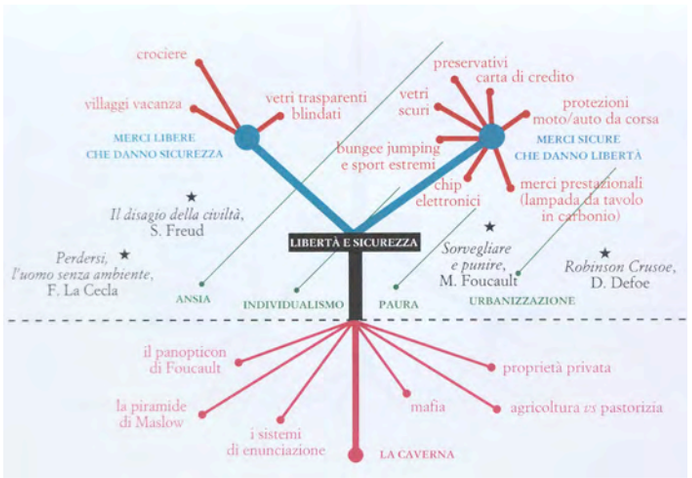

Figure 3 – Safety and freedom conceptual tree

Such reasoning, shown in a very simplified schema (fig. 3), was represented in a multiple slide presentation.

Synthesis phase. Researches and scenario were presented to the participants of "Dwelling the door sill" workshop, which was extensively developed on multiple meetings throughout two months. The concepts "Over" (fig. 4), "Frame 3D" (fig. 5), "Theta" (fig. 6), and "Asola" (fig. 7) show a few of the results accomplished by the students.

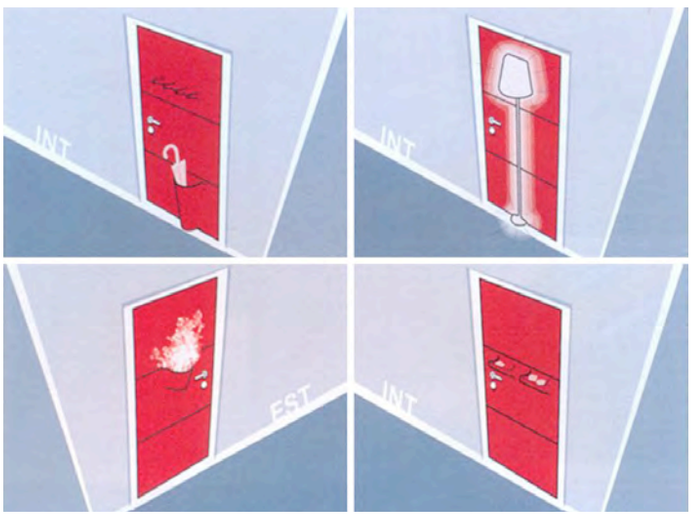

Figure 4 – "Over" by Baglieri, Bartoli and Costacurta

Figure 5 – "Theta" by Caputo, Giordano and Nardi

Figure 6 – "Frame 3D" by Fioravanti and Franzato

Figure 7 – "Asola" by Baglieri, Bartoli and Costacurta

Development phase. The concepts were evaluated according to how meaningful it was for the company and to how technically and commercially feasible would be. Even though "Over" remained as a concept, "Frame 3D" was broadly reviewed by designers, prototyped and shown at conventions (fig. 8). "Theta" and "Asola" were effectively implemented and are now part of the company's product catalogue (fig. 9).

Figure 8 – Evolved "Frame 3D" by Fioravanti and Franzato with Cavalleri, Di Pino and Galisai. The photo was taken at the SAIE 2 fair, in Bologna.

Figure 9 – “Theta” and “Asola” in the organization’s catalogue.

Final Discussion

The experience described here is a clear example of how introductory investigations, their interpretation and views on scenarios, original idea conception and their applications are fluent and osmotic in metadesign processes. Even though identification of all four phases in research, analysis, synthesis and development were clear, their effects and values are not possible to be delimited because of how they connect. There is fusion between research and design: while the developed concepts and products expose scenarios and their innovative trajectories, they also hold a summary for the researches displayed in the scenarios.

In this sense, it is considerable that designs such as “Frame 3D” and “Asola” are relevant and essential for resignifying the “door” object in the home environment. “Frame 3D” clearly states the “from door as an object to door as a place” trajectory as it expands the “door” object in a three-dimensional way. Such trajectory was considered to be very important for the metadesign process since it represents the essence of the general scenario, but the design ended up being technologically and commercially unfeasible. Nevertheless, the designers were asked to carry on developing their sacrificial concept in order to continue reflecting on it and, for that matter, three designers were added to the team.

“Asola” represents the “from door as a construction element to door as a décor element” trajectory, which intends to embody languages that embody the nautical (round shaped doors) and automotive (door handle design) sectors into the market.

On the other hand, “Theta” and “Over” designs refer to safety-freedom polar axis. “Theta” shows the “from safety as the focus to safety as a key condition” trajectory, retrieving the vintage wooden latch lock system. Such solution states that security has been essential to entrance doors since before the placing of security doors in the market – therefore, “Theta” considers safety mandatory. Moreover, this project effectively covers gestural expressions that were lightly suggested by the scenario and that could be explored in a deeper way in future projects. As mentioned in the previous case, “Theta” also seeks language fusion between historical times.

“Over” adverts the “from safety to safety-freedom” trajectory by suggesting the use of glass – which is usually connected to the notion of delicacy – as the main material used on the security door panel. That way, internal lock systems are visible from the outside, establishing an audacious expression of safety as it assures visual freedom between the notions of inside and outside.
Beyond that, the experience shows the potential of design as a learning and innovation tool for organizations. The metadesign process has allowed the organization to reflect upon itself and its own strategies; and such reflections have resulted in other kinds of results for the company.

After the first cycle of the process, a design centre was created in the company in order to develop the remaining cycles. The formation of such centre, besides assuring internalisation of metadesign technologies and their practices, has determined a restructuring of the company’s clusters since it would focus on designing new products along with the research and development department, which is set basically on the engineering aspect.

It is relevant to state that the research team followed the successive cycles closely in order to carry the action-research forward and ensure its success. Outside designers were asked to be part of the following processes. In 2009, for instance, the company launched the “Prêt-à-porter” collection, which was developed in collaboration with Agatha Ruiz de la Prada.

By bringing out such products, the company’s portfolio strategies have changed and there is a special section destined to the most representative doors of the new “Dwelling the door sill” organizational scenario.

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Designing for experience and public transportation: an emotional-driven project

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Abstract
This paper is aimed at describing the development of design solutions to qualify the experience of public transport users in a large Brazilian city. The project envisages the development of bus stop prototypes incorporating the identified solutions, and it is supported both by CNPq (the Brazilian research council) and FAPERGS (Rio Grande do Sul's state foundation for research and scientific development). Thus, it describes two separate methodological steps and their respective results: (a) an in-loco analysis of emotional experiences from users when using public transport and (b) the use of this information in design workshops. The first step was developed based on Appraisal Theory (Desmet, 2002), a well-known model to understand emotion in design. It helped the researchers to understand that the most important emotions to work on would be anxiety and irritation, as well as their causes, in relation to the public transport system itself. Based on these results, a reference-orientated research was developed to collect cases and other general references related to the theme to be used as examples. The second step, a three- day workshop, was developed counting with the help of 23 designers, divided into four groups. Three concept bus stops, inspired by the experience-design analysis, were developed and are presented in this paper. The main results show that all the designed solutions were able to offer alternatives to prevent unpleasant emotions, namely anxiety and irritation, based on a user-centered approach.

KEYWORDS: design for experience, emotion, project urban mobility

Introduction
Artifacts created by designers have always been agents that represent meanings and evoke emotions in people. What brings strength to these designs is the fact that these intangible elements can be consciously designed, with the emerging field of Design & Emotion. Design for Experience and Emotional Design fall within this spectrum.

According to McLellan (2000), Design for Experience "orchestrates" experiences that are functional, engaging, compelling, and memorable. It requires designing every detail of the content and context, in order to evoke responses that are potentially gratifying in emotional terms (Kurtgozu, 2003). It is beyond the simple constitution of a service or product, but a whole set of activities of designing the processes and systems that give support for the experience, as well as the earlier stages of its constitution, such as a full understanding of the user's context and the production context.

This paper addresses a specific context of applying some of these concepts: the design of an experience with an "urban mobility" theme. Urban mobility has been a focus of interest to many experts, such as traffic engineers, city planners, politicians. The interest of this project, however, refers to a specific aspect of this system, which are bus stops.

Bus stops commonly evoke negative experiences. The waiting, discomfort, and insecurity are aspects often associated with these spaces in Brazil. This paper therefore addresses a theme that involves the daily life of millions of urban public transportation users. The quality of these services is in general quite deficient: the time spent and unpleasantness due to long waits can be sensed at bus stops in most large Brazilian cities. Thus, this context brings the question: Is it possible to design for alternative experiences that improve the conditions of this waiting, as well as the user's perception of quality of the transportation service?

The assumption made is that an experience developed based on the avoidance of negative emotions and/or the promotion of positive ones can qualify people's perceptions about the Brazilian public transport system. Several experiments could be designed by to these experiences. In the case of this research, we aimed at investigating and suggesting solutions that can be used in future projects to modify the waiting experience for the better, based on the desired emotional states and an experience-driven design approach.

For this purpose, the model developed by Desmet (2002) was used in this study. It explains the emotional relationship among people and objects (or situations) and applies to all possible emotional responses elicited by human-product interaction, which identifies the three universal key variables in the process of emotion elicitation: (1) concern, (2) stimulus, and (3) appraisal (see Figure 1).

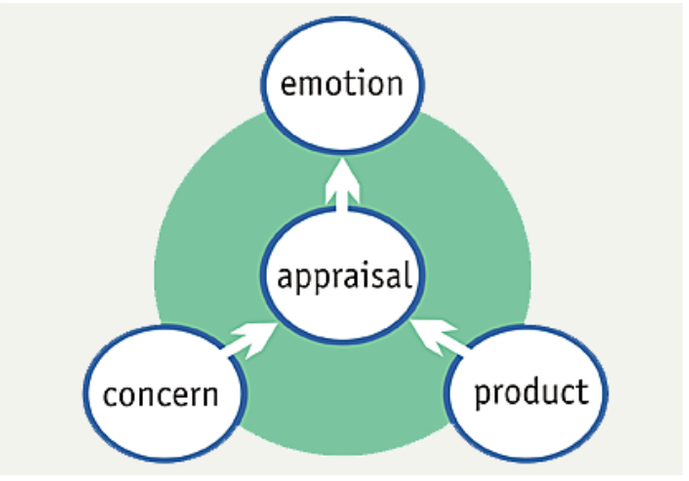

Figure 1: Basic Model of Product Emotions (Desmet, 2002)

This model is based on the emotion cognitive theory called Appraisal Theory. An appraisal, in the cognitive tradition of emotion psychology, is defined as a quick evaluation of a situation with respect to one's well-being (Frijda, 1986). Stimuli evaluated as reinforcement for the user well-being tend to evoke pleasurable emotions. In contrast, a negative answer (harmful to my well-being) evokes an unpleasant emotion.

The casual relationship between appraisals and emotions imply that the understanding of this phenomena can permit to activate particular appraisal pattern results in the corresponding emotion. This implies that attempts to design for a particular emotion may be facilitated by an understanding of the appraisal pattern that elicits this emotion (Demir et al., 2009).

For experience-based projects, the designer should identify the emotion aimed as the result of your project. Using direct interviews with the users, it's possible to identify the individual concerns and to understand the appraisals which evoke the specific emotion. Having this knowledge, the designer can develop the project process considering the elements associated to the desired appraisal (Tonetto e Costa, 2011).

In this research, three methodological steps were developed: (a) the user concern analysis, based on in- loco interviews with bus stops users (detailed in the section 2), (b) in-depth interviews with urban mobility experts to have a better comprehension about the urban mobility system and the bus stops' development process and maintanence, and finally (c) a workshop for development of bus stop' concepts based on the promotion and/or avoidance of specific user emotional states.

Concern Analysis

Nineteen in-loco interviews were developed, in order to explore emotional experience related to the actual bus stops in the Brazilian public transportation system. These interviews followed some guidelines, which were aimed at understanding users' concerns to good emotional experiences.

In bus stops, the interviewers first asked people to identify their main emotion at that moment, using an "emotion wheel", developed with a list of emotions generated by Scherer (2005). One side was green and displayed "good" emotions, whereas the other side, red-collored, exhibited "bad" emotions (see Figure 2).

After the first 9-10 interviews, no consistent good experiences were reported. Anxiety and irritation, on the other hand, were highly incident (seven of them reported one of these emotions). These data pushed the researchers to shift the experience-driven project from "evoking good experiences" to "avoid bad emotions".

Figure 2: Emotion Wheel (both sides)

From that point on, the following new interviews focused on looking for people who reported anxiety or irritation. The interviewers kept developing new interviews until the results reached the point of data saturation, which means, in qualitative research language, that new interviews stopped bringing new results into the discussion. In total, nineteen users reporting irritation or anxiety were interviewed.

The results generated what the researchers defined as a Concern Analysis, following Demir et al. (2010) definition. There are at least three types of concerns (product goals, activity goals and life goals), according to the same authors, but all results converged into two categories: goals with the use of the service (product goals) and goals with the activity itself (activity goals). The concern profile is described in two different sections, according to the two kinds of concerns found in the research.

Goals with the use of the service

Most concerns in this section were mentioned by users identified with either anxiety or irritation. They are listed (indicated by letters in the text), explained and exemplified as follows.

Users mentioned that the bus stops have always (a) poor structures (see Figure 3), since there is no possibility of being protected by the weather and/or be sited while waiting. In addition, they are referred as usually too small to protect the amount of people who is waiting for a bus. This concern is stated in the following interview fragment: "The bus stop is too small to the amount of people that use it. If it was raining, there wouldn't be enough space to protect everybody". The users mentioned that some bus stops are even just a sign showing that the bus stops in that place. There is no structure at all.

It is important to highlight that the lack of space to sit while waiting (b) was mentioned either as a single cause to these emotions or connected to a much global bad evaluation of the bus stop from users. This is important to understand, since some users are not so critical about the bus stops, but are pushed to an anxious or irritated emotional state solely by the lack of seats.

Figure 3: Bus Stops in Porto Alegre (Photographers: Cristiano Porto Klanovicz, Frances Danckwardt and Juliana Terra)

The same phenomena (meaning being a single cause of irritation or anxiety, or part a complex evaluation of a more global poor structure) was identifyed regarding the fact that the bus stops do not protect people from the weather (c). “When it rains, we get wet, and lots of bus stops generate a mess with people”.

As a last cause both by anxiety and irritation, the lack of maintenance (d) was reported by users. “This one is rusty, ugly and needs painting”. It was said that they are always in need of being repaired.

As specific cause of irritation reported was “feeling cold” (e). The open structure of bus stops allows the cold weather to irritate people, since “in the back, there is no wall. If it rains or winds you get wet and feel cold”.

As a specific cause of anxiety, the insecurity was reported (f). Being “just a ceiling” and dark, due to the lack of light during the night, users report that “it is too dangerous to stay here alone” as a reason for them to be anxious for the bus to arrive soon.

Activity goals

As it happened in section 2.1, most concerns in 2.2 were also mentioned by users identified with either anxiety or irritation, and the first one was the variability in the waiting time (g). Users report that it is impossible to be sure when the bus is going to arrive in the bus stop, and that it is a cause of another inconvenient: “I can’t do anything while I’m waiting. I don’t know if it’s going to take long or not. I listen to my music, if so”. Just the information on when the bus should arrive is not enough in this context, since “even if it has a schedule, it never follows it, then you don’t know if you can do something useful or not”.

The fact of waiting while doing nothing (h) was detached from the waiting time to some people, and connected to the long waits: “It takes too long to arrive”; “I usually wait about 15minutes, doing nothing”; “If I am distracted, I might lose it”. These examples show that, even when people know when the bus is due to arrive, the waiting time tend to be long in some city spots, making the wait a poor experience.

It was reported by users that other people complain while waiting (i), and that this is another cause of irritation. “It is bad. People just complain. I have never seen anybody say anything good about it”; “I do nothing and watch people complaining”.

As a specific cause of irritation, users reported that the crowd is always pushing itself against them (j). “Everybody pushes each other. Sometimes we can’t even take the bus”.

Synthesis and Concern Profile

It is common, in experience-driven projects, following the mentioned approach (Demir et al., 2010), that the results will be organized, building a concern profile. Concerns are related to user’s goals, reason why the authors summarized the results in a table, structuring them as real concerns to build the profile.

In the following table, the reader can find a synthesis of all results: The Concern Profile.

Type of Concern	Emotion(s)	Concern
Goals with the use of the service	Anxiety and Irritation	(a) “I want to be waiting in a place in decent conditions” (bus stops have always poor structures).
		(b) “I have the right to be sited, if I wish or if I am tired” (lack of space to sit while waiting).
		(c) “I must be protected from the rain if I have to wait to use the service” (the bus stops do not protect people from the weather).
		(d) “I want to see a bus stop that is well conserved” (lack of maintenance).
	Irritation	(e) “I do not want to be cold, if I am waiting to use a public service” (“feeling cold”).
	Anxiety	(f) “I must be protected all times, when using the service” (insecurity).
Activity goals	Anxiety and Irritation	(g) “I have the right to know until when I must wait” (the variability in the waiting time).
		(h) “I should be able to use my waiting time as I wish” (waiting while doing nothing).
		(i) “People shouldn’t be here complaining, or they shouldn’t need to be complaining” (people complaining while waiting).
	Irritation	(j) “I want my personal space to be preserved, and do not want people pushing me” (crowds: people pushing themselves against users).

Table 1: Concern Profile

The Concern Profile in Table 1 shows that, designing with focus on the ten items described can lead the project to a great potential of avoiding anxiety and irritation in the public transportation system. In the next section, the reader can find the application of this profile in a workshop.

Workshop: Methods and Results

The research developed three complementary approaches. The first, addressed in the first part of this paper, in regards to the emotion design concept and appraisals theory (Demir et al, 2010; Desmet and Hekkert, 2007), enabled two predominant emotions to be identified in situations involving waiting at city bus stops: irritation and anxiety. These emotions were associated with concerns, such as the desire for protection, comfort and greater information, among others. The identification of the two emotions and the concerns made it possible to initiate the second focus of the research, namely, the development of a design project to create tangible conditions in order to avoid those emotional states. In this study, a design methodology was adopted which is frequently used at the

Unisinos School of Design, where this project has been developed: a design workshop built on a specific design methodology which, on the basis of preliminary research referred to as the metadesign stage, seeks to materialize design concepts in a short period of time. After this, there is a time to critique and reposition the design problem, defined as the "design of the design" (Celaschi & Deserti, 2007). The goal is to reflect on the design problem before actually solving it (design stage). It organizes the preliminary research into two categories: contextual research and references research not directly linked to the design problem, called Blue sky research. These stages and the results obtained are presented below.

The workshop consisted of 23 participants, seven of which had already been working on the preliminary research. They were divided into three project groups and needed to abide by the project brief which entailed building bus stop design concepts which would seek to avoid the emotions of irritation and anxiety. Contextual research was introduced on the first day of the workshop, which, on the one hand, revealed the problematic reality of bus stops in Porto Alegre and, on the other, presented cases of bus stops demonstrating elements of innovation. The cases were presented through texts, photos and videos (Figure 4).

Figure 4: Contextual Research

In comparing the current bus stops with the conceptual experiences designed in other cities, it was noted that the bus stops in Porto Alegre did not, for the most part, provide users with the minimum conditions of dignity.

In the following stage of the workshop, the Blue sky research was presented. This research seeks to build paths for innovation on the assumption that innovation is often found outside the context of the design problem. Blue sky research "looks for examples and stimuli (within a wide range of formats) in order to obtain, by transfers through analogical reasoning, suggestions for constructing scenarios in the pursuit of answers to a design problem" (Scaletsky, 2010). The research presented was the result of many conceptual discussions by the group of seven researchers, springing from the concerns expressed by the bus stop users who were interviewed. This aspect is significant because the field research, whose methodology was built on the appraisal and concerns concept, closely linked to experience-based designs, provided input for the organization of another type of research – Blue sky research. This provided initial proof regarding the relevance of the design methodology options adopted. The organizational logic of the Blue Sky was: presentation of a key concept, a brief textual definition of the concept, keywords associated with it and, lastly, the presentation of photos and videos for this concept. Table 1 presents a summary of this research. It's important to note that in all these stages, the workshop participants were reminded that a design project was being developed for the experience that had engendered two emotions that needed to be avoided, with a focus on the concerns associated with these emotions.

The metadesign presentations ended with a summary of three interviews with experts from the urban mobility sector: a designer from an important office that develops public transportation projects; a transportation expert who works at the metropolitan agency that manages transportation; and a manager who works in a municipal urban transportation agency. The interviews brought forth different, highly relevant information regarding the use of materials (cost/maintenance), the problem of vandalism, major aspects of legislation, the relationship between private and public companies and the lack of resources and various experiments that had already been conducted. The interviews, in a sense, were a reality shock for initiating the design process.

Positive idle time / Perception of time	
Idle time represents free time at our disposal. Amusement, cheerful times and activity make time go by faster Anguish, boredom and anxiety slow it down. We perceive time according to how we fill it.	PASSATEMPO LAZER DIVERSÃO INTERAÇÃO BRINCADEIRAS CRIATIVIDADE DISTRAÇÃO ALEGRIA
	
Space / Comfort	
Comfort is understood as the act or effect of comforting; well-being; or material comfort. Space is the three-dimensional extension, either unlimited or infinitely large, which contains all beings and things and serves as the stage for all events.	EXTENSÃO DIMENSÃO ÁREA LIVRE GRANDE MACIO CONFORTÁVEL BEM-ESTAR ACONCHEGANTE ALÍVIO ESPAÇOSO AMPLO AGRADÁVEL
	
Protection	
Act or effect of providing protection; efforts geared toward the growth or progress of something; shelter, support, help, aid	ABRIGO SEGURANÇA PROTEÇÃO DEFESA ARMADURA REFÚGIO
	
Anti-irritation	
This is the state of not being irritated, annoyed or exacerbated.	SOM FELIZ FÉRIAS SILÊNCIO PRAZER CALMA ISOLAMENTO RELAXAMENTO BELEZA
	

Table 2: Summary of the Blue sky research

Construction of scenarios and launch of the design concepts for the experience

Following the presentation of the metadesign research, the groups started to reflect on the design problem. The objective of this stage was to construct design scenarios that would serve as platforms for launching the concepts. Scenarios can be defined as possible worlds. However, the goal is not to design the future, but rather place the designers within these uncertain scenarios and, as a result, modify the mental model of those designing the project. The metaphor used by Kees van der Heijden (2005) of "memories of the future" accurately defines the central concept of employing the building of scenarios as a possible and effective design strategy. Figure 5 presents one stage of building scenarios. Through the relationship between two axles and four polarities, each group of designers came up with a possible world for each quadrant.

Figure 5: Building scenarios stage from Group 3

During the last two days, the three groups built design concepts for the experience. In the method used, a concept is not just an abstract idea, which guides the project itself, but a concept needs to be tangible. In this design strategy, the concept represents the boundary between the metadesign stage and the design stage. According to Celaschi & Deserti (2007), scenarios allow the designer to create corridors for innovation or visions, and these corridors lead to something tangible, which is the concept. The concept is the gateway to the project. Its materiality, however, should not be construed as a form to be developed, but as an idea that is still open within the design.

Even after having worked together for three days, receiving the same metadesign research, the three groups came up with very different results. Group 1 (Figure 3) proposed four concepts, based on the polarities "more movement / less movement" and "digital interactive / static analogical". The four concepts share certain repeated characteristics: the idea of modularity and adaptability to bus stop situations and a proposal for integration with services that ensure greater safety, thereby addressing one of the concerns related to the need for protection to avoid "anxiety". Group 1 also suggested the concept of a set or family of components that can be added to the modules. These components can vary from bus stop to bus stop, unleashing a dynamic that can help avoid the feeling of boredom, cited by bus stop users. All three groups proposed protection mechanisms against bad weather, one of the main causes of "irritation".

Group 2 showed great concern with the materiality of the proposed solution, even outlining the material with which the stop would be built. Two strong concepts were presented: the first one, a bus stop that reflects the identity of a specific location in the city, a bohemian neighborhood, for example. This suggestion cannot be applied across the board to all the city's bus stops, but can serve as an important point of reference for the city. The second concept put forth stems from the metaphor of a "planetarium". A planetarium is a place where an instrument projects images onto a dome-shaped surface

and creates a "star environment". The group's idea was to create different settings for the bus stops through lighting resources or digital screens. In the interviews, both with experts and users, it was expressed on several occasions that the waiting time at bus stops always seems to be longer than it really is, and this is one of the main factors causing irritation in users. Thus, strategies that help reduce the perception of time can contribute toward avoiding this emotion.

Group 3 group worked with a metaphor from the movie "Transformers," a mutant bus stop, which is transformed according to the needs of users. It can, therefore, be adapted, for example, to weather conditions. By offering users the possibility of personally interacting with the bus stop venue, the concept releases users from passively waiting and helps avoid situations that lead to anxiety and irritation. Group 3 was able to come up with a precise representation of the concept. As mentioned before, the four poles – individual/shared and slow/fast – contributed decisively to the construction of the concept. Users can look for either a more individual and slower format or join up with other users in a venue providing greater integration.

Final Thoughts

The study presented in this paper describes the design process based on promoting certain emotional experiences, using a specific theoretical approach known as appraisal theory. In the first stage, identifying the emotions aroused in users, as well as analyzing their concerns, brought to the design process, developed during the workshop stage a distinct dynamic that needs to be analyzed. The design trajectory of the work groups, based on the explicit goal in the work brief to mitigate or eliminate certain negative emotional states on the part of users, was modified, as opposed to design trajectories observed in projects without an experience-focused approach, such as was established in this study. The assumptions involving the emotional impact of the design solution raised questions at times about the creative process of the participants, which at certain times was a goal to be pursued or a restriction upon the free process of generating ideas.

Many practical and functional aspects of the proposals, elaborated in just three days, have not yet been defined and need to be more fully developed. For this reason, we refer to these ideas as concepts. They are not yet design solutions and could undergo different modifications or interpretations. At times, some groups seemed to have

lost sight of the definitions put forth in the metadesign research, based on the declarations of users and experts. This should not be viewed as a problem, since it is part of the design process. As already demonstrated by Dorst (2006), there are stages in which the process is totally vague and barely within the control of the designer. The appraisal and concerns concept introduced an important safety factor for the three groups. All deemed the concerns as a kind of "checklist". The groups constantly questioned whether this or that solution met this or that concern. In this sense, the research presented here demonstrates how some design strategies, sometimes of distinct natures, can coexist and reinforce each other in the pursuit of design solutions.

This study is a work in progress and there are still subsequent stages involving the development of bus stop prototypes and testing in a natural environment, in order to verify which emotions are aroused from interacting with the solutions derived from a design process driven by emotional experience.

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Acknowledgments

The authors would like to thank:

Cristiano Porto Klanovicz, Frances Danckwardt, Isadora Longo and Juliana Terra, their research assistants, for all the work done during the interviews and the workshop preparation;

Prof. Fernando Duro for all the support before and during the workshop;

André Marques, Daniel Prujá, Fabiane Escobar Fialho, Fabrício Tarouco, Fernanda Vitola, Gabriel Kauffmann Schüller, Leandra Saldanha, Luciene Machado, Luiza Rossetto, Marcelo Diehl, Natalia Luz, Paula Visoná, Paulo Rosa and Taís Lagranha for taking part in the workshop;

Coordenação de Aperfeiçoamento de Pessoal de Nível Superior (CNPq)

Fundação de Amparo à Pesquisa do Estado do Rio Grande do Sul (FAPERGS).

Developing Innovation

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Abstract
Design Thinking is the basis of design activity at Stanford University. There lies the ME310 Design Innovation course through which projects for companies are developed by student teams with universities around the world.

The Javeriana University, Cali, Colombia, has been for 5 years an important academic partner of ME310 in a developing country. Projects have been developed for international companies such as Panasonic and local companies like El País newspaper.

Despite innovation being mandatory for competitiveness, in Colombia there are few options to access and apply innovation models. Thus, the Javeriana experience with Stanford know-how is a valuable opportunity. Some results are:

- Several Javeriana engineering students have been trained in Design Thinking and now bring their knowledge to Colombian companies.

- Valuable results, through effective collaboration between businesses and Javeriana, are being obtained and an important example is the project with Banco de Occidente, Colombia.

- SUGAR, a global academic network, centred on the ME310 course, is being formalized to further the development of Design Thinking in collaboration with business.

- Future research needs to be done on Design Thinking in developing countries and on the impact of design collaboration between developed and developing countries.

KEYWORDS: ME310 course, design thinking, SUGAR network, Transfer of Technology between Stanford University and The Javeriana University.

Introduction
With over a century, innovation is now more than ever a mandatory topic for governments, businesses and society (Tarde, 1903). In a globalized and highly competitive context, those that best address the needs of the people are the winners. For developing countries innovation becomes an essential element of progress and quality of life (Porter, 1990).

"Innovation is the lifeblood of our global economy and a strategic priority for virtually every business manager worldwide. In fact, a recent survey by IBM at 1500 senior executives identified creativity as the number one leadership competency of the future."(Dyer, et al., 2011)

U.S. companies are turning to universities, consulting firms, independent consultants and books, and hire experts on the payroll to find ways to integrate innovation into its operations and in their culture. Universities such as UC Berkeley, MIT, Stanford, Northwestern (Kellogg Business School), provide training in innovation to groups of executives; senior consultants as IDEO, Doblin and Innosight are contracted to carry out innovation projects and to create cultures of innovation in enterprises.

In the case of P&G, documented by Roger Martin in his book "The Design of Business", the company hired in 2001, for a leading position in innovation, and within its own payroll, a seasoned executive with a vision for innovation, Claudia Kotchka; in turn, she hired IDEO and a group of 3 renowned academics as consultants to implement the innovation in the enterprise. Today, 11 years later, P&G is recognized as a company based on design and innovation. Claudia Kotchka foreshadowed it when she decided, after studying the processes that were followed by companies like Philips in Germany to get to that point, that her work would be clearly reflected only 10 years later.

In Colombia, the Javeriana University has had the opportunity to talk with several companies on their approach to innovation, and the options they have to integrate it within their operation and culture. It's been detected that big companies seek innovation consulting firms in the U.S.; as well as that, they are sending their executives to training at the universities listed above. However, some foreign consulting companies are too expensive and managers feel they still fail to integrate the topic of innovation properly. Several other companies are seeking more partnerships with universities to work on innovation and these interactions are being supported by SENA (National Training Service, a public Colombian institution) and Colciencias (Administrative Department of Science, Technology and Innovation), in its Science and Technology Program and sponsored by the University-Business-State partnership (Revista EAN, 2010).

Companies in Colombia still do not easily find information on how to approach innovation, how to integrate it into their cultures and processes and how to make it sustainable.

The Pontificia Universidad Javeriana in Cali, Colombia, is making a difference for businesses and future professionals of the country with the transfer and adaptation of knowledge from Stanford University in the United States to the Colombian environment.

Since 2007, Javeriana Cali offers a recognized postgraduate course from the Faculty of Engineering at Stanford, called ME310 Design Innovation; it is a global collaborative course in which students of both universities work during an academic year on large challenges of real innovation proposed by some companies. The course uses the methodology of Design Thinking, which is researched and developed since the sixties by the Center for Design

Research CDR at Stanford University.

Additionally, the methodology has been tested by the famous company in design and innovation consultancy IDEO, also founded in the sixties by a graduate of the course ME310, David Kelley, who is a professor at Stanford.

ME310 Design innovation

The course ME310 at Stanford, led by Professors Larry Leifer and Mark Cutkosky, has about 30 students each year divided into groups of 3 or 4 students each. In turn, Stanford teams up for the course with several universities around the world, contributing among all the equivalent number of students equally divided. In a year they may have about 10 projects submitted by companies, which pay an important fee for students and teachers from 2 universities in the world to work on an innovation project with the Design Thinking methodology, Stanford style.

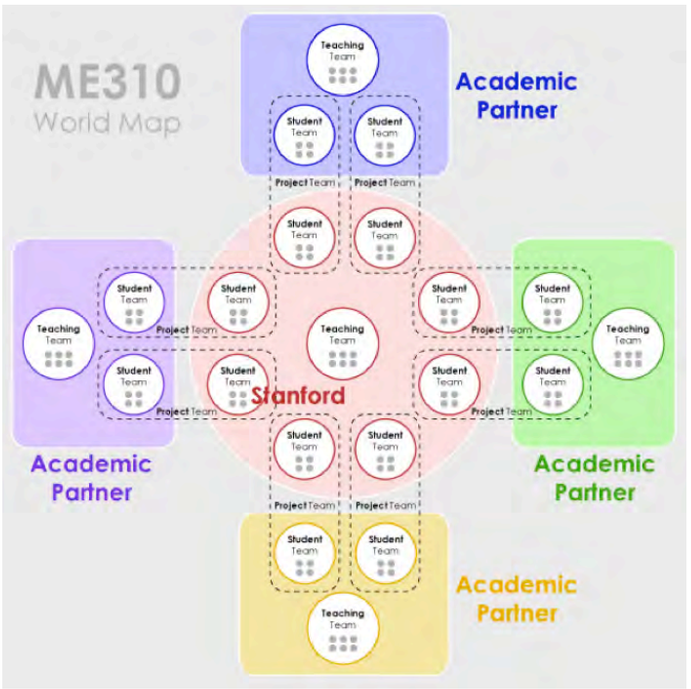

Figure 1. Description of how universities from around the world interact with Stanford University in the course ME310. Image taken from the ME310 course website: me310.stanford.edu.

Some of the most recurrent academic partners of the ME310 course at the University of Stanford in recent years, apart from Javeriana University, have been the University of Potsdam, Germany (HPI Hasso Plattner Institute), University of Ponts de Paris, the Aalto University of Finland, UNAM of Mexico, the University of S. Gallen, Switzerland and others. In the past year universities in China and Norway have also started to participate in the course. When professors from Stanford University first came in contact with Javeriana University, it was in search of a partner in a developing country, and although by then it had been collaborating with UNAM, Mexico for a year, they felt that Mexico was not a model of a developing country: Stanford wanted to experience working with diverse teams, with students and teachers from even more distant and needy places.

Each corporate project is worked out on a team of 3 or 4 students from Stanford and 3 or 4 students from the academic partner. Students are guided by large teams of teachers from each side and meet with a representative of the company once a week during the 9 months duration of the project. They work at a distance using video conferencing communication technologies, chats and videoconference over the Internet, sharing files and information through a "wiki" and files in the cloud. Three times in the year, students meet in person: at the beginning of the project at Stanford University for a week, when the two sides start getting acquainted and begin their work on the project; the second time at Javeriana University (in our case), also a week, this happens in a middle and critical point of the project where there are high levels of decision making involved. And finally at the end of the project, they meet at Stanford University for nearly a month, for the development and assembly of the presentation and exhibition of the final solution.

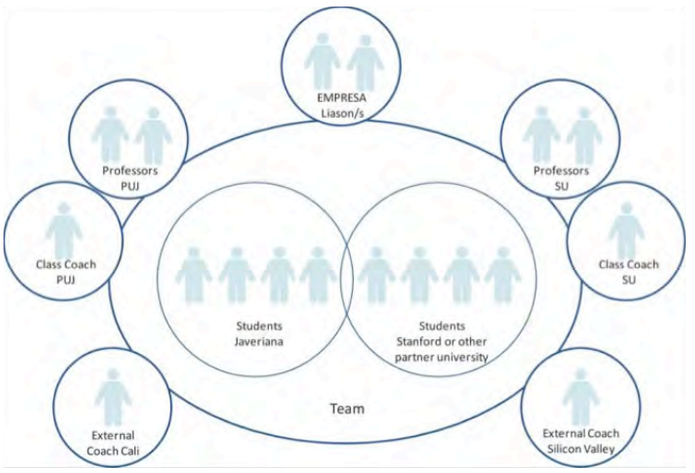

Figure 2. Description of the structure of the personnel involved in the course ME310, in collaboration with Stanford University and/or another academic partner.

The operation of the ME310 course is based on the application of the Design Thinking methodology, as it has been already explained. The theoretical basis of the methodology has been published extensively (Faste, Rolf, et al., 1993; Brown, 2009; Leifer, 1995; Carleton, Leifer, 2009; Carleton, Cockayne, 2009).

How ME310 was inserted at the Javeriana University in Cali

At the time when Stanford University contacted Javeriana University of Cali (2007), there was no design program at the latter but it was working on a project that sought to analyze the possibility of having design programs in the University for which all options were being considered. However, for many years it had been teaching a course in product design to engineering undergraduates; industrial design methodologies were followed and IDEO and its

methods were an inspiration. This was a sufficient basis to start ME310 teaching at the Faculty of Engineering of Javeriana University.

At Stanford, this course is mostly taken by first year students on the master's degree in engineering; in USA it is common for an undergraduate (programs last 4 years) to go directly to graduate studies, so it was decided that students from 5th year undergraduate engineering programs from Javeriana University were a good equivalent, and good co-workers in the groups. Javeriana student participants come from Industrial, Civil, and Electronics Engineering, and Computer Science programs, and are carefully selected; have excellent averages, good English and excel in the personal aspects. So far, every course has had an average of 8 Javeriana students per year, a figure expected to increase with the completion of more projects for Design Innovation, not only with Stanford, but also with other academic partners in ME310 (see below the SUGAR network formation).

For a 5th year engineering Javeriana student, this course is equivalent to his/her graduation project, the internship and two elective courses. There are 18 credits in total, divided into two semesters, with a weekly commitment of 20 to 30 hours.

Figure 3. SGM – small group meeting at Javeriana University's Loft (Innovation Lab), 2011-2012 with participating students and bank project employees.

Projects with academic and corporate partners

After 5 years of operation of the ME310 course at Javeriana University, 12 projects have been worked on in total, with global companies from Silicon Valley, Latin America, Colombia and Cali. Some of the projects with global companies have been directed at Latin American markets.

In the first year Stanford University brought the two projects that were worked on by Javeriana University: Autodesk, and Kodak; the latter was interested in working with our university as Latin America is its second largest market.

From the second year on, the Javeriana University has obtained several projects from Colombian companies to be worked out with Stanford University: Telefónica, Belcorp and El País (Cali newspaper). We also worked on a local project in affiliation with Stanford for a medium size company, General Metálica S.A. (GEMA).

Javeriana University developed in 2010 a project in partnership with UNAM, in conjunction with Stanford, for Tupperware, a U.S. based company. The project addressed the Latin American market needs. UNAM students were from undergraduate and graduate mechanical engineering and industrial design programs.

In this 2011-2012 academic year that has already ended, Javeriana University worked out a project using a hybrid academic and consulting format with Banco de Occidente, a Colombian bank based in Cali. At Stanford University this model is called 'embedded ME310', and has also been used by University of St. Gallen with local banks in Switzerland. In this case, employees from Banco de Occidente, some of them former students of the course ME310 and an engineering student participated in a project that looked for new ways to enhance the use of mobile devices. Professor Larry Leifer, from Stanford University, and a team of professors from the University of St. Gallen served as consultants at a distance for the project.

Table 1. List of companies that have developed projects within the ME310 course with the involvement of Javeriana University.

Period	Sponsor Company
2007-2008	Kodak: Provided by Stanford University
	Autodesk: Provided by Stanford University
2008-2009	Telefónica: Provided by Javeriana University
	Panasonic: Provided by Stanford University
2009-2010	GEMA: Provided by Javeriana University
	Luidia: Provided by Stanford University
2010-2011	Belcorp: Provided by Javeriana University
	Panasonic: Provided by Stanford University
	Tupperware: Provided by UNAM University
2011-2012	El País: Provided by Javeriana University
	Panasonic: Provided by Stanford University
	Banco de Occidente: ME310 project embedded by Javeriana University.

Meanings, implications and consequences of the activities of the ME310 at Javeriana University

Both Stanford and Javeriana Universities consider that the main vocation of the ME310 course is of an academic purpose, which is to educate students in the field of product innovation. This is the message received by companies that wish to sponsor ongoing projects and need to develop new products or services (concept received from Larry Leifer). We also hasten to emphasize that the methodology of Design Thinking has traditionally been successful in achieving results that financially benefit the businesses of the contributing projects' companies. Besides the academic interest already mentioned, sponsoring companies receive at the end of the course a working prototype that represents the solution of the problem initially exposed to the students. Also, the company receives a final report, which explains the main issues considered by students in their effort to find the solution to the problem. This report becomes a manual that can guide the company to consider aspects that support the decisions made by students in the course of the project. On the above, it must be emphasized that the quality and performance of the final prototype is a reflection of the ability of the methodology of Design Thinking to achieve effective and innovative results of high practical value to the sponsoring companies.

As noted above, the methodology of Design Thinking is being researched and constantly updated by the Center for Design Research at Stanford University, headed by Larry Leifer, from the 60's. For the Javeriana University, this experience of applying the methodology has been used to verify that indeed the results have been valuable to the sponsoring companies. This statement can be supported by analyzing the meaning that the final prototypes have had in each of the sponsoring companies.

Often, the proposals made by the companies have been directed to get answers to questions for the long term; this is, companies have sought what one might call "futuristic solutions" to their needs. In such cases, firms take portions of the solutions to implement them in their products, present and future. Such has been the case especially with Panasonic, which has shown a preference for working with students from Javeriana University for three of the five years that the university has been affiliated with the ME310 course. In the latest project, for example, Panasonic headquarters asked the students to maintain high confidentiality of the final results as they saw their applicability in some of the developments that are planned for the near future television (In the words of Mrs. Deanna Wilkes-Gibbs, Panasonic representative before the University of Stanford). The results achieved in the projects of Kodak and Autodesk, Telefónica and Tupperware are also contributions that are taken into account in future product developments in these companies.

Belcorp in particular was very satisfied with the product developed by students and is currently working in the patent of the product and on the engineering development that will lead to its commercial production, according to company representatives. Similarly, they are considering the initiation of a second project in the academic year that is about to begin.

The same situation occurs at El País, the largest newspaper in Southwestern Colombia, which is seeking to increase its base of future readers within young people of the region. The solution proposed by students in the 2011-2012 course involves the implementation of "interaction points" in various places in the cities of the region; points at which the youth can have experiences of information, interaction and integration (iii), promoted by the El País brand. This solution has been highly valued by the directors of the newspaper and they plan to continue with its implementation on a commercial scale.

In addition to the academic achievements by the students and the creation of successful products and services for corporate sponsors, there is the objective of creating and implementing a new culture that encourages innovation in the participating companies. In general, the companies mentioned so far are characterized by and permeated by some form of methodology to develop innovative products in their administrative structure; and this has led them to recognize the value of Design Thinking as a methodology for reaching successful development of innovative products. For Javeriana University it has been very gratifying to note that Banco de Occidente has not only decided to implement to commercial level the solution designed within the ME310 embedded course, that looks to enhance its electronic channels, but it has also decided to create a group of employees that will permanently focus on developing more innovations using the methodology of Design Thinking. The idea is to replicate the methodology to continue to meet their needs for new product development on a permanent basis. At the same time, they are considering to continue the work with Javeriana University, with new groups of bank employees (most of which have not taken the ME310course) to find solutions to other needs of the bank and, at the same time, to expand the bank's base of employees trained on the methodology. This time, the bank and the university are also considering the active participation of students and professors from St. Gallen University in one project, in order to have a more direct and constant support from this university that has an important experience advising companies in the field of banking.

Figure 4 - Belcorp project team 2010-2011. Standing: Javeriana students; sitting: Stanford students. In the back without t-shirts: Belcorp innovation directors. Photo taken by the author at final presentation and exhibition at Stanford, June 2011.

In the network of partner universities working with the methodology of Design Thinking it is clear that establishing a culture of innovation in a company is a task of "administrative management". With this term we mean that its president and upper management must support the culture of innovation within the company decisively. The implementation of this culture can only come from the top of the chart and must permeate down due to the introduction of a company policy. The implementation of a culture of innovation cannot occur in the opposite direction. In the case of Banco de Occidente, the program began informally, taking the bank employees out of the bank to locate them and work on campus at Javeriana University. This operation scheme had many advantages as it allowed the bank employees to interact with students from the other two ME310 projects that were marching in tune with them. On the other hand, the bank employees were isolated from the daily operational tasks that they faced before, which needed answers in the short term. This isolation led them to better relate to the attitudes of the creative teams of Design Thinking.

The results were given in the course of time, within the nine months duration of the ME310 course, and eventually the bank employees were able to show their preliminary results in front of the CEO of the bank and other senior management. This allowed to openly show the existence of the group of innovation and its potential for innovation. The bank CEO then went to support the existence of the group by setting it formally and, simultaneously, adopting Design Thinking as a culture of innovation to be implemented within the bank. And yet, the next group of bank employees who will work on new projects with Javeriana University will do so on the Loft (innovation lab) of the university, for the reasons noted previously.

An additional phenomenon is happening in the business environment of Colombia: the alumni of past ME310 courses are working in various companies in the country and we believe they are becoming seeds that are encouraging policies of their companies to adopt the Design Thinking within their respective cultures of innovation. It is well known that the fruits will be in the long run and, however, in preliminary talks with several companies, there is already a glimpse of the existence of an interest to know more about the methodology and eventually participate in the ME310 course sponsoring projects. As examples there can be mention to the fact that in Banco de Occidente there are already 4 former students; in Carvajal 2, 3 in PWC Bogota, 1 in GMC, 1 in Inventta Colombia and 1 in Desca Telecommunications, Cali. Another 10 alumni are working or studying specializations on innovation abroad.

SUGAR and the ME310 course

Figure 1 shows schematically how Stanford University works in cooperation with several other universities around the world. These universities cannot work directly with Stanford University in a given case because, among other reasons, the maximum number of projects that the university can accommodate is about 10. This and other developments have led to consider the option to develop work between universities in the periphery, as it happened with the Tupperware project, which was made between the Javeriana and UNAM universities.

About 4 years ago Professor Larry Leifer saw fit then to form an alliance of universities that had collaborated with Stanford, in order to unify policies and principles of operation between them and the ME310 course including, of course, Stanford University. This alliance is now called SUGAR, an acronym for Stanford University Global Alliance for Redesign; this because Professor Leifer considers that the task of designing innovative products at the end has more to do with redesign. Thus, under his leadership, the alliance has worked on academic training of teachers and students from partner universities, event presentation and demonstration of results of works performed between universities in the periphery of Stanford.

At this time, members of SUGAR are looking to set standards for certain activities that they think are critical to develop projects with corporate sponsors in the future. One of them is to be able to show to these companies that there is a unity, collaboration among universities; that the methodology is unique, and that Stanford University and its allies provide the umbrella under which developments and updates of the methodology are covered.

A second theme, in order of importance, is to find funding and support in order to avoid sponsoring companies to bear with the full weight of the costs involved in the projects. This is so specially now that there is a realization that costs tend to increase and may eventually exceed the capacity of interested corporate sponsorship, especially in developing countries. This task is being carried out at the time and still has not found general and common sources of support and funding.

Figure 5. Larry Leifer presenting the 2011-2012 kick-off workshop at the Sheraton Hotel in Palo Alto, California.

Thirdly, it has caught the attention of the members of SUGAR that the methodology of Design Thinking is very effective in creating solutions to problems and needs for innovative products and services in the business community and yet, there are always companies that are not yet ready to deploy commercially such solutions. It has also been observed that corporate sponsors would expect universities that encourage innovation to also have the ability to support and establish guidelines for efficient and rapid commercial deployment of new products in organizations. Within SUGAR the term "bringing it home" is now used to describe this need. This situation is precisely the one that Javeriana University lived in the Banco de Occidente project, which was described above. Although decisions were finally taken internally in the bank, the university was able to suggest some administrative initiatives and especially at the policy level regarding the management of staff in creative and innovative environments. This experience enriches the analysis of the topic that is being worked on within SUGAR at this time.

Furthermore, it was observed that the task of "bringing it home" might also be necessary to be resolved within the universities themselves, especially where groups are starting to innovate using the Design Thinking methodology. This is because in some universities it may not be easy to rearrange some procedures and administrative structures that allow for the operation of the new groups of innovation over time. In the case of the Javeriana University, fortunately, there is a high degree of institutional flexibility that has allowed the operation of the course ME310 surpassing some curricular and administrative standards still in place for general application. That is, those rules exist but do not apply in the case of the ME310 course. The adjustment of the ME310 course within the university structure was the result of "administrative management" conducted at the highest hierarchical level that recognized the importance of the existence of the course, for it offers academic preparation to students and innovation management in the regional business environment.

Other aspects that are being analyzed in the group of universities SUGAR are the possibility to exchange teachers and teaching materials as well as case analysis and the definition of approved course logistics. These are considered to be the most urgent and important issues for the proper performance of the SUGAR group.

Future work

Finally, for the Javeriana University it is clear that future research needs to be done specifically on the operation and implementation of Design Thinking at universities and companies in developing countries and on the impact of collaborations between developed and developing countries. According to professor Pamela Hints, at the Stanford Institute of Design (Hints, 2012), specialized in design groups, there are plenty of investigations on globally distributed teams, but not much on the cultural aspects, much less about something that specifically effects the collaboration between developed and developing countries.

We also believe that a vast field to explore is the so-called 'social innovation' (Howaldt, Schwarz, 2010); In the future, we would expect to apply Design Thinking to solve social responsibility challenges and to aid development of developing countries. Hopefully the SUGAR network can eventually sustain these initiatives.

Figure 6. Celebration after final project presentation: students working on Panasonic projects on 2009-2010, from Javeriana University, Stanford University and others in the SUGAR network.

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Magic and design: new paradigms and new models of thought

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Abstract
The shamanic traditions of the Amazon Indians and their influence on Brazilian contemporary design have been a point of strength for this analysis. The discussion of this paper is based on surveys of transdisciplinary theorists – as Branzi, Durkheim, Morace, Lévi- Strauss, among others – that address the shamanic magic and modern science as two complementary categories of thought. However, if on one hand the shamanic tradition shows that Nature has a lot to teach, on the other hand, the Western man is not prepared for this. The Shamanic wisdom is a type of knowledge which today constitutes a major challenge for the system of beliefs of modern science. The research's results are indicating that if individual quality and creative ability of the designers are articulated within a logic which is enriched of renewed energy, it will be possible to join tools that might help them overcome the limits of materiality. Therefore, the paper aims to show that the exchange between the different cognitive systems is fundamental to a process of creation of significant value and to the construction of a comprehensive vision of reality. Such an exchange could consciously lead design towards a universe which reunites in itself the Western and mystical aspects, in a simultaneous way.

KEYWORDS: Brazilian design, indigenous cosmology, Shamanic culture

Introduction
By highlighting the neo-primitive condition of native people in Brazilian Amazon, the idea of proposing a dialogue between Indian tradition and the culture of Brazilian modern project emerged, in particular, the relations that involve Amazon indigenous cosmology and Brazilian design. This dialogue has its origin in a doctoral thesis of my own (BADAN, 2010) whose research started from the analysis of the Manifesto do Rio Negro written by the art critic and cultural philosopher Pierre Restany (1978) and, consequently, the observance of the life style of indigenous tribes of the Amazonian region. The analysis led me towards the intuition that Brazil, in the field of design, has the possibility of proposing answers to the new questions and the new challenges of the globalized world. This is a vision also shared by the theorist and designer Andrea Branzi (2007). To him, the research of a strong, simple and uncontaminated culture – like those of the Amazon people – yet based on ancestral beliefs, offers ways to feed new creative energies and to institute a point of reference to contemporary design.

The text shows, therefore, the Brazilian phenomenon and seeks to show how in Brazil, the contemporary designer tends to unify thoughts concerning the Western rationality with those related to shamanic logic. What results from this practice is the creation of objects imbued of renewed energies, promoting a radical innovation of meaning of everyday things.

Understanding the route of the analysis
The object of study in this paper deals with themes of design in the ambit of anthropological research, more specifically, the material culture of Amerindians and the culture of modern project in Brazil. However, to elaborate this research it was necessary to re-cut the object of study to a size that was limited to the indigenous cosmology of Brazilian Amazon. This is because the impenetrable fields of the Amazonian region are the spot of conservation of a neo-primitive condition that contrasts with contemporary civilization of big metropolises (RIBEIRO, 2005). Because it presents a physical and cultural uncontaminated space, this area favored the discussion between the tradition of a native life style and its relation with the culture of Brazilian modern project. In this context, designers and shamans were defined as subjects that interact with the object, which evidenciated the qualitative characteristic of the research.

Due to the anthropological background of the research, the methodological principles applied were based onto two strategies: ethnography and case study. While ethnographic investigation was interested by indigenous material culture, the case study analyzed the Brazilian phenomenon, establishing a dialogue between native tradition and contemporary design. All bibliographic references used came either from direct examination of primary sources such as iconographic material, manifests, statements and anthropological and ethnographic reports, or from secondary sources, composed by books and scientific papers.

From the analysis emerged a hypothesis of an experimental basis based on shamanic practices of Amazonian Amerindians and which manifests itself on Brazilian contemporary design. Taking into account this hypothesis of mystical roots, information was collected from different perspectives considering, exclusively, sociological, mythological and spatial aspects referent to the typology of villages and longhouses. The results indicate that the relation between the way of living of Indians and Brazilian design is not of a formal nature, but of a philosophical one. Therefore, paying attention to the ontological context suggested, the discussion that involves indigenous tradition and the culture of Brazilian modern project presupposes the existence of a symbiotic relation, leading to believe that designers and shamans, even though being of different nature, developed an analogous system to structure their worlds.

This interaction, though resultant of an artistic intuition,

takes into account the evolutionary process of historical development of Brazilian design, whose universe is created from the European and autochthonous parameters, and from the cosmological structure noticed by the people of the indigenous tribes of Amazon. I say artistic intuition because some artistic manifestations, such as the Cannibal Manifesto of Oswald de Andrade (NETTO, 2004) and the Neoconcrete Art (TELES, 2002), had to be considered in this research. The reason is that Brazilian designers have been bringing to the design area, the perception of arts that involves the constant search for new paths, imbued of a simple look that recreates the everyday. In this aspect, experimenting several banal materials, questioning their possibilities and shapes, and attributing them new functions, are some of the practices from the arts that are being used in design today.

Between scientific and magical thought

By extracting poetic quality of banal materials with the purpose of composing useful and expressive things, the Brazilian designer is able to notice the relationship that exists between men and the environment where they live in, inside of an interpreted rationality, moreover, like magic. This is because in Brazilian design there is logic, philosophy and depth that are applied in a reverse process of Western design. Therefore, through the contrast of two realities that are practically opposite in design, the proposition of this paper is to transpose a comparative discussion – and non oppositional – that involves parameters of Western (scientific) and native (magical) thoughts as two logics that complement each other, also, in the design area.

Moreover, in the science field, this discussion is not recent.. It has been some decades that, thanks to reports of ethnologists, anthropologists and mystic, researchers have begun to realize that observing other rationalities, it would be possible to elevate science beyond the ordinary consciousness. However, it was only with the Venice Declaration (1986), subscribed at the first forum of UNESCO about Science and Culture, that the magical, instinctive and irrational components of human existence started to be valued in the scientific circuit, beginning a new dialogue between logical and wild thought.

About these two categories of thought, the sociologist Émile Durkheim (1989) writes that if science and magic seem to represent two opposing concepts, it is because, on one hand, the modern reflects the forecast that organizes, the "enlightened practice of life" whose regime is imposed by the techno-industrial civilization. On the other one, shamanism reflects the unpredictability, the absurd, the irrational that, by the slightest carelessness, deviates the direction of human destiny. Believing in the potentialities of wild mind, the anthropologist Lévi-Strauss (1990) considers these two logics as being complementary, even though being of opposing nature. While scientific knowledge follows reason and requires full transparency to reality, indigenous knowledge has a mystical mentality which intends a certain human density to be embodied to the reality.

Lévi-Strauss (ibid.) clarifies that the logic of Western society is prone to separate things: science from religion, religion from utility, utility from history. Analogously to this social context, modern scientific culture is inclined to classify, to analyze and to name every object noticed in the exterior world, treating them also as separate entities. It turns out that dividing life into subjects and objects, observers and observed, the West has been fragmenting Nature and, thus, has been losing the notion of the whole. Consequently, the Western man, as a separate entity, lost the ability of comprehending the unit of Nature and the universe order. This is a conflicting situation inasmuch as such separation has never existed. The human being has never been dissociated from Earth, he is connected to everything: society, family, images, beliefs. He is, with the same intensity, the world and the universe.

Contrarily to the West, the traditional view of autochthonous cultures continues to show that everything must be linked as parts of a unified universe. Referring to the thesis of Lévi-Strauss (ibid.), the physicist Patrick Drouot (2001) writes that there is a set of relationships within which all members of creation – man, culture, Nature – interact and interpenetrate themselves, with their own qualities and energies. Therefore, the perception of visible and invisible universe implies a fluidity and transparency devoid of absolute contour. Nature reveals the elements inserted in its interior through its interactions rather than highlighting them individually. In the words of Drouot (ibid. 178), "global unit is a whole", there is no boundary among the world of animals, humans and spirits. The real is One, and the universe is noticed as a living entity.

Adding thus the human condition of the tribes located on the Amazonian region to this conformation of Nature, indigenous culture characterizes itself, fundamentally, by centrality. In a certain way, it defines itself in opposition to that Western, which typology seems to be molecular. As indicated by Figure 1, the main difference between both logics is in the fact that, while scientific rationalism operates over distinct levels which allow to employ mechanisms often inapplicable to other horizons, the shamanic logic assumes a global and integral determinism.

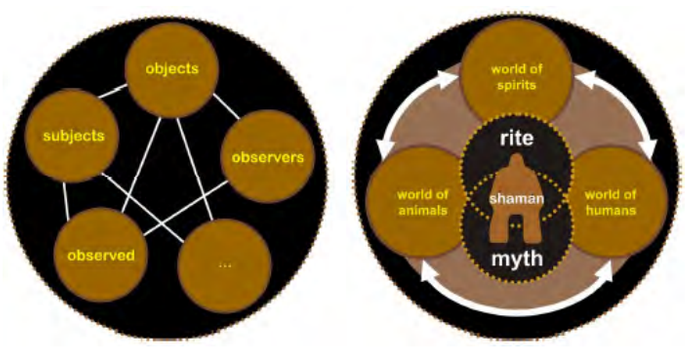

Figure 1

This brief analysis lead to the presupposition that the most adequate starting point to the research is to penetrate in the midst of the indigenous traditions of Brazilian Amazon. In particular, it incited me to investigate the mythical wisdom of shamans which is linked to the origin of the universe, to its cosmology. This is because the shamanic traditions, with their paths of exploration and their methods of experimentations, may represent a new advancement in the comprehension of mechanisms that govern human being and the universe. According to the sociologist Francesco Morace (2000), the strength of these native traditions remains intact and arouses interest in the contemporary due to the symbolic charge and the aura of mystery that surrounds them. It is a knowledge that transcends the limits of vision of Western world and offers resources to men, so they can themselves reach complex immaterial, expressive and communicative horizons.

A deviation of the one-dimensional view of West can redirect the scientific vision and, consequently, amplify the designer vision – even more in an uncontaminated environment such as that of the Amazonian forest which, with its vastness and stillness, lives in a time apart and separate from the rest of the world. The rescue of the shamanic ways might mean, therefore, a logocentric freedom from contemporary design, which up until this point, was hostage of reductionist views of Nature, human being, the spirit and the holly. The shamans logic suggests ways, amplifies the virtue of things, anticipates the effects and satisfies, fully, the common desires of a whole indigenous generation.

If this path is expressed in coherent reflections, the autochthonous thought has chances of benefitting designers to use "magical" intuition in a conscientious and sapient way (MORACE, 2000), allowing the immersion of a new reality. The expectation is that a reading key which is able to conjecture a redefinition of thought from its ethical and esthetical qualities – even before the stylistics – might help professionals of contemporary design to break the crystallized paradigms of this activity, and surpass the limits of habitual materiality.

Cosmological organization of Brazilian design

As shown in Figure 2, by confronting the Amazon indigenous cosmology with the roots of Brazilian modern project, it was evidenciated a symbiotic relation between two universes: one based on European and autochthonous parameters; and the other, structured from cosmological parameters noticed only by shamans of Amazon tribes. Arising from a reading based on an artistic-intuitive reflection, the likeness between both is not of formal nature neither a material one, but philosophical.

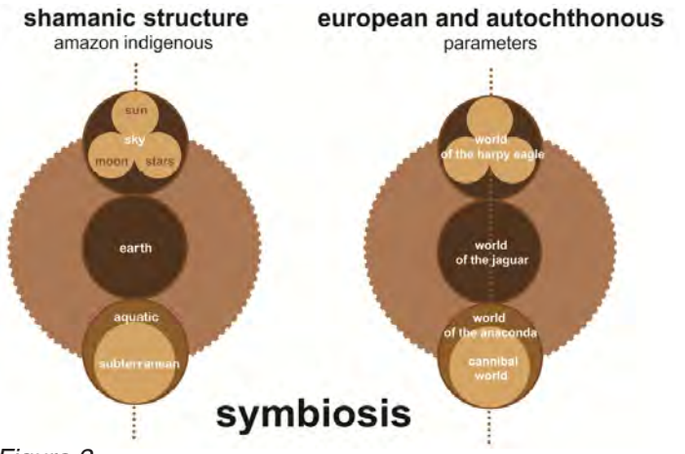

Figure 2

Having as a basis the indigenous universe, the conformation of the cosmology of Brazilian design might be diagramed in four specific worlds, denominated as: cannibal world, anaconda world, jaguar world and harpy-eagle world (BADAN, 2010). It is worth highlighting that the congregated ideas in each one of these worlds were not contextualized within a chronological order of time. In correspondence to the mentioned choices by the anthropologist Philippe Descola (2002), they were gathered by logical reasons of identity and verified affinities, above all, in the process of intellectual development of its designers.

Bearing in mind the shamanic way of thinking, time is not a measurable variable neither a projectable one. As noticed by the anthropologist of religion Carlo Prandi (2006), the idea of time implies a cycle based on everyday and seasonal facts, in which space has very diverse qualities from those that follow certain Western indicators – to know, the meaning of high and low, under and over, amongst others.

Considering, therefore, this Amerindian mode of thought, the identity of worlds related to the cosmology of design alludes to the visual perception of image only on a first moment. More than belonging to one or another world of design, things have a same manner of conceiving and asserting their own identity from a bricolage of pre-existent signs coming from themselves, from people and from environment. Therefore, the identity of these worlds must presuppose, here, the pre-existence of a single knot, either in design or methodological consistency applied.

Still on the adopted criteria in the recognition of identification codes of worlds, with the purpose of justifying the choice of animal names to designate the spheres related to cosmology of design in Brazil, it is important to take into account the cultural reflections of Kaka Werá Jecupé (1998), a native who tells the Amerindian Brazilian history from the shamanic thinking. According to Jecupé, for the Indians each word has a spirit, a life sung in a shape; that is, "Indian" is a quality of spirit put on a harmony of shape. And to exist such harmony of shape, great entities of Nature work incessantly oriented by ancient deities and by Mother-Earth, whose, by their turn, are driven by older ancestors.

Shamans are the only beings of their tribes capable of communicating with the entities of Nature and the deities which are specific to them. Mircea Elíade (2000), historian of religions, clarifies that the majority of these spirits have shapes of animals and play a considerable role in indigenous Amerindian communities. Even differentiating in shapes, names and in number from a region to another, the "anaconda ancestor" of each native groups is the strongest shamanic spirit which dominates that sphere of the cosmological universe; to know, the anaconda in the aquatic world, the jaguar in the terrestrial world and the harpy-eagle in the celestial world. According to the anthropologist Stephen Hugh-Jones (1993), in a transformational and experimental universe like that related to the Amazon culture, the anacondas in the water are similar versions of the jaguars on the land, and the harpy-eagles in the sky. In other words, the biggest predators in sky, land and water are equivalent and complementary beings.

In the cosmology of Brazilian design, from the four identified worlds, the world of the harpy-eagle showed a more evident correlation with magical manifestations (or supernatural) from the cosmology of the shamanic Amazon, expressions that were able to be recognized in the individual attitudes of designers, in their particular motivations and in their subjective capacity of proposing technical and esthetical innovations. As these professionals have a certain vision of things that come from above, they have managed to interpret better the situations of the relations between man and world.

Designers of this world have been questioning the frontiers of design and artistic interaction, highlighting the symbolic character of their products. For this reason, the following item of this paper will be substantially focused on the harpy-eagle world – which it does not mean that the concepts will be treated in a unilateral way or that they are not applicable to other worlds.

The world of the harpy-eagle

According to shamanic mythological perspective, the initiator of the first shaman would have been the harpy-eagle, the "anaconda ancestor" of the celestial world. Like told by Elíade (2000), when the gods decided to give a shaman to mankind, they send a bird to Earth, the harpy-eagle. But men did not understand its language and the bird had to return to the Sky. So, the gods send it again to the planet, now with the order of granting the gift of being a shaman, to the first person it found in its way. It is due to this myth that the apparition of the harpy-eagle to a native is interpreted by indigenous as a sign of shamanic calling, since the cosmic view of a future shaman is considered as indicative of overcoming of its profane condition.

Figure 3. Creative, ingenuous, subversive, Brazilian designer Rodrigo Almeida is obsessed by Brazilian popular culture, Tropicalismo and Oswald de Andrade. (www.rodrigoalmeidadesign.com)

In associative terms, the symbolic code of this bird represents to Indians of Amazon, the creativity, the rising, the capacity of looking things from the high and with distance. In an equivalent way, in the cosmology of design, the world of the harpy-eagle is characterized by the "vision" and intuition of designers, considering more the introspection than the observation and the logic of the contradictions. By having in mind this symbolic representation, it is assumed that all beings associated to the harpy-eagle would have a vision of things that come from above. Thus, what explains the analogy of the term "harpy-eagle" between the indigenous cosmologic meaning and the symbolic meaning of design, would be the ability of seeing.

By analyzing the organization of shamanic mythical thought, Lévi-Strauss (1990) observed that one of its essential priorities is to elaborate structured sets between traces and fragments of events through contiguity. As the pioneer of modern anthropology Franz Boas (1995) elucidates, the mythological universes are destined to decompose themselves from the moment in which they are being formed, allowing new universes to be created from juxtaposition of their fragments. It is within this fragmentary premise of myth, which implies a set of trace elements which are separate and are approached intuitively, that the design of the harpy-eagle world is also organized.

Beyond mythical perspective, designers that represent this world come, generally, from arts. Poetically objective and with a keen eye for mundane things that recreate the day-by-day, these designers innovate by experimenting without limitations and embarrassments of large- scale production. By gathering multi-activities, they are much more explorers in their researches, and their creativity is driven by visual perception. In practical terms, the raw material selected by these professionals results from the subversion of the road scum and of products that are

denied or not valued by society. Analogously to the construction of mythical thought, in a process of contiguous juxtaposition from the parts of secondary materials, the logic of subversion institutes new functions to the final product (Figure 3). However, in order to subvert the original function of materials and industrial components with the aim of utilizing them in another context, the designer of the harpy-eagle world performs three basic actions: recycle things of Nature and urban waste of natural origin, reuses discarded materials by society, and re-contextualizes industrialized products that cost little.

In the end, between art and mythical cosmological thought, the dynamic of designers that represent this world consists, fundamentally, in reinventing new products based on already existent products, in exploring old materials and develop a new raw material with them, and in waddling the technological deficiency of industry with creativity and innovation. Maybe, due to the connection of ancestral shamanic logic and design, the designing development and the inventive capacity of designers, the harpy-eagle world refers to the elementary technological universe, direct, natural and within reach of people.

Magic innovating the meaning of daily objects

Going back to the past in order to think about the future is not nonsense, but a trend that leaves aside the obvious and the esthetics to create something new which is, at the same time, elementary, pre-historical. As noticed by the designer Kenya Hara (2007), the shape of things is not an only esthetical variable. It might be used to involve the look of a person and, consequently, of society.

Given this trend, the compass of knowledge has been geared towards those societies which still retain something original, primitive, mythical, and spiritual. In relation to new objects, the input comes from emerging Asia (Hong Kong and Taiwan), from Central America and from South America. The last, according to the history of Brazilian design, Brazil's entry would occur only at the end of 1980's, by the hands of Campana brothers. The Campana's have been questioning about the frontiers of design and of the artistic intervention, by highlighting the symbolic character of their objects. Through their unusual objects, they make a speech about reuse based on the strategic of reutilization adopted by the poor population of Brazil – like those of slum dwellers – which recreates objects and materials every day. Dealing with rudimentary techniques and daring in the decontextualization of the objects, designers propose a new reading of objects and raw materials of everyday life; a kind of behavioral return to the origins which more seems a starting point (LEON, 2005). The same is observed with the work of Eulália de Souza Anselmo, who shows a willingness to take a leap beyond old inspirations with a production of essential and primitive objects. Or with the work of the designers Tânia de Paula and Christian Ullmann, whose goal is to develop craft products by using renewable resources and industrial waste along with Amazonian communities, distant from big urban centers (Figure 4).

Figure 4 shows, on the left, the armchair designed by Eulália de Souza Anselmo, a delicate craftsmanship, embroidered with flowers in natural wool (ww.revestir.com.br). To right, the chair designed by Tania de Paula and Christian Ullmann is made with vine cushion of sustainable management (http://casa.abril.com.br).

The sense of it all concentrates in the necessity of design to be free. Instead of repeating shapes and inspirations of the last two centuries, it is necessary to re-study the materials and their natural, primitive beauty. Objects of this nature provoke an own emotion because they are connected to a naturalistic beauty of creation, by a human half and a natural half. It is unexpected, accidental and, by that, impressive and exciting. Today, the urban man is saturated by beauty with which he lived for a long time, and, therewith, there is not much sense to re-propose historical pieces: it is made necessary to experiment and innovate beginning from a return to his origin, to the archetypes and shapes.

Contemporary design in Brazil absorbs and mixes inside itself, the shamanic and the Western, the strict and the disorder, the tradition and the future. He moves among these contrapositions within three primordial concepts of Amerindian basis, which summarize their main characteristics. First, it is not possible to live a completely material world without spirituality, because without mysticism, life would be very poor. Technology helps to recreate the magic that is missing in the life. Secondly, what animates and gives energy is not the known, but the mystery, the one which is hidden. It is the opposite of information and serves to show the world as an improvised revelation, full by secrets. The aim is to make man to understand his impotence and to rediscover the fascination that comes from Nature. And, by the end, simplification. Indigenous culture tends to subtract, while the Western one to add, filling the atmosphere with rumors, the house with objects, the streets with confusing images.

Indigenous design is made of modest and transformable things, it does not waste resources offered by Nature. There, the simplicity is not an esthetical attribute but a virtue, a way of being physically in the world and of showing a soul. Without these two attributes, one cannot go anywhere. It is in analogous way to this behavioral typology that Brazilian contemporary design tends to propose spaces and a system of objects, which may be transformed according to the wishes of people.

A few conclusive reflections

In Western design there is a logic, a philosophy, a depth which is applied in a different process from what makes Brazilian design. Brazilian design is able to contaminate its own narrative vision with other stories, incorporating foreign cultures and, at the same time, emphasizing its own reality. One can say that it is an attitude of cannibal character: if in the "other" there is some kind of value, certainly it is "someone" who deserves to be "eaten". In correspondence to discussions already performed in other areas, it is likely that Brazilian designer shares, equally, the attitudes which characterize the cultural cannibalism.

The cultural cannibalism signalizes, not only traces of Brazilian history, but also shows evidence of its condition as a cannibal culture. Since the beginning of history that Brazilian culture hybridizes itself through the juxtaposition of cultures, which have very diverse characteristics amongst themselves, sometimes, opposites. From the date of the roots of the Portuguese colonization, Western Europe has influenced Brazil, but the contrary has also been happening. However, the behavior of Western European in relation to Brazil is not cannibal. As there are many unknown frontiers which promote different behaviors, it would be interesting to the Western world to know which kind of relations exist among several logics and how they communicate in order to search alternative ways, also, to design.

For this purpose, this paper searched in shamanic magic of Amazon Indians, evidence of other rationality and of another science different from the Western one, and not just a vague imaginary inspiration. In this aspect, the two cosmological diagrams presented (one related to the indigenous culture of Legal Amazon, and the other one to the culture of Brazilian modern project) allowed the realization of a comparative analysis between shamanic logic and the logic of Brazilian design, and the perception of a correspondence between them. As a result of this analysis, while the Amerindian universe is interpreted as a culture that lives in intimate interdependence with its own environment, Brazilian modern project acts looking to adapt to the human or technological environment, and to live in harmony with it.

In the end, once the shamanism is part of a logic that teaches to be possible to learn a lot with Nature if this is observed with acuity, it seems the future of design is to interact with other logics of thought, mainly with those that are able to help the designer to develop projects that can bring together the man to a condition of life less materialistic.

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Oeste Ativo Ecosystem for Innovation: a regional business regeneration program through the design thinking based methodology IDEAS(R)EVOLUTION - a Co-creative way of thinking brands and integrated innovation

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Abstract
This article presents the results of an experimental implementation of the methodology IDEAS(R) EVOLUTION - Design thinking for social and territorial innovation (Mateus et al, 2009, 2010. 2011) in the West region of Portugal (e,g Oeste Ativo). Based on knowledge generation through a co-creative and participative processes involving stakeholders from businesses, governance institutions, civil society and several entrepreneurs, a Vision and a Strategy for the regeneration of the local industrial sector was developed; simultaneously with an innovation network designated, The Oeste Ativo Ecosystem.

The main effect that the science of design brings to a territory is to simplify complexity. After eighteen months of the methodology's implementation in a sequence of 6 stages (e.g. Involvement, Inspiration, Ideation, Integration, Implementation and Interaction), (Mateus et al, 2011), the Oeste Ativo project materialized in the implementation of an ecosystem for innovation, that is, to be capable of generating a controlled and fertile Habitat powered by Biodiversity of the species (i.e. people, companies/enterprises, public and private institutions, etc.), while respecting the complexity and randomness of environments and enabling and encouraging the sharing, the cooperation, the competiveness, the mutualism and the symbiosis between all agents for the (R)evolution and regeneration of the territory.

The main changing forces involved were a group of 30 territorial stakeholders, composed by individuals, internal and external public representatives of the Oeste region living forces. These stakeholders defined the priorities and the development clusters for the territory: Agriculture, Energy, Heritage & Culture, Ceramics, Health & Wellness and Gastronomy. From the collaborative dynamics and creative tools exercises, also emerged the Technological and the Tourism Industries, as transversal clusters as holistic aggregators and integrators, as well as the base support for the future Territorial differentiation, positioning and investment attraction.

This paper concludes presenting a comprehensive strategic Brand building program and a Brand energy network system, generically designated ACTIVAMENTE (action orientated). The system organizes the innovation effort of the Oeste region, seeking to create brand value through communication synergies optimization between the participants a group of different sub-projects thus generated by the broader (holistic) network of knowledge and action designated OESTE ATIVO ECOSYSTEM.

Keywords: Branding, Innovation, Co-creation, Creative intelligence, Design Thinking, Cooperation, Ecosystem

Introduction - Territorial development trough stakeholders involvement and participation
Since the end of the Second World War, social and economic development has become a key policy concern throughout the world. Changes in political, economic and social structures have led to a number of radical responses towards social and economic development policies. Public actors have argued that development may be achieved by involving private actors, and instead of passively awaiting their participation, public actors have established agreements with the private sector. (Argiolas et al, 2009)

Relationships between public and private organizations has presently drastically changed. On one hand, public organizations have modified their behavior, shifting from direct and unique interventionists to effective collaborators and supervisors. On the other hand, private actors have been involved in implementing policies in order to strengthen sectors such as health, education, and civil infrastructures, activities that in the past were controlled exclusively by the public powers. Crossing the traditional approach of separate roles for public and private actors, public-private partnerships lead to increasing cooperation in achieving social and economic development (Kooiman, 2003).

These formulas have become a dominant approach to territorial development and implementation is presently encouraged by a large number of European initiatives. Many scholars argue that it undoubtedly represents a tangible signal of the transformation of governance systems (Lowndes and Skelcher, 1998; Osborne, 2000; OECD, 2001, 2004; OECD-LEED Programme, 2001; Glendinning et al., 2002; Bassoli et al. , 2007; Graziano and Vesan, 2008) from hierarchical and vertical to horizontal and agile structures, characterized by stakeholder involvement and participation.

Territorial development involves the creation of locally competitive goods connected with local culture (Crouch et al., 2001). This theoretical frame underlines the basic need that the OESTE INDUSTRIAL ASSOCIATION (e.g AIRO)

demonstrated when IADE /UNIDCOM - the creative university research unit was first approached. AIRO needed to develop in the OESTE region of Portugal a collaborative and participate "space" where entrepeuneurs could present there business ideas, co-create projects and implement them without the need of approval, support and license from any public governance system. They wanted to call themselves "Warriors against crisis". They thought that IDEAS(R)EVOLUTION methodology could give them the methods, the tools and the dynamization that they needed to "bring this Warrior Spirit into life".

Development - Local action for partnership governance

. By involving firms, organizations, non-profit entities, and civil society (e.g. stakeholders) an opportunity is created to propose better ideas and spread innovative ways of managing local relationships, which tend to have higher results than when only public actors are taking decisions. Partnership governance is a form of multi-stakeholder governance (Freeman, 1984; Bierman et al. , 2007; Streck, 2004; Andonova, 2006; Bassett, 1996, Martens, 2007) because it involves all stakeholders in the decision making process and in an active participation.
Active participation means encouraging document consultation, controlling actions, and possessing information. In this way, policies and decisions are shared.
Multi stakeholder governance offers many benefits in terms of flexibility and motivation. Yet the most important positive element is related to the creation and exploitation of strong relationships. By cooperating and sharing information, stakeholders are invited to meet, exchange viewpoints, and interact. As a result, they can create and maintain long-lasting relationships. In addition, because each actor has the chance to express personal ideas, tacit personal knowledge can be shared, which promotes synergy. Knowledge can be transformed from individual knowledge to organizational knowledge, guaranteeing that the decision making process has better execution conditions.

Multi-stakeholder governance is a network among co-interested and co-motivated actors that is oriented toward the achievement of a common good. (Argiolas et al, 2009). "The importance of knowledge in wealth creation has grown constantly and is now on the verge of attaining much higher levels crossing new frontiers, in the measure that many more world regions are connecting with a planetary central brain bank in constant growth and change and ever more accessible. As a result all of us – rich and poor – will live and work with this wealth revolution and its consequences..." (TOFLER, 2007)

To generate new knowledge for the OESTE territory it was an important issue since the beginning of this project for AIRO. There main idea was to promote a "Mind change" revolution within the Industries and businessman in the region. The OESTE ATIVO territorial brand should be an open platform for those who wanted to learn, share and do more. The IDEAS(R) EVOLUTION methodology was the toolbox of processes to provoque that "Mind change" effect and the knowledge stock asset.

When AIRO accepted the challenge of applying IDEAS(R) EVOLUTION methodology to develop the OESTE ATIVO project one of the key factors was the fact that in our methodology Brand Building is a parallel process to the innovation effort and focus.

Entrepreneurship and The Innovation Ecosystem

The creative economy (based on human creativity and ideas) and the green economy (based on social equity and the environment) share goals for improving economic and societal well-being: one through valuing the benefits of creativity, and the other through valuing the benefits of environmental awareness.

Governmental initiatives around these changes include ways to stimulate a more decentralized and proactive form of citizenship); to grow a culture of business and social enterprise (i.e. SMEs and "social" businesses); and to embed an entrepreneurial "start-up" mindset that encourages initiative, risk-taking, and responsibility (for example, new ventures and enterprises).

The new economic entrepreneurial Innovation Ecosystem could be conceptualized, according to the following guidelines, as referred by Daniel Isenberg´s Babson Entrepreneurship Ecosystem Project (BEEP, 2008).

1. Stop emulating Silicon Valley. Even Silicon Valley could not create itself today if it were starting from scratch.

2. Tailor an ecosystem around your own particular characteristics. Sustainable entrepreneurship is the result of numerous forces working together, which we call the entrepreneurship ecosystem. Each region has a unique ecosystem with more than a dozen elements. You need to understand all of them, and how they can be strengthened and aligned.

3. Engage the entrepreneurship stakeholders early on. Entrepreneurship is about engagement and empowerment. Stakeholders should be engaged early in the process.

4. Support the high potential entrepreneurs. Although entrepreneurship is inclusive, to jumpstart an entrepreneurship ecosystem, the most impactful sector to influence is the high ambition, growth oriented, market-seeking ventures. These create the jobs, the dynamism and vitality, and the growth.

5. Get some visible successes, even by "brute force" if necessary. Success breeds success.

6. Change the culture head on. It is possible to increase tolerance for risk, the legitimacy (even nobility) of launching your own business, acceptance for honest failure.

7. Stress the roots: don't provide easy money. Provide

funding, but insist that the entrepreneur bring in a matching investor. Keep the funding off the ventures' balance sheets.

8. Pave the footpath. Don't push clusters too hard. Every government now has a cluster strategy and thinks that will get entrepreneurship going, but success is elusive and rare.Clusters don't create entrepreneurs. Entrepreneurs create clusters. Remember, entrepreneurship is inherently a contrarian activity, so wherever you decide they should be, the good entrepreneurs will always be figuring out how to do something else, do it differently, and do it better. Identify, watch, encourage, support.

9. Remove bureaucratic obstacles for entrepreneurs. Eliminate roadblocks and red tape through consolidation and streamlining. Have permitting "boot camps" to free up log jams.

10. Experiment relentlessly and holistically. You can learn from what others have done around the world, but you have to experiment based on your own reality. Focus initially on short run experiments, small scale funding, short courses, and small numbers of entrepreneurs. Develop a norm of reflecting and learning from mistakes as well as successes.

The main Mission of OESTE ATIVO project was always to create a Entrepeurnership and Innovation ecosystem. IDEAS(R)EVOLUTION being a Design thinking for territorial innovation based in co-creation methodology, was a natural partner to build this goal. The first step of the project was to "design" and parameterize the sequence of workshops according to the AIRO objectives.

Marketing for stakeholders cocreation

Kotler(2010) states that the tendency for a continued co-creation and co-participation allows brands a strong link with its clients which facilitates valuable insights for its diffusion. Better than the traditional process in which organizations don ´t have sufficient wealth of resources generated by its clients. This paradigm change, of Management and Strategic Planning, implies, as stated by Fonseca (2006), "that its unthinkable to imagine territorial development without the capacity of these territories to attract and maintain dynamic and motivated populations".

Marketing is emerging as performing a broader role in the management of the enterprise in guiding all business processes that are involved in the co-creation of value with customers. Customer orientation has once again emerged as a dominant business philosophy in the corporate cultures of successful firms as management comes to understand that the welfare of all of the firm's stakeholders, including but not limited to its owners, has its roots in customer need satisfaction. Consequently, the rewards to the enterprise for co-creating customer value must ultimately be shared among all of the stakeholders. Understanding customers and how the enterprise fits into their value-creating processes and communicating that understanding to the other resource-providing stakeholders becomes the primary role of marketing.

The preceding sets the stage for offering a value cocreation concept of strategy that is consistent with S-D (e.g. service dominant) logic and that is integrated with an expanded concept of marketing organization. Value is not created by the business but is co-created by customers as they integrate resources (Vargo and Lusch 2008) that not only include firm- supplied resources but other resources at their disposal in order to improve their well-being by helping them develop or co-develop solutions to problems.

To be truly customer centric, the firm has to think not about optimizing the firm and its activities but how to support customers in their resource integration and value co-creation activities.

For OESTE ATIVO project was really important to re-focus all the region effort to become more innovative and developed into a Human centered approach. Since the co-creation stage to the projects network development or to the communication and branding stages the "prosumer" should be the center and the heart of this Movement.

IDEAS(R)EVOLUTION design thinking methodology for territorial innovation and development

IDEAS(R)EVOLUTION is presently an integrated approach for the innovation of organizations and territories based on Design, Marketing and Creative Intelligence (Mateus e Rosa, 2011), which is focused on Co-creation and Dialogue (fig1).

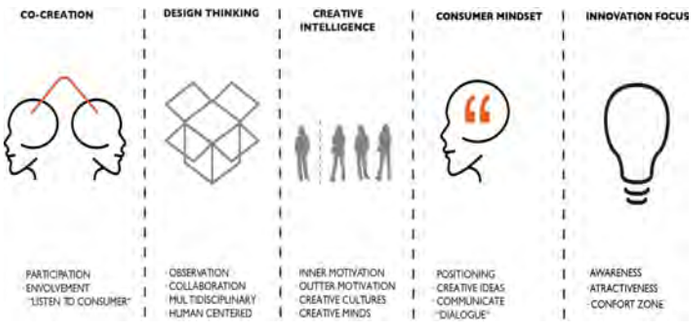

Figure 1 - IDEAS(R)EVOLUTION Principles
Source: The Authors

In its essence it is based on three broad operational dimensions (fig 2):

CO-LEARNING - process and environments for organizational learning in co-creation and "open innovation" with all stakeholders, thus potentiating consumer know how.

CO-PRODUCTION - Co.creative processes for development and innovation production (i.e., brand, products/ services, territorial, etc.).

CO- BRANDING - Co.creative processes for the cons-

truction of Dialogue with consumers (e.g. stakeholders) and communication effort sharing for specific targets and markets.

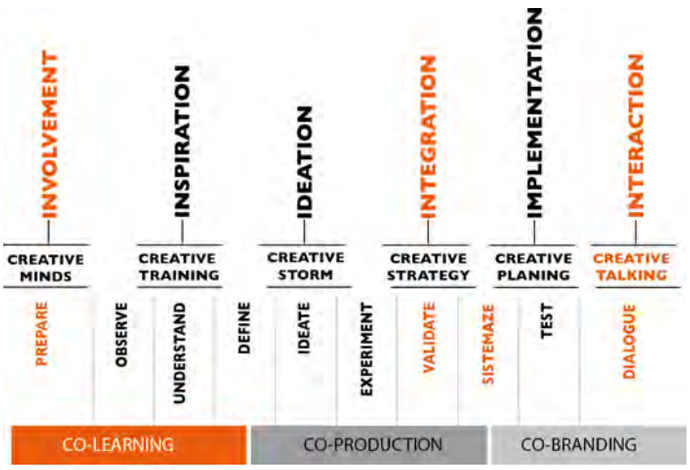

Figure 2 - Methodology 6 Stages - Phases and Operational dimensions
Source: The Authors

IDEAS(R)EVOLUTION is a methodological process that associates creative thinking tools inside the organizational and on territorial structures. It is insert in the framework of on-going scientific research programme. It aims at breaking down barriers and to contribute for more flexible and competitive organizations.

This approach is inspired in the emergent methodologies of design thinking (Kelley 2006, Brown 2008, Martin 2009), co-creation (Prahalad et al, 2004), branding (Aaker2010, Neumieyr, 2010) and on the empirical and conceptual work developed by Gomez & Mateus (2009) and Mateus & Rosa (2010, 2011).

IDEAS(R)EVOLUTION brings design thinking to the communities, combining local economy, sustainable development, co-creation, collaborative participation and innovation, focused on territorial development through local economic growth, quality-of-life development and social change.

Having these objectives in mind, two new stages were initially added to the methodology basic design thinking process (e.g. involvement and integration). Presently further empirical and conceptual work led to a 6 sequential methodological stages (e.g. involvement, inspiration, ideation, integration, implementation and interaction). Accordingly to this concept, it is argued that each "territory" (i.e. organization, brand, place, etc.) for its sustainable development and survival depends on a continuous flux of creative intelligence and innovation ecosystem. These innovation fluxes depend, increasingly so, on social relational networks amplified by technology (e.g ICT) and fed by constant dialogue, Always On.

Presently consumers have a stronger power of decision conferred by WOM (word-of- mouth + word-of-keyboard) and Prosuming (Tofler, 2009), based on attitudes and planned behaviors of a "tribalized" like kind related with enlarged "neighborhood circles" (Godin, 2011). These behaviors are in turn dependent on own perceptions, atribution of value and social pressure by others (Ajzen, 1985, 1991; Ajzen e Fishbein, 2005; Rosa, 2002). Therefore organizations, brands and territories aiming at not losing "attraction power" (i.e. to confer identification, prestige and trust) with their "tribes" (e.g. its stakeholders and consumption bases) must establish with them a 24/7 dialogue, thus became Always On with the Tribe (Rosa, 2011), implemented though activation platforms for innovation and creative intelligence (Mateus, 2011).

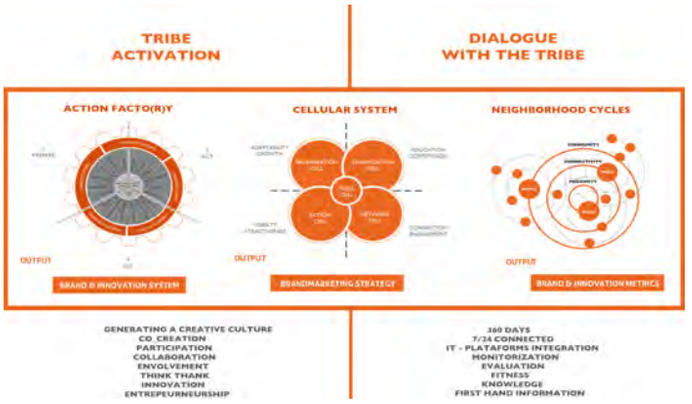

Figure 3 - IDEAS(R)EVOLUTION macro Processes
Source: The Authors

Being IDEAS(R)EVOLUTION ´s main objective: to develop a creative culture and intelligence in the territories, organizations and people; all of its methodological steps aim at producing an actionable set of results that involve all stakeholders, both internally and externally. The innovation flux for management is expected to result from this co-creative melting pot (e.g. involvement, motivation, commitment and creative participation) producing "integrated open innovation" that actively involves all concerned territorial partners.

Synthetically the IDEAS(R)EVOLUTION methodology at its present stage of development is composed of:

1. Two macro-processes (fig 3):
TRIBE ACTIVATION - Creative generation of Ideas
DIALOGUE WITH THE TRIBE - Implementation and dissemination of Ideas

And,

2. Six phases or sub-processes(fig. 4):
2.1 - Involvement - to increase the knowledge of the design thinking process, of the creative techniques and the motivation for creativity for each stakeholder participant in the workshops.

2.2 - Inspiration - information search /gathering, contextualization and diganostic for the design of the

innovation challenge. Based on etnographic research techniques and on the User Centered Design method of Think/Use/Do.

2.3 - Ideation - Creative divergence and convergence in search of new multifaceted solutions to the problem/challenge. Exploratory and collaborative techniques applied to individual and group dynamics creativity for Design Thinking.

2.4 - Integration - Systematization of emergent ideas from previous steps (of ideation and creation) though consensus converging to generate an innovation strategy.Based on psychossociological techniques consists of exercises in "collective intelligence" for consensus generation (Delphi method: Linstone and Turoff, 2002); cross impacts analysis and inventive problem solving (Trizics Method: Altshuller, 1999) and validation of applied ideas with the community (Innovation Matrix).

2.5 - Implementation - Conception and pre-test of an Innovation Pack . Design of a full market test. Based on marketing research techniques focused on consumer behaviour for final validation and improvement of the innovation proposal.

2.6 - Interaction - Definition of the communication strategy and tech platforms parameterization (INOV HUB) for innovation in dialogue with the consumer. Based on Social Networking Marketing operationalization of the multi-channel communication platforms for continuous innovation.

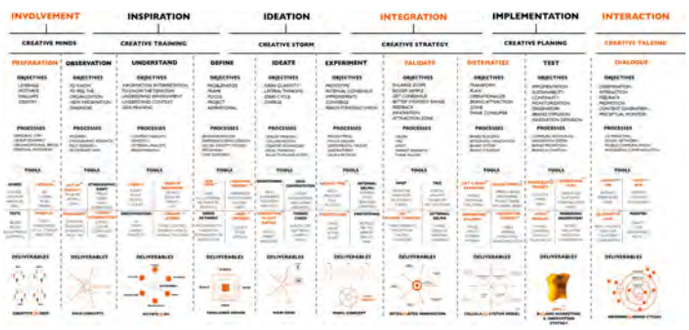

Figure 4 - IDEAS(R)EVOLUTION blueprint
Source: Mateus & Rosa 2011

The OESTE ATIVO Ecossytem case

OESTE ATIVO is an AIRO (Industrial Association for OESTE region) project that was developed with the goal of provoking and lead a (R)evolution for change the minsets and the knowledge creation in the territory of the OESTE, focused on their economic activities and business anchors. To Create a movement that impact the largest number of people with willingness to change the OESTE region and that want to implement real projects, resulting-from the synergies created in the movement OESTE ATIVO that allow an precursor and mimetic effect.

The main concept was the guerrilla logic, a group of people highly motivated that seeks achievements trough concrete actions, assertive, effective, capable of causing change and evolution of mentalities and attitudes in the OESTE region.

Their mission is to create a knowledge stock for the region, within the business organizations of the territory, acting in advanced training and the transfer of this knowledge for agents in the territory. By acting on the created knowledge in connection within the regional businesses, and by defining the strategic priorities of development and regeneration of the productive sector, as well as by implementing this strategy.

This ongoing project started in July 2010, and until now the IDEIAS(R)EVOLUTION methodology was implemented and applied at the full range:
The 2 macro processes: Tribe Activation and Dialogue with the tribe, by implementing the 3 sequential models: Action Factory Model (Mateus & Gomez, 2009, Mateus et all, 2010, Mateus et all, 2011) - That consisted on a Sequence of 7 workshops in order to generate the creative ideias for the territorial development, the Strategy and Planning.

The Cellular System model (Mateus & Rosa, 2011, Mateus et all, 2011) - That consisted on the parameterization of the OESTE ATIVO Innovation Ecosystem management board with the participative governance philosophy.

The Neighborhood Circles Model (Mateus & Rosa, 2011)- That consists on a Marketing approach to the development of dialogue with the stakeholders and the consumers to co- create and to disseminate OESTE ATIVO ecosystem. A specific website based platform is being developed to allow this interaction: www.oesteativo.com

The 6 stages of IDEAS(R)EVOLUTION methodology where applied in the following sequence:

1. Diagnostic: Individual interviews with local leaders, opinion makers, governance. Initial Stakeholders Selection

2. Workshop 1 - IDEAS(R) Stage: Involvement - Phase: Preparation - Tools: Lateral Cooking - Objective: Group Dynamics and engagement and territorial Perceptual mapping trough the groups 3 food plates preparation in collaboration.

3. Workshop 2 - IDEAS(R) Stage: Inspiration - Phase: Observation - Tools: (a) co- observation - Objective: the stakeholders are the project observers and all collected information is filtered by the stakeholders group. (b) Foresight - Objective: Prospective group analysis where we are where we should be

4. Workshop 3 - IDEAS(R) Stage: Inspiration - Phase:

Understand - Tools: (a) Roots - Objective: Explore the Macro context (planet, people, Profits and Culture) - (b) Sense Of Belonging - Objective: The understand the Perceptions and the cognition on the territory "to Feel" and "to Be".

5 - Workshop 4 - IDEAS(R) Stage: Inspiration - Phase: Define - Tools: (a) DNA - Objective: Define the deep values and genes of the territory - (b) Consumer Journey - Objective: One day of a potential entrepreneur in the OESTE Region in order to identity the actual service experienced and the emotional and motivational drivers.

6 - Workshop 5 - IDEAS(R) Stage: Ideation - Phase: Ideate - Tools: Brainstorming - Objective: to Transform the collected information into a new strategic vision and path for the OESTE region and to selected the most potential ideas from the stakeholders.

7 - Workshop 6 - IDEAS(R) Stage: Ideation - Phase: Ideate - Tools: Inno IN-OUT matrix - Objective: To transform the potential ideas from the brainstorming into innovation projects for OESTE ATIVO thinking about markets, consumers and economy.

8 - Workshop 7 - IDEAS(R) Stage: Ideation - Phase: Experiment - Tools: (a) Internal Delphi - Objective: Reaching a internal consensus about the sectorial clusters, identifying the synergies between ideas and the emerged networks for each project.

9 - Workshop 8 - IDEAS(R) Stage: Ideation - Phase: Experiment- Tools: (a) Prototiping - Objective: Group meetings to develop the projects ideas, Polinization sessions where all stakeholders collaborate in the others groups projects.

10 - Conference 1 - IDEAS(R) Stage: Integration - Phase: Validate - Tools: External Delphi - Objective: To present to a bigger group of potential stakeholders the strategic path that we reach, to motivate others to come to OESTE ATIVO Ecosystem and collect feedback in order to provide the necessary adjustments and improvements.

11 - Workshop 9 - IDEAS(R) Stage: Integration - Phase: Systematize - Tools: (a) Left & Right Branding - Objective: To develop a full brand identity and brand building program to OESTE ATIVO Project - Tools: (b) Innovation Iceberg - Objective: to help to construct all clusters projects on the go to the market stage.

12 - Implementing Cell - IDEAS(R) Stage: Implementation - Phase: Deliverable - Tool: The Cellular System Model - Objective: To parameterize the implementation managing blueprint, regarding Fuel Cell (Governance), Regeneration Cell (Adaptive and Operational), Dinamization Cell (Training and Educational), Network Cell (Networking and Linkage) and Action Cell (Promotion and Visability).

13 - Conference 2 - IDEAS(R) Stage: Implementation - Phase: Deliverable - Tools: Go to the market - Objective: Presenting The Brand OESTE ATIVO, The Strategic Clusters ATIVAMENTE and to launch the first 3 stakeholders projects (Ecobike Tour, Talents Academy and Heritage).

14 - Workshop 10 - IDEAS(R) Stage: Interaction - Phase: Dialogue - Tools: (a) Always On - Objective: Web-based Platform to collaboration and co-creation for actual and new stakeholders, as well as dialogue platforms with end-users to promote OESTE ATIVO cluster projects. - Tools: (b) Co-creative Labs - Objective: Physical Innovative spaces available to the community to continue the effort of network and co-create new projects.

15 - OESTE ATIVO Innovation Ecosystem Monitor - IDEAS(R) Stage: Interaction - Phase: Dialogue - Tools: Monitor - Objective: To provide full control and monitorization of brand performance and projects development and success. (img1)

Image 1- sequence of co-creative workshops

Main Results

Along with this process we impacted more the 30 potential entrepreneurs. These stakeholders defined the priorities and the development 10 sectorial clusters for the territory based on the traditional economic sectors: Agriculture, Energy, Heritage & Culture, Ceramics, Health & Wellness and Gastronomy. From the collaborative dynamics and creative tools exercises, also emerged the Technological and the Tourism Industries, as transversal clusters, holistic aggregators and integrators, as well as the base support for the future Territorial differentiation, positioning and investment attraction.

From this clustering effort also emerged the networks between entrepreneurs and concrete projects that are in development stage within each cluster, 9 projects have already experienced the go the market approval, 3 of them where already launch with success, starting by the already in the market:

1. Ecobike tour - Sustainable Mobility Vehicles for tourism resorts and regional tours

2. Talent Academy - Community and Social responsibility Project regarding the unemployed persons

3. Heritage - Modern and innovative approach to traditional regional Ceramics.

4. Cognos - Knowledge based company to provide Training Courses to local Companies

5. Link Up - Creativity for Industry company to provide the links between creative industries, industrial companies and local students

6. OESTE ATIVO - Website platform to provide collabora
tion and communication synergies

7. OESTE region - Website and Portal to provide international visibility and distribution channels for local products

8. Sustainable Housing - Projecting wooden houses with renewable energies

9. Food for Senses - Local produced natural food with sensorial design concept to the market

During the generation, incubation, implementation and dissemination of each one of this projects there was a continuous flow of ideas, a information cycle and enlargement and enrichment of the people network that supports the Ecosystem. Step by Step the main objectives (Fig. xxx) where reach, such as: Motivation, Leverage, Deeper understanding, Integration with the Environment and the Context, Ambition and Attitude, Ideas Sparkle, Selection and Filter techniques, Polinization, Sharing, Internal and External Consensus, Visual Thinking techniques.

Enlarge the Scope, Experiment, Simplify complexity by System Thinking capabilities, be Strategic and Them Operational, Plan, Act, Do, Face to Face approach to markets, achieve Dialogue to Have Real time feedback and Monitorization.

The Brand

Parallel with the creation of this Innovation Ecosystem we developed the full Brand Identity and Brand Building Program in order to support the Innovation effort with the right communication Tools and strategy.

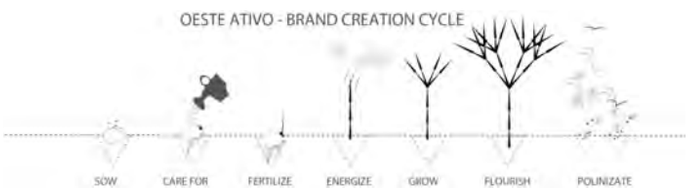

Figure 5 - OESTE ATIVO Brand Creation Concept
Source: The Authors

The OESTE ATIVO Brand concept (fig. 5, fig. 6) is an ecosystem that allows the biodiversity of their species, which aims at the harmony and the continuous evolution through the creation of a controlled habitat, where knowledge about the time of gestation, growth and maturity of each species is essential and the quest for interaction and changing between species is permanent as well as a factor of balance and relationship with the complexity and randomness of environments and external contexts.

The Identity (fig. 6) chosen was developed by GIVE U DESIGN ART, a local design company whose owners where initial stakeholders. This identity language is based on a structural frame of the plant/tree: transmits the balance and the controlled habitat. Its a geometrical structure, rigorous, freestanding, apparently fragile (cognitive dissonance) because is discrete and structured but that is not the element of more emphasis of identity. The different species that fulfill the structure those are the stronger visual elements because they represent for the people (warriors) and they are the of potential growth of the ecosystem. The Plants represent the biodiversity, the diversity of the territory. Each one of them means the union, the connection and sharing because each graphical element is not UNO. If the structure itself contains structural elements “empty” to fulfill, each species indicates that also can still grow, multiply. This standardizes is the graphic language that expresses and reinforces the focus and the purpose of the project “SIMPLIFY THE COMPLEXITY”. It was also our aim that the graphical forms representation could show the emotional and poetic side of OESTE ATIVO.

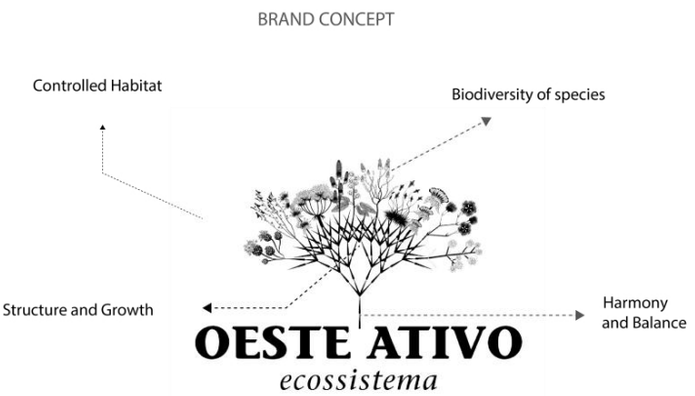

Figure 6 - OESTE ATIVO Brand Concept
Source: The Authors

The brand building Program is focused on a bilateral approach, meaning the OESTE ATIVO as a brand most create awareness and attraction for it one, mainly regarding the objective of Disseminating the project and attracting new entrepreneurs for the Ecosystem but also most empower the clusters projects in the stage where they go to the market and fly by themselves (fig. 7, fig. 8).

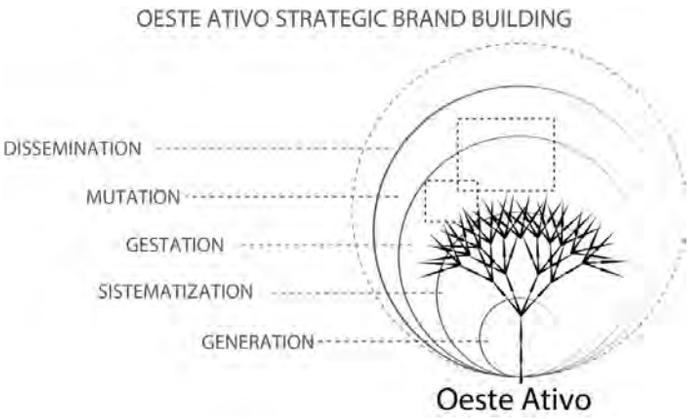

Figure 7 - OESTE ATIVO Strategic Brand Building
Source: The Authors

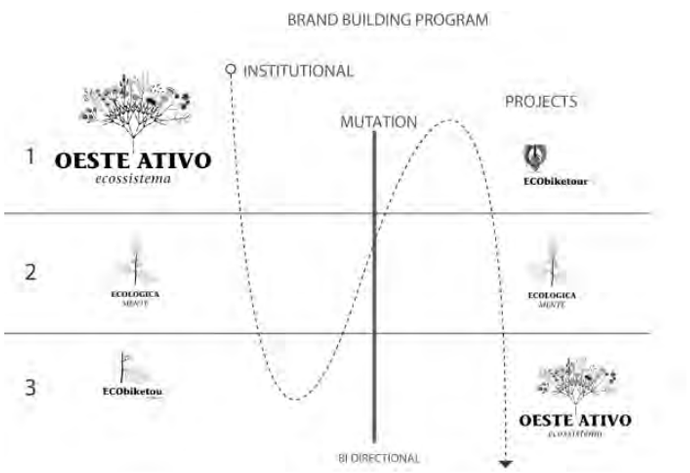

Figure 8 - OESTE ATIVO Brand Building Program
Source: The Authors

In order to achieve this we develop a strategic model for the Brand (Fig 7 and 8) and we create a Brand System for the sectorial cluster wtih 3 levels:
1. The Clusters Identity (fig. 9), That we have called ATIVAMENTE (ATIVA, which stands for Active/in Action; and MENTE that stands for Mind/Knowledge). Each one of this clusters is represented with a simplification if a plant from the region.

2. The Incubating Projects - Each stakeholders research project as a different name and is represented by a detail of the clusters plant

3. The Mutation Project - When the projects reach the go to the market stage. We decided to represent this stage with a graphical element of a animal to reinforce that the project is going to fly by their on feet from now on.

Figure 9 - OESTE ATIVO - Brand System ATIVAMENTE
Source: The Authors

Conclusion

The current economic paradigm with the difficulties and uncertainties it presents, puts increased pressure on its citizens: the realization that the solution to these problems is in individual participation to evolve to a new society.

This pressure not only requires active individual participation but also the development of a new skill-set. These skills are: cocreation, the integration of one's skills into a collective dynamic, realizing that growth depends on the interaction with others. The need for continuous creation, meaning that individual mind-sets have to change closer to what a creative person really is.

The need to look within, and around, abandoning the belief that solutions will come from governments, external agencies or magic formulas, but from within ourselves and local communities. We are talking about an attitude change creating a new logic of individual relations and of social participation, in creativity and knowledge centred communities.

The application of a "designedly" way of thinking and communicating could be very timely now in stimulating both new value propositions and more human-centered strategies for growth and development—all within our rapidly changing, increasingly sustainable, post consumerist society (Best, 2012). What will these new propositions (practical, attractive, and aspirational) that can step-change people's behavior and mindsets about success and "what matters" and move us into alternative lifestyles (based on well-being), actually look and feel like? This to me is an opportunity for design —to reframe and shift things "by design." This was opened in OESTE ATIVO project, to reframe a region trough "Design processes and Mindset". Nussbaum rightly points to the importance of the ability to reframe problems in new ways to make original solutions. What matters is that we are reframing things. It is the very act of reframing itself that is important.

The OESTE ATIVO project was and still is an important field experience laboratory regarding the IDEAS(R)EVOLUTION improvement. Until was been a solid prove that

Design Thinking, co-creation, creative intelligence, marketing and innovation are “branches of the some tree”. When harmonized, integrated and systemized this knowledge areas provide territories a full system to operate in this participative governance paradigm that we live in.

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Perspectives about Design Education for Social Innovation: the Safe Agua Case Study.

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Abstract
Water is one of the scarcest and most precious natural resources on earth. In our interlinked economies, access to safe water in one community quickly becomes a global issue that affects us all. Experts forecast that by 2030 demand for water is expected to be 50% higher than today, and withdrawals could exceed natural renewal by 60%, making water scarcity an even more dire reality for a third of the world's population.

The authors of this paper, both educators in one of the most prominent art and design colleges based in the US, present a social impact design project they have helped develop which focuses on meeting the challenges of safe water access for populations of urban slum dwellers in Chile and Peru. The paper provides insight about multidisciplinary design research and co-creation methods with end users and the NGO project partner in both countries. It also includes an analysis and discussion about the field-testing and pilot rollout of the innovative product solutions that resulted from the collaboration. Highlights about the opportunities and challenges inherent to designing with communities across cultures for social innovation and scale are central to the takeaways from the case study presented.

KEYWORDS: social innovation, safe water access, user-centered design research, co-creation, social design, products and services for the base of the pyramid.

Introduction
"Nothing has to be or to remain as it is or as it appears to be; there are no limits to the conceivable." —Horst W.J. Rittel, The Reasoning of Designers, 1987.

There is a revolutionary transformation underway in the design field at large as it continues to expand its meaning, shape human experience and influence other knowledge domains and contemporary culture at a broader scope than at any time in the past. In their most essential roles, designers today deal with concrete and objective results whose consequences affect us all, shaping the form, function and symbols of our world: from the visualization, ideation and planning of images, products and services to the strategic conceptualization of systems and environments. (Buchanan, 1994)

Increasingly, as well, designers are called upon as translators and synthesizers of a class of societal challenges that are ill defined, ill structured, and "wicked." (Rittel and Webber, 1973)

This paper offers an in-depth overview and articulation of the evolving pedagogical methods and design outcomes of Safe Agua, a flagship initiative facilitated by Designmatters at Art Center College of Design. Safe Agua focuses on meeting the challenges of safe water access for populations of urban slum dwellers in Chile and Peru and is the result of an ongoing partnership between Designmatters and the Innovation Center of the NGO Un Techo Para Mi Pais, headquartered in Santiago, Chile.

In the context of the analysis of the Safe Agua case study, this paper also poses some consequential questions about the opportunities and challenges inherent in crafting new pedagogical models for design education that aspire to social innovation outcomes.

A Journey Beyond The Studio:
An Overview Of Safe Agua Chile & Peru
Clean water is essential to life; lack of access to it results in poor health and economic hardship. In our interlinked economies, access to safe water in one community quickly becomes a global issue that affects us all. Experts forecast that by 2030 demand for water is expected to be 50% higher than today, and withdrawals could exceed natural renewal by 60%, making water scarcity an even more dire reality for a third of the world's population. (Water Resources Group, 2009)

Over two academic terms in 2009, the Designmatters Department at Art Center College of Design partnered with the Innovation Center of the Chilean organization Un Techo Para Mi Pais, which has offices in 19 countries throughout Latin America, to sponsor studios in which undergraduate students traveled to Chilean slums and worked directly with residents to envision, design and test solutions addressing the lack of safe running water. For residents of Fundo San Jose, in the outskirts of Santiago, Chile, the team, calling itself Safe Agua Chile, generated six solutions involving the use, storage and transportation of water.

In 2011, the same staff and faculty leadership team extended the Safe Agua project to a Peruvian slum with key support of a Sustainable Vision grant from the National Collegiate Inventors and Innovators Alliance (NCIIA). The Safe Agua Peru team sought opportunities for water system innovations, capitalizing on the field research and outcomes of the Chilean project. The Peru project included a new studio class of students from the undergraduate Environmental, Product, and Graphic Design

departments in an advanced-level transdisciplinary studio hosted by the Environmental Design Department at Art Center. A Graduate Broadcast Cinema student was also enrolled in the project to produce a documentary about the collaboration.

The project began in September 2011 with a 10-day intensive field research trip to Cerro Verde, a community perched high in the hills of Lima with no access to basic services. This community was identified with the team of Un Techo Para Mi Pais Peru, in Lima, and the Techo Innovation team based in Santiago (Figure 1). Driven by field research and continuous dialogue with a cluster of approximately 20 families from Cerro who agreed to participate in the studio, teams designed a series of proposed products and systems to address water scarcity. They created full-scale working prototypes, which were tested in Peru, then further iterated upon and refined based on several loops of feedback with the community of end users and partners in Peru.

Six Proposals

By the end of the studio's full academic term in December 2011 (16 weeks into the project), and based on lessons learned from testing and user feedback, the Safe Agua Peru teams developed designs that aspire to enhance benefits and functionality for users (including health benefits, convenience and water-savings; user experience; educational value; and appeal to kids) while targeting affordability and potential for local manufacturing and effective distribution. The following six working prototypes were proposed:

- GiraDora, designed by Ji A You and Alex Cabunoc (figure 2) is an innovative concept for a human-powered combined washer and spin dryer for families earning $4 to $10 (US) a day. Currently, hand-washing clothes is a time-intensive chore that takes up to 20 hours a week, consumes much of families' scarce water, and can lead to health risks. GiraDora reduces the time to hand wash a load of laundry from one hour to three-to-five minutes, uses a third less water, and improves the experience of hand-washing clothes for women living without access to running water. The user sits on the drum-like appliance and pumps the pedal with her foot to agitate, clean, rinse and then spin-dry clothes. Local assembly and an innovative business plan with three revenue streams for micro-entrepreneurs provide supplemental income. At a price point currently under $40 (US), GiraDora's comfortable and ergonomic operation significantly increases productivity, reduces health risks, instills dignity and affords opportunities to begin breaking the poverty cycle.

- Balde a Balde (Spanish for "Bucket to Bucket"), designed by Kim Chow (figure 3) is a portable faucet that delivers a flow of water from any container. Lack of running water is associated with a decreased incidence of hand-washing and an increased risk of diarrhea—one of the leading causes of death for children under five globally. Balde a Balde makes the convenience and health benefits of running water available to families among the two-in-10 urban dwellers, and seven-in-10 rural dwellers who lack access to piped water connections. (WHO/UNICEF Joint Monitoring Programme for Water Supply and Sanitation report, 2010) Unlike other hand-washing interventions, Balde a Balde addresses not just clean hands, but optimizes the full range of water-related tasks performed in the home. Balde a Balde provides running water wherever it is needed: a universal clip attaches the portable faucet to any existing container; a squeeze of the siphon pump initiates a continuous flow of water; tapping the spout instantly turns on and off the water; twisting the valve regulates the volume of water.

- VitAmigos, conceived by Cora Neil and Thomas Kong (figure 4), proposes a new, fun, playful and interactive experience for mothers and children that combines water purification and nutrition in a tasty beverage. For families living without access to safe water, VitAmigos seeks to reduce waterborne illness and improve kids' health for less than the cost of a soda. VitAmigos is not just a vitamin-enriched water; it also provides an educational experience for children. Comprised of a playful and durable clear pitcher and time-release tablets, it works in phases: first the tablet purifies the non-potable water, then it dissolves to create a vitamin-rich beverage, with a fun color that indicates it is safe and ready to drink.

- Clean+Smart, designed by Mariana Prieto and Alexandra Yee, uses small detergent packages as the vehicle to deliver ADI educational toys to children living in extreme poverty. Detergent is a commodity that is purchased very frequently in small packages throughout slums in Latin America. Clean+Smart gives families with children a low-cost opportunity to collect high quality toys that can support their children's development from the home (figure 5).

- Caja del Tesoro, designed by Seth Weissman and Viirj Kan, is an analog vending machine and micro-business initiative that gives women living at the base of the pyramid the skills and tools necessary to help them earn their way out of poverty. The stand-alone storefront adjusts to vend a range of products, providing a convenient, safe and accessible place for slum communities to purchase necessities anytime during the day or night. The concept includes an entrepreneurship program to empower women to generate income for their families, while providing value for their communities (figure 6).

- Soap Buddy, designed by Carlos Vides, is a soap-dispensing bracelet for kids that intends to promote hand-washing by making soap more accessible and fun. Hand-washing is critical to preventing diarrheal illnesses, and can reduce twice as many water-related deaths as clean drinking water alone. (charitywater.org, 2012) Soap Buddy makes hand-washing fun by extruding paste soap (common in developing countries) though the bracelet's faceplate. The interchangeable

faceplates become animated when the soap is extruded: Spiderman shoots out a soap web, Hello Kitty's whiskers grow, soapy boogers ooze out of a nose, or roses grow from a stem.

Next Steps

The student teams that have moved forward into a new phase of iteration and development all have in common the fact that their designs resonated strongly with the families they engaged and the project's partner; these teams have also demonstrated entrepreneurship intent in wanting to see their patent-pending prototypes advance to a new phase of development, beyond the studio course, that includes a second round of pilot testing and impact assessment (underway at this writing) in slum communities in Santiago, Chile, closer to the Innovation Center's Chilean headquarters. The Balde a Balde and GiraDora teams are currently working with a team of faculty and students from the Society and Business Lab at the University of Southern California Marshall School of Business; Clean+Smart are pursuing commercialization strategies, and VitAmigos is collaborating in turn with chemistry experts from the California Institute of Technology to research water purification technologies appropriate to their design system.

A further stage of testing in both Peru and Chile is anticipated in 2013 for these projects based on the local support and social enterprise network of the Techo Innovation team, and a number of pending NCIIA "E-Team grants" for which Balde a Balde and GiraDora are under consideration; this is key support—NCIIA makes awards to multidisciplinary teams of students and faculty to bring to market promising innovations.

The Design Challenge & Framework Criteria

The Safe Agua studio posed the following design challenge: "How can we work with families living in Peru's asentamientos (slums) to design and develop solutions, products and services for using, obtaining, containing and carrying water in order to help break the cycle of poverty?" This challenge was framed with a market-based approach, guided by the social entrepreneurship thought leader C. K. Prahalad:

"If we stop thinking of the poor as victims...and start recognizing them as resilient and creative entrepreneurs and value-conscious consumers, a whole new world of opportunity can open up. Four billion poor can be the engine of the next round of global trade and prosperity. They can be a source of innovations." (Prahalad, 2004)

Design criteria were established through the lens of social entrepreneur Paul Polak's book Out of Poverty (2009), as well as Polak's teachings at a NCIIA workshop attended by the Product Design lead faculty of the project. Polak's charge, to "Make sure your approach has positive measurable impacts that can be brought to scale. Make sure it can reach at least a million people and make their lives measurably better," (Polak, 2008) along with joint goals established between the Art Center Designmatters/faculty team with the Innovation team at Techo. Key drivers were outlined as follows:

- Scalable, sustainable solutions with potential for real-world implementation;

- Radically affordable products and services for Base of the Pyramid;

- Solutions that address specific problems, with both quantitative impacts (illness reduction, water conservation, increased time for self-improvement, opportunities to generate income) and qualitative impacts (sense of dignity);

- Solutions at the scales of: products for individuals & households; products, spaces and services for a small group of families (which can in turn benefit a larger group) along with services for many communities.

To guide students in integrating these criteria from the outset, the teaching team expanded beyond the Environmental and Product Design faculty who previously led Safe Agua Chile. To achieve deeper field research results, an ethnography instructor collaborated on framing the field research methodologies and co-led the field research trip. During the term, the instructor continued to lead a co-requisite ethnography seminar embedded in the design studio to articulate problems, construct compelling stories and contextualize the studio work with discussion and readings on poverty, slums, the role of water, social innovation and Base of the Pyramid (BoP) entrepreneurship case studies. Additionally, the class integrated workshops, lectures and consultation by a business Teaching Assistant, a University of Southern California Marshall School of Business MBA Candidate and Society and Business Lab Fellow. As the projects progressed, the business TA guided teams through the process of framing business models, using tools from Business Model Generation: A Handbook for Visionaries, Game Changers, and Challengers.
Field Research and Designerly Ways of Knowing

The following section provides an overview of the key design research strategies and exercises for immersive learning that were used in the Safe Agua studio. Many of the methods articulated were greatly informed by methods deployed in the previously led-studio, Safe Agua Chile; and others were co-developed with the design research ethnography expertise as referenced above. This integration of academic and studio instruction is an important hallmark of all transdisciplinary studios at Art Center and proves increasingly essential to support the accelerated pace of learning that projects such as Safe Agua demand.

Exercise In Empathy: A Day Without Taps

Successful design is rooted in empathy. To prepare for the research trip, "A Day Without Taps" was an effective exercise that visualized a measure of constraints the students would encounter in the field. Each student and faculty member purchased five gallons of water to use for all daily activities for one day, carried it home on foot, bike

or public transit, and boiled their drinking water. The goal of this exercise was to become conscious of how we use water in our daily lives and to dedicate one day to understanding how our lives would be different without convenient access to water. This exercise built empathy with the families the team worked with in Cerro Verde, who purchase non-potable water from a delivery truck, for 14 times the cost-per-gallon that Lima's middle class city-dwellers pay, store water in barrels along the dirt road, and hand-carry water up hundreds of hillside steps.

The Field Research Trip

Development of Safe Agua Peru began with a 10-day intensive research trip to Cerro Verde. Two core families hosted each research team of two students, with a total of 20 in-depth interviews conducted collectively. During the visits, the teams participated in daily activities and helped with daily chores, gathered quantitative data, discussed people's aspirations and life stories, and bonded with families. At Techo's office in Peru, to prepare for working with families in the field, the teams conducted a role-playing exercise to practice interviews with a translator, developed interview questions, and met with Cerro Verde's two community leaders.

Methodologies

A set of methodology cards (figure 7), which built on those developed for Safe Agua Chile, guided ethnographic research methods to collect both quantitative and qualitative information. The cards were intended as a generative starting point for gaining insights into another culture, rather than a prescriptive method. They outlined seven areas of focus, three specifically related to water and four broad topics beyond water. The cards were designed based in part on the collective experience of the faculty, as well as inspiration from IDEO's method cards (IDEO Method Cards, 2003), to help overcome language and cultural barriers, with methodologies targeted to each topic:

- Day in the Life: Suggested methodologies included timelines and giving inexpensive digital cameras to the family members to keep and narrate a photo journal of their daily life. Quantitative questions included budgets, earnings and time spent on work, family and chores.

- Aspirations/Limitations: Methodologies included card sorting. Qualitative questions included what steps people are taking to achieve their dreams and goals, and what larger structures (policy, class issues) might prevent people from achieving them. The findings from this card—that people's highest aspirations were for their children to succeed, as well as to own their own house and earn more income—drove the larger missions of each team well beyond water.

- Materials & Making: Methodologies included gathering existing individual and local skill sets, and innovative solutions that people have created. Questions included asking people what objects are missing from their lives in order for them to perform daily tasks.

- Maps & Networks: Methodologies included drawing an ideal home layout, mapping paths people take to perform water-related actions.

- Obtain/Contain Water: Methodologies included guided tours, and tracing water back to its source, identifying at which points contaminants are introduced, money exchanges hands, and municipalities, companies and broader policies are involved.

- Carry/Move: Methodologies included flow analysis and storyboarding the path that water takes. Key questions included, "How can minimizing carrying and moving water impact people's health and afford free time for self-improvement activities?"

- Use/Reuse Water: Methodologies included participating in daily water-related chores (laundry, dishes, cooking, cleaning home, etc.), then drawing a step-by-step action map of each routine, and asking at what point along each action map do design opportunities lie.

Initial Problem Identification & "What Ifs"

In a first stage post-field immersion, teams mapped their insights, visualizing the various threads of immediate findings with posted notes that were organized under meta-questions: "What's the problem?" and "What If…?" The teams collectively ranked the most pressing problems and returned to the field to ask families to rank their highest priorities, and pose "what-if" scenarios/solutions together. While students often came up with "blue sky," abstract solutions, families tended to gravitate toward pragmatic ideas with concrete steps addressing each problem. To understand the broader framework of each key problem, teams created maps that traced back to root causes, and sketched forward potential implications. A presentation on BoP trends, aspirations, and inclusive business models by Lima-based staff from the Netherlands-founded nonprofit organization SNV, which works worldwide to develop best practices for sustainable development, was key to contextualizing the field research. The SNV Peru-based team of researchers added important data and guidance that was informed by years of research working with BoP communities in Peru.

Design for Social Innovation: the Pedagogical Journey

The Safe Agua studio (figure 8) stands apart from many other studio classes typically present in the Art Center undergraduate curriculum in that students aren't assigned a design brief per se, but instead offered an ill-defined "wicked" problem to wrestle with, and a specific context that grounds it. Faculties mentor the students and guide them through an open-ended process of "opportunity definition" that occurs in the field with end users and partners. In this sense, the design research methodologies that informed the Safe Agua studio, as most Designmatters collaborations, follow a long lineage of participatory design research modes of engagement. Participatory design is widely recognized today as offering important advantages

to a design team that can draw upon the tacit knowledge of users to identify issues and solutions that may otherwise elude them. (Press, 2003) In designing for a specific group or context, users may also gain a sense of "ownership" about the design that can lead for more successful outcomes. In this context, the Safe Agua project approach epitomizes a project that engages designers, principles of design thinking, co-creation and participatory design to place people at the center of the design exploration and process—beyond reducing them to "end users." (Buchanan, 2001)

The participatory arc of the project continued well past the field research immersion. The teams took initial findings and began to analyze and synthesize the data to define key problems. To ensure that framing occurred within a dialectic process that asked questions of relevance, and that—importantly—would maximize the chances for proposed products that the families would be eager and able to purchase, the teams sought opportunities that connected with both observed behavioral patterns and consumption patterns (i.e. cost, time, and health). Teams also identified market opportunities with the potential of broad-based impact (the ideal target scale of beneficiaries was held at the one million-plus mark).

Co-Creation

In response to a critique from Techo that Safe Agua Chile did not fully achieve a true process of co-creation, the team sought more meaningful connections between students and families throughout the Peru project, beyond the field research stage. Tactics used for ongoing dialogue that would lead to co-created "opportunity definition spaces" the team consulted regularly via Skype with the Techo team, and with the families in the study via Nextel phones. In the next step of validating initial design directions, design teams emailed "co-creation" documents (including a clear problem statement and storyboard, drawings of three potential solutions, and specific questions) for the Techo team to use as a tool to elicit feedback from Cerro Verde families. These regular feedback loops during prototype development continued to dictate the direction of the design development.

Iterative Prototypng

The objective of the prototyping phase was to develop design solutions that respond to the opportunities identified, via a process of brainstorming and sketching, storytelling, and building iterative prototypes. Inspired by Paul Polak, this quick prototyping focused on the premise of developing "tools for empowerment" rather than dead-end objects. (Polak, 2011)

A "Thinking through Making" exercise transitioned from problem definition phase to iterative prototyping phase. The goal of the exercise was to begin to make rough 'proof-of-concept' prototypes to ideate off the page, through making and hands-on exploration.

After initial rounds of design exploration, all teams created working prototypes for midterm presentations. Two weeks after midterm, two student representatives—a bilingual product design student and the graduate broadcast media documentary filmmaker—brought all the prototypes to Peru for field-testing. We timed the field-testing to give students a meaningful deadline to make a big leap forward after midterm, and then receive feedback with four-to-five weeks to implement into final designs. With key support from Techo, the students tested the teams' working prototypes in Cerro Verde with five families, for four days, and left robust prototypes with families for longer-term trials. The student researchers also conducted focus group discussions and surveys with larger groups of women, and visited a local school. The families in Peru responded to these working prototypes, shared their own ideas, and showed us exactly what they valued and what they wanted to change. Back in California, the research team downloaded their field notes and shared documentary footage of interviews and product testing with each team.
This direct interaction with end users afforded insights that drove the designs, and in some cases fundamentally shifted a team's design direction. For instance, Team GiraDora sent two separate prototypes: a plunger-like washing device and a salad-spinner inspired dryer. Immediately, the women of Cerro Verde identified the highest value in combining the washing and drying prototypes into a single device, which dictated team's final design direction.

Lessons learned from Safe Agua Chile drove the decision to allocate limited resources to a second field trip—which had not occurred for Safe Agua Chile. Safe Agua Peru instead allowed for feedback during field-testing at a critical juncture of the studio (midterm) and having access to this feedback that the two students assigned to go back to Peru brought back, yielded a unique educational experience for entire class. The salient values proposed by the final designs, i.e. benefits to users, including health, convenience, water-savings, user experience and educational value, are a direct outcome of those closer interactions between the design team and the families.

Beyond the initial studio: project development toward pilot testing

In Spring 2012, a new course in the Art Center curriculum, the Designmatters Development Seminar, was created to ensure that faculty mentorship and resources would be available to support the student teams who had expressed interest in continuing development on their design innovations. Safe Agua Peru's VitAmigos, Balde a Balde, GiraDora, and Clean+Smart teams have developed their prototypes and incubated business strategies. The teams have explored human-centered/participatory design research methodologies and user testing; employed rapid prototyping, collaboration and innovation techniques; practiced project management and leadership; and gained a broad exposure to resources for developing implementation scenarios through access to outside partnerships and grants that will carry these innovations to a new amplified pilot testing phase in 2013. It is anticipated that in this phase the teams will have to conquer a number of challenges

inherent to pilot rollout of social innovation proposals including: 1) the identification of a local social entrepreneur or implementation partner that may have the potential to accelerate the rate of testing and finalization for the projects to move forward to an amplified scale of pilot rollout; and 2) the design of appropriate distribution pathways and commercialization strategies for each project.

Conclusion

The Safe Agua Peru case study presents an example of an immersive design education model for social innovation that required a rigorous process of collaboration with local partners and end users, field research, methodologies of co-creation, iterative prototyping, field-testing and evaluation, and a critical influx of knowledge imparted to the student team outside design (notably in best practices for design research, ethnography and BoP business models and social enterprises). As a continuation of the Safe Agua Chile project and reliant on a strong partnership with the Techo Innovation Center and the same staff/faculty leadership team at Art Center, Safe Agua Peru also demonstrates the value of taking a "building block" incremental approach. With Safe Agua Peru, strong outcomes both for the students involved and the for the social impact promise that several of the projects are demonstrating are unquestionably linked to that measure of increasing knowledge gained over time, iteration and collaboration that the Art Center and Techo Innovation team accrued since the first engagement with Safe Agua Chile in 2009.

Social Innovation applies to a broad spectrum of contexts. To design education, it co-relates closely with putting in place curricula where students can experience and learn about the real and positive impact the systems, strategies, products and services they conceive as designers can afford individuals and groups of people who live in highly resource-constrained environments. Projects such as Safe Agua aspire to make a tangible difference by setting forth new pedagogical models that are characterized by their openness to experimentation and a mode of responsible engagement with collaborators. The "ROI" for advancing the articulation of design as a key contributor to social innovation at large cannot be overestimated.

Figure 1. Participatory Field Research in the Community of Cerro Verde, Lima, Peru.

Figure 2. Techo staff field testing refined GiraDora clothes-washer/spin-dryer prototype by Alex Cabunoc and Ji A You, in campamento near Santiago, Chile.

Figure 3. Balde a Balde portable faucet, by Kim Chow, provides running water from any bucket, to maximize cleanliness while optimizing water use, for people living without basic services. Prototype testing in Cerro Verde, Lima, Peru.

Figure 4. VitAmigos water purification and vitamin tablet, by Cora Neil and Thomas Kong.

Figure 5. Clean+Smart by Alex Yee and Mariana Prieto.

Figure 6. Caja del Tesoro, an analog vending machine and micro-business initiative that gives bottom of the pyramid women skills and tools necessary to earn their way out of poverty, by Viirj Kan & Seth Weissman.

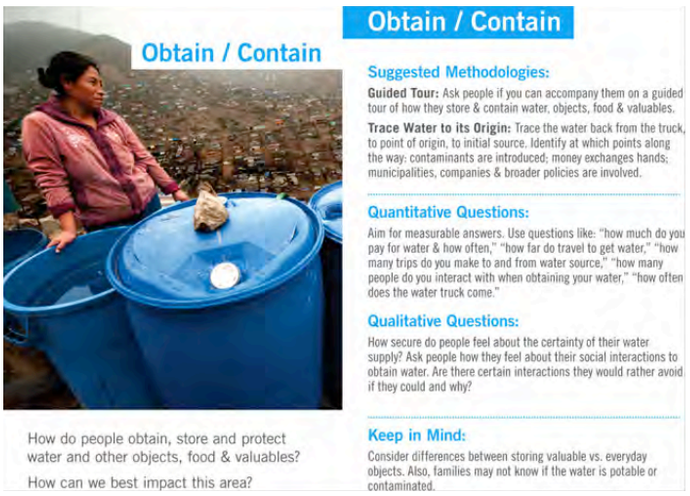

Figure 7. Safe Agua Peru Methodology Cards.

Figure 8 . The Safe Agua Peru Studio/ Visual Map.

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The authors are indebted to the leadership and vision of Julian Ugarte, Founder and Director of the Innovation Center of Un Techo Para Mi Pais and his team for their ongoing partnership. For more information on the Innovation Center see: http://www.centrodeinnovacion.org/.

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Designmatters at Art Center College of Design is a repeat grantee of The National Collegiate Inventors and Innovators Alliance (NCIIA) whose mission is to support technology innovation and entrepreneurship in universities and colleges to create experiential learning opportunities for students and successful, socially beneficial businesses; for more information see http://nciia.org.

The Art Center Safe Agua Peru faculty team is composed of Liliana Becerra (Product Design), Penny Herscovitch and Daniel Gottlieb (Environmental Design), Julka Almiquist (Humanities and Design Sciences Department). Students are: Erik Anderson (Graduate Broadcast Media), Bianca Fuchs (Graphic Design), Viirj Kan, Cora Neil, Carlos Vides, Alexandra Yee, Ji A You (Environmental Design), Kimberly Chow, Alex Robert Cabunoc, Thomas Kong, Mariana Prieto di Colloredo, Seth M Weissman (Product Design). Department Chairs are David Mocarski, Chair, Environmental Design and Karen Hoffman, Chair, Product Design. The Designmatters Department team includes: Co-Founder and Vice President Mariana Amatullo and Director Elisa Ruffino.

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Scenario Building for Service Design at Montemor-o-Velho

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Abstract
This paper aims to showcase an ongoing service design project for the Montemor-o-Velho municipality, which is integrated in Ruas de Cultura (Streets of Culture), a project with a wider scope. The proposal of Montemor-o-Velho City Hall promotes the regeneration of several central urban spaces, through the dinamization of 3 axes:

1. One unit where the Artistic Residencies will be installed;

2. A Technological Centre and companies' incubator;

3. Several spaces dedicated to social activities

The ID+ participates with 2 types of intervention. The first one is centred around the development of actions/tools that can promote the implementation of an organizational and space management model based on the following premises: active incentives to sharing experiences, sharing knowledge and tasks; and a second one focused on the creation of an identity system for the project.

This article aims to highlight the axis of service design actions/tools' development, with a particular emphasis on participatory design. Based on visual representation tools characteristic of the design activity, several scenarios will be outlined in order to promote a strategic debate between all stakeholders, some of which will be detailed in this paper. The tools which will allow for the collaboration and participation of future users of these spaces will also be developed in the project.

KEYWORDS: service design, identity, participatory design
Introduction

'…if conditions are right ordinary people can make the extra-ordinary happen if given the chance.' (Landry, 2005:14).

To understand the theoretical background of this proposal, it is important to establish a few concepts, regarding new lifestyles that are emerging in this century.

There are a growing number of people, organizations and institutions behave in a creative way in the contemporary knowledge society (Giddens, 1990 and 1999; Ray, Anderson, 2000) and according to the Young Foundation Report (Mulgan, 2007), social innovations have been moving from the margins to the mainstream.

2009 has marked a breakthrough in the recognition of the importance of social innovations, with, on one hand, the announcement of a new Office of Social Innovation by President Obama and with the discussion the European Commission has launched on how to better support and accelerate social innovation.

This reality is all the more visible in the ICT and there is plenty of literature concerning the new social tools and the growth of virtual communities in which the sharing, participation and collaboration help in the democratic process of accessing information.

Knowledge is shared and diffused collaboratively, even though people don't know each other and are based in different locations. These virtual communities are delocalised and globalised, and the sharing and diffusion of information happens between elements of the same communities whom can be based in places as far and as different as New York or Seoul, Paris or S.Paulo, and so on. The platform which allows its creation and enables the sharing and exchange of information is technological, designated as Web 2.0.

Nonetheless, there is also an emerging phenomenon of groups of people sharing, participating and collaborating in the same physical place where this process is not virtual and its existence is materialised through a platform that is entirely different from the one enabled by Web.2.0. People socialize with each other face-to-face, and the by-product of this socialization is physical, achieved through a network of interpersonal relations.

The value produced for and by this group of people in a specific place is extended to other people outside the community. Much like in Web 2.0 communities, where everybody has access via the internet to what is produced even without producing contents, in these places services and activities are also accessible through visits not to the website but to the physical site. Similarly to what happens in museums, cultural and social centres, etc., but where people can collaborate, thus becoming producers and users of the products.
Looking closely at cities it is possible to find these creative milieux. Places where groups of people put in practice urban regeneration through a focus on culture as a means of generating wealth, jobs, identity and active citizenship. These clusters are the result of a special urban creativity, deriving from the problems and potential of cities and the special response they require, where groups of people put in practice urban regeneration through a focus on culture as means of generating wealth, jobs, identity and active citizenship.

These clusters of urban creativity, characterized by specialisms and niches as well as an innovative mix of ideas, are the result of urban life itself in the sense that they result from a set of conditions only found in cities - optimal dimension or critical mass, cultural and ethnic diversity, universalism and large fluxes of exchange and interaction (Landry, 2000).

Creative Places

Many cases of social innovation happen in some very special urban places, that here we will call: Creative Places. These places are very diverse but, at the same time, they have some strong common denominators, the most evident of which are: their being deeply rooted in their own city, but also open and cosmopolitan. And their being self-standing initiatives, but also highly connected and depending on a complex interplay of top-down, bottom-up and peer-to-peer interactions.
We have defined Creative Places as: new type of urban spaces where groups of people collaboratively promote and manage a mix of creative initiatives in the fields of art and culture, economy and production, social services and urban regeneration.

There are 3 main areas that play, and will continue to play in the coming future, a crucial role in the economic and social development of several countries, specially their cities.

_Culture, seen as one of the engines that propels economic growth, a more universal worldview and the democratic involvement of citizens.

_Knowledge based enterprises, which support a knowledge-based economy and have a key role in the attraction and retention of talent, fundamental for countries and cities competitiveness alike.

_And social initiatives, which play a major role in offsetting the emerging flaws in the traditional nation-state's welfare system.

Creative Places gather together these three phenomena that are steadily gaining momentum: artistic and cultural production (the sector of activity with more economic growth (Florida and Tinagli, 2004; United Nations 2008; The Economy of Culture in Europe Report 2006)), and whose labour force shows the lowest numbers of unemployment (Florida and Tinagli, 2004; United Nations 2008; The Economy of Culture in Europe Report 2006); knowledge-based enterprises (the shift from industrial to knowledge based society brings about new forms of value production); and social initiatives (the evident shortcomings of the welfare system motivate alternative ways of responding to needs and supplying services that used to be provided by the nation state).

The existence of these three phenomena, or areas, - Art & Culture, Knowledge-based Enterprises, and Social Initiatives – do not, by itself, define a Creative Place. It is the simultaneous mix and confluence of those activities that is its defining characteristic.
And by amassing these 3 areas Creative Places work as incubators of novel developments, as well as launchpads for what may be a more socially sustainable future.

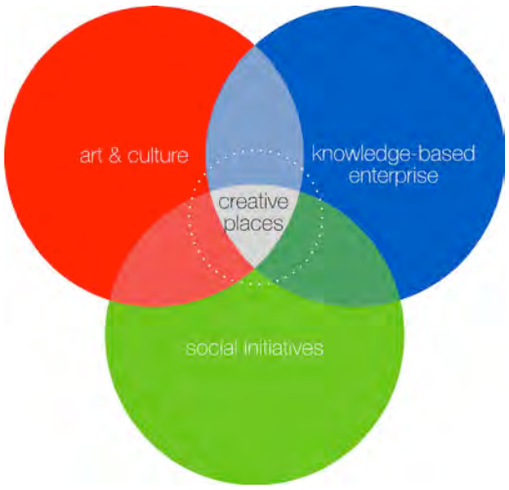

Figure 1 – Sectors of activity within Creative Places

Art & Culture - Refers to the artistic and cultural production sector, from theatre to music, media art, design, architecture, and so on.

Knowledge based enterprises - Small or medium enterprises, in which the production of value is based in the capacity to generate, share and use knowledge. Whereas the traditional enterprises relied, and some still relying, on natural resources, labour and capital, the knowledge-based enterprises rely on creativity, information and data, intellectual capital and innovation.

Social initiatives - Initiatives regarding the social services' sphere, traditionally offered by the state or, sometimes, by religious organizations: childcare, healthcare, education, care of marginalized groups, care of the elderly, and so on.

Where these main areas mix (or overlap), we can find Creative Places.

This mix of activities echoes in other characteristics of these places, namely their creative bubblyness and talent effervescence, what makes them very promising from the viewpoint of sustainable economic growth, culturally driven urban regeneration and identity, and, above all, in the creation of a mature and sustainable knowledge based society.

The ID+ is developing this Ruas de Cultura project on the basis of this concept, with the goal of creating both the conditions for the participation and collaboration of all the stakeholders, and for the building of a brand that adds value and promotes the project.

Ruas de Cultura project

Project's Background.

The Municipality of Montemor-o-Velho is proposing a pilot project "Ruas de Cultura" in order to:
- Attract artists, creators and technicians involved in a set of complemented but differentiated sectors of the

creative industries;

- create spaces for production, socialization and exhibition that allow for the Exchange of experiences and the creation of a creativity fostering environment;

- promote, within the area of the project's intervention, the settlement of companies, residential and animation spaces.

With Ruas de Cultura, Montemor-o-Velho aims at becoming a space that encourages innovation and draws agents to the cultural industries emerging sector. Montemor is a territory with a strong historic-cultural identity that is visible not only in its built heritage, but also in the countless cultural activities that are organized there, like the annual theatre festival CITEMOR, already on its 33rd edition and that draws around 2000 visitors. This festival is free and its audience mainly young (under 35 years). Montemor is also known for its PDO (Protected Designation of Origin) rice production, responsible for the region's economic development. It also has a High Performance Nautical Centre, with state-of-the -art equipment and a 2 kms channel, specific for sports like canoeing, open waters swimming, triathlon, etc. For this reason, Montemor-o-Velho is also the hosting city of many young athletes.

The Mayor's strategic vision to tranform Montemor-o-Velho in a place where culture and entrepreneurship can flourish side by side have led to the acquisition of several buildings in the municipality, where the services and activities inherent to the Ruas de Cultura project will take place. The effective interaction between technicians, creators and artists in the artistic and technological development and the production of cultural goods should be the main orientation of the project, but is also key that attention is given to the promotion and business trading of services, products and cultural activities offered in Montemor-o-Velho and its area of influence.

Departing from this specific project "Ruas de Cultura", and drawing on international best practices identified through a combination of desk and field research, this project will identify and develop optimal strategies for building the necessary infrastructure in which sustainable cultural and collaborative services can flourish.

Project's Object and Objectives:
The ID+ Research Unit will be engaged in the following tasks:
To cooperate in the definition and implementation of the management and working model of the different spaces of the project. This project is based on the need to establish an organizational model for the proper functioning of the "creative industries hub" and "work and live " spaces, having as a premise the incentive to the exchange of experiences, knowledge and tasks' sharing.

The idea is to outline a model for collaborative work, implemented through the design of a set of actions/tools produced for this specific purpose; To endow the project with a global identity that promotes value creation and a close-knit relationship with its publics, which is central to the project's success. The correct implementation of this identity system will allow the development of a sense of ownership on the part of all the participants and will nurture its enrooting.

A diagnosis report on the region was carried out in the first phase of the project's development, so as to map out all the possibilities and constraints to the successful accomplishment of this project.

_To participate in inter-regional workshops and in programmes that involve the transfer of knowledge and sharing of best practices resulting from the project's development.

_To develop the script and the rules that govern the functioning of the incubating and work and live spaces.

_To supply self-management tools and peer-to-peer collaboration models to entrepreneurs and creatives.

_To implement the Communications Plan

_Strategic analysis of the brand

_Definition and design of the Brand Identity System

_Brand Identity implementation

_Definition of the strategy and website design

Starting with these preliminary briefs, some proposals have been developed. As this is a participatory project, there will be meetings with all the partners and stakeholders involved, as well as with some of the future participants to find collaboratively some answers to their needs and to limitations in the project.

From past experiences, participants usually demonstrate difficulties in imagining some of the possible concepts (like the organizational model and self-management, the sharing of responsibilities and material and immaterial resources, and the offer of joint activities), so possible scenarios to materialize those concepts have been developed, in order to stimulate and feed discussions in the next meetings.

The pilot project can establish in Montemor-o-Velho a phenomenon based in cultural innovative actions that promote social cohesion and integration, community's development, a sense of belonging and collective identity, sustainable behaviours and active citizenship.

The functioning strategy proposed for the project is based in the study of strategies adopted in similar cases and in the ID+ know-how.

Three functions were identified as a conceptual framework:
Cultural function - the project as a reference point for cultural activities.
Social function - the project as a hub for activities with strong social characteristics.
Urban regeneration function - the project as a hub for the creation of positive relations between the different actors, the citizens and the urban territory in which it is located.
Also, three dimensions were identified regarding the design framework for services & activities:
Quality of the human resources available and their competences
Openness to the city and its citizens
Introduction of the best practices identified at international level
From the cases studied during previous researches, it was possible to extract some models, or a mix of models and the project can be developed at two levels:
1. Management (organisational system & infrastructures' sharing system)
2. Services & Activities (for and with the local community - offered by each artist or entrepreneur and in cooperation with others & monthly activities, workshops, courses, events).
A draft of a system map was developed, showing what spaces and resources could be shared In the same way, a draft of a system map was developed regarding possible common activities.
Proposal for the "work and live" space.
_Organisational system: The system of management and organisation should be structured to enable responsibility sharing. A speaker should be elected, in representation of all the artists in residence. This figure is to be responsible for organising a monthly meeting between all the representatives involved in the project's smooth running.
Also to be elected:
Responsible for the management of material resources
Responsible for the spaces' management
Responsible for coordinating and managing the activities on offer
Responsible for the digital platform (both intra and inter net)
Responsible for communications on behalf of the project
Positions should be rotated every 6 months, allowing for the participation of all residents.
_Infrastructures' sharing system: Besides the house and the ateliers, there are some spaces that can be shared and used by every member of the residence: a living room, a meeting room, a storage room and also the kitchen (figure 2).
A restaurant/café could further open the residence to the local community and forge stronger ties between the centre and the general public, since it is a socialisation place by nature. It can also play an important role in the dissemination of good eating habits and practices, as well as in promoting the traditional gastronomy of the region (figure 3). There could be also some culinary workshops, with the participation of local associations and the wider public – like traditional cuisine workshops to foster the sense of belonging and heritage. For instance, depending on the garden's size and production, it can be organize an organic garden to supply the restaurant – or at least some specialities.

Figure 2 - Shared spaces and possible activities

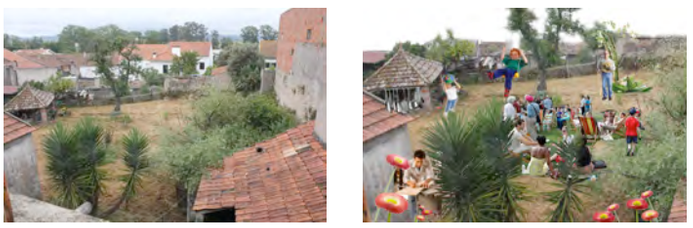

Figure 3 - Scenario for strategic discussion regarding shared spaces and activities

_Services & Activities offered by single artists and in cooperation with others & monthly activities, workshops, courses, events.

Each artist must carry on with their own set of activities, independently of the others, but on a monthly basis they should get together (in groups of 3 or 4) to offer a common activity/project, taking advantage of the existing synergies and competences.

They should organize workshops for a wide public, inviting experts when possible. Participation in those workshops should be paid, and money should be distributed between participating artists and used to finance the costs of organising them and pay possible guest speakers.

There are some possible activities to be organized in cooperation:
_Cultivating a vegetables garden
With this resource, some workshops and events can also be proposed by the local community:
Organize lectures/workshops with or for schools about farming, horticulture, etc.

Organization of open days dedicated to gardening
_Creation of an intercultural centre, with multiple activities directed at children. Organization of workshops with local schools, leveraging the know-how and the existing resources in the ateliers.

Organization of theatre plays, with the scenarios built in the workshops.

_Creation of a lab for the development of creative skills. Monthly they could offer workshops teaching how to play musical instruments and acting. These could be on offer for scheduled school visits, or could be held on a regular basis, to a wider public.

Proposal for the creative industries hub space.
Regarding the creative industries hub space, the structure is similar to the Work and Live Space (figure 4).

Infrastructures' sharing system: Besides the working space, there are some spaces that can be shared and used by every member of the hub: a meeting room, a storage room and also a kitchen.

Regarding the material resources, it is also possible to share a Fax machine, a Copy machine, a DataShow and some Consumables.

Figure 4 - Shared spaces and possible activities

Services & Activities offered by a single entrepreneur and in cooperation with others & monthly activities, workshops, courses, events (figure 5).

Each entrepreneur must carry on with their own set of activities, independently of the others, but on a monthly basis they should get together (in groups of 3 or 4) to offer a common activity/project, taking advantage of the existing synergies and competences.

They should organize workshops for a wider public, inviting experts when possible. Participation in those workshops should be paid, and money should be distributed between participating entrepreneurs and used to finance the costs of organising them and pay possible guest speakers.

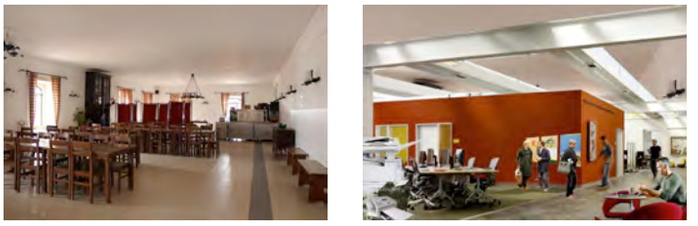

Figure 5 - Scenario for strategic discussion regarding shared spaces and activities

These are some of the possible scenarios that can be developed in the Ruas de Cultura project. Nevertheless, all proposals will be developed on a participatory basis, i.e, with the inclusion, participation and feedback from all of the involved stakeholders.
This is an early stage of the project. In the meanwhile there will be meetings and workshops with the all the people involved to define a more detailed brief.

Figure 6 – Ruas de Cultura street

Figure 7 – Scenario for Ruas de Cultura street

There is also an ongoing project for the identity of the Ruas de Cultura (figure 8 and 9).

Figures 8 and 9 – Identity brand development and draft proposal.

Conclusions

For too long urban design involved only architecture and land-use planning. Now other professions began to form an essential part of the city-making. We have learned that the physical alone does not make a city or a place (Landry, 2006). So our vision of a possible city is based in the idea of a Collaborative City.

In a closer look to this city, we discover its several hubs, in particular places made of and by people, which work as creativity incubators, laboratories of new cultural experiences, centres of social and solidary dynamism where new economic models are being forged.

Places where people lead sustainable lifestyles, and from where they are able to show to the remainder of society how traditional ways of life can be changed.

Amongst the possible approaches to sustainable development, we give a special focus to the design of services oriented towards new social models, in order to develop and strengthen cultural identities and sustainable lifestyles. In this sense, the innovation driven by design operates within an integrated system, with multidisciplinary teams that can help to build new social scenarios. These scenarios presuppose new attitudes towards the unsustainable patterns we adopted, implying new business strategies and new ways of promoting quality of life and well-being. This scenario offers design a different approach and a new opportunity to develop and enhance a sustainable future.

Design is about culture and creativity, is about problem solving, and these “projects” are solving problems arisen from everyday activities that people have to carry out in this complex society.

In these framework design should act as an interface between two levels (top-down and bottom-up initiatives), for top-down initiatives are strategic whilst bottom-up ones are more tactical or operative. Design has the capacity of being both strategic and tactical, this means that design can potentiate people’s and government’s visions, creating scenarios according to those same visions, benefiting city life in meaningful ways.

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COMPETE
PROGRAMA OPERACIONAL FACTORES DE COMPETITIVIDADE
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FCT
Fundação para a Ciência e a Tecnologia

The factor innovation at the organizations – Building a brand DNA

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Abstract
Organizations are adapting to a new market where people have a more active role in how they should act in the way in which they operate. These changes make them have a greater concern with the design as a tool of differentiation among its competitors. According to MARTINS and MERINO (2011), the design transcends the creation of simple graphic elements and values as contributes adding an appropriate image, with responsibilities in society. These values and other concepts such as vision, mission and culture of the organization are of the essence of your brand, identified by its "DNA", which is built according to OLHATS et al. (2011), within a co-creative process involving the company and its stakeholders sharing the experiences that both have about the brand. This article aims to study the construction of the "brand DNA" as a factor of innovation in organizations through research literature on the subject studied as in GOVINDARAJAN and TRIMBLE (2005) who advocate the construction of the "corporate DNA" as an innovative way application of concepts and values that help companies gain a better understanding of it's operation and all the elements that surround it, so it can differentiate from other companies.

KEYWORDS: branding, brand dna, innovation.

Introduction
The brands construction is gradually developing strategies and actions to renew and update the image or symbolic collection of the brands themselves, so they can tell themselves apart from each other in the market they are inserted, proportionating new experiences for their consumers.

To differentiate themselves, it is necessary for these organizations to develop renewing and innovating capacity, setting their brands in the subconscious of people, being capable of fitting themselves to the changes in the market social-cultural environment that influences and is influenced by the consumers behavior.

Branding is characterized as the set of actions related to the brands administration. Those are actions that, taken with knowledge and competence, lead the brands beyond their own economic nature, starting to be a part of the culture, and influence people life. Actions which are capable of simplifying and enrich our lives in an each time more confuse and complex world (MARTIM, 2006). Within the branding area, arises the Brand DNA concept, which is about the brand essential characteristics it is built on, according to Olhats et al. (2011), within a co-creative process involving an enterprise and its stakeholders sharing the experiences both have regarding the brand.

In this paper, a branding and design management research is established in order to achieve its main goal, which is to study and present the brand DNA construction as a factor for innovation at the organizations that apply concepts and values that help the enterprise having a better comprehension about its own functioning and about all the elements that involve this enterprise, so that it be able to tell itself apart from other companies.

The methodology will be taken based on the proposal by Gil (2002) that separates the classification of the researches in two groups: regarding the goals and regarding the technical procedures used. First of all it was realized an exploratory research to define the objectives and then, as technical procedure a bibliographic research was made. Papers, theses and books about design management, branding and innovation guided this research.

Innovation
The innovation concept is often confused with the idea that it is something new, but when studying authors who deal with the subject, we can realize that this is a mistaken association. KOLOUPOULOS (2011) states that "innovation is the result from a process sustained by uncountable repetitions that aim to refine the product and fit it to the market needs". As for Porto (2010), "innovation is linked to a gamma of knowledge that are arranged in a certain configuration and not only to a technology or market", in other words, it is a new way for us to make use of knowledge and tools already existent.
Within this concept, TIDD (2008) prese
nts us a classification for innovation where it is divided into 4 tips:

> *1. Product innovation: changes in products/services a company offers; 2) Process innovation: changes in the way the products/services are created and delivered: 3) position innovation: changes in the context in which the products/services are introduced; 4) Paradigm innovation: changes in the underlying mental models that guides what the enterprise works on.(Tidd, 2008).*

With this conceptualization, it is realized that the Innovation Process refers to the utilization of many initiatives that will result in important changes creating new experiences. Its conception arises when there is a significant change in behavior. In a general way, innovation aims to transform the context around itself creating possibilities that would not be imagined before (Koulopoulos, 2011). It is possible to say also that "innovation is something new that adds social value or richness, it is beyond a new product. […] TIDD (2008) also says innovation presupposes a process, almost a chronology that involves knowledge, information and creativity" (Porto, 2010). For these reasons, the application of innovation, both on business and academic fields, becomes responsible for modifying the organizatio-

nal culture. Said so, KOULOPOULOS (2011) tells us that "innovation is about important changes that create new experiences, it means a behavior change. Innovation aims to transform the context of our life and crate possibilities never imagined before."

Within this context, the design professional becomes of vital necessity in projects that aim in its goals, innovation. Due to its interdisciplinary thinking method, the designer ends up acting in all organizational fields assisting in communication between the departments.

Therefor it appears […] the manager; who in the present time displays the hard work of motivating and integrating teams, that in many times work isolated, can end up losing track of the organization goals or acting in a not so optimized way, attending only to the very own sector objectives. (Martins e merino, 2011).

Design management

Design now-a-days does not relates anymore only to the design professional, it involves a thinking mode where, seconds MARTINS e MERINO (2011) "the design actuation field transcends the creation of products and graphic pieces as isolated products, becoming part of a system and setting itself as a management process". This new way of thinking in design allows design and other fields to come closer letting everyone have – each one within its actuation area – a better focus in the projects objectives, creating new solutions for the problem.

A mistake that is constantly committed while creating a product, service or graphic piece is considerate that it is enough having only the design professional and this way, every problem related to its construction will be solved. Seconds the Design Management Guide (1997), "design needs to have its place in the process of development of new products where it is necessary also the collaboration form others specialists, and the orientation should be a company responsibility". MARTINS e MERINO (2011) defend the design use in the organizations because these have the obligation of being prepared to have their image on the same level as the concurrency.

Design activities well placed can contribute to add such values, so as identify ways of adding new ones, such as directed and universal products, appropriated image, educative, compromised with the social responsibility, products ecologically corrects, that can be thrown away or reused. (Martins e Merino, 2011)

From there on, it is noticed the need of the designer roll as a important tool in the organizational structures as an agent that aims to promote new ways of telling the enterprises apart from the concurrence searching ways of renewing itself and even innovate on the market.

Logotypes can be much more than a minor part on the bottom of an advertisement! Taking in consideration the amount of capital the corporations spend to develop a business identity, why not make them work in a better way? (Gobé, 2002).

Some organizations already realized that and have been working on new ways to promote their brand focusing on the experiences between them and their consumers. GOBÉ (2022) says: "imaginations is what keeps these companies alive and the incentive to the people that want to make the place become a new work 'zone' that stimulates and promotes innovating ideas and of provocative thinking".

For this developing scale to be able to happen, it is necessary the creation of a new vision in the brands creation, one that involve everyone and every levels of the organization and also the external influences that get to it. In this context arises the branding e brand DNA concepts, that aim the brand management in a innovating way through the co-creative processes involving the organizations and their stakeholders.

Branding and Brand DNA

Now-a-days we live in an society overfilled with information, shown on several communication channels every single moment. This information overload can not be completely absorbed by our mind (Ries e Trout, 2009). Within this scenery, in order for a brand to be able to survive, before any other thing, it should understand it self and understand its surroundings. To this effect, in order to help its comprehension, arises the branding trying to understand, construct and manage the brands in a way that they strengthen their experiences with their consumers.

According to GOMEZ e GOMEZ (2010), it is understood by branding as being a brand permanent management, made within a co-creative construction process in a way that the meaning existent behind each brand reaches its consumers on a beforehand planned way, making that these consumers live experiences according to what it stands for for each person. GOBÉ (2007) adds by saying that "branding has to do with life, respect, success, love, freedom and hope – has to do with creating linkages in which everyone can believe".

The emotional experiences lived by consumers is the result of the attitude that the enterprises stand for against the market, this attitude is defined by its "DNA". NOWRAH (2006), says that "brands DNA" can be understood as a living being DNA, once this carries every organization characteristic , reflecting its values and image before the society. For GOVINDARAJAN e TRIMBLE (2005), the construction of a "corporative DNA" is the innovating way to concepts application and values that will help the company understand in a better way its functioning and every element that surround it, so that one be able to tell itself apart from other enterprises, setting its position and witch strategies it should take to conquer its place in the market.

The DNA construction process becomes innovating by the

fact that it is a co-creative process, based on the design and branding knowledge sets where the goal is a brand DNA identification and validation within a process where the board and its stakeholders share emotional or functional experiences with the brand.

It is a methodology developed on the design scope that aims to identify the brand DNA and allows the process of co-creation of value to the company, because proposes that its several stakeholders be since the creative work beginning sharing its experiences and participating on the product, service and communication conception. On the emotional and tribal slope, this model defends the organization target clients participation, which should happen since the creative process beginning. (Gomez e Prestes, 2010).

For the brand DNA validation to occur, it is necessary the participation of everyone involved in the process, having a more opened vision, both internal and external of the guiding concepts the represent a brand, allowing that both its workers and consumers can live its DNA.

Conclusion

A good relation between brand and customer is built when it is created a strong emotional appeal. in order to create this emotional appeal it is needed to innovate and create new ways to communicate with people, creating experiential loads that easily are engraved in the memories of whoever it gets to.

The soul behind a brand is found in its DNA, it is it that presents itself behind all strategies and actions of a brand in order to this brand to identify itself and tell itself apart from its concurrence and make that its relation with the customers remains in a an intense way.

The design professional ends up being a good acquisition for the organizations that desire to work in new and improved ways of communicating with people, making use of its way of interdisciplinary thinking involving every sector of an organization at the moment of building and identifying its DNA.

In order to innovate, it is necessary a combination of people from inside and outside a organization, both with their skills and points of view, bringing this way new solutions for the enterprises the desire to differ from the others. Therefore, a brand DNA construction process becomes extremely efficient once it involves not only a organization members but also its stakeholders and the other people that somehow be involved with the brand, building its essence within a co-creative process.

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The role of the emotional design in bridging products and cultures

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Abstract
The actual globalised market suggests that most industrial products can be sold everywhere in the world. As a matter of fact, the purchase of an object (or the access to a service) is usually motivated and pushed not only and often not mainly by its intrinsic function capability and quality, but by its meaning (from a metaphoric point of view) and the cultural values it expresses. Meaning and expression of values are mainly given to a product through design. According to recent studies on perception, based on neuroscience, it is possible to examine perceptual formal elements (e.g. shapes, colours, touch, interaction protocol, etc.) and to model both emotional meanings and cultural values. While this kind of modelling is a pioneer activity, still in its first tentative explorations, it seems to provide an unavoidable step toward a more aware a more responsible design activity.

The paper addresses to the above topics, presents a provocative model to depict the relationship between structure elements, emotional feelings and the cultural values, and it presents some cases of analysis of products/services available in the market. The different cultural values within different countries are examined and classified on the base f some social sciences results; emotional feelings and the values expressed by some products' design are abducted on the base of the hinted metaphors. The paper outlines a relationship between the formal characteristics of products and services, and the success factors overall in the world, and again in provides provocative guidelines to avoid cultural rejection in some countries. Examples and experiences are discussed.

KEYWORDS: Emotional design, cultural values, global market design, brain sciences.

A way to interpret Design
The first artefacts produced by humans were related to craftsmanship: resulting products were single operas, often personalised, with high costs and low production constancy, and the quality was related mainly to the knowledge of the author; apprenticeship was the only way to learn from a master.

The industrial revolution introduced production process formalisation and measurements, and the knowledge on the products was transferred from the people to the processes; the serial production allowed high standardisation, constant quality, reduced costs.

Most industrial products are now comparable in terms of quality and cost, and the differentiation among the products is mostly left to other aspects: the brand and the styling. We passed from Industrial Design to Design, which conveys meanings and emotions through perceptual characteristics of the products, beside the usual functions and quality.

Despite the wide literature about project methodology and creativity, and despite the maturity of the design education system all over the world, in most cases the design process as presented in the academic literature is conducted following empiric approaches and is mainly based on atelier like transfer of skills.

Nevertheless, as Design is a way for conveying emotions through perceptual elements, a deeper understanding of emotional mechanisms and, more widely, of cognitive and decision making processes, should provide conceptual tools to stimulate the creative though and to better understand the consequences of design choices.

According to the authors (Maiocchi & Pillan 2009), Design is the activity able to provide artefacts with:

- Functions: the ability for which the users will get the artefact; not only the primary functions (to clean, for a vacuum cleaner; to dry for a hairdryer an so on), but also secondary requirements (to be compact, to have big wheels for stepping on stairs, and so on);

- Shape: the geometrical (size, profile, curves, colours, etc.) and sensorial (softness, noisiness, etc.) characteristics, able (as we will see in the following) to drive primitive emotions;

- Meaning: the many aspects, possibly recalling other contexts through metaphoric evocation, able to give to the artefact a meaning unrelated with the goal of it; this aspect is extremely powerful in conveying emotions.

In particular, for the emotion generation, the following model can be provided, according to many neuroscience studies (Zeki 2009; Ramachandran & Hirstein 1999):

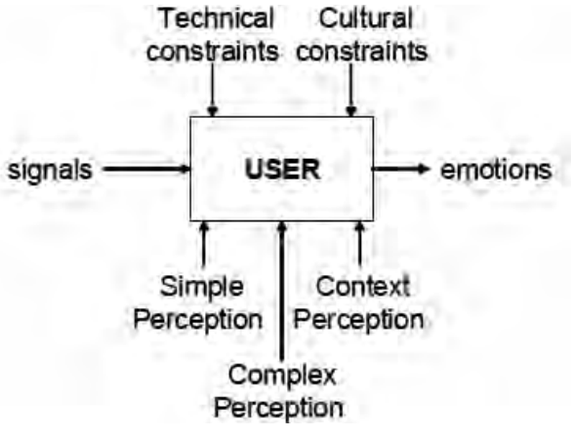


Figure 1. A schematic model of the emotion construction

- Signals. First, external physical signals (e.g. light, sounds, etc) reach perceptual organs.(e.g. eyes, ears, etc);

- Simple Perception. These signals are interpreted by the brain, through simple abstraction processes (f.i. brain areas to "see" only slope at 45%, while other only at -45°, co- operating for the interpretation of any other slope; the persistence of the colour perception guaranteed by tour brain, and so on) (Zeki 2009);

- Complex Perception. Elementary signals are interpreted and recognised in their mutual relationships, as an embedded brain abstraction activity (e.g. part of the brain devoted to recognise faces; parts to recognise houses); this complex perception is related to the phenomena studied by Kanizsa (Kanizsa 1997) or to the Gestalt principles, as well as to symmetry properties, order, rhythm, contrast, rounded or angular shapes (Ramachandran & Hirstein 1999). It has been proved that of recognitions of this kind provide emotions (i.e. to determine the secretion of some neurotransmitter related to pleasure, fear, or other feelings);

- Context perception. Further levels of recognition happen, taking into account a wider context; some of those recognitions are embedded (such as social structures, family or simply chairs); other, more subject to change, are related to everyone's personal experience; in any case, those recognitions are responsible of very strong emotions, strongly related to metaphoric structures (Lakoff & Johnson 1980) and semantic maps;

- Constraints. The emotions are submitted to an acceptance evaluation; beside technical and economic constraints (preventing the designer in doing something or the buyer in buy something), cultural values can dramatically influence the evaluation and then the acceptance; Hofstede et al (Hofstede 2010) examine which values are typical of different cultures (countries or groups within a country), providing the consequent behaviours of the people; the maps provided by the authors allow to understand whether or not some meaning of the product will be accepted or refused by some cultures.

In this paper we will examine the cultural constraints and the meaning generated by the context perception, providing a model for evaluating possible coherences or conflicts.

Cultures and values

Human populations share biology. They react in similar way to similar stimuli, but in the centuries various behaviours sedimented in various groups, making population different; those behaviours, initially learned, some times went embodied in the genetic heritage; still today we are changing in our behaviours, and learning new ones. It is what we call culture. There are many evidences of this model, also matching data from linguistic, genetic and history (Cavalli Sforza 2001). Each culture is characterised by rites, heroes, symbols, each of them coherent with specific values. Geert Hofstede (Hofstede 2010) et al. studied deeply how to characterise culture and to measure the related values.

According to those studies, six indexes can be used for characterising a specific culture, as shown below:

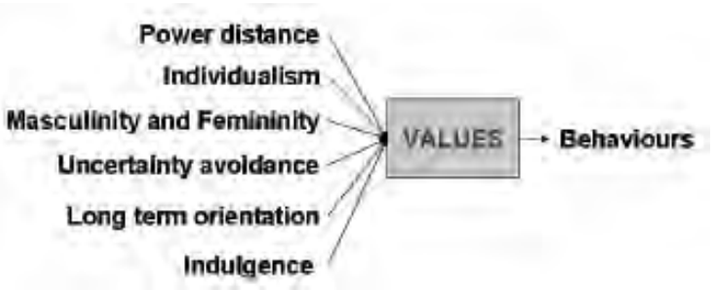


Figure 2. The cultural indexes according to Hofstede

The indexes have the following meanings:

- Power distance. The level to which a less powerful member accepts the unequal distribution of power in any kind of structure (family, school, community, organisation, etc.)

- Individualism. Individualist is a society in which the links between persons are limited, and everybody is interested only to himself or to his family; opposite to collectivist, in which the protection of the group prevails

- Masculinity and Femininity. In a masculine society there are strong gender distinction for emotional roles (assertive male, focused on success; tender and modest female, focused on life quality); a feminine society: mixes emotional roles, and both tend to tenderness and life quality;

- Uncertainty avoidance. The threat level perceived in conditions of uncertainty, ambiguity, absence of information;

- Long term orientation. Long term orientated cultures favour actions giving future results, with perseverance and frugality, while short term orientation favours actions looking to past and present, respecting traditions, personal appearance and social duties;

- Indulgence vs Restraint. Tendency to allow relatively free gratifications of basic and natural desires related to enjoying life and having fun; the opposite, restraint, gratifications needs to be curbed and regulated by strict social norms.

All the above indexes have been measured over more than one hundred countries, providing rank lists, positioning maps, correlations, and, more important, many lists of behaviours associated to each different cultural orientation.

For example, the following figure refers to the ranking of an excerpt of he measured levels for Power Distance (the scale is relative, and arbitrary).

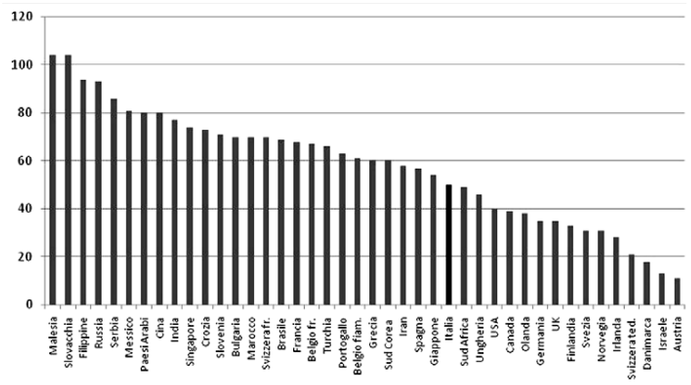


Figure 3. Ranking for Power Distance (reworked from Hofstede 2010)

The following table shows the different behaviours observed in opposite value of the index for Power Distance:

Family and school

Low Power Distance	***High Power Distance***
- Inequality to be reduced	*- Inequality favoured*
- Social relations to be managed	*- Rituals in social relations*
- Interdependence	*- Dependencies*
- Parents, elder and sons are equal	*- Obedient and respectful sons*
- Sons do not support parents	*- Sons support parents*
- Students and teachers are equal	*- Teacher respected outside*
- Teachers stimulate interaction	*- Only teachers can take initiatives*
- Teachers transfer neutral know how	*- Teachers transfer personal wisdom*
- Learning for interchange	*- Learning depends on teachers*
- Policy based on secondary school	*- Policy based on universities*

Organisations

Low Power Distance	***High Power Distance***
- Hierarchy = advantage	*- Hierarchy = inequality*
- Decentralization	*- Centralization*
- Few supervisors	*- Many supervisors*
- Balanced salaries	*- Different salaries*
- Manager use experience and collaborators	*- Manager refers to seniors and rules*
- Advice of subordinates taken into account	*- Subordinates obey*
- Ideal leader = democratic	*- Ideal leader = good father*
- Rational relationships	*- Emotional relationships*
- Obstructed privileges	*- Spread privileges*
- White and blue collars equal	*- White collars higher than blue collars*

State

Low Power Distance	***High Power Distance***
- Power legitimated	*- Power over right*
- Power separated by skill	*- Power joined with skill*
- Large middle class	*- Small middle class*
- Equal rights	*- Powerful privileges*
- Power based on ability	*- Power based on tradition*
- Changes by evolution	*- Changes by revolution*
- Politics: dialogue, not violence	*- Politics: violence, not dialogue*
- Pluralism and vote	*- Autocracy e cooptation*
- Strong centre and weak wings	*- Weak centre and strong wings*
- Distribute income and levelled by taxes	*- Unequal income, emphasized by taxes*
- Low perceived corruption	*- High perceived corruption*

Design and communicated values

According to what we stated above, the formal characteristics of a designed object tend to associate specific meanings to it. Those meanings refer in some way to implicit or explicit underlying values and replicate a number of cultural messages and values of the specific market.
As an example, the three vacuum cleaners in the following picture convey different meanings, respectively transforming the user into the prototypical housewife, into the warrior against massive dirty, into a Ghostbuster for dirty as an intangible enemy.

Figure 4. Three kind of vacuum cleaner

As the first will be more acceptable for a masculine society, the second makes acceptable men engagement in house works.

If we were able to ascertain the values related to a designed artefact, we would be able to verify its coherence with the dominant cultural values of a market, and then predict its potential success/flop.

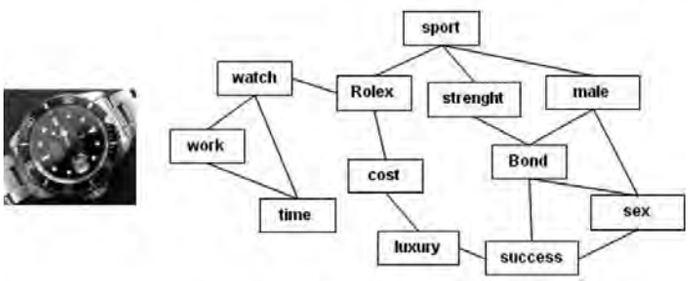


Figure 5. A Rolex watch and its stereotypical semantic context.

What we called Context Perception is the more appropriate source for meanings having to do with cultural values: we can represent them as a semantic network, connecting many metaphoric relationships; for example, the stereotype of a sport chronograph, black, heavy, with many buttons and information recall unavoidably masculine values.

The work of Hofstede provides a large checklist of behaviours: collecting all the presented behaviours for all the six indexes it is possible to verify how much a specific artefact imposes, requires, expresses or simply orients the user attitude toward some of the specific behaviours indicated in the list.

In such a way, we suppose it should be possible to invert

the organisation of the study by Hofstede: if an artefact is compliant with certain behaviours, we can verify which indexes should be present (and to which extent), in order to make the artefact acceptable.

After that, we can verify which countries are compliant with those values of the indexes, forecasting possible success or failure.

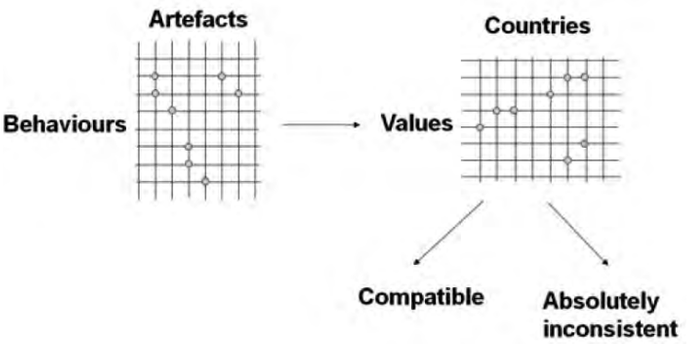


Figure 6. From artefacts to supposed behaviours, to values, to acceptability

Some experiments

We applied the above process on two kinds of artefacts: products and services; dealing with services, we must consider the organization structure (i.e. the social interaction model) instead of the material characteristics (shape, colours, materials,...) considered for products. We deduced a huge reference checklist collecting all the behaviours listed by Hofstede. Then we used the list to analyse the artefacts under test, from a point of view of the complex perception. In a number of different contexts, a few hundred of students were involved in the experiment so to produce statistical results. So we scored the "values" hidden behind the artefacts, getting a "cultural profile" of it, to be compared with cultural profile of a country.

Here some result of the experiments.

Products.

We considered the following six handles by famous designers:

Figure 7. Six handles by famous designers

Then we examined the behaviour checklists provided by Hofstede, scoring one point for each "the statement is coherent with the model suggested by the artefact". For example, the handle by Cini Boeri seems ignore thrift, the one by Mongiardino recalls to traditions, etc.

Then we normalised the total scores, according to the number of questions for each index on the checklists, getting the "soul" of the artefact:

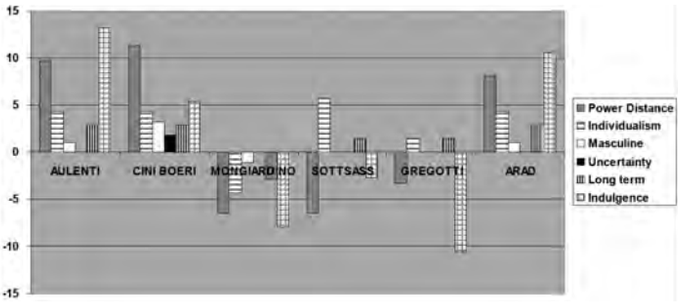
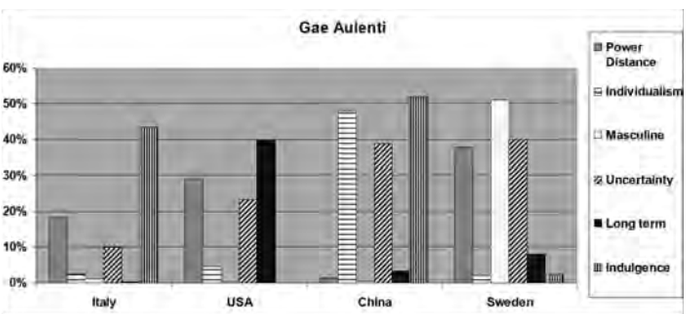


Figure 8. The "soul" of the handles

The handles of Aulenti, Cini Boeri and Arad appear to be more oriented to values near to acceptable power distance, individualism, masculinity, while Mongiardino is the opposite, and the others are more complex.

Furthermore,, we can compare the cultural values of a country as stated by Hofstede, with those of an artefact: if we consider less relevant the different scores toward orientation (i.e. both country and artefact show the same value, e.g. masculinity, also if to a different extent) in respect to opposite values (i.e. country and artefacts show a masculine and a feminine tendency), we can build evaluation as the following one:



F*igure 9. The compliance of the values of a country in respect to the ones supposed behind an artefact*

More, if we "compute" an average of the differences between the values for a country and for an artefact, we can obtain some indication on the "worldwide marketability" of each product:

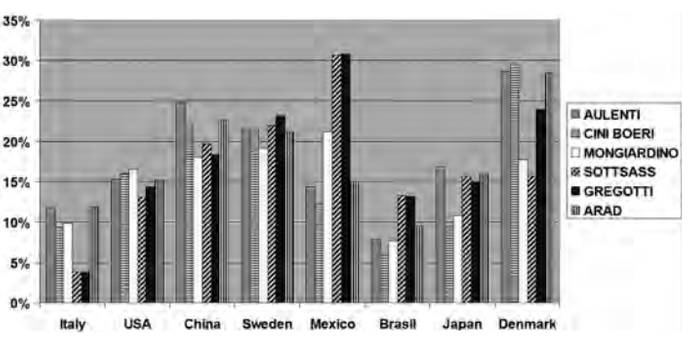


Figure 10. The "worldwide saleability" of the products.

It is evident that Sottsass and Gregotti are suitable for Italy and that the large China (but also Sweden and Denmark!) is a difficult market for those traditional Italian style design products.

Services.
We experienced the approach also for the design of services, taking into account four different kind of innovative services:

- PEDIBUS: a self-organised scholarship escorting by walking;

- CAR SHARING: self organised private car pick up and transportation among people sharing expenses:

- GAS: Solidarity purchasing groups

- FOREIGN: the name of an Italian association supporting foreigners in Milan (Italian language courses, ...).

The results, with the approach described for the products, are shown below.

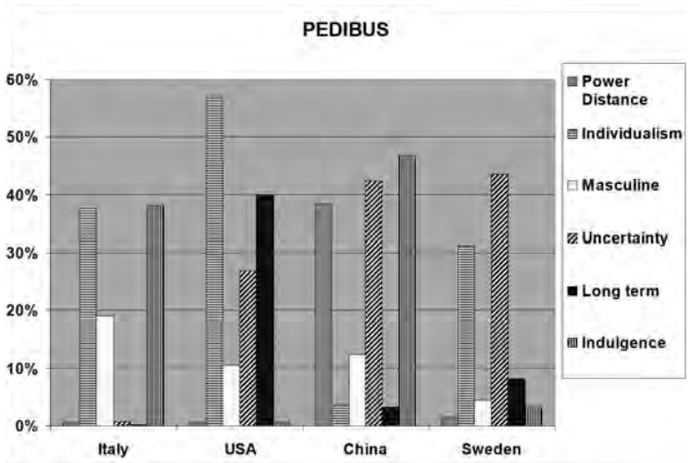


Figure 10. The cultural compliances between indexes and countries for the service PEDIBUS.

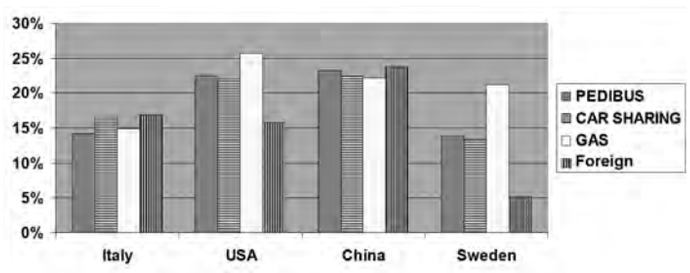


Figure 11. Acceptability of different services in different countries

Final remarks
A number of different disciplines, such as brain and neurosciences, social studies, and cognitive psychology provide a great amount of knowledge that allow a deeper understanding of the messages (metaphors, meanings, emotions, cultural attitude, and so on) vehicle by formal attributes of designed products and services. While these knowledge are widely employed in marketing, advertising and trend setting activities, the academic world still stack to a traditional approach to the design process, mainly based on empirical knowledge background “atelier like”.

A deeper understanding of cognitive and emotional phenomena associated to product and services characteristics could bring novel contributions to creative processes, also supporting a more aware control of the cultural outcomes of the project decisions.

In this paper we presented some provocative experiments performed applying Hofstede theories about cultural diversity, on some products and services. We mean to stress that the presented work is completely in its experimental phases, and it is not yet mature for a reliable application. In particular, we see as a priority, the search of a more objective way to construct of the semantic net representing the complex perception of the artefacts.

A research group we are experimenting the application of a number of different information and models provided by the cited bibliography and others, in order to understand how to include twenty first century knowledge in the design practice. We are still looking for partnership in the design academic community.

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Towards a Cross Cultural Society; from ethnicity to design, “narrative” heritage drives innovation.

Mapuche Weavers and Italian Designers co-create for fostering diversity.

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Abstract
The paper focuses on the territorial dimension of the project, which is meant to be a resource for the development and support of local economies, helping them to increase the value of their cultural identity and their creativity design process as well as production’s know how.

Last August a team of designer from School of Design of Politecnico of Milano meets, thanks to the support of ProChile Italy, and their office in Santiago and Temuco, a groups of Mapuche weavers and Chilean Association made a workshop for a possible innovation about the identity of the products and the strategic way to develop a creativity network based on commercial opportunities.

This activity of cross fertilization of knowledge was important about the contemporary idea on creativity, on concept of “identity of place” through objects and, overall, on new possible bridge between Italy and Chile.

More and more frequently we are currently seeing the return and a new discovery of traditional techniques and manufacturing, which have re-appeared in the contemporary world with a new look and a new balance. The set of traditions, meant as material culture, can be identified with the craft manufacture, which becomes the founding element of a community’s identity. As it is subject to changes in time, the set has to be interpreted as a variable heritage which should be preserved.

Through this field experience we can observe that creativity in design with Art represent the expression of a society wish, able to understand the changes; today the object of market and consumption is not only the simple possession of a specific product but it is the experience, the “story” that the customer can live inside the object, according to values of the manufacture that create add value to the existence.

KEYWORDS: Cross fertilization, Social Innovation, design driven innovation, human capital growth, creative community, Co- Creativity , Fostering Diversirìty

Introduction
The intercultural experience conducted last August in the Mapuche community of Temuco in Chile has fostered cultural exchange and economic methodology among the community of weavers and young designers from the School of Design at the Politecnico di Milano.
The workshop, sponsored and hosted by PROCHILE Italy, together with national offices in Santiago and Temuco, was aimed at bringing together the culture of ancestral Mapuche weaving, characterized by manual production and processing of color and fantasy, with more contemporary design methods, in this case where the designer is the “doctor”, the expert, who along with his cognitive tools, methodology and design, is able to observe, understand the specific and spatial characteristics of the craftsmen’s “way of doing” together with the people around him at that time. Complex design experience, on the one hand, enhances “what you do” and, secondly, proposes innovative ways to use for identification of new product lines and shapes but also different approaches to the market through intervention on communication and product distribution.

The “know how” as the value of Made in Italy to be transferred

The Italian design, tacit or explicit, has always been an engine of innovation for small and medium sized Italian companies, and recognized as the main competitive advantage of “Made in Italy” at the international level. If historically the “Made in Italy” is born from the success of some companies in the production of differentiated products, identifiable mainly in the fields of furniture and textiles and clothing, today the term Made in Italy has become a “meta-brand” that identifies the different productive sectors giving a strong identity to the Italian production system and not only by incorporating the style of living, quality, ethics, creativity. The ability of a professional designer to identify and exploit local conditions and materials, fusing them into innovative products, is one of the strongest factors for the Italian districts’ typical “know how”, having found new life in the synergy of multiple firms with different specific production.

So the designer becomes a “knowledge broker” , an orchestra conductor, a careful observer of the ways and processes involved, so as to exploit the full production potential, based primarily on what can be done and not only involved in creating new forms.

The ability of designers to build connections and be the mediator between producers and consumers is not a new feature of the profession. By nature designers find themself having to communicate with actors of different levels, but may be involved in a project with a single company, assuming then the role of “facilitator”. In this context, the designer, must make use of his/her ability to interpret the various languages and build a relation and to push for innovation in the relative system.

At the international level, unprecedented opportunities to build connections, networks and supply chains are available now. This phenomenon has certainly been facilitated and accelerated by the development of communication and information technologies that allow the exchange of design data at a rate which cancels physical distances. Still, the fact is that the "world of design" reports are not attributable to individual actors, but enlarged to the community of scholars who represent the scientific debate and design verification at the international level. Today, the contamination of the design languages, cross-fertilization between disciplines methodologically related and / or different represent unprecedented mergers and design produce specific local know-how.

This phenomenon goes beyond any study or possible schematization to where the ability of designers to interpret the needs of customers and turn them into tangible responses are combined with the ability to interpret different cultures, capturing values, signs, traditions, customs, and translating them into innovative consumer solutions.

Historical starting points

Before beginning the critical analysis of recent DDIT (Design Driven Transfer activities) projects, it is useful to have an overview of some suggestions given from past experiences in this field.

It is important to underline that the following suggestions are particularly referred to how a single designer or design research center should act in planning Design knowledge transfer projects in "developing countries" or in "peripheral countries " and not in general in all territories with a gap (as defined in the above paragraph) as could be the case for example of European artisans.

According to the experience of Gui Bonsiepe in particular in South America, Design knowledge transfer projects should keep into consideration that:

1. the socialization of strategic production tools (technologies) must be sustained by the elaboration of innovative projects characterized by a high value of use;

2. the import of external design ideas (design from other cultures) should be reduced to minimum […];

3. the influence of foreign consumption models […] have formed and deformed the (local) consumers conscience. New products should be introduced slowly and accompanied by information in order to let the (local) consumer to form an authentic conscience of their (local) needs.

4. it is important to socialize the design process in order to let workers (local community) participate directly as producers of (their) material environment […]. (italic words are the authors writing)

According to the Ahmenabad Declaration (1979) in India, Design knowledge transfer projects should aim:

1. to understand the values of a society and to define a good quality of life inside its parameters;

2. to look for local solutions for local needs using local materials and competences and applying advanced technologies;

3. to build new values, to satisfy primary needs and to preserve the plurality of cultural identities.

The typology of technologies that should be used and transferred to communities within these projects has also been an important topic of discussion lead by the pioneers of Design knowledge transfer: V. Papanek's belief in the use of "autochthonous technologies" ; G. Bonsiepe's theory on "intermediate technologies vs. appropriate technologies" ; K. Schumacher's attempt to apply "intermediate technologies" and develop "vernacular solutions". However the aim of this paper is not to investigate this specific matter.

These two examples do not aim to give and exhaustive and omni comprehensive picture of the past actions in the field of design knowledge transfer projects, but merely aim to underline the importance that Design knowledge transfer projects have had in the past and to stimulate an international discussion on the meaning of these projects in today's new economic and geo-political paradigms.
In summary, we can say that design fits in the processes of globalization with tools and methods developed in the discipline, which permit:

- To identify CULTURAL CONTEXTS (design resources, creative basins);

- To identify TECHNOLOGIES (specialty area);

- To Prefigure CONTEXTS OF CONSUMPTION (new markets, new consumer scenarios).

This approach relies on the belief that this project can create more knowledge and innovation. Specifically, the project developed with the Mapuche community has moved on two levels:

_ Promote the democratization of access by the craft and industry associations in the area with possible international connections giving rise to virtuous relations which are based on mutual recognition of the players in the sector while remaining masters of strategic aspects of their production;

_ Encourage a kind of exponential growth driven by the internationalization of cultural relationship and the creation of "cultural flows" to generate new sustainable design and production scenarios consisting of "hybrid cultures" projects, from production to consumption.

Designing in the micro to a macro reality

"The guru of the 'global village' concept, Marshall McLuhan, predicted in 1966 that 'in the future, the role of the craftsman will not be more important than ever before'.

Four decades later, there are some interesting signs sustaining this forecast: the growing awareness by the public and private sectors as well as regional agencies for International Cooperation of the dual role of crafts in their blending of traditional and modern skills, creativity, economics and in their social-cultural impact on sustainable development, and so have increased the public's preference for eco-friendly, handmade, quality products and the greater recognition of the very qualities we take for granted in crafts - qualities of timelessness and permanence, the adaptability of artisans to their materials and to changing needs, and above all, the spiritual dimension of crafts. These are all favorable trends, nevertheless, counter-balanced by some disturbing contradictions. In today's "global village", the artisan is, paradoxically, more and more disconnected from consumers' needs and tastes. With the expansion of markets and the spectacular growth of tourism, the traditional direct, personal contact between makers and users has been disrupted. Can the artisan take any longer, as in the past, the combined roles of a designer, producer and marketer? In this context, there is an increasing demand for well-applied design, much of Which comes from the local cultures and from the imagination and creative skills of artisans. "

As evidenced by Indrasen Vencatachellum comments, there are interesting signs that show a greater interest in the peculiar character of micro and small enterprises' productions, with widespread difficulties for small producers to connect to international networks of production and distribution. Many international institutions, including the School of Design and the Department of Industrial Design, Art, Communication and fashion, are engaged in supporting and developing productive territories, motivated both by a desire to support local economic development, "to preserve the knowledge" of small production companies in real danger of "extinction". We can generalize by saying that the crisis of small producers is due mainly to their difficulty in adapting to sudden changes in the socio-economic world and their inability to connect with other leading players in alternative ways of growth and development. According to Indrasen Vencatachellum, to deal with this kind of constant change one must break away from traditional ways of working, all concentrated in the figure of the craftsman with the knowledge and skills necessary to design (the designer), produce (the producer) and distribute (the distributor) their artifacts and identify alternative ways of building strategic alliances to develop new forms of work that see craftsmen collaborate and dialogue with designers to whom falls the task of understanding how to switch between "ethnic" production based primarily on local characteristics, to a "product narrative" in which the value of the product is related to its quality materials that take on a new meaning through the symbolic, emotional or identity relation the consumer is able to experience .

From ethnic product to narrative object

The experience with the Mapuche weavers, within their territory and with their instruments and their wisdom and knowledge, was primarily a human adventure in which the designers tried to enhance the normal capacity of the weavers beyond repetitive experiences, proposing to express creative freedom over what is normally processed as "mechanical". This type of design model resembles the "theory of the unbalanced system" by Ugo La Pietra in the 60s, who acted on that "rigid system" so as to reveal its contradictions and / or open new expression possibilities.

The workshop lasted three days and it is possible to synthesize the activities as follows:

- Understanding: activities performed the first day: meeting with the weavers, participation in stages of coloring of the wool through plants and flowers collected in the region of Temuco, until the visit to one of the stores built inside the shopping mall in Temuco;

- Action: on the second day, the designers held the first business and interaction seminars, so that by this implication, the two work methods could meet and exchange ideas;

- Consolidation: activities developed between craftsmen and designers leading directly to the product.

The phase of understanding was to approach and learn hyper specialized loom spinning and weaving, with Italian designers constantly accompanied by a translator, and this made sure that the designers seized not only aspects of the language but the way of living and thinking of the craft. In this phase were important steps such as sharing a typical Chilean breakfast, exchanging glances and with respect to the first question "What will we do together?" It was important at this stage to have the same cultural level by ensuring that both groups perceived it as intercultural exchange rather than intellectual colonialism. Then were the participation and listening by the designers of the phases of coloration of the wool already spun, the explanation of the characteristics, in terms of color qualities, of each plant adapted to this type of processing.

Therefore, understanding not only the characteristics of the "elements of the project" but also the ancestral culture, the transmission of ways of doing and typical of those women who have been handed down their unique and uncopiable craft from mother to daughter.

Fig. 1, From Ethnicity to design; action and understanding.

Action is the first phase of interaction activities the designers addressed on this occasion, through two workshops, on the issue of how design and methodology are involved in the process of reconfiguration of crafted products. For the contribution of the design is not a purely formal act, which reinterprets and recovers the classical manuscripts, icons and traditional materials in a different way, at this stage the artisan is considered a partner at the same level in the creative process.

Fig. 2, From Ethnicity to design; Understanding and consolidation.

In the consolidation phase we work directly with the craftsman suggesting new uses or new instances of the typical product of interpretation; *In light of the observations reported, we could identify new trends that seeks to recover those deep-rooted cultural values over time, through close bonds that unite the individuals to the community and to their manual arts' history and the identity of a territory. It spreads the nostalgic memory of the past and the desire to retrieve objects and memories of the era. The meeting between dissimilar cultures and different design approaches such as the designer and craftsman , is transformed in many cases by a number of ideas for new products with unique and different codes and languages. With these characteristics, the local produce stand on the market as goods with high differentiation (Sassu, 2003), becoming "cultural objects" because they show an implicit association with a specific territorial identity (Lai, 2007).*

Fig. 3, Narrative design workshop, an interpretation between design user and culture.

Conclusion

Things become icons that testify to the origins of each culture, their strength is expressed through the ability of memory that mixes archetypal images and ideas into a future that is fascinating, with the intensity of history.

Through this vision, it is possible to think that internationalization processes are not merely seen as strategies which involve the migration of goods (import/export) nor technologies, but also the migration of designers and of productive communities in search of new "sense". Design therefore can become a genera to of new knowledge and goods flux by bulk ding international connections between design and production communities.

This experience with the Mapuche weavers has triggered a cross-fertilization of design methodologies that have led the community to redefine the production objectives and designers to reflect on the methodological skills and relationship between design and craftsmanship.

The second day especially, during the design phase, the goal was to transfer a new point of view on the product to the craftsmen. Sometimes the artisan is aware of what makes his work a valuable one, but tends to not recognize his work as a kind of intangible value. On this occasion we wanted to communicate through design for an object that traditionally could be anything, but taking unusual shapes for different uses. Another objective was to communicate to the actors of the territory the commercial value, the strategic value of the recovery and enhancement of textile identity. As a plus in this case we can say that design represents the interface between tradition and modernity, which reconfigures the traditional codes to make them consistent with contemporary languages. So we must talk about strategies that bring value to a system with a traditional knowledge-oriented approach to design.

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Using scenarios to explore the social aspects of design led innovations

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Abstract
Emerging technologies have redefined the way people go about everyday life. An increasing array of online and on-the-go solutions supporting remote work, entertainment on demand, information sharing, social communication, telehealth and beyond, are now available at the touch of a screen. This paper discusses concept of scenarios as a design tool that can be successfully employed by organisations as an innovative design led approach to: (i) understand people's everyday practices in current social contexts in order to identify opportunities and emerging markets, and (ii) reveal stakeholder relationships existing in the provision of services within current everyday practices. To illustrate this approach, two case studies will be presented: the first focusing on a real industry project exploring opportunities for the development of future health care services, the second focusing on people's access to services as part of a transport journey experience. This paper aims to demonstrate the use of scenarios as part of a design led innovation approach to understand the social aspects and their complexities of new designs in an increasing everyday technological driven context.

KEYWORDS: Scenarios, design led innovation, experiential journeys.

Introduction
Widespread advancements in technology have altered the social environment that we operate in and transformed the way in which people work, interact and maintain relationships (Australian Bureau of Statistics, 2010; Isen & Stevenson, 2010). In this busy interconnected world, technology 'on-the-go' enables, and indeed some may argue, requires that we are always 'on-line'. As consumers are drawn to new features and extensive applications in what have rapidly become the "ultimate portable converged device", in 2010 Australian sales of internet enabled Smartphones grew by 29% (Euromonitor International, 2012). A 2012 study by Google about the use of mobile technology in 26 countries highlighted that people use smartphones to access the web (as much as through their desktop computers) for everyday type of activities, this includes: at home, work, on the go, public transport, while waiting, at social gatherings, etc. Such use 'have transformed consumer behaviour' in various facets of everyday type of decisions. How does this affect society and individuals' everyday life?

The invention and diffusion of information and communication technologies are said to be revolutionising work and family life. Wireless mobile devices increase the scope for work and family flexibility by enabling the micro-coordination of time, tasks, and schedules. This is particularly significant as people are now working at times and places outside of the traditional workday and place. It is widely believed that technologies like the mobile phone and e-mail are blurring boundaries between personal life and the workplace. While for some commentators these developments represent a threat to the quality of modern life, for others they represent new opportunities for integrating the spheres of work and family (Anu and Amta, 2007).

As emerging technologies surrounding us mediate most of the human world influencing our everyday life, design plays an ever important role in the evolution of the environment with greater effect and wider scope of how design shapes our everyday interactions (Friedman, 2003). Design is an interdisciplinary and integrative discipline; it has been defined by Simon (1998) as the 'process by which we devise courses of action aimed at changing existing situations into preferred ones'. The process of design thinking has the ability to capture both new knowledge and in the application of this knowledge to the creation of possible futures and scenarios with a broad research team, stakeholders and with future potential customers (Bucolo and Mathews, 2010).

Over the last forty years, design researchers have extensively employed empirical studies to explore a variety of everyday life practises (Cross, 2007), to capture new knowledge and discover opportunities to identify latent needs and potential markets. In capturing knowledge and translating it into future practices, design thinking can be assisted through the use of scenarios, which describe possible, preferable or avoidable futures (Jonas, 2001).

This paper reports the use of scenarios to explore social aspects of design led innovations that affect people in everyday life activities. Two case studies are introduced; the first around the design of a design led innovation in the medical field; the second focusing on the use of mobile technologies during public transport. The following sections discuss the concept of scenarios and design led innovation, and two design case studies describing their methodological approach including the use of design scenarios. The conclusion section presents a comparison of approaches and limitations in each case study. Finally, the discussion section addresses the complexities, challenges and opportunities of the use of scenarios in design practice and research.

Scenarios as conceptual framework for design
Jonas (2001) defines that 'scenario is a design itself'; it is a conceptual framework for disciplinary design development. It is informed by a cyclical reflective process between theory and practice leading towards a 'prospective' design solution. The construction of such conceptual framework (scenario) requires a methodology where the

individual is the centre of the design production. In order to produce scenarios that describe 'possible, preferable or avoidable futures', such methodology embeds three phases that go from 'problem modelling' (analysis), to 'future concepts' (projection), to the identification of a 'solution' (synthesis).

The use of scenarios is not new. In a review of the use of the use of scenario as a tool, Hertzum describes that it emerged as a methodology in the late 1940s spreading to other areas since then (2003:216). Most commonly applied in: strategic management, human computer interaction (HCI) and software engineering fields, scenarios are commonly employed to ground decisions around the 'use situation'. From this point of view, Carroll defined the concept of scenario as 'a projection of a concrete narrative description of activity that the user engages in when performing a specific task, a description sufficiently detailed so that design implications can be inferred and reasoned about' (1997:385). Under this concept, scenarios are widely used in (HCI) and information technology (IT) to understand human activity interacting with computer systems. Within those fields it has been acknowledged that the use of scenarios in design process facilitate: (i) evoking reflection in the design process, (ii) managing the fluidity of a design situation, (iii) affording multiple views of an interaction, (iv) helping to generalise, and (v) promoting communication among stakeholders (Caroll, 2002).

To produce realistic scenarios depicting work practices and providing an information tool for the design process, data employed for the design of scenarios is based on contextual enquiry and analysis, demographic or market research, and observations (Grudin and Pruitt, 2002). In the evolution of scenario related methods, Persona Design emerged as an infrastructure for engagement to facilitate communication of data and to provide possibility to illustrate different scenarios of use.

From the interaction design field, Cooper (1999:23) defines personas as 'a precise description of our user and what he wishes to accomplish'. A more detailed definition is provided by Calde, Goodwin & Reimann (2002): 'fictional, detailed archetypical characters that represent distinct groupings of behaviours, goals and motivations observed and identified during the research phase'. Cooper's definition focuses on the motives behind the user's actions and argues that good interaction design has a meaning only in the context of a person actually using it for some purpose (1999:149).

In the broader sense, scenarios facilitates the creation of design representations that are focused on 'use situations'; they can be employed for different purposes: the construction of mock-ups and user interface metaphors, revision of design rationales, usability specifications, evaluation of use cases, etc. However, the widespread HCI's approach on scenario focusing on 'use' aspects does not provide further insights beyond the specific human interaction with computer system activity that it represents. Persona Design provides a design tool that complements HCI's focus on use and activity by addressing 'motives and purpose' in the scenario design process, and thus, provides a platform for discussion of future-use situations of technologies in the context of everyday practices.

Scenarios and design led innovation

As noted by Kyffin and Gardien (2009) innovation no longer relies on technological breakthroughs or incremental product development. In their view, innovation ranks high on management agendas with an increased scope in complexity as it needs to integrate product, services, and users' needs while bringing different stakeholders in the process. The importance of design to a firms' innovation and in particular for the development of new products has been addressed in various studies (Bruce & Bessan, 2002), with an increasingly interest in the use of design thinking for the creation of innovative services. Along these lines Brown (2008) states: thinking like a designer can transform the way you can develop product, services process – and even strategy'. This trend, stimulated by design firms such as IDEO (Hargadon & Sutton, 1997, Nussbaum, 2004), has repositioned 'design' from downstream manufacturing related activity to one that adds strategic value to business. In understanding such strategic value, various authors have looked at the design practice as a 'construction of alternative futures' (Ehn, 1988). This trend leads to a view of design that is concerned with the social and creative activity that considers multiple futures of unknown complexity (Bucolo and Mathews, 2010).

From this perspective, the use of scenarios in design led innovation processes provides a methodological framework to outline current and future everyday practices, and to deal with the 'construction of alternative futures'. As a design tool, scenarios allow devising alternative futures and thus, overcome the flaws of traditional innovation process which is often seen as being very linear. Traditionally new ideas are prematurely channelled into products and processes that do not necessarily turn the ideas into market successes (Kyffin and Gardien, 2009).

These approaches have been widely document in the literature; however, little is known about the use of scenarios as: (i) a socio-design approach to understand people's everyday practices within social contexts, or (ii) as a method to identify innovative design opportunities and emerging markets. To explore the use of scenarios in design led innovation, two case studies are described: one from a commercial perspective, the second from a design research perspective. The following sections introduce each case and describe the methodological approach employed.

Case study 1: exploring design solutions for new medical services

Bucolo and Mathews (2010) reported a study conducted to explore alternative approaches to the design of health services. MedCo is leading medical device manufacturer and is the current market leader within its sector interested

in exploring design services to compliment their product offering, specifically in China and India. The company has a small specialised product offering; however it has significant opportunities to grow within their current and emerging markets. Given MedCo's dominance of the market due to their scientific and technical superiority, the company could be described as a technology led company, with a significant science and engineering development team, and they have also undertaken market research to help guide the development process. MedCo is aware that the likely barriers to growth are similar to the challenges facing many other medical devices manufacturers and that they need to ensure that their product remains accessible and affordable to all.

Stages	Description	Methodologies and Technologies	Outputs
Stage 1	Understanding the social and cultural context	Semi-structured interviews, Persona Design	Multiple Personas with insights from diverse contexts and needs
Stage 2	Moving from Product interactions to temporal experimental journeys	Experiential journey map	Multiple experiences of Personas over life journey Value propositions for new services
Stage 3	Identifying latent user needs for new services	Role paying	Graphical representations Digital service opportunities
Stage 4	Transforming latent user needs into scenarios	Fragmented connections Future scenarios	Narratives for each sub scenario
Stage 5	Communication of results Development of strategy	Video vignette for final deliverable	Video vignettes of new service possibilities

Table 1: summary of case 1 methodology (Bucolo and Mathews, 2010:184)

Table 1 summarises the design exploration approach. Data collection was undertaken over five stages and each stage involved the construction of new materials, and new insights through active engagement with the research team, stakeholders and MedCo.

Stage 1 focused on capturing market intelligence of the proposed market and achieving an increased understanding of the stakeholders and of the contextual information required to inform the creation of future scenarios. Results from stage 1 were conveyed into Persona designs. Stage 2 focused on understanding MedCo product beyond the singular instance of user-product interaction but within a temporal experiential context. These insights were translated into actual stories that convey key specific activities linking potential market end users to MedCo.

Stage 3 focused on identifying latent user needs for new services. Role-playing was employed by the research team as a rapid ideation workshop that led to the identification of latent needs represented in the form of storyboards. Selected latent needs were then transformed into scenarios in Stage 4. This stage focused in identifying 'fragmented connections' in the Personas journeys with MedCo devices/services. The use of scenarios and narratives, not only assisted in communicating ideas to a broader group of MedCo stakeholders, but also generated discussions about the ideas proposed as 'future scenarios'. It did not focus in producing product development type of solutions, but in describing opportunities for potential future MedCo services. Finally, Stage 5 focused on transforming scenarios into media appropriate to deliver concepts emerging from the project and gain acceptance from stakeholders. In this process, the use of scenarios not only was instrumental to communicate final results, but also to develop the design strategy of new service possibilities.

This project employed Personas, experiential journey maps, narrative, scenarios and video vignettes to translate customer experiences into ideas and conceptualisations for discussion within the company regarding potential future service development. This process led to more detailed understanding of the context for the service, the end user, and provided a new strategically approach in a company with strong technological knowledge.

Case Study 2: the study of mobile technologies in the context of personal transport journeys

Research is never ending into how these devices can integrate into our daily lives; what the technology is capable of and what it can now do for us. But is the technology advancing faster than our understanding and acceptance of it? Developers have certainly been able to identify and exploit the potential of these devices, but have we given enough consideration to the contexts in which they are used? We now have the power of a PC available in the palm of our hands. So does each different and dynamic context that we use these advanced devices in, have an influence on our use of them? Are we changing our behaviour to integrate this technology into our daily lives? And does design recognise our needs or simply facilitate technology?

In seeking to address these questions a research project was conducted to explore people-technology interactions with fixed and mobile technologies in a public domain. To this end, this study focuses on exploring this topic within the context of public transport (PT). A city's PT network is intended for use by the population at large, for thousands of people this service is essential to their daily activity. Technology implemented in this context is both aimed at making the process more efficient and enhancing the overall experience of the service. However new designs can be perceived as complex and difficult to use. Although the study of public transport is widely reported in the literature, a topic not addressed is about the impact of context on people's use of these technologies. The research question guiding this study was refined to: What is the experiential context of fixed and mobile technologies in transport journey experiences?

Using field observations, the study explored the interaction between people and technology during PT journey experiences and investigated the context of use of both fixed and mobile technologies while undertaking these activities. It considered people interactions with technologies relevant to the transport journey, for example: ticketing machines, timetable displays and self check-in interfaces. It included the use of advanced mobile devices within these environments, such as personal mobile phones and tablets. Employing video recording and talk-aloud verbal protocol, the objective was to examine the affect of

social and experiential context on the use of these technologies. The data analysis employed thematic analysis and was supported with ATLAS.ti qualitative analysis software. The coding of field observations identified a number of emerging themes from the collected data. Field observations were conducted at Brisbane Central Station and Brisbane's International Airport. The methodological approach is summarised in Table 2.

Field observation:	Observation of people's use of mobile technologies in public contexts as part of a public transport experience. Aims: • Identify key aspects of participants' PT journey, activities that are part of it, and interactions with technology • Data collection: visuals and verbal protocol
Participants and resources	1. Participants must be an infrequent user or unfamiliar with PT 2. Equipment: Eye-tracker glasses Tobii and a micro HD spy camera. Participant must bring his/her own a smart phone or iPad.
Instruments	• Design narratives or written scenarios to guide participants • Screening questionnaire to determine participants' familiarity with mobile technologies and use of PT
Task 1	Observing people's use of a hand-held device for way finding in Brisbane CBD. Description: » Participant to role-play a prescribed scenario in which the goal is to find his/her way to Central Train Station and purchase a ticket for the next available train to a certain station. » Using his/her smart device, participant must: find the train time schedule, find directions to Central Station, use ticket vending machine, and identify the platform location.
Task 2:	Observing people's use of a hand-held device to take a train from Brisbane Airport to the CBD. Description: 1. Participant to role-play an out-of-town passenger arriving to Brisbane Airport. 2. Using his/her smart device, participant must: find the train time schedule, find his/her way to the train station, use ticket vending machine, and identify the correct platform.
Outputs:	• Video recording: (a) from researcher's perspective, (b) from participant's perspective • Verbal protocol: talk aloud during self video recordings

Table 2: summary of case 2 methodology

The methodology employed for field observations has been successfully employed in previous studies aiming to explore experiential knowledge taking place in people's interactions with technologies (Chamorro-Koc et al., 2011). Field observation sessions are organised on a one-on-one basis: participant- researcher. This required participants to be followed during a daily life journey activity in a designated public context-of-use. The researcher follows the participant throughout the activity and the participant is asked to talk aloud while interacting with technological devices. The researcher audio records his or her observations as well.

Participants were briefed before each field observations, and were provided with a specific scenario for the task at hand. Field observations consisted on the researcher following the participant and were video recorded from both the participant and the researcher's point of view. To diminish the intrusive nature of this type of participant observation, the researcher worn a micro HD video camera placed on his/her lapel to capture the surrounding context in which the task was taking place. To capture the participant's interactions with the various technologies interfaces from his eye point of view, an eye-tracker glass device was employed. The video recordings captured not only the images but also the participants' comments (talk-aloud protocol).

Storyboards were produced to help explore and communicate the mobile context and activities of the participants' PT journey experiences, for all observations conducted. Figure 1 shows the storyboard from the pilot test conducted for this study. The conduct of the pilot test allowed for confirmation of the effectiveness of the video recording equipment and to determine the extent to which the method would be able to respond to the research question.

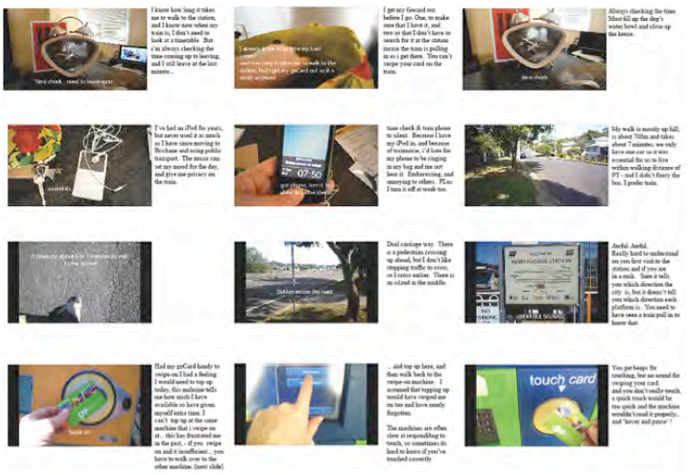

Figure 1: Storyboard for Case 2 (pilot test)

Although participants were not expected to adhere to the scenario exactly, the use of scenarios provided a framework for the observation with relevance to aspects of context of use identified in the existing literature. On average the duration of each scenario was 45 min. An exemplar of the narrative provided in each scenario is provided below.

Scenario 1
You are a twenty something year old backpacker. You have just arrived in Australia from the UK. This is your first trip overseas on your own; you are excited but also a bit nervous. Due to trying to save a bit of money you went for the cheaper flight that had a two hour stopover in Brisbane before your final connecting flight to Sydney. You have decided that two hours isn't enough time to leave the airport so you will pass the time here. Your tasks are:
- *Confirm your flight departure time, your boarding gate and location.*
- *When do you need to be there? Where can you find this information? Is the information you need readily available?*
- *A new mobile app has been launched at the Brisbane Airport. Do you see any information directing you to use the site?*
- *Try visiting bne.com.au on your mobile device or seek out any available Wi-Fi zone.*

Figure 2 shows images from the researcher's perspective.

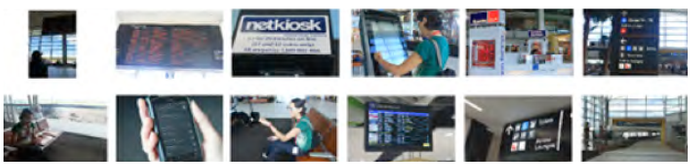

Figure 2: images from the researcher's perspective

From field observations and verbal protocols it was identified an evident connection between context and action issues, where familiarity and prior knowledge are the determinant factors. Familiarity refers to the participant's level of understanding of particular objects and/or interfaces. Prior knowledge refers to the participant's previous experience in similar context situations. The study found that contextual factors are the primary source of reference to

inform participants' actions. This is evidenced by the fact that participants' described their interactions with public transport infrastructure and emerging technologies based on context situation or environment. Figure 3 represents the four identified connections: (i) context -> experience, (ii) context -> interface, (iii) context -> knowledge, and (iv) context-> emotional. Such connections explain that people's actions are informed not only by the physical environment or the technology interface, but also by their experience of a 'known' social context and a particular configuration of time and space. This type of experiential knowledge allow people to connect particular contextual information to a decision making process in which they can assess if the situation is 'normal or standard', whether to undertake a passive or active role while waiting or expecting a particular event in the journey experience, or to decide for alternative actions (other routes) for faster or more enjoyable travel experiences.

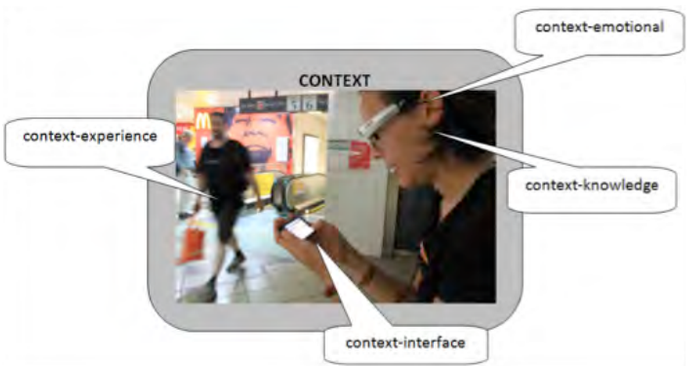

Figure 3: four identified context-action connections

The next step in this ongoing study is to conduct more observations and gather data from different demographics in order to identify different 'patterns' of transport experiences and to reconfirm or expand the context-action connections identified so far. In this study, the use of scenarios as part of the design research process has led to identification of experiential and contextual aspects beyond the 'technical' aspect of people-technologies interactions.

Discussion

From two different perspectives: industry project and design research study, two projects with different aims and similar approaches have been described. In both cases the use of scenarios transcends the 'task-based' approach traditionally employed by Human Computer Interaction and Interaction Design fields. Both case studies describe a methodological approach in which design narratives are employed as an effective tool to explore and identify fine grain detail that is relevant to design projects where technologies affect people's everyday lives.

Scenarios have been instrumental to explore and identify social aspects relevant to design-led innovations. In case 1, scenarios are employed to convey data gathered from the experiential journey of people who are current customers of MedCo services over their lives. This helped reveal 'gaps' in which current services do not meet users' needs. Such gaps were not product related, but related to accessibility aspects of the service due to cultural background and financial issues. In case 2, scenarios are employed as a point of departure for the study participants to frame their actions during field observations. Scenarios in this case, helped participants to guide their decision making process and adopt a state of mind as the activity goals and relevant considerations were clearly stated. In doing so, scenarios were useful to prompt emotional responses from the participants during field observations. Emotions related to boredom or anxiety while waiting, excitement when correctly finding their way around, frustration when unable to find a wireless internet access, emerged naturally during the 'transport journey'. Thus, scenarios have been successfully employed in both projects to understand people's everyday practices in current social contexts.

One evident advantage of this approach is that it does not require a large pool of participants in order to gain a rich level of insights. One of the challenges of this approach is that in order to generalise, an appropriate selection of user representatives must be rigorously identified. Without delving into the specific results of each case study, the main difference that must be highlighted is about the relevance of scenarios to communicate elements of the project or the process itself. As an industry project, case 1 required involving different stakeholders in the communication process, thus scenarios were employed as a strategy to demonstrate and justify results. Differently, as case 2 is located within a Design Research situation, scenarios were employed as an effective communication tool between the design researcher and the participants. The case studies described are compelling in demonstrating the use of scenarios to uncover social practices and identify gaps and opportunities for design innovation.

Conclusion

Personas, experiential journey maps, narrative, scenarios and video vignettes to translate experiences into ideas and conceptualisations for discussion within stakeholders were employed in Case study 1. In its initial stage, Case study 2 has employed scenario narratives and storyboards to formulate scenarios for two purposes: (i) to provide a framework for action to the observation participant, and (ii) to depict current practices.

Case 1 presented the early stages of a research project involving design processes in investigating some potential innovations by a medical device company. There are limits to generalizing from this case but it is argued that the nature of this approach may have application for other medical devices companies who are exploring possibilities in new markets. Case 2 described an ongoing study that focuses on exploring context and experiential knowledge of people's interactions with technologies in transport journeys. By exploring the social dimension of people interactions with technologies, four context-action connections explaining interconnections between the social context

and people decision making have been uncovered.

Through the description and illustration of both case studies, it is hoped that design researchers and industry groups are encouraged to experiment through design tools to help them begin to address the social aspects and challenges of design led innovations. This paper aims to contribute to illustrate how design tools are key players in the process of articulating innovative responses to the needs of the developing world.

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Using extreme sketching in creative business modelling

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Abstract
Whether planned in detail or developing almost accidentally, all businesses have a model for how to turn raw materials or services into revenue, including how products are channelled to customers, and how the business interacts with partners. Business schools worldwide teach how to develop and optimize business models, but not all business owners have gone to business school. In terms of business model development, small creative businesses owned by for example a single artisan face special challenges compared to traditional businesses. One crucial difference between the two is that creative workers are motivated by the outlook of self-fulfilment and not profit, and this means that owners of small creative businesses are unlikely to invest time and money in strategic business development. Based on an four-hour long experiment with a self employed jewellery designer this article reports on using live provocative sketching as an aid to develop creative business models together with the owners. The experiment suggests that the particular combination of live visual sketching and provocation can push reflection on business development, and help make work values clear to the business owner, who gains a better understanding of the dynamics of his or her business potential, and which may prove a valuable outset for further business thinking.

KEYWORDS: Business model development, sketching, creative businesses

Introduction
Most people would agree that a rock festival is different from, say, an investment bank, and that the festival is a creative business and the bank is not. They would also agree that a writer is a creative worker, and an insurance agent is not. But why is that? One explanation could be that a writer is stereotypically conceived as a passionate artist who produces con amore, whereas the insurance agent is stereotypically understood as someone mainly driven by profit. Such stereotypes are of course only partly true, but in recent years it has been more common to speak about creative businesses and their owners as being—in terms of traditional business school thinking—unconventional (see for example, Lash & Urry, 1994;

Howkins, 2001; Hesmondhalgh, 2007). In terms of strategic business development, that unconventionality poses a certain challenges for the creative companies.

But who are these people, working on their own producing artwork or other intellectual property? If we look to the literature, creative people are described as intuitive, playful, imaginative and passionate but also aggressive, dominant, immature, and having a hard time following rules. They are disciplined and hard working, but they do not care for their past accomplishments, because their interest is motivated by the act of being creative rather than the final product (Csikszentmihalyi, 1996). These are clearly not the personality traits of a traditional businessman, and may be the reason why creative workers are sometimes portrayed as incompatible with business thinking.

Apart form personal characteristics, another feature separates the creative person from the non-creative person; their reason for working:
"Perhaps the most important quality, the one that is most consistently present in all creative individuals, is the ability to enjoy the process of creation for its own sake. Without this trait, poets would give up striving for perfection and would write commercial jingles, economists would work for banks where they would earn at least twice as much as they do at universities, and physicists would stop doing basic research and join industrial laboratories where the conditions are better and the expectations more predictable." (Csikszentmihalyi, 1996).

As a result, it seems obvious that creative businesses face certain unique challenges when it comes to business model development. Traditionally, one would say that a business is in business for the sake of making money, but this is not true for a creative business. A unique hallmark for a creative business is that it is not motivated by the outlook to make profit. Actors, for example, do not act to make money, but to make art and to earn a place in 'the theatre family' (Eikhof & Haunschild, 2006).

Someone running a small creative business faces quite a dilemma. The creative work is spontaneous, unpredictable and follows no strict rules, whereas interference with the market brings about the need to manage, plan and organize the processes of creative production. This poses tension between activities related to creating intellectual property and activities related to organizing and steering the company. Consequently, the creative business owner needs to balance two opposing identities: the artist, who provides motivation and self- fulfilment, and the business man, who makes it possible to make a living out of the creative production (Eikhof & Haunschild, 2006). Since few owners of small creative businesses have business school training, this calls for attention on how to help creative business owners with strategic business development, something that the British government has called special attention to (DCMS, 2001).

In the following, we discuss how a common thinking tool, well-known to designers, namely visual sketching, combined with another tool from the design field, namely provocation, might help bridge the gap between traditional business model development and the creative mind.

Thinking tools for business development
While traditional business modelling tools like the business model canvas (Osterwalder & Pigneur, 2009) are useful for

analysing a business in terms of its cost structure, revenue stream, and so forth, it may not be a very good thinking tool. In other words, tools that are designed to help document the 'as is' of a business may not be very useful for exploring the 'what could be', that is, to help develop new business models.

Figure 1, Examples of extreme sketches used in workshop settings

Seeing that the creative business owner is not primarily motivated by money, then working systematically with how to develop say, the cost structure of a business, is not a very likely activity for such a person. And seeing that 'business talk' takes its outset in a different dictionary than that which is used to describe the value of artistic work, business concepts such as value proposition is likely to be ignored by creative business owners. Consequently, we have seen an increased focus on how to articulate and develop business models in creative industries with the use of techniques that might appeal to creative people, including tangible sketching tools such as symbolic artefacts (Mitchell & Buur, 2010), games (Chan, 2011), and ambiguous acrylic shapes (Lübbe, 2011).

In line with this body of work we hypothesize that facilitating discussion with creative techniques from the design field will help creative business owners understand, engage with, and strategically develop their current business models.

Combining visual sketching and provocation

In the design community, sketching is often understood as the production of paper sketches of the type described by (Goldsmidt, 1991; Goldsmidt, 2003). Buxton (2007) uses the term sketch to describe any representation of an idea or concept that can be used to get new ideas, develop old ones, or think about well-known issues in a new fashion. No matter the material qualities of the individual sketches, the act of sketching is understood as a tool for aiding idea generation and exploration of ideas in a design situation. Apart from helping new thinking, sketching also serve to help designers talk and about and share an idea, as well as remember and store its key components (Ferguson, 1992; McGown & Green, 1998; Ullman, Wood, & Craig, 1990) which is why sketching is many designers' preferred technique to inspire thinking and help them communicate with others. In the literal as well as in the metaphorical sense, designers sketch to help themselves and others see things in new ways, including physical forms, modes of interaction, and the potential use context of a design. The design community also make use of provocation to drive discussion and help designers and users see things new ways. In participatory design, for example, 'provotypes' are used as a provocative tool to challenge design assumptions made by designers and other stakeholders (Boer & Donovan, 2012). In critical design, provocation is used to force consumers to reflect on the values and challenges of living with digital technologies (Dunne, 2005), or challenge the ideology inherent in a certain design, such as SignWave's Auto- Illustrator (Brynildsen, 2002).

This article reports an experiment that combine sketching and provocation—a technique called extreme sketching—as a means to engage an owner of a creative business in a discussion of current and potential business models. Extreme sketches share the qualities described by (Buxton, 2007) but they have other qualities that make them useful when sketching outside a design context. For example, the real time visualisation of a discussion in front of participants is key to how extreme sketching can be used to engage users in abstract discussions about, say, complex business issues (Mitchell & Nørgaard, 2011; Nørgaard, 2011). Also, the sketches use humour and extreme situations to document and drive discussion, and this helps participants engage with challenges and boost understanding and new thinking (De Bono, 1990; De Bono 1972). Further, the sketches' physicality and hand drawn nature makes them work well as tickets to talk (Sacks, 1992), meaning that they lower the threshold for engaging in a discussion with strangers. For an example, of extreme sketches, see Figure 1.

The jewellery designer experiment

To explore how extreme sketching might facilitate new thinking about business models, we arranged to discuss business models with a Copenhagen-based jewellery designer. The four hour-long session focused on developing the company's business model and included— besides the designer—an interviewer and a sketcher. The session was videotaped for further analysis of how the live sketches were used to inspire or provoke the discussion of current and possible business models.

Method of exploration

First, the interviewer explained what a business model is, and how different models work differently in terms of,

for example, customer relations and revenue streams. The interviewer then proposed seven different business models—the auction model, the subscription model, the rental model, the bait and hook model, the co-innovation model, the collective model, and the direct selling model—and prompted the designer to reflect on what her company might look like if following a particular model. To get an overview of the current state of the business, the interviewer prompted the designer to explain how her current business worked in terms of the concepts described by (Osterwalder & Pigneur, 2009).

Figure 2: Scenes from business model session with jewellery designer.

Next, and inspired by the previous discussion, the designer identified the direct selling model as a business model she would like to explore further, and the interviewer guided her through questions like “what would be the first steps of implementing this model?”, “what would happen then?” and “what would it take to reach this point?”.

Lastly, the interviewer engaged the designer in a discussion of what the use of extreme sketching had brought to the session, and how one might use extreme sketching when discussing business models with creative business entrepreneurs.

Simultaneous with the interview, directly in front of and visible to the jewellery designer, the sketcher interpreted the entire discussion using extreme sketching. The result was a 0.75x8 metre long frieze with sketches visualizing the discussion, showing the stages and the chronology of the interview (see Figures 2 and 3).

Results

Through the interview we developed an impression of a designer who was not traditionally business savvy, and far from interested in being so. Initially, she was unfamiliar with the term business model, and seemed hesitant when talking about her business in traditional business terms. An early theme in the interview was the delicate balance between making art for the sake of art and making money to pay the rent. While the process of making art and the collaboration with peers seemed to interest the designer a great deal, the work that involved finding ways to reach customers or getting an overview of the company’s cost structure seemed a matter of no interest if not almost painful to talk about.

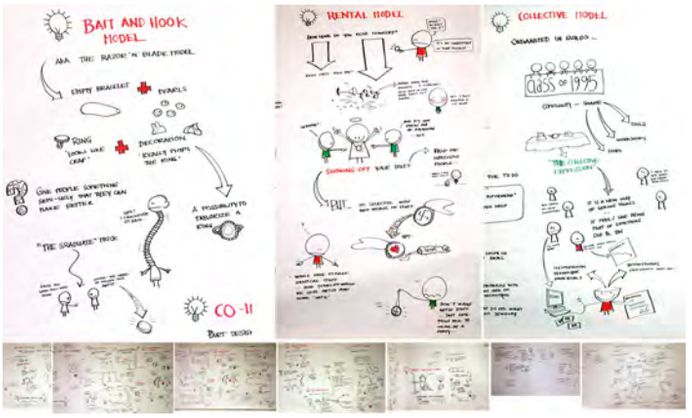

Figure 3: Closeups and overview of the sketches.

It became clear that the owner considered herself an artist rather than a business owner, and was motivated by the production and exhibition of avant garde jewellery rather than by selling it. When describing her work and business conduct, the jewellery designer made explicit how she did not want “anyone” wearing or buying her jewellery, and how she sometimes turned down buyers she found unsuitable to own or wear her products.

During the session, the designer used the extreme sketches actively when reflecting and explaining how certain business models might work for her company. As the scroll with sketches grew longer, she walked back and forth as if to physically navigate back and forth in the discussion. When referring to ideas voiced earlier in the interview, she walked to the point on the scroll that showed this particular moment, and continued thinking out loud while studying or referring to the scroll. Such activities indicate that the designer used the extreme sketches as an aid to recall earlier themes in the interview and get an overview of important topics.

Besides functioning as a memory aid, the sketches also proved valuable for supporting reflection, as the following example suggests;
“I really didn’t like this one (she points to a visualization of the direct sales business model) because, I don’t like the selling part (she points to an illustration of a sales woman ringing a door bell) but then...this is a really good idea (she points to an illustration of a champagne and cupcake party), and I thought that this model could really work for me. I also like this one (she moves to a previous part of the scroll) I like this the most (she points, and looks back and forth in silence as if she is thinking further).”

When asked to elaborate on how she used the sketches during the interview, the designer comments on the reverse or provocative nature of some of the sketches:
“I like them...they are really good for someone like me who is very visually minded (...) In the beginning I was quite provoked because she drew this (she walks to the start of the scroll and points to a sketch suggesting that an artist might cut out her heart to make a living) and I thought, ‘wow, that’s a harsh way of putting it’...that I have to cut out

my heart to make money. But I do see that I need to find a model where I can earn money and still have time to do the stuff I think is most fun".

While the participants discussed and sketched how the direct selling model might work for the jewellery business, it became visibly clear that if choosing this business plan the role of the designer would change, putting more emphasis on the planning of marketing related events and less on creating jewellery. This sparked a discussion about what job role would be desirable for the designer to have in the future, what skills she needed to make this happen, and how engaging a commission paid event planner might help her keep her focus on producing art. Later, new thoughts about how to manage customer relationships were inspired by sketches visualizing rental agreements and official membership documents. These findings exemplify how the extreme sketches helped the jewellery designer get new ideas about and actually pushed forward the discussion about potential business models.

When reflecting on how extreme sketching might be used to help other creative entrepreneurs develop their business models, the designer pointed to the value of the information being made visible. She argued that the technique might work differently with groups of participants, who—despite their common interests in developing their business— might not share an understanding of how to optimize the business model:
"If (colleagues) were here, I think this would look quite differently. I don't think they see the world exactly like I do".

Discussion

In the following, we will discuss some aspects of deploying extreme sketches as input to business model thinking. The insights are based on the experiment and do as such not offer any solid conclusions about the utility of extreme sketches in this context. They can, however, point to areas where creative business owners need support and inspiration when discussing themes related to business models, and where more traditional business development tools are not sufficient. Such areas include the value of using emotional interpretations and provocations to push forward reflections on business concepts, make intangible business values legitimate, and help balance activities related to production of intellectual property with other activities, equally important, but perhaps less inspiring for creative workers.

The experiment with the jewellery designer suggests that extreme sketches could help address business issues in a way that a creative business worker would find inspiring and understandable. The experiment showed how the jewellery designer, whose business activities are almost solely motivated by the self-fulfilling processes of making art, was aided by extreme sketches to reflect in new ways about what intangible benefits her business offers. The fact that creative people have other reasons to work than earning money seem something of a challenge in terms of discussing creative business models with their owners. As opposed to money, intangible values such as fun and self-fulfilment are difficult to define precisely, and might seem too fuzzy to include in a traditional analysis of for example a company's value stream. Traditional business people and advisors might thus exclude such values all together, not understanding that these values in creative businesses are more important than money. To even this unbalance, extreme sketches might offer creative business owners a means to help reflect about and verbalize intangible business values.

The extreme sketches seemed to capture and make visible emotions that the jewellery designer voiced about business aspects such as canvass sales or getting input from users. Aiming to provoke, the extreme sketches put such emotions on the edge, which succeeded in making the jewellery designer think in new ways about how she might sell her art through a direct sales model, something which she initially rejected fiercely.

Based on this experiment, it is interesting to ask if extreme sketching can help creative business owners deal with the tension between creating intellectual property and managing other business activities such as cost analysis or logistics. In any business both types of activities are important, but in a creative business the latter is likely to receive less attention because, in the mind of a creative worker, it does not fit into the category of fun and inspiring activities. The experiment with the jewellery designer describes a business with huge tension between the production-related activities that motivate the owner and other equally important activities such as reaching customers or closing a sale. The use of extreme sketches suggests that perhaps sketching can help business owners address the unbalance between the two types of activities, for example, when the jewellery designer—provoked by a sketch—starts thinking out loud how a few commercial designs might finance her art projects, which profit-wise are bad business. In several examples, the jewellery designer is triggered into talking about business activities that she either does not like doing, like the sale of products, or which she finds will compromise her integrity as an artist, like co-creating jewellery with potential customers. Because the visual reference to, for example, co-design of jewellery, is physically and spatially present on the scroll, they seem to open a room for thinking and talking about business activities that the owner might otherwise ignore, and the use of humour or reversed situations, seemed highly effective in producing an emotional response with the business owner, either instantly, or when re-visiting a part of the documentation later on in the interview.

Conclusion

People working in the creative industry are different from those working in traditional profit- oriented businesses. For starters, they are not in it for the money. This underlines two things, first, the importance of developing business models that makes clear how a small creative business must propose other values to its workers than a monthly

salary. Second, how successful business models for creative companies should help balance activities that motivate the creative worker with those necessary for running a company. But before advancing so far, owners of creative businesses must start thinking about strategic business development. Unfortunately, many of them are unlikely to do so since they are unfamiliar with and uninterested in business concepts such as business models and value proposition.

Creative business owners might not respond well to traditional business modelling tools such as Osterwalder and Pigneur's business model canvas. This may be because such tools are based on traditional business concepts such as revenue stream and value proposition, and ignore concepts important in a creative business such as self-fulfilment and exploration. The results from this experiment suggest that extreme sketching can help creative business owners understand the mechanics of their businesses and their own motivations, help them see new possibilities, and prepare them for a traditional analysis and mapping of business model concepts. Consequently, this could be part of what Osterwalder and Pigneur (2009) calls business model prototyping. Further, extreme sketches may help creative business owners explore motivational values and help find a balance between "what is in it for me"— the values that motivate their running a company—and "what is in it for the customers"— the values that help pay the rent and finance the creative activities related to producing intellectual property.

The experiment discussed in this paper, suggests that extreme sketching can aid the generation of and talking about new business ideas, and that the physicality of the sketches make it easier for people to navigate in a discussion, refer to past events, and use those as inspiration to continue reflection. Further, the experiment suggests that extreme sketches can help explore some of the emotional barriers that creative workers might face when their personal work values clash with the realities of business, such as the need to make money to cover production costs. And this is perhaps the very first step towards engaging an artist in what—in terms completely unfamiliar to her—could be called strategic business modelling, so that she can continue producing the avant garde jewellery that she loves.

Acknowledgements
Thanks to Helen Clara Hemsley and Robb Mitchell for participating in and helping out with the experiment.

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Development of integrated future forecasting process based on mega-mind-micro context and user-participation

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Abstract
In the 21st century, the era of art•design-oriented creation, the effective forecast of the future design values are becoming important. The design forecasting method - the so-called 'Trend forecasting 1.0' is somewhat subjective, or totally analyses the fragmental environment on a current trend. The primary reason is that forecasting tends to rely on the authority of specific specialists without user-participation. In addition, that is because it synthetically can't have read the inter-context of macroscopic-microscopic on the signs of trend. Therefore, it is necessary to develop the forecasting method and process of 'Trend forecasting 2.0' which is considering the mutual(from macro to micro) context and the user-participation without fragmentary analysis and a one-sided forecasting depended on specialists.

Thus this research has the purpose to suggest 'The integrated forecasting process' including user participation. This process is composed of following three steps.

The first step is Mega-context (Mega trend) research; "Future Zodiac". Real innovation is in the context, and ability of reading context is designer's capability and driving force. Therefore, this research introduces the "Future Zodiac", which is the tool to forecast the future images by reading the stream of macroscopic fields (Technological, Ecological, Economic, and Political areas), and provides 12 future keywords by "Future Zodiac".

The second step is Mind-context (Lifestyle) research: "Future Minds". This step is about human lifestyle research that reads changing value context of historical lifestyles. And this research suggests 10 "future minds" which is the lifestyle related with future customer's behavior through analysing future core minds influenced by the environment of Future Zodiac.

The third stage is Micro-context (Design trend) & user-participation research: "urtrend.net". The urtrend.net is a future making system by imagining and creating about future issues through user-participation. This system can analysis design trends and find users' hidden needs. In this research, there are some ideas related future home life based on accumulated data and analysis from urtrend.net in last 1 year.

Finally, it proves the effectiveness of future forecasting system by suggesting 2020 future home life scenarios as a case of this integrated forecasting process.
KEYWORDS: future design, trend forecasting system, mega-trends, lifestyle, micro-trends, future scenario, user-participation

Introduction
1. Background; The limit of trend forecasting 1.0
In 21st century, the creative era, public desire level about new physical environment is rising, and the importance of design is magnified as the core of creative era. Therefore future design value's effective prediction is directly connected to success of product and industries, so design advanced countries, companies, and designers have made continuous efforts on research about design's future value and trend.

The exiting methods on forecasting the future product and design mostly have been depending on the designers' intuition. And they are focused on analysis about product/consumer or competitive market analysis or human recognition. These forecasting methods are mostly subjective, short-term and scrappy trend forecasting which is called 'Trend forecasting 1.0'. The reason of the limitations of 'Ttrend forecasting 1.0' is that most forecasting methods tend to depend on specific experts without user-participation. Also, trend forecasting 1.0 method could not suggest mutual (mega-micro) contexts synthetically about trend signs.

Therefore, in order to understanding a complicated phenomenon, and reading the future value more correctly, it is necessary to develop the new forecasting method and process as 'Trend forecasting 2.0' which is helpful to read the futures value through stereoscopic vision. The stereoscopic vision is the view point considered the integrative context and the participation of users without fragmentary or assertive prediction of specialists.

Thus this research have purpose to suggest 'The integrated forecasting process' through development of 3 tools, which are ⊠Mega-context (Mega trend) research tool; "Future Zodiac", ⊠Mind-context (Lifestyle) research tool; "Future Mind", ⊠Micro-context (Design trend) & user-participation research tool; "urtrend.net"

Actually this research was conducted for understanding the existing studies through the documentary research about future forecast, and developing future scenarios based on the integrated future forecasting methods as the alternative. This new method proved the effectiveness through the verification of a number of expert panels. Also it has been applying as collaborated projects with Samsun and Hyundai Motors in Korea for the development of a future design forecasting. However, on account of space considerations, this research set limits to the introduction of integrated future forecasting method/process and the

development of future scenarios based on this tool.

2. Research Structure; Trend forecasting 2.0 (Context & user-participation)

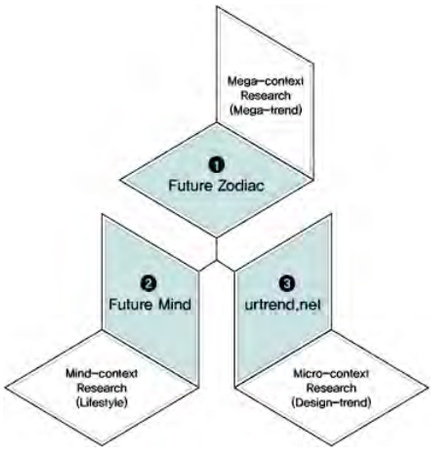

Figure 1 Integrated future forecasting structure

Bruce Mau said the real innovation starts from context. Innovation cannot exist without studying context, and the core of innovation is making change from inside with examination of the front and rear contexts. Therefore, innovation needs the thinking of integration with considering all parts, not a part, and it is the same in future forecasting. It is impossible to forecast accurately, because of lots of variables. Therefore it is necessary to consider various possibilities synthetically, and substitute various contexts exquisitely. It is needed to verify the most important context for the future, understand stream instructed directivity, and verify changing direction of concrete humans and materials.

Thus this research tried to find contextual flow for future forecasting by setting of three points of view - 'Mega-context (Mega trend)', 'Mind-context (Lifestyle)', 'Micro-context (Design trend)'. This research suggests 'Future Zodiac', 'Future Mind', 'urtrend.net' as a tool for understanding about context stream and propose the 'Integrated future forecasting process' which has organic relations with these 3 tools.

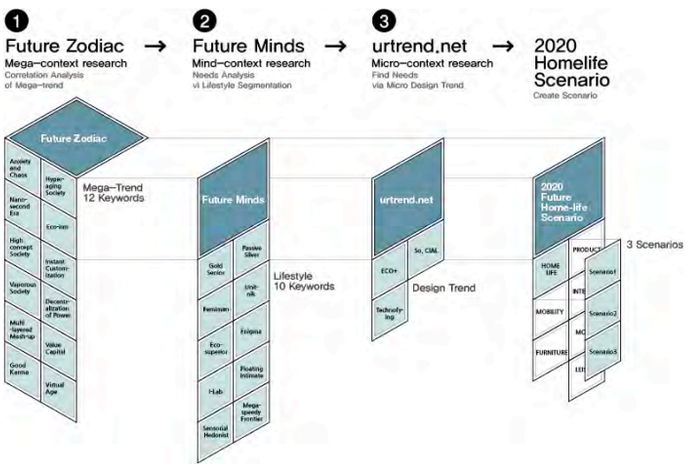

Figure 2 Integrated future forecasting process The first, in

the 'Mega context (Mega trend) research', it is possible to know the future environment which is influenced various mega contextual factors and correlations of those. In the second stage – 'Mind-context (Lifestyle) research', researcher can draw mind of human living in that future environment. And the third stage, Micro-context (Design trend) research, is helpful to discover design trend and users' hidden needs. Moreover, users can participate in this stage and they can suggest their ideas about the future. Finally, future scenario with result of these integrated context information will be follwed. In this research, <Homelife> is selected as the subject because it makes us to take attention to human living change in the future.
This scenario is not arguing about the specific way of future living. It has purposes in telling possible accidents and conflicts for arousing new inspirations. Through this, I am trying to say the new scenario is designer's creative area, not future fixed thing.

The integrated forecasting process

1. [Step 1] Mega-context (Mega trend) research; "Future Zodiac"
Future Zodiac thinks macroscopic environmental changes with comparing future to constellation. It analyses about current images that can be possible in the future with expressing in one star, and understands correlation of stars as a constellation. The future is uncertain thing as darkness, but the thinking of design is a connection work of creation of far future that seems not related with, and it aims discovering future new business field with tool of constellation metaphor. When focusing on each constellation and their relations, it is possible to find one changing effect on the others, and which one is more important element visually.

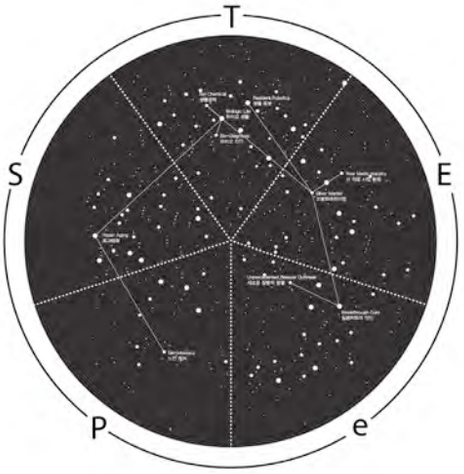

Figure 3 Future Zodiac structure

For that, the first, Future Zodiac is conducted for 1) categorizing future in five fields (society, technology, ecology, economy, and policy), and for analysing all future related materials with monitoring various forecasting books, reports, columns, newspaper sources, and design works. After that 2) organizing in a roadmap will be conducted.

Organized materials take step of 3) material integration and analysis through forecasting specialists, statistician, and famous writers in each fields. Finally, researcher 4) deducts 12 mega trends based on procured materials, and relocates with reflection of contents. And it is conducted to deduct current affairs about those 12 mega trends that influence on design.

Through this work, 12 mega trend keywords, which will influence in 2020 strongly, and explanation are further below.

Table 1 Mega-trend keywords by Future Zodiac

1	**Hyper-aging Society**
	Society will change into the hyper-aging society globally after Japan and Europe, and it will have wide effectiveness socially, economically, and politically. According to the change of population composition, prime and old aged people will be requested vigorous role, and it is expected to conflict surrounded them, also social problems like welfare, and increase of various new businesses.
2	**High concept Society**
	The problem is how to create new thing with controlling knowledge in hyper concept age after information age, and it means the ability of creating artistic and emotional beauty and ability of deriving emotional sympathy are important. So design and services need to have ability of problem solving by realize existing invisible meanings emotionally.
3	**Instant Customization**
	Technology can solve human's infinite desire immediately with rapid development of science and technology. Machines and computers may be able to replace creativity and emotional ability of human and they will provide and know immediately what people want. However, it could cause extreme personalization, lack of patience, and extreme selfishness, so we need continuous concern about consideration and respect to the others seriously.
4	**Decentralization of Power**
	The world's power is changed from violence and wealth to knowledge through smooth communication of knowledge and information in the world by the development of network. It causes dispersion of centralized political and economic powers, and influences on design, so design's social and public role will reinforce.
5	**Eco-ism**
	Serious conflicts including weather change and carbon problem, drain on the resources and resource securing war between countries, global warming, and environmental problems are realized. People now feel the sense of crisis about environmental problems, and it becomes an issue with global concern. However we need more efforts to realize green values, and design's intervention will expand necessarily.
6	**Anxiety and Chaos**
	The world is changing fast, and it became very hard to handle this fast speed. The war that is not disappearing in 21st century, political instability, and natural disaster increase anxiety, and repetitive economic crisis increase worries and chaos in the imperfect world.
7	**Vaporous Society**
	Vaporous society is the society with diverged and explosive gas that attributes over fluid's liquidity. Gas float freely, as lighter than bigger molecules, and has characteristic of uncatchable but it can easily mix in a space. This means image of society, which sometimes show certain move or incident spread to the world and strong agglutinability with explosive power, but sometimes it shows lethargy condition without any power.
8	**Nano-second Era**
	A 'nanosecond' indicates a metaphorical rather than physical speed; it expresses the idea that it is no longer possible for humans to catch up to, and fully experience, everyday life at the rate at which it moves today.
9	**Value Capital**
	An object will no longer be judged by its physical worth, but rather by the meaning it will bring to an individual. Not only that, but many values that were considered worthless and inapplicable will hold monetary worth in the future
10	**Virtual Age**
	People feel more senses of closeness with one's identity and relationship in the cyber world, and may understand more realistic in cyber world than physical space. Because of this, illusion of experience and social misfits may occur as social problems, and the ironic case of finding authenticity in society of collapsing border of truth and illusion.
11	**Multi-layered Mash-up**
	Multi-layered mash-up means stereoscopic phenomenon mash-up to make new things and maximize merits selectively from previous status over the flat structure cooperation or amalgamation. Creation of new things is dangerous and worrying, but it is the time of design become important role in the amalgamation of far field each other.
12	**Good Karma**
	People are trying to find solutions of modern various problems, including economic crisis, environmental crisis, and alienated phenomenon by rapid development of technology, from human mental goodness and harmony. We will look around to the surroundings actively and try to solve problem together, and designer's social participation and role will receive attention.

2. [Step 2] Mind-context (Lifestyle) research: "Future Minds"

Future Mind is the stage for suggestion of core mind, which is life style that influence on future customer's behavior through analysis of each tendencies. To investigate future life style, at first, future minds is conducted for analysing contextual relation between past macroscopic environment and typical consumers, and comprising historical mind stories in 1940 to 2020[Figure 4]. Based on those change of historical minds, the future people's tendency and need can be found. Also, the contextual relation of lifestyle could be revealed by analysis about the past significant accidents and human behavior, interests in 10 years period. Through this process, future minds deducted changing contexts about the core values, tendencies, and needs of the society.

Figure 4 1940~2020 Historical minds story.

[Figure 5] shows 10 future lifestyles which will be influenced by 2020 mega-trends, macroscopic environment. It is divided by ages and tendencies, vertical axis shows older age higher and low to younger, and right customers from center are progressive, on the other hand left side customers are conservative. 10 future minds can be divided into 3 groups, which are inner-directed customer with their own thinking, outward-looking customer with getting opinion from others, and integrated creative customer group with both of tendencies. Younger customers show inner-directed tendency and creativity more than outward looking tendency, and it is expected to show same result in 2020. The explanations about the type of upcoming 10 lifestyles in 2020 are as [Table 2].

Figure 5 Future Minds

Table 2 Lifestyle Keywords by Future Minds

1 Gold Senior Gold senior is prime and old aged people enjoying relaxed and cognitive life based on health and stable finance. They are open to changes and hope second golden age with active self-developing and continuous social participation.	
2 Passive Silver Passive silver have dependence tendency, because of loss of financial power and aged body, who are park-type silver or seniors who live alone. They deny changes and feel loneliness due to the severance with society. They need help from others and welfare policy.	
3 Floating Intimate Floating intimate want to find meaning of life and solve social unrest through formation of community and realization of public value. They have fun with communication in on and offline, and have floating meeting tendency with repetition of arbitrary or inevitable contest and reunion..	
4 Enigma Enigma tries to protect and hide physically from opening of privacy with expect or unexpected case in the exhibitionism society. They pursue real values, not appearance, and they believe protecting privacy is the real luxury life.	
5 Sensorial Hedonist Sybaritic life is the goal of life, and they pursue instantaneous and sensual fun and enjoyment. They like five sense satisfied new things and try to experience for enjoyment	
6 Eco Superior Eco superior miss mother nature and they want to live in the nature escape from the exhaustion of urban life. They believe, the luxurious life is coexistence with nature and enjoy destroyed and disappeared nature as it is.	
7 I-Lab I-Lab is the prosumer, who do not believe industrial product and repulsion about standardized trend, and they make their own products and services. They want intervention possible blank, and want to stick their own products to others. They are social friendly creators	
8 Femiman Femiman refuse traditional gender role through changing of social culture values, and pursue multiple life and sexuality. They pursue neutrality in the contradicting characterized both extreme world.	
9 Unit-nik Unit-nik is called nowherians, who enjoys single, free life. They think the real house is where their mind live and they invest time and money for themselves actively.	
10 Mega-speedy Frontier Mega-speedy frontier is the digital native generation using high-tech as their body, because they grow with IT and digital from their birth. They respond fast and immediately, and enjoy creative activities in both reality and virtual world..	

3. [Step 3] Micro-context (design trend) & user-participation research; “urtrend.net”
Urtrend.net is the micro design trend forecasting system which pays attention to user making and leading trend. Through the web site, designers and users create effective designs together in a place, which is future making system with collective creativity.

Urtrend.net system 1) collects future issues and deducts future topic with monitoring of collected data. 2) The deducted topics are shared in the web, and take various imagination and materialization steps with users’ participation. 3) After that, the System finds their inherent emotional characteristic from users’ opinions and ideas about topics, 4) and share that results with form of newsletter, regular report, exhibition, and workshop.

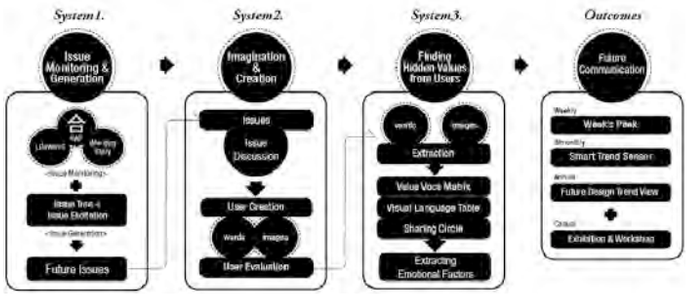

Figure 6 Structure of urtrend.net

Urtrend.net operates based on the web site, and has 3 big menus, which are ‘Report’, ‘Talk’, and ‘People’. The ‘Report’ menu is a space for vivid trend uploading by trend casters and expert columnists as a main source of making future topics. The ‘Talk’ menu is a space for users to ask and participate in the topics from Report, which is monitored issues, and users can write a comment or share with uploading pictures on the topics in Talk menu. ‘People’ menu is helping user’s connection in the website, and users can check oneself, friend, and acquaintance’s activities easily with basic SNS function.

Figure 7 urtrend.net webpage

Urtrend.net’s comments from Talk menu are used as important data to analyse and find their hidden needs. From Jan, 1st. 2011 to Dec, 31st. 2011, total 500 notes and 92 columns were updated and 17 talks were operated based on that. As a result, we can find underlying psychology, which are “Anxiety” and “Ideality” based on the 3 themes <Eco+>, < So,CIAL>, and <Technofying>.

Especially, looking into the result of users’ idea/thinking related on future home life, seniors interpreted home as ‘a place for enjoying second life’, and we got the imagined idea for future home life, which are ‘all in one medical-care service with health check+workout+treatment’, ‘place without stairs and slippery floors’, ‘the place with history of life and it raise one’s dignity’. Meanwhile, home is ‘the place for family communication and own resting area’ to families with communal living. And following ideas – for example, several ideas are relived, such as, ‘coexistence of open space for family and independence space’, and ‘the space with efficient circulation and enough storage’. The meaning of home for Singles is ‘the space for my own free life, which enjoys their single life’. They have noticeable ideas, which is ‘the healing space of mental stability and comfort’, and ‘the space with through security and soundproof’. And they want life with ‘enjoying single’s free life, but they do not want isolation or breaking self-management and life balance’.

3. Case study; Creating Scenario “2020 Future Homelife”

This research developed future scenario cases through ‘Integrated future forecasting process’ that constructed with ⊠Future Zodiac as the Mega-context(Mega trend) research tool, ⊠Future Minds as the Mind-context(Lifestyle) research tool, and ⊠urtrend.net as the Micro-context(Design trend) & user-participation research tool.

The theme of future scenario is '2020 future homelife'. The first, it needs to analyse mega-trend's(environment) opportunity and threat, which is highly related to home life(Step1). And main character (target persona) which is fitted into the environment should be comprised(Step2). Based on step2, it is comprised 7 living activities (communication, entertainment, cure, cooking, cleaning, work, and education) in future living environment, and researcher deducted as ideas of future living design for elaboration through matrix analysis. This is based on collected contents from ideas about user's opinions related on home life at urtrend.net (Step3). Finally, we produced scenario with contents from collected ideas and visualize as illustrations.

1. [Step 1: Future Zodiac] Mega-context analysis (Environment)
Among the Future Zodiac's 12 mega-trend keywords, the 6 keywords which have high relation with home life in 2020 are selected. And it is time to organize future home life design's implications according to these environmental changes. Those 6 keywords are hyper-aging society, increase of anxious and chaos, green society, common good, immediate individualism, and hi-concept society. And researcher analysis various images of the future in 2020 under 6 keywords for use basic data to make scenario.

Figure 8 Environment keywords for 2020 Future scenario

2. [Step 2: Future Minds] Mind-context analysis (Lifestyle/ Persona)
This step is conducted to comprise specific persona through analysis about context relationship with selected mega-trend keywords in Step1 and 10 lifestyle types in Future Minds. First, 'senior' character was selected as an upcoming hyper-aging society, and 'unit nik' which is protagonist character living emotionally in the technology geometrically developed society was selected as a second characteristics. Finally, large family members who aim common good in the future were decided as the characters of scenario.

- 'Gold senior' who wants to have second life with family form, represents social change of aging, low fertility, and late marriage.

- 'Unit-nik' who enjoy single life as a protagonist in future society with institutionalized immediate individualism.

- Type of future small family with pursue personal life and aim common good at the same time, it has family members like 'Gold senior', 'I-Lab', 'Eco-Superior', Mega-speedly Frontier' in communal living.

Figure 9 Lifestyle keywords for 2020 Future scenario

3. [Step 3: urtrend.net] Micro-context analysis (Future design idea)
This stage suggested more concrete future home design solution through deducted incite about future home life and abundant idea by user's participation from urtrend.net. For example, this step derived specific ideas to be come true, which is 'coexisting spaces of individuals and open communication space for family' that is deducted from urtrend.net web site for drawing established future family. This is a process of getting answers about what future users want, and stage of getting inspiration, possible to know future preferring goods, and it could be an images of the future that helps to understand human's underlying psychology about how environment change in the future.

Figure 10 Future Homelife needs & ideas
[Figure 10] shows about analysis of senior, single, and family's needs through the stages. The keywords set as nature and "relaxation in the daily life", "my own space that specialized to me", "both separately and together".

4. [Creating Future Scenario] "2020 Future Homelife"
The collected contents from referred steps are made to scenario with stories, and visualizes as illustrations. Illustration is edited to video with subtitles and background music through the scenario's stream, and the 3 home life scenarios are generated in the same method.

In this research, the first scenario which draws the image of life in the living area in hyper-aging age is introduced. The [Figure 11] shows view of the first scenario.

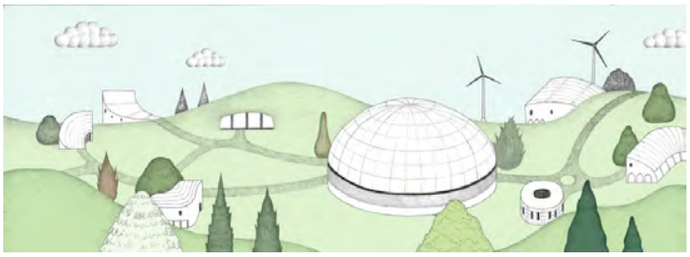

Figure 11 2020 Future homelife scenario 1

[Figure 11] shows 'S town' which is the multi-family house area with perfect security and ideal to senior generation, missing incident of designer K as a background story. This scenario draws future image with ideas like self-sufficient city based on artificial park and energy production facility, high-technology in the senior's life everywhere, active senior's social participation, and city combined with nature.

Figure 12 Illustration of 2020 Future homelife scenario

For example, [Figure 12] is senario 1's illustration based on deducted idea from above. Natural medium multi-use space on the above picture comprises with a dome and describes communal living possible to organic cultivation and bartering. Also Hyper surface furniture on the above, it describe systematic form like [Figure 12] and empty space transform to be a body fitted furnitures.

Conclusion

We make future, not forecasting. This means future can be drawn as what we think, besides it has intention of drawing future direction with suggestion and creation before accepting future passively. Our imaginations are making our future to live. Therefore design participates to make future from long time ago, and it solves many problems with futuristic vision to forecast and create future by design power.

Forecasting future is impossible with simple thinking and it is obvious to study uncertain future very multilaterally. We need new vision of future in the age of social network, geometric technology development, and make harmony with human and nature. In this wide variable age, design is not only designer's work. Future design should make together with designers, experts of various fields, users, and context that move the world.

Thus this research suggested 'The integrated forecasting process' through developing of 3 tools, which are 1. Mega-context (Mega trend) research tool; "Future Zodiac", 2. Mind-context (Lifestyle) research tool; "Future Mind", 3. Micro-context (Design trend) & user-participation research tool; "urtrend.net. This research has innovative meaning in that it is possible to forecast future design values by convergence various stream and context from macroscopic trend to microscopic materials and human's needs.

'The integrated forecasting process' will be applied as collaborated projects with Samsung Electronics and Hyundai Motors in Korea for the development of a future design. So, it is expected for this process to be used more actively to suggest future design value in the rapidly changing society.

Environment (via Future Zodiac)	Hyper-aging society/ increase of anxiety and chaos/ green society
Persona/Lifestyle (via Future Mind)	• GOLD SENIOR Digital senior, who want second golden age with active self-development and constant social participation.
Future design idea (via urtrend.net)	• The residence environment fitted to old age Ergonomically designed living furniture or goods, individually adjusted chair or desk, autonomic temperature and humidity adjustable environment will be applied related to elder's change in body such as declining of vision and hearing or sensitive to temperature. • Increase of interest for safe food It shows minimization of food mileage through development of personal organic regional farm products that are safe from herbicide and insecticide with growth of personal crop cultivation. • Multi-use space by nature Smart dome in the S town takes a part of natural food producing and exchange, medical and cure facility, beauty treatment for elders, nature friendly garden as a central culture function of multi-family housing area. • Vitalization of underground living space Because of saturation of ground space, the concern about using underground space has increased. It constructs pleasant environment underground space with stable temperature and delivers sunlight with optical fiber. Therefore, underground road is vitalized, and the movement of governmental movement to develop submarine tunnel and underground city is increased. • Hyper surface furniture The furniture designed to use multiple uses. This scenario suggesting furniture is little unrealistic in 2020, but the changing interior idea to match on the situation will be realized in the future. The demand of individual characterized changing furniture is exist even now such as office, living room, kids, elders, and female.

Table 3 "2020 Future Homelife"' Scenario 1

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PROFESSION

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Brand: approaches and contextualization of the concept

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Abstract
This communication intends to present a view and context of the brand concept, sustained in doctorate in Design developed by the author.

Every year, and in an ever more mediatic way, new brands have been designed (or redesigned), and there is no area of activity that escape this phenomenon, by necessity, fascination, fashion or any other reason, institutions - in which we may include countries and regions - corporations, companies or even individuals, these exercises are targeted ever more multidisciplinary.

Until the eighties marketing and advertising disciplines were, almost exclusively, holders, relegating to a plan of almost insignificance towards all other areas involved; from the nineties to the present day these disciplines and specialties ranging from Public Relations or Communication Design at the Branding, have been gaining visibility through areas such as the naming or typography, among others, offering them all the greatest richness and robustness in order to transform it, in most cases, into the strongest asset owned by companies.

Presented in this paper are questions about the shape as well as the product and its communication. Also approached, is the verbal construction of the brand and the importance and influence that the designer can have in its construction, giving emphasizing important factors to consider in its development.

Although the emphasis is placed on the area of design, it is intended to offer a contribution to the conceptual understanding of the heterogeneity as well as clarifying the concept across all areas associated with it.

KEYWORDS: brand, design, holistic view, transdisciplinary, conceptual

Introduction: an approach to the concept of brand
When we look at the moon at night, observe the trace left by an airplane or the scratches that the cat made on the couch at home, we tend to believe that the lunar craters, the line in the sky or tears in the fabric, are marks, as ephemeral they may be. The same can thought about the Lascaux paintings or the promises of eternal love written on a tree by a teenager in love. However, only the latter two examples, demonstrated by the intention to communicate something - engraving – to someone, may be regarded as true marks. The others, although they visually mark the space or object and can be read and interpreted, are not sustained by an intention or an argument: they simply exist.

It seems therefore consensual, who sees the mark from the point of view of its form, it is "the signal that is made by the act of marking, the marking of a matrix or a trace on surface" (Costa, 2004, p. 21), centering on the intent of the author (and the ability of the reader to interpret the signal) and the difference between brand and a not brand. In this sense the question raised in 1710 by George Berkeley "If a tree falls in a forest and no one is around to hear it, does it make a sound?" (Wikipedia, if a tree falls in a forest, 2012). If we transpose this enigma for brands, it is shown that these depend on its recognition as such, or they risk never acquiring such a status, remaining in a silent limbo forever.

However, this concept of mark left by Costa is too wide raging making it therefore necessary to define the field to the concept of trademark or registered mark (ie, with the intent to identify and communicate an institution, activity, product or service). It is also an artificial construction - is understood as being unnatural - a reputation among target audiences and social communities with the intent of stimulating them and bringing out feelings of belonging.

Since the mid-nineteenth century, with the emergence the first trademarks conceptually similar to the current brands, which has been witnessing an increasing prevalence and role of brands in relation to goods or services that they project. Products or services have long ceased to be sold on its own, and are now under the control of the brands that sustain and certify them. As stated by Juan Tejada, "commerce is not done much around products but more around brands" (2006, p.193). As an example we have brands like Seat and Skoda that had a poor reputation in the segments in which they competed when they were independent brands, became, after integration in the Volkswagen group, in major assets, repositioning itself by enhancing its international reputation. Thus, these brands have established themselves in the markets, boosting sales of associated products, that are not just cars, but also the status associated with them and that those who buy them believe that are going to transmit.

As Frutiger says, brands are "signatures of any type of goods" (1981, p.254) that are used by those who hold them to identify, differentiate and gain notoriety. More than a logo, visual identity or an object (Neumeier, 2008, p.1-2), brand is something (product, service or institution) with which people connect through a strong sense of identity and belonging, represented by a name, because "that has no name there" (Costa, 2008 05 08), and a sign, that is, a signal capable of representing something other than itself. Joan Costa calls it "a sensible sign, both verbal and visual sign" (2004, p.28). The designer must take a leading role in building this brand and synthesized all the values, feelings, relationships and identity in a drawing, which will play a key role towards success.

Factors of the brand: from design to naming

Drawing and components

It is clear, from what has been previously stated, the drawing of a brand is, along with its name, usually one of the first and most important contacts we made with it. As the popular saying goes "you never get a second chance to make a good first impression" which, in a well-designed brand is half way towards creating a relationship of empathy and often loyalty with the consumer. If the consumer is positively impressed, he will identify the brand when confronted with it or other competitors. As Mollerup says "we have blind faith in everything we see" (1987, p.10), from which one can infer that, whether or not consistent with the image they transmit, the brand influence and constrain the behavior those who interact with them. Design allows companies to take advantage of this by inducing the consumer behaviors that allow a positive qualitative assessment, thanks to the information it transmits and the image it communicates.

But this is not exclusive for visual or auditory signs. As expressed by Mollerup, "the image of a company is not only determined by its visual aspect. Just as a tree is known by its fruits, a company is recognized for his actions, especially those which are visible" (1987, p.10)

The negative image that a company can carry, if undeserved, might be the result of a poorly planned communication strategy. In this case, the design should be in charge of the redesign of the visual elements of the company to correct them and thus to ensure greater effectiveness of visual communication. The opposite case, where a false image (deceptively perfect), is equally unsustainable, and there should be intervention in product design so that, at least, it reflects what visual communication company says it is.

The construction of the visual identity

Per Mollerup, referring to the evolution of brands says that "as societies tend to be more complicated, the brand seems to become more simple" (1997, p.198).

However, contrary to what one would expect, this trend is not based on matters of mere taste but in need of a quick and easy identification. Thus the importance of understanding how to build the visual universe of a brand that is founded from two major areas: image and identity, subdivided into branding and corporate identity.

Regarding to the image, it plays a key role because of the importance that the human being gives the visual sense, which is emphasized by Matthew Healey stating that "although we think and communicate verbally, we are guided in our environment, particularly by the vision" (2009, p.96). Per Mollerup goes deeper in this notion emphasizing the connections that the thought constructs to allow associations, saying that "what we see with our eyes, we draw broad conclusions and with the power of thought, we see things that do not exist but they were inspired by things that we saw" (1987, p.10). From what humans see, it is possible to take multiple associations, where the experience with the brand does not escape this cognitive phenomenon: feelings of safety, comfort, well-being, confidence, can generate a belief in the promises that they make. As Francisco Providência so well illustrates in the Management Design Manual, "when we have a malfunction leaving a Fiat dealership, we think that is a consequence of its low cost but if it happened with a Mercedes, we will ask about what we could have done wrong..." (2008, p.40).

The written signs are required to enhance the visual form of brand image, contributing to a more efficient and effective communication, although the image of a brand is not only determined by what it communicates and promises: it will be also what makes effectively to fulfill the promise it announces.

Visual identity – the anatomy of the brand

When examined superficially, a brand can appear no more than the addition of a few elements: a little bit of color, one or two typefaces and sometimes a strong slogan, everything associated with a logotype or symbol. However, when examined in depth, you realize that it is a complex signal that goes far beyond its simple visual expression. There is not only a symbol and a name, despite it being that, and not all the symbols and/or names are trademarks. Jon Miller and David Muir make this clear with the example they present – "Calvin Klein is clearly the name of a brand, but what about Josef Stalin? Surely many people have heard of Stalin - but it would difficulty result as a brand name for perfumes or underwear" (2009, p.23). As such Healey adds, "A logo is not a brand, a name is not a brand, nor it is a product design, packaging design, visual identity, an advertising music or a shopping experience" (2009, p. 70). Luis Sucupira complemented these two perspectives stating, "a brand is actually a sign of visual appeal and psychological attributes" (2007, 01 11).

Hence the needs to trace anatomy, ie, define the form and structure of the constituent elements of the brand, to better understand them. As a matter of organizing and understanding the brand can be studied taking into account two large blocks that support it:

- The form (either visual or not). This is the signature of the mark, ie that which is approved by the consumer as that identifies the brand. Includes issues such as name, the brand's graphic design, typography, color, graphic style, all issues related to sense of sight, and can be extended to factors related to other senses.

- The product and the conformation of their communication. This includes the issues and areas of expertise like Product Design, Packaging, Advertising, Public Relations, Marketing and interpersonal communication in customer support.

The shape
Name Even before existence, a brand needs a name. It will go through the brand that people will recognize it, says Costa, “the brands must move among and between people. How can something circulate without a name? What cannot be named cannot exist. The brand is, itself an exchange value and interchangeable” (2004, p.19). Hence the name is so important and it is upon this that the brand name will create its reputation.

As already noted, a brand is a symbol composed of a visual (non-verbal) and a verbal component. If the visual component is easily given the importance it really has, the verbal component is sometimes underestimated or regarded as a minor issue. However, when a brand is created, long before an image, drawing, icon or logotype is associated to a name. Under normal conditions, no one asks a designer (or another specialist from the area) to create a name for their brand from a pre-set design. However the opposite – that reveals the swiftness with which the naming is sometimes tackled – is a reality that the designer is faced with it frequently.

The name even before being written sounded in the minds of those who need it. The first unnamed brand is yet to be created. And this is for a simple reason: no matter how much the design will serve to strengthen the presence and brand recognition among consumers when someone wants a brand, he asks for it by his name. As Joan Costa certifies, “what you can not name, does not exist” (2004, p.19). Further, the name is the brand element that most reputed, and the only element that is not dispensable.

When creating a brand, it is essential that the definition of the name is one of the first steps being taken, not being seen as little more than a mere step of the strategic plan. This will be the sonorous form of the brand and should transmit, in line with the image, its values principles and positioning.

Graphic brand is the element that will spearhead a visual brand identity, which assumes to “ensure the fast identification of ownership and the company’s products” (Mollerup, 1987, p.36). This represents the brand and, over time, will become synonymous of the company/product that uses it.

The graphical representation of the brand can take various denominations, as we shall see that can be more or less correct. From the real term logotype to the common sense logotype; symbol, logo or logomarca (a Brazilian neologism that join logo and mark), everything serves, as a name for this graphic piece, essential for their effective memorization.

The most common term to refer to this graphic element is logotype, though, often, it doesn’t effectively deal with a logotype. According to the Houaiss Dictionary (2009), the word has its etymological origin at the junction of the Greek word logos (language, word) and type (lead character, letter, to be reproduced by printing). Obviously, there are brands whose graphical representation is a real logotype, such as MoveOn or TAP (Portuguese brands of footwear and aviation, respectively), but there are others in which the absence of letters prevents the use of this term. Cases such as Nike or Shell, which abandoned the use of the name written and appealed to represent them, just their visual symbol in the form of pictograms.

There are also the terms imagotype and logo, although any one of them are inaccurate or even wrong.

The last one -– logo –, although it does not appear in any dictionary reference to the meaning given to it by many designers, seems to be a general term to call found the graphics of the brand, as Healey explains, stating that “one logo can take any form. Some logos are constituted only by one word. Others are a symbol without words. Many involve a combination of both. Many logos have multiple variants of shape or color” (2009, p.90).

Typography The choice of one or more types that will monitor the graphic representation of the brand as well as the applications associated does always influence how the brand is assimilated. As Healey proclaims, “type is the clothes that involves the words, giving them character, emphasis and a subtle but distinct personality that the reader often feels unconsciously” (2009, p.96).

However, it is necessary to distinguish the function that typography has in graphic representation of the brand from the one that will serve as background material for use in communication. In fact, through typography one can enhance the distinctiveness of the visual identity that does not mean surrender of the function that it should play, that is, to communicate the message, distinguishing, if necessary, the types used in the logo those used, for example, in the body of text of a letter, in order to enhance the message without giving rise to distraction. Despite the strength and recognition of the public concerning the types used in the logos of Coca-Cola and Greenpeace, it’s difficult to conceive a text with two or three pages clear and readable using the same types.

Color In some brands, color is at least as important as the drawing itself. As an example, brands such as Orange, Yellow Pages or even Greenpeace adopted the color name. There is also the case of colors that were so closely linked to brands that are now identified as color of the company. This is the case of green, associated to Benetton, or red to Ferrari. These are just two of the most prominent examples.

In choosing color, you should also regard to technical concerns of its reproduction: some colors are not capable of being reproduced in four-color or display color, such as silver or golden color, and may his conversion to CMYK and RGB create ambiguities that the direct conversion does not create.

Graphic style The use of pictures, illustrations and other graphic motifs color bars, fillets, dash, etc.., is used nowadays not only in the advertising media but on all means of communication that a brand has and needs. If the visual elements are well selected and applied in various media, it can have a very positive impact on the client, which will be impressed. A Portuguese proverb says “by the breeze will see who is the coach”, meaning that the customer is influenced by the surrounding environment which is given to the product, creating expectations about the experience it may provide.

The graphic style, not just due to media such as billboards, mupis, or newspapers but also to campaigns for television and web pages, is using more and more, and so obviously, a part of photography. According to Healey, the “realistic images are the most powerful element used in brand communication – stronger perhaps than the combination of name, logo, colors and font” (2009, p.98). All of this is because “when we talk about creating a brand identity, we talk about image creation” (ibid).

Is noteworthy that the content and the graphic style should never left to reflect the brand (much as the realism of the image can be manipulated or not): a large and luxurious car should not look short and stocky just like a small utility should not look a limousine.

Connected factors to other senses than the vision Besides the name, the graphic representation, typography, color and graphic style, which represent the basic elements of the brand, there are others that goes beyond its design, associating it with a sound, smell, taste or touch A radio station, for example, may have a signature that will be not only a draw: a certain jingle and his variations, can identify so efficiently the radio station we tuned in the car as a building of ten floors covered with his brand on it .

But the other senses should not be neglected, as Martin Lindstrom on Brand Sense says “consumers have a strongly reaction to the brands that can involve all the senses” (apud Healey, 2009, p.104). Healey said even if “studies show something that bakers and pastry chefs have always known: a strong and pleasant smell attracts people and encourages them to buy” (2009, p.104). This applies to all senses capable of being stimulated.

The stimulus may also be varied between almost imperceptible, as often happens in the field of flavors, and the most relevant experience for the consumer, depending on a variety of factors such as products, brands, public culture, among others. Certainly, when properly designed, beyond the valuation, the multisensorial experience creates a strong brand loyalty in the user.

Product and its communication
Product design If the first block focuses on the questions of the shape, the second is set in the brand proposal. It begins with the reason of its existence: what she has to offer?

Support the growth of a strong brand in a policy-based product design, ie a balance between aesthetic and functional component of the objects, has been an upward trend since “the designer of modernist furniture and vehicles” (Healey, 2009, p. 84). Brands like Braun, Ikea, Bang & Olufsen, Apple or Alfa Romeo, although working for different audiences and segments, are examples. Their products are inseparable from the high level of incorporation of design throughout the development process, with results in terms of reputation and added value.

However, to make that possible, the brands had to understand what the customer could expect from them, their cultural patterns, consumption habits, etc., in order to reduce the risk of no return investment which, in some of cases, could lead to serious financial problems to the his owners. As an example we present two cases from Apple: Newton and the iPad. While the market, despite his innovative nature, rejected the first – only near 200000 pieces selling in five years –, the second, launched in 2010, sold in just 80 days 3 million units. Despite the innovation patent on both devices, the numbers seem to prove that, rather than the existence of a need, who draws the line that separates success from failure is the opening of the consumers to buy a new gadget, arising from the creation of expectation that managed to impose their strong brand. This and that public confidence deposit in products and in the identity of the brand.

Package The package assumes importance that is expressed by Heatley when he says “the packaging design is often the real reason for the existence of a brand” (2009, p.106). The multi-function that it plays, are shortcuts on the way to success: first and foremost, is a container that should protect and maintain the product, just as it was conceived until it reaches the consumer, often including in himself instructions for use and information security. It should serve as a communication interface in order to, first, communicate the brand identity and, secondly, to attract the attention of the consumer retail space, allows the positioning of the product within a particular category or price and may even serve for reuse purposes other than the original, allowing the extension of the contact with the brand.

The role of the designer is, for all this, of capital importance in the development of package and, as Mollerup emphasizes “be careful to respond to the prevailing conventions of a particular market, (...) make the packaging to visual identity of the rest of the enterprise and be part of the family of products (...) and distinguish the product both to similar products from other companies as against the other products in the same company” (1987, p.88).

Advertising, Public relations and Marketing These three areas expertise related to the brand are grouped together because, although they share complementary visions, orient themselves for the same purpose: to promote the product, service, company or brand.

Advertising, communication strategy of persuasiveness has the purpose to promote a commercial product or company accelerating the economic production-consumption circuit. Appears in various media (classic and new) and in various media ranging from printed material – such as magazines and newspapers, billboards, direct mail or even in the case of itinerant advertising, t-shirts, hats or buttons with the brand printed on it – the audiovisual, radio, television, cinema and Internet. According to Costa & Moles "confirmed its omnipresence as a symbol of the culture of industrial societies" (1999, p.13). Their contribution to the brand identity is also crucial, despite the ephemeral nature of which it contains.

Healey says "If advertising is the visible face of a brand, then the craft known throughout the world as Public Relations is the invisible" (2009, p.120). So the PR function is to "maintain mutual understanding between a public or private institution and groups of people that are, directly or indirectly connected" (Wikipedia, Public Relations, 2012). The strategy that follow is very different from that followed by advertising, not promoting the brand in a visible manner, preferring to agitate public opinion in order to make way for advertising messages that will be launching. Al Ries goes further by stating, "advertising does not build brands, PR do it. Advertising is just to keep brands that have already been created by the RP" (Ries, 2003, p.19). An example is the Apple and the launch of new products (some of them truthful new brands like the family of "i" – iMac, iTunes, iPod, iPhone or iPad).

Marketing is, according to the Houaiss Dictionary, a "business strategy for optimizing profits through the adjustment of production and supply of goods or services to the needs and preferences of consumers" (2009), participating in the process from conception to the after purchase of a product. Their market knowledge is the great asset that we offer to businesses, serving up the predictability of behavior of that market to strategize. Francisco Providência says that "serves the marketing organizations producing thought of the needs and ambitions of the market, segmenting it into different structures of interest and ability to purchase (...)(taking) the party for the all, reducing the whole society to consumers" (Providência, 2008, p.114). Due to a view sometimes a bit reductionist, tends to see only the opportunity as "sales opportunities" (ibid), when it should first have a closer view of the design, which sees them as "opportunities for change" (ibid).

Customer service For the final leave one of the main company-customer interfaces. This can range from simple one-stop contact until the after-sales service or the telephone help lines, and the importance of such services increases as consumers become more demanding, often assuming a role as important or more to the success of the Advertising and PR.

If until some fifteen or twenty years ago there were few links between the company and the client, hoping that nothing went wrong with the product or service, the consumer now has a lot to choose whether the relationship with the brand is not the expectable. Healey says "failure to provide satisfactory support to the client (...) is the main reason for losing customers to the brands that cost them much to gain" (2009, p.126). For satisfactory support means more than providing answers to routine problems, the need to make an effort for the customer to be really satisfied. Healey explains it well in stating that "provide a level of customer service that exceeds expectations is the best way to create buzz and make people to speak of a brand" (ibid, p.129), leading them believed and became loyal, to them.

If people believe and became faithful will, as in any cult, engage with the brand, so enthusiastic about it, and because of this, the enthusiasm replicate, infecting as if it were a virus, quickly, unstoppable and affecting a large number of individuals. If, however, they can "irritate a devotee, a terrorist-brand will get in his hands" (Atkin, 2008, p.166). Create strong links as happens between people, involves constantly feed the relationship in order to keep it alive and well. If not, it is quite possible that the discouragement leads to distrust and, worse, to an impetuous end, with broad repercussions on the reputation of the most exposed value: the brand.

Conclusion

If it appears that the big brands are already mapped out, there are small companies or companies with some expression but limited to their countries or regions, eager to grow and gain international status.

The study developed by the author in his PhD was based on the analysis at four strong in the Portuguese market but with low expression on an international level, in order to understand how to enhance the communicative power of each of them. Among the many conclusions reached, it was highlighted that allowed us to observe that the strength of the brand could be maximized for internationalization, based on strong character identity that each of them had, whether it would join an effort to improve and adapt their communication with the new markets. Three of them, TAP, GALP and Vista Alegre are already doing that, while the fourth, Delta Cafés, is preparing to extend its offer to the market after it has been implemented in Spanish. The four Case Study have in common a reflection on the importance of image as a vehicle for transmission of their DNA, concluding that this is strengthened as it is given greater importance to its design, correcting what is less well and enforced what is correct.

Any brand originating in developing countries know that, whatever their size, the possibility of expanding markets is increasing, and should develop an integrated program that will include not only communication but also the product and the institution. The temptation is huge to develop an image similar to the competition in markets in which it proposes to impose, abdicating of their own identity, can be great, but will not create differentiation neither authenticity.

It appears therefore the relevance of this study: the thought of design or redesign a mark the author suggests that it take into consideration the factors set out as a means to ascend to a higher (and ideally high) degree of notoriety.

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Comparative Analysis Of Country Brands To Tourism Promotion In Latin America

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Abstract
The touristic potential of South American countries can be verified by the increase on the number of visitors on the region in the last decade. To develop their touristic programs, some countries of this region have created branding touristic programs with the objective to communicate to their consumer market their specific values. This present study interpretive-descritive developed in the Significação da Marca, Informação e Comunicação Organizacional (SIGMO/UFSC/CNPq) group, about the branding and design aspects related to communication and tourism in South American countries has the objective to present studies about the development of these brands, besides general concepts related to the subject. These brands are used as communicative facilitators in the strategic local campaigns. Branding strategies developed for the South American countries are used as strategic factors because it synthesizes values and caractheristics of a region or because it changes the way natives and visitors see a determined area.

Keywords: countries branding, South America tourism, design and tourism

Introduction
The use of visual identities to portray the caractheristics of a region, and consequently position it strategically, it is a design, marketing, publicity and branding Action since the 90's decade (Kotler, Gertner, Rein e Haider, 2006).

For the The FutureBrand 2011-2012 Country Brand Index (2012), a country brand manual developed by the Future Brand office, the aspects that differentiate the countries brands are their system values, quality of life, good for business, heritage and culture and tourism. Formerly, countries brand were associated to travel and tourism only. Now, the objective is to make that the people who live in the region live better, and the brands which understand the needs of its inhabitants and tourists will have a better position at the ranking. These brands have to create conections that estimulate people to visit, negotiate, study and live in these countries.

Design management, in this pretext, must manage the mediation among the products that have to be created with the countries brands and the deffinition, promesse's applications and the meanings of a brand, inside the branding strategies, turn to producers and consumers (Healey, 2009).

Concepts
"Drawing" and "designate" are two meanings related to the word Design. The first one searches the execution, the action, and it is connected to the art. The second one searches the organization, the concept, the project, and it is connected to the science. Therefore, design acting field, based on the word meaning, it is understood as something wide, which can be studied in operational, tactical or strategic ways. Its way of pratical application, in any of that fields, depends on the analysis, on the development and on the visual execution (Mozota, 2003). For this article, both ways of thinking Design are valids, and depend of the context.

The visual identity is what makes it singular and differentiate one object (Péon, 2003). The visual signature is the central element of this system (figure 1) (Garcia et al., 2011). Branding targe exemplifies these concepts.

Formed by a set of symbols which are perceived, the visual identity it is the brands symbolic expression and it is made, besides the graphic visual symbols, attributes and values expressed in other material elements, behaviors and attitudes. City, places and regions brands are composed by its same dynamics (Merino & Martins, 2011).

Figure 1, Brand target
Source: Garcia et al. (2011) based on Teixeira (2011)

Signs are projected to identify and distinguish products and services (Niemeyer, 2002). The American Marketing Association (2012) define brand as "a name, term, draw, symbol or anything which identifies products of an organization or service, distinct from the others". The attributes and values belonging to the brands transmitted message are necessary for the emotional and sensational comprehension that it transmits.

Considering that branding is philosophy and brand is culture, it is needed ways of expression to spread it as a coherent and interpretable message. It is designs function,

when in the creation of graphic brands aiming the city marketing, to develop forms which will be understood as belonging to the cultural and philosophical speech of a region.
Branding is a question of communication, because are brands public expressions, official or casual, that will be in contact with the public and will transmit the brands sensations. The official communication, the one possible to be administered by the managers, starts with the visual identity, center of design strategic management.

Besides the concepts relevant to the design field, there is the tourism one. Barroso & Mota (2010) quote Ignarra (1999:23) when he quotes that "tourism", according to the World Tourism Organization (WTO), is defined as "the displacement from the place of residence for a period longer than 24 hours and less than 60 days motivated by non-economical reasons". Therefore, the tourism marketing function, agreeing with the marketing and tourism concepts, according to the same author, when this quotes Trigueiro (1999) consists in identify the market segments, promote the touristic products development and provide potential informations about the offered products.

Metodology
The developed research, of exploratory character, was developed through bibliographical articles researches, in theses, dissertations and books, national and international, with the objective to elaborate and descrive concepts South American countries brands. To this, The FutureBrand 2011-2012 Country Brand Index (2012) parameters were used, the manual and country brand developed by the FutureBrand office.

This interpretative-descritive study developed in study group of Significação da Marca, Informação e Comunicação Organizacional (SIGMO/UFSC/CNPq), presents branding aspects related to the South American countries brands, toward the tourism, and it has the objective to show studies about the development of this brands, besides general ideas related to the theme.

The working metodology from the The FutureBrand 2011-2012 Country Brand Index (2012) was based in three information sources: (1) quantitative research, done between 18th and 27th of July in 2011 with 3500 frequent business, tourism and opinion makers travelers from 14 countries, (2) opinions and perceptions of 102 tourism experts from 16 different cities, united in workshops between August 19th and September 7th of 2011 and (3) 400 ideas developed in collaborative tasks between experts and other interested, between August 30th and September 16th of 2011.

The objective of the The FutureBrand 2011-2012 Country Brand Index (2012) is to develop a world ranking of countries brands, the criterias are based on the value system, quality of life, good for business, heritage and culture tourism. With the objective to develop the ranking, each criteria was divided in different variables. The value system criteria was divided in political freedom, tolerance, stable legal environment, freedom of speech and environmental friendliness variables. The quality of life criteria was divided in most like to live in, education system, healthcare system, standard of living, safety and job opportunities. The good for business criteria was divided in skilled workforce, advanced technology, investment climate and regulatory environment. The heritage and cultural criteria was divided in natural beauty, history, art and culture and authenticity. The tourism criteria was divided in value for money, resort and lodging options, attractions and food. For this article purposes, will be considered the studies of the top 4 countries in the South American countries ranking, which will be developed in separate topics, and a brief study about the other countries in the region.

Is not the objective of this article to develop a study about the The FutureBrand 2011-2012 Country Brand Index (2012), just use it as parameter for the studies about the South American countries.

Tourism and branding in South America
Branding is a philosophy that involves a posture and creates a culture, which expresses itself through symbols, like myths, ideas and values. The symbolic in the culture is a process of power. Inside the concept of graphic brands applied to the tourism, the philosophy and the culture are expressed primarily through the graphic symbol, of its institutional colors and its font. The visual communication forms generated from it must organize and systemize the brand, being this care exercised trhough brand management, which has to establish a strategic plan and develop actions that aim the spreading of these visual informations.

Therefore, as there is no control about the unofficial brand communication, the management process turns to its philosophy, for the management and official process have a bigger possibility of control, whether is based on the initial stimulus and the visual communication, contact point with clients, can be more effective.

The tangible aspects closer to emotions are the feelings and the sensations, which are responsibleby the perception of the brand stimulus. Thus, to work the cognitive side of humans, it is necessary to conventionalize the objects, and so establish logic, creating a code that is susceptible of reasoning. This can be controlled through codes and logics.

One of the functions of the professional designer is to Project forms based in concepts that join value to a local. In city branding, this professional has to search a way to communicate these experiences (Mozota et al. 2003) Tourist insatisfaction, in relation to a visited place, is spread 4 times more than his satisfaction. When a tourist finds problems, almost half of them does not return to the destiny (Bautzer, 2010)

The advantages of knowing, visiting or staying in a place must be perceived by the visitor or the native trhough the

sensations that the region transmits. Its transmission is function is function made by the means of communication and, as part of it, by design, strategic tool, in the case of cities, of marketing places, which has 4 functions: develop a positioning and a strong and attractive image, establish encouragement for present and further users of goods and services, provide products and local services in an efficiente way and promote the values and the image of a place in a way that is possible for the users to know its differential advantages (Kotler, 2006).

For the Country Brand Index (2012), while Europeand countries questionate their local values, Latin American countries, including South America, are strengthtening their sense of regional identity. It is a good region for tourism, but still with safety and economical stability issues. The Brazilian touristic brand is the most valuable in South America, followed by Argentina, Chile and Peru.

Branding South America

South America, despite of the growing of its brands evidenced by the Country Brand Index 2011-2012, still presents problems in the world tourism market. The culture, and even the names, thought as brands, are not perceived easily in the tourism market. There are cases like Paraguai, which is confused by Europeans, Asians and North-Americans with Uruguai. The brand recognization of this country is even more difficult by the fact that it does not have national symbol attractive to the tourism market (Wojciechowski, 2008). Differently from these two examples, the touristic brand Brazil, first place in the general ranking among the South American countries, gain ten positions since the last publicized ranking by the FutureBrand office.

Publishing Brazil as a touristic destination, both inside and outside markets, is one of the objectives of the Brazilian graphic brand (picture 2) (Ministry of Tourism 2010a). The development of the visual identity is part of the Aquarela Plan – International Tourism Marketing of Brazil, which was divided in five segments: Sun and beach, ecotourism, sports, culture, business and events, and culture and major events. The brand drawing, according to the initial project, should represent visually the green of the vegetation, the yellow of the sun, the light and the beaches, the blue from the sky and waters, the red and orange from the traditional celebrations and the white from the religious manifests and from the peace (Barroso & Mota, 2010).

Figure 2, Brazilian graphic brand
Source: Ministry of Tourism (2012b)

The Brazilian touristic brand presents as characteristics signs modernity, competence, culture meetings, racial mixture, luminosity, brightness and exuberance (Ministry of Tourism, 2010b). Beside the colors and tones extracted from the national flag (blue, green, yellow and white), presents hot colors as red and orange. As concept, presents the theme “Sensational” based em emotional expression that the visitors talk about Brazil when they are questioned about the country. The plan in debate invested 18 millions of dollars through visual campaigns in fairs, to business men, tourism operators and also directly to the final consumer, in 18 countries, in 2005 (Hoffmann, 2005).

The Argentinian touristic brand (figure 3), second place in the CountryBrand Index 2011-2012 ranking relative to South America, was developed from a proposal in a public contest, made in the region. The strategic objective of the brand was to graphically transmit the different expressions and personality of the country, maximizing positive attributes and reducing the negatives, always agreeing the Argentinian values. Beside that, should not be developed to be changed in short term, which means, must be sustainable in its time (Jujuy, 2006). The Argentinian country brand searches to place in the world market, increasing the exportations, the tourism growthing and spreading the cultural, traditional, science and sports values, among others. The governmental department responsible by the implementation and brand strategy development is the INPROTUR (Instituto de Promoción Turística Nacional (Marca Pais Argentina, 2010).

Figure 3: Argentinian touristic graphic brand
source: Portal Argentina (2010)

Chile is present in the Country Brand Index 2011-2012 as the third best placed country brand in the South American ranking. To search the informations about the graphic draw of the touristic Chilean brand, was made a search of 0,16 seconds by the term "tourism in Chile" in the website www.google.cl, which present a result of 25.600.000 websites. It were taken as a reference the five top results of the first page (www.turismochile.cl, www.sernatur.cl, www.turismochile.travel, www.turismochile.com e www.chile.travel), and it was verified that the country does not present one single and unique organized brand, since it website presents a different visual graphical organization, which results in a difficult comprehension of the message to be transmitted by the country. The brand found in the website www.chile.travel (figure 4) was considered the official one for study purposes of this article, for pointing itself as the "official touristic website from Chile".

Figure 4: Touristical graphic brand from the site www.chile.travel
source: Logo Chile (2012)

The Chilean national flag is composed by a five-pointed star, which means the unitarism of the Chilean Republic, and by the colors red, white and blue, ordered in horizontal lines (Sua pesquisa, 2011). The graphic brand considered in this article for study purposes, presents 6 five-pointed stars ordered around the word "Chile". The colors are close to the ones in the national flag, but are not the same. Because there is not an organized touristic graphic brand in a strategic plan of promotion, there is a lack of organization in the communication of the country values, especially to visitors.

Peru, fourth place in the Country Brand Index 2011-2012 among the South American countries, presents its touristic graphic brand from Peru (figure 5), developed by Argentinian franchise of the Future Brand office. It searches, through the present spiral, the creation of a graphic symbol based on the signs found in archaeological sites in the country. The brand was released in New Yord, in an event called Peru Day (Fishel, 2011). The strategic question related to its released involves their target audience. To Kotler, Gertner, Rein and Haider (2006), the positioning of the country is still not defined between the focus on the quantity of tourists or in the amount of spending by them. It is searched that the tourist increases the time that they spend in the local. Despite that, the country improved 3 places in their ranking position, if compared to the last one.

Figure 5: Peru touristic graphic brand
source: Luiz (2012)

South American countries are in a process of identity solidification. All four countries presented above present improvement in their positions in the Country Brand Index 2011-2012, if compared to the last ranking. Besides the problem of the solidification of an image that agrees with its identity e based on the points presented in the manual (the value system, quality of life, good for business, heritage and culture tourism criterias), some countries presented images that disagree with what is expected from the brand. For Colombia, the main reason of creating a graphic brand focused in tourism and to create later a visual identity (figure 6) was to modify the image, perceived by the tourists, of a country marked by the drug deal and the violence. The objective then was to create an image common to the general characteristics of Latin America countries, as a way to promote, beyond tourism, investments and exportations (Lightle, 2011)

figure 6: Colombia touristic graphic brand
source: Marquillería Urbana (2011)

Conclusion

Design can be used to develop ways to express brand values, as a tool to show comunicational strategies. A space can be thought and formated to agregate value, integrated to the design strategies and to the symbolical meanings of the graphical brand. The graphic designer is the professional who has to create ways to communicate the experiences of the brand, by the logotype. (Mozota, 2003).

When someone will work with cultural studies in the communication market, will work with the symbols of a certain area, and these symbols have to be expressed by the brand. The symbolical is part of the culture as a process of control of the meaning, and has to be organized by brand management. The brand management has to create strategies and develop actions to communicate the brand concepts.

The control of the forms, means and emotions that envolve a product and its brand are necessary (Ortigoza, 1997). Although is not tottaly possible, because the same are made by a tangible part (the one that is manageable) and by an intangible, strategies must be developed in a way that these values will agree with the brand communication, and so be perceived as a part constituent e characteristic of a system.

Branding is, in its essence, communication. The most important things to the public are the public expressions of the brand, either casuals or official. The official communication, who its easier to be managed, starts with the visual identity, the visual and expressive part of the brand. It has to be relevant, accessible and integrated to the other communication pieces as a whole.

For the South American countries, the Country Brand Index 2011-2012 can be used as a evaluation tool of its brands, aiming to improve their qualifications, characteristics and identities perceived in a brand, inside the Brand Target.

The development of a touristic brand must be based on the regional identity and so represent its values, as a way to promote a place or a region. Communicational campaigns created for the promotion of tourism must agree with the country identity, and the values in it. The graphical brand must reflect these charecteristics points in a visual and conceptual way, because the brand is the main point of the visual communication of a country.

Acknowledgments

The organizers of this article thank to the Federal University of Santa Catarina, specially the courses of Design and Business administration, the undergraduation teaching scholarship, to the group Significação da Marca, Informação e Comunicação Organizacional (SIGMO/UFSC/CNPq), to the Post-design program – Masters in Design and Graphic Expression – of the Federal University of Santa Catarina and also too the others involved in the development and financing this article.

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Designing as understanding: Sketching strategies for innovation for SME's

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Abstract
When working with design in professional practice as an innovation driver, we must build from the diversity of design and combine innovation efforts from various disciplinary stances within design and get inspiration for new approaches from kindred disciplinary fields. This paper presents a mapping of design in terms of 'design thinking' and 'design doing'. 'Design thinking' is presented as a spectrum of logic and aesthetic thinking, and 'design doing' is similarly juxtaposed as acting upon either internal/material or contextual/external matters. The mapping is developed to understand the expanding concept of design, and this paper reports how the hypotheses embedded in the mapping has been tested in a praxis-research project where design researchers worked with artists, developers, consultants to increase innovation in a group of small and medium sized enterprises in Denmark. This project was undertaken in order to test creative design methods as tools for developing strategies, business models and product experiences. Based on our experiences this paper states the importance of a wide understanding of design as a driver of innovation, particularly with regards to different modes of thinking and understandings of the world as pliable.

KEYWORDS: scale-agility, method-agility, perception-agility, strategic design, business innovation, design as innovation driver.

Introduction
As design moves into new area of expertise, we need to revisit the core of design as well as our understanding of the breadth and width of design. The idea of design is almost so vague or widespread that trying to limit and define it is close to impossible or even unacceptable to many design practitioners. However, while the design discipline is expanding into neighbouring areas and learning new techniques, methods, practices and theories, understanding the possible landscape of approaches could be bring a clarity that would help designers and developers remain agile and nimble in their processes, and still maintain a core value and identity as creative designers.

The Futorium project was one such project that explored the edge of the design field by going into creative clinch with other related but different approaches to developing new business opportunities in order to learn more about design. Formally named "Strategic Experience Design in Small and Medium Sized Enterprises" the project was aimed at taking a dozen SME's and renew their approach to the market or their own organisation using the concept of experience economy (Pine and Gillmore, 1999). The project ran for a little over a year during 2010 and 2011, and of the 24 applicants, 12 companies started, and 8 companies stayed in the project despite the global economic recession. These 8 companies expanded and developed their businesses into new products, new markets, new approaches or organizational identities. The idea of the Futorium was to offer a greenhouse environment to the companies and let them try several different approaches to innovation. Concurrently, the project setup offered the project partners an opportunity to learn from each other's approaches and develop combinations of their expert perspectives. This setup allowed us as designers to look into the cards of business development consultants, organisational developers and a range of artists.

The partners of the project were:

- Designers from the Aarhus School of Architecture, specializing in strategis and experience design.

- Business consultants form the public organization Business Region Aarhus, which helps companies start and grow through various transition phases.

- Artists from the Culture Night organization, which is a network of professional artists spanning from music and painting to filmmaking and street artists.

- Habit-breakers from the company VovemoD, who specializes in changing the role of habits in relation to innovation culture in companies and organizations.

The companies that were part of the project for the full length were:

- KR Hospitaludstyr, makers of hospital beds – both individually customised and large scale production beds for the care-sector.

- Decoplant, a gardeners company who takes care of office plants and other green environments like wall-mounted herbs for industrial kitchens and restaurants, but during the project also develop a whole new type of flower and plants market aimed at the consumer.

- TankeKompagniet, hwo helps shops improve their sales through service innovation, mystery shopping, display designs etc.

- Hou Master Butchers, who sells meat products to consumers, but was eager to participate in the gourmet and customisation trends taking place in the food-market.

- Innovisio, makers of visual web applications like e-magazine solutions and dynamic web pages

- Borum Industries, makers of road marking equipment selling globally and leading the market with high quality, efficient products.

- International Furniture, a price-efficient reseller of Danish and European design furniture to mainly the office market in Denmark.

- Havets Hus (Ocean House), which is a communication centre for teaching and exhibitions about marine life in Denmark. Havets Hus is a development project funded currently by European union regional funds towards creating a physical science museum.

The group of companies involved in the project was very diverse. This was primarily in order to have a group of companies which were not in direct competition with each other, but also to have a wide range of experiences and market requirements to tackle in the project and to get inspiration from – a type of cross-pollination ideal.

During the project each company elaborated on strategic goals, missions and visions. A number of workshops offered ways to explore, expand and decide on next steps towards achieving those goals. The workshops introduced new perspective from e.g. visiting a theatre and seeing 'Wating for Godot' while analysing the experience-related means that the theatre uses to enhance expectations, build loyalty, tension and engagement, or following and working with street-artists or jazz musician to understand their reasons to create and influence their audiences. The central four workshops focused on using various techniques and methods to develop parts of each company's stated strategic goal through designerly brainstorming, role-playing, exploration through music, and building of prototypes whether in video or physical mock-ups.

It is beyond the scope of this paper to detailed report on the results developed for each company and with each workshop. The focus of the following reflection will instead focus on the crossover of disciplinary stances and exchange of perspectives and techniques. Juxtaposed between the aesthetic artists and logic accountant consultants, we designers could learn from both ends of a spectrum which is integral to most design work, and definitely central when design develops into what is called 'design thinking'.

Design thinking has been propagated at an increasing intense way in the last few years, lately most prominently by the design company IDEO and CEO Tim Brown (2009). This notion of design thinking is interesting from the point of view of the designer, as this holds the potential of bringing how designers think and work closer to management and strategic, long-term decisions. As any other professional practice, design is interested in this potential rise in the organizational structures of influence, especially if it is based on a profound appreciation of how designers think, how situations are approached, how problems are solved and decisions are made.

We have previously (Ludvigsen, 2010) proposed a tentative map of how designers think and act - integrating some of the basic distinctions in design: an intrinsic empathic attitude to other people and an appreciation of objective material qualities, as well as a continuous oscillation between strict, linear logic and hermeneutic, integral or aesthetic reasoning. This mapping is presented here in order to show the possible interfaces between design, art and business management. The importance of such a mapping is of course related to the idea embedded in the concept of 'design thinking', as a way of arguing that designer should be allowed into strategic decision making in companies, and that the creative, aesthetic approach of designer has a high value as an alternative perspective in this context. (Brown, 2009; VanPatter, 2007)

Design thinking offers a holistic approach to strategic development that holds an interesting promise to management, and as such presents us with new and important research challenges on the border between design and management. (Boland et al., 2008; Buchanan, 2008)

Logic and Aesthetic

In order to appreciate the full extend of design one should not limit it by choosing a particular strand or type of design as the "right" or "true" kind of design. There has always been – and will always be – a disagreement between designers who are more artistically or technically oriented, those who sees the commercial market as the prime ground for design or those who are preoccupied with culture in general. Or, similarly, with the cavernously deep differences between the designers working with graphics and objects of beauty and those working with systems in IT or organizations. There is no reasonable way to give precedence to one of these types of design. Far more interesting knowledge would come from trying to put them into an integrated overview of the differences in design and the thinking behind it.

The first and most evident axis in this mapping is that of design thinking: the cultural backdrop of the designer and the fundamental way the designer decides to know about things. At one end of this axis we have the traditional engineer and technically oriented designer. Here the design process is more or less a linear model with a range of logic steps and logic decisions following each other. The design process is completely transparent and the tools are well documented and described. At the other end we have what I am calling the aesthetic thinking. This connotes a more artistic and inspired approach to the design process where the very personal process of the designer is defining the outcome. This resembles Fällmans (2003) definitions of engineering design as opposed to black-box design with the third account of pragmatic design positioned in between them combining the subjective approach of the artist-designer with the transparency and collaborative approach of the engineer-designer. However, the two extreme positions are interesting for spanning an axis onto which design thinking can be rated as to how much they rely on aesthetic or logic thinking in their process approach.

The notion of aesthetic actually has its roots some centu-

ries back when Alexander Baumgarten coined the term in a doctoral thesis in 1732 (Kjørup 1999). He was intrigued by the incredible success of the new scientific discoveries of this time and the promise of scientific and logic thinking to uncover and know everything. However, as described by Kjørup, he saw a problem in the fact that logic knowledge could come to one right answer to anything, yet there still existed things in the world of man that could not be described that simple or be known in such unambiguous way. Baumgarten coined aesthetics to mean sensitive knowing as opposed to abstract, scientific, logic knowing. We do not have only one path of discovery or enlightenment where concepts are divided into the lower obscure and the higher complete concepts in a logic or philosophic clarity. We have also this other path from the obscure concept toward clarity in a sensitive discovery. So where the traditional continuum takes the obscure concept towards a higher degree of intensive clarity and completeness, Baumgarten introduces the notion of extensive clarity. "Whereas the increasing intensive clarity can be said to go in depth, and thus become increasingly abstract, the extensive clarity can be said to go in horizontal width and thus become more and more concrete" (Kjørup, 1999, p.51.)

Several other terms have been constructed to emphasize this difference in thinking e.g. (Martin 2007), yet I find it fruitful to look at the core of the two camps to find the cause of the divergence. The difference between logic thinking and aesthetic thinking is not a distinction between 'new' and 'old' school design thinking. It is a cultural distinction that has been around for years. The logic approach is the most accepted in the world of business as certainty and scientific rigor is often at the backbone of organizations and the decisions that are made in the organization. The logic approach is verifiable, based on facts and figures, whereas the aesthetic approach is fundamentally relying of experience and trust. Logic thinking relies on inductive and deductive processes, whereas aesthetic thinking allows abductive reasoning (Pierce, 1958) into the process. Both types of thinking are probably needed in most organizations – especially in the process of creating a strategic path - and definitely in any design process. The professional designer will work through the spectrum from rigorous analysis and data gathering to gut-feeling explorations and subjective sketching processes. Combined I suggest that logic and aesthetic represent a spectrum or axis of design thinking usable for understanding design in relation to other innovation-oriented disciplines.

Material and Context

But design thinking is only half of design. The other component is design doing. Here I have resorted to two general areas of innovative action that designers use to discover the new. As Tim Brown (2009) emphasizes, along side many others in the ongoing debate on design thinking, the core of a good design process is understanding the people and the context you are designing for on one hand, and on the other have a deep understanding of the material you are designing with – a mastery of some concrete form with which you can test ideas and make prototypes.

This axis of design doing is essentially a spectrum of 'asking' whereas the previous was an axis of 'knowing'. Designers work with problems and challenges in open ways with a dedicated focus on the future – on possible solutions of a design question. Because design is about future solutions it is a process of discovery and the designer starts from a position of 'not-knowing' working their way towards a possible answer. In this process of design doing the designer asks either the context what is desirable, feasible, viable or asks the 'material' what is likewise desirable in terms of expression of form or graphics, feasible in terms of material quality and production methods, viable in terms of cost etc.

'Material' can be defined as whatever carries the design, or what the designer can manipulate in order to communicate with a user or recipient of the design. Most often the designer works on a model of the actual product and is prototyping his way through several possible solutions in order to find the best. A designer is often very specialized in one or two particular types of materials and is able to manipulate this material to convey different messages, 'tones' and experiences. This material aspect of design is often overlooked when talking about the emergent practice of strategic design and design thinking since it is difficult to define a distinct material of management or organization. However, I believe firstly that there is such a thing as a material of high-level strategic design, namely the material of the organization itself; people, processes, values and visions, and, secondly, that the craftsmanship aspect of mastery is an important component of the execution of design thinking.

'Context' at the other end of this spectrum is where we have seen a plethora of new initiatives and design work being done in recent years, e.g. (Buchenau et al., 2000). Understanding and involving users and stakeholder in every level of the design process is a fundamental way of securing a desirable outcome of the developmental work. Starting from the roots in participatory design in the 80's and early 90's (Ehn et al., 1992) in system development and with a widespread incorporation of ethnographic methods into the design process, contextual knowledge must play an important role in any design process. Today many designers are specializing in this type of design work and intentionally dissolving the difference between creator and receiver of design and using contextual skills to move design work into new domains and types of design projects.

Both types of 'asking' activities should be seen in the context of the basic design process, where every attempt at a solution is tried and tested up against the knowledge of the present. In trying to work out a 'wicked problem' (Rittel, 1973) the designer needs to jump the hermeneutical gap (Hallnäs and Redström, 2006) into future states with whatever means of representation the communication of this state requires, and then work his way back from the future

towards the present. This sketching approach is meant to keep ideas in a liquid state (Boland et al., 2008) with several possible solutions juxtapositioned and influencing each other towards a resolution. With these four directions of the design mapping in place the overall diagram looks somewhat like this (Figure 1).

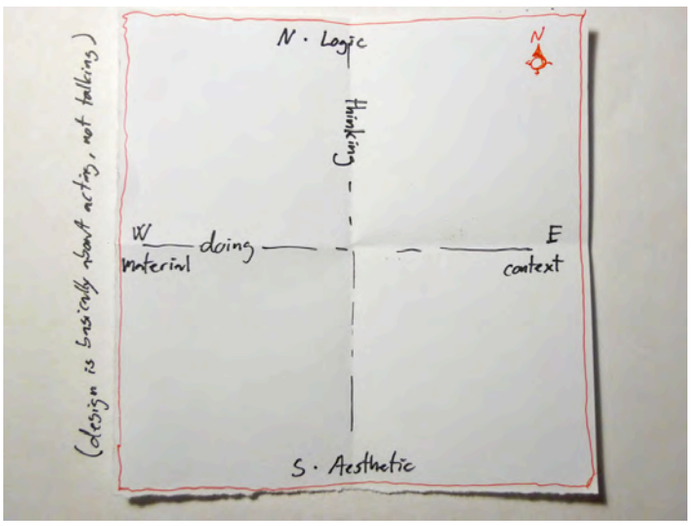

Figure 1, The interrelated four design positions

With these four epistemological directions, the subjective artist, the strict engineer, the user-oriented innovator and the material explorer, we can also describe the four quadrants they outline: circumscribed by context and logic, linear thinking we have the designer focusing on market in the upper right quadrant. Below the designer works with an aesthetic perspective and focusing on the context of use and reception of the design the designers focus is on the meaning and cultural implications of the design. Between the material and logic perspectives, upper left, the designer is focusing on form in terms of production, whereas the designer with a material focus and a fundamentally aesthetic approach looks at the artefact and form in terms of expression as an artistic challenge.

However, there is still one obvious range of distinction within design that should be included in order to capture the new edge of design and the ”interface” towards management - namely the type of design being done. For this purpose I will use Buchanan’s concept of placements (Buchanan, 1995). In recent years design as afield has expanded to mix with strategy, politics, art and experience economy. Richard Buchanan explains this new edge of design in relation to the classic genres of design; graphic and product design in terms of placements (ibid.). Placements are those design spaces or solution spaces in which a designer finds his solution to a given design problem. The classic placements are graphic design and product design. Here designers’ understanding of the solution is that it will take the form of a graphic symbol or other 2-dimensional form, or a 3-dimensional thing that can be handled and experienced in a physical form. Over the course of the last couple of decades we have seen the emergence of interaction design as the third placement where the design can take the form of an interactive product, service or experience. Buchanan further suggests a fourth placement of system. Compared to the third placement where the recipient of the design can directly experience an action, a system cannot. System design entails designing the overall system of thought that shapes how we act in relation to the designed. The designed system can only be experienced in its application of a particular instance of a service, object or graphic representation – never in its entirety – just as with organizations and strategies.

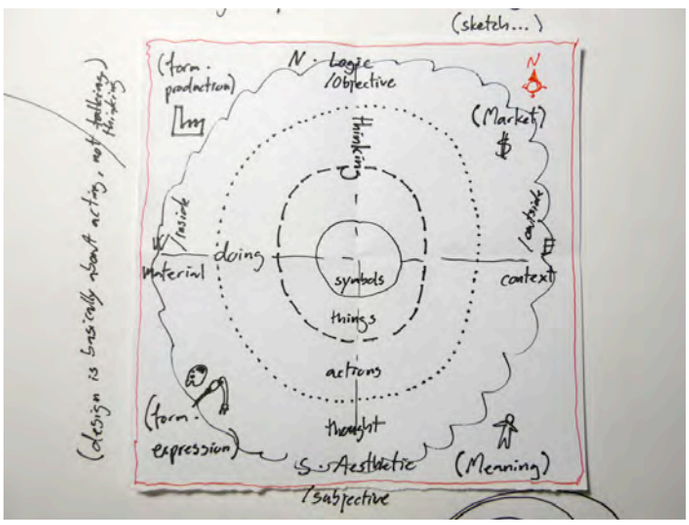

Figure 2: The map of design thinking and doing

The notion of placements is interesting as it gives us – again – distinctions of types of design. These can be related to each other, not just, as suggested by Buchanan, as equal areas of invention, but I propose it as a nested hierarchy going from graphic to product to interaction to system. This is NOT a hierarchy of importance or complexity delineating interaction design as better or more difficult than graphic design. Each of the placements has its own complexities and areas of expertise into which one can be a master. The nested hierarchy as shown in the final sketch of the design map (Figure 2) tries to depict a distinction of the level of wickedness (Rittel, 1973). Each of the four placements or orders of design (Buchanan, 2001) implies an increase in the abstraction in representation: the graphic designer works almost directly with what will be reproduced, the product designer will work with a model in physical form or in sketches, the interaction designer will use scenarios and video to show development over time and the system designer will resort to diagrams showing interrelated parts and infrastructures influencing each other at high level. The map is meant to be the whole picture of design. This is of course impossible to achieve, but mapmaking sheds light on the interrelation of the dominating areas or ‘camps’ of design and helps us to understand the different aspects of design thinking and appreciate these qualities in relation to the overall picture. The problem in the design field is that each quadrant and each placement are cultures in themselves each with an appreciative system of their own (Schön, 1983).

Walking in the map

The partnering companies each started the project with their own more-or-less clear goal of what they wanted to develop. As we then moved towards a greater depth of understanding the importance and potential of experience economic strategies, these goals were reframed, explored and developed. Below, three instances of innovative leaps taken from the project is described and related to the design map. These are situations where either design thinking and doing was an integral part of creating the leap, or where another approach to innovation pushed the designers' process and understanding of how to reach innovative results.

As TankeKompagniet started to develop their ideas for engaging their customers in a more equal and collaborative fashion, they looked towards how designers prototype their way to insight into how that sort of services should be developed. After initially having designed a game that could enhance collaboration, the interaction during the game still needed to be tested. Prototyping the game in detail and running a series of experience prototypes (Buchanau & Suri, 2000), with the primary focus of getting details right, the discussion around the game lead to a strengthening and reformulation of the company approach to its customers all together. The collaborative relationship between Tankekompagniet and their customers was enhanced and positioned as a unique selling-point.

This example is probably one of the clearest examples of how the material sketching and prototyping of practicing designers inspired our collaborating partners form business consultancies to look upon their own processes and reframe or enhance them by including various types of experience prototyping techniques. This speciality of designers is particularly usable for other disciplines – as it strengthens or curtails abstract discussions of potential impact.

Another situation, where the designers' normal practice was put a little more under pressure was during the workshop that introduced freeform jazz improvisation. Discussing and trying various forms of ungoverned improvisation in music, the participating managers from the companies, started discovering the bodily embedded capacities of handling problems through concert and concentration – through collaboration and based on experience. This type of tacit work is something that most designers take for granted as part of the design process, but often designers are wary of communicating this, as the professionalism of the designer might then come into question. This artistic aspect of the design process is often hidden from the customers out of fear that it could water down the professionalism and devalue the design service, whereas in the case of the musician, the artistic component is enhanced and developed. For the musician it is the depth into which he or she is able to dive that characterizes the value of the work, since the felt dimension of the art comes thusly clearer to the audience. Whether this poses a challenge or opportunity to design is not clear. One could state that, with a map such as the one provided above, designers could more easily explain to outsiders when they chose one approach over another and that they are not losing sight of the entirety of the design challenge ahead, even though they are currently taking an aesthetic approach to a given problem. This part of the design process is often kept as a back-stage activity (Goffman, 1963). Confidence in an adaptive, creative and productive agility could open up the design process, as indeed we are seeing examples of within the field of co-design and participatory design (Sanders and Stappers, 2008).

The last example from the innovation process that unfolded interesting insights into the new areas the design field is expanding into, was from a workshop that was conducted around the organizations understanding of their relationships to their customers. Here it became clear that design theory and possibly also practice lacks well-established definitions of who people are utilised as a design materials in a change process. Our colleagues from the business consultancies and 'habit-breaking' industry had a much better understanding of how to understand, motivate and guide the organisations and managers to new and better approaches to their customers through questioning strategy, tactics and identity. This part of the strategic approach to design is of course explored in the emerging field of strategic design, but it seems to be tremendous step for designers, as we often prefer to talk about a given third object, whether material or immaterial. Leadership skills are not part of most design schools curriculum, although in many extended design project that is an important key to reaching valuable results. In the Futorium our colleagues showed a model of a wedding-cake and used it to illustrate how a customer relationship was built step-by-step towards a shared goal of meeting at the top in a partnership. But it is the responsibility of the courting part to help and sustain the progression of the relationship and make it desirable for the courted. Thus the relationship itself became a design material, as is often seen in the outermost ring of the design map, where the systems-level design is characterized by immaterial design processes working at a very high level of complexity.

Conclusion

This paper reported on the Futorium project and the design map as a way to explore approaches to the new design field of strategic design in relation to experience design. The map is proposed as a form of mapping of the many different approaches that the design field takes in practical design work. Currently the design filed is divided into many different sub-fields that are more interested in how they are different from each other than how they can be said to be similar. There is a valuable lesson to be learned from integrating these different positions, and if we argue that the mapping offers a 'complete' view of the design field, our experiences from the Futorium project suggests that important aspects of working as a designer in the emerging boundary regions of design become the 'meta-competences' for navigating the design landscape depicted in the map.

The Futorium project was setup to test how this mapping related to designers working with accompanies in developing strategic innovations and see how the designers' approaches differed form those of consultants form other disciplines. The model was not tested to the extreme, but rather exemplified through the project. In future instances of similar projects it would be interesting to test some of the assumptions behind the mapping deeper and develop the categories themselves.

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Implementation of Green Marketing Strategy towards Women Consumer and Its Opportunities for Companies

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Abstract
Marketing strategies are long-termed manners of action in order to reach determined aims of a business firm. One of these manners of action is green marketing strategy. Green marketing is the group of marketing activities including production, quotation, distribution and publicity of nature-friendly emblements and comprising of post-usage of the product, which not only fulfill the needs and demands of the consumers but also make the business firm reach its targets. Sticking of the perceptions, that the business firm gains public acceptance and it is embraced by the consumers, helps the concepts of societal marketing and green marketing flourish. Using green marketing approach especially in the marketing strategies where woman are intended population, producing goods and services in this direction, fulfilling the demands of the women who are sensitive to this issue provide them acquire substantial advantages against the rivals in competition which apply marketing approaches insensitive to the environment. Buying behavior of women consumer can be analyzed according to their social values, significant alterations affecting their lives, their synthesis-oriented features, significant components in their communication structure and their sensitivity to the environmental activities. In order to attract the attention of women consumer, firm speaks of the benefits of the goods or services to the human being and environment. Therefore, women's outlook on the firm changes, they buy more products of the firm and they remain loyal to the business firm. The business firms, which understand the case, have seen this as an opportunity and have assumed an attitude sensitive to the environment. While employing green marketing strategy, to fulfill the demands of women consumer will procure the trust for the business firms increase, purchasing rate rise and the firm acquire a reputation by enlarging its market share.

KEYWORDS: green marketing, women consumer, firms and opportunities

Introduction
Business firms can not only take in the markets in which they sell their goods and services as a whole but also they can divide them into parts according to a lot of facts and apply target market strategies to the market part of parts which they aim. In respect to this, gender, regarded as a classification criterion in the marketing literature, and accordingly women consumer are used as the classification criterion for many products and services, for that matter, women consumer are accepted as niche market for the business firms, which put forward some types of products. The business firms which choose women consumer as target market and work for them should have the knowledge about women in order to reach the success. The business firms effort of applying marketing strategies directed to women consumer have positive impacts on sale graphic and profit margin of product or service. That is why the fact that women take more parts in work life day by day raises the financial power of them. Buying behaviour of women consumer can be analyzed according to biological and emotional differences, social values, important elements in communication systems, sensitivity to the environmental activities. Here in this point, "green marketing" strategy step in marketing activities of business firms. In accordance with the information stated above, when the business firms are regarded as socio- economic entities, they cannot remain unresponsive towards the environmental conscience which shapes the behaviours of the consumer. The facts that non-renewable resources run short gradually and environmental pollution occurs after the production and consumption make especially women consumer more sensitive to the environment. This incident heads them towards buying the products in this way and choosing the firms which are interested in this issue implicitly or explicitly. This circumstance makes marketing managers face with the consumers more sensitive to the environmental problems. The firms, which take this issue in consideration, apply green marketing activities by striking an attitude in the direction of protection of natural resources and consumption of energy sensitive to the environment in this way, the business firms both meet the demands of consumers by fulfilling their economic functions and they obey the rules of morality in society, become sensitive to the issue by providing aid and support for socio-cultural environment.

These developments raise the goodwill of the society and make the purchasing rate increase. They also make the loyalty of women consumer to the trade mark increase and sense of trust develop. Furthermore, they assure the profit margin of the firms rise and secure their positions in society and market by gaining a reputation.

The aim of this study is to suggest the implementation and benefits of green marketing activities directed to the women consumer which increase the financial power of the firms and pay attention to the environmental sensitivity in the decisions of purchasing and to the attitudes of the firms. For that purpose, firstly marketing perception and the factors influencing buying behaviours of women are represented in the study in the rest of the study, the definition and development of green marketing and the benefits of implementation of it towards women consumer are suggested.

Marketing and Marketing Perception
According to American Marketing Association, Marketing is defined as " a process of implementation and

scheduling about distribution, promotion, pricing and improvement of ideas, products and services in order to perform the exchanges which will make people reach personal and organisational aims." (Koç, 2011, p. 46)

According to the Chartered Institute of Marketing in England, marketing is "a profit oriented management process for prediction, detection and satisfaction of needs of consumers." (Koç, 2011, p. 45)

In consideration of marketing definitions of American and English marketing associations stated above. It can be inferred that the definition of marketing embraces all these issues below entirely. Marketing is a social and managerial process which enables the individuals and institutions fulfil their needs and expedite.

Marketing aims of the satisfaction and happiness of the customers. It functions as a bridge between the business firm and the environment. Goods and services, appropriate for the demands and needs of the market, are sold so easily. However fine is a good or service, it has no value and it is not demanded if the price, color, taste, function and stance of it do not fit the expectations of the consumers and if it cannot be found in the necessary place (Karafakıoğlu, 2005).

For the business firms which take this situation into consideration, making scientific marketing researches becomes inevitable in order to determine the real needs of consumers. In the scope of these researches, "contemporary marketing perception" is improved.

In the 1950s, administrators of the firms have recognized that consumers do not buy the products all the time even if the products are fabricated plentifully and works of selling are intensified. (Odabaşı, 2001, p. 10)

Therefore, they have realized that the process of producing at first and trying to improve the needs of the consumers to one product at next is not necessary. Then, they begin to implement consumer-oriented plan of production and marketing. The needs of the consumers can be defined and satisfied not only with the product but also with suggestions and values which the firm present through a total amount of marketing mixture. This case assists long-term and reliable improvement of the firm. Contemporary marketers have the view suggesting that consumers are clever to know what they need, they can realize the value of money, they do not buy only goods from the firm if they cannot get in return for their money. This view, constitutes the foundation of the concept of marketing. (Blythe, 2001; Odabaşı, 2001)

As a result, if a firm adopts the approach know as "contemporary marketing", "consumer-oriented marketing" or "the concept of marketing", it will attempt to provide the satisfaction of the consumer as a whole. The demands and needs of the consumers should be analyzed continuously in order to take the suggestion of the firm into the desired shape because this process is the substance of the concept of contemporary marketing. In the concept of marketing, consumer becomes the focal point of the firm and all the resources and activities in the firm are aimed at the satisfaction of the consumer (Odabaşı, 2001).

Behaviors of the Consumer

Behaviors of the consumer are the one of main topics of science of marketing. The behavior of human reflects the total process in which the individual interacts with its environment. Also, the behaviors of consumer deal with the special types of human behavior in the context of buying. Thus, behaviors of consumer can be defined as below;

Behavior of the consumer is a field of scientific study which investigates the processes and the factors affecting the processes in which the individual or groups choose, buy, consume, use the products, services, ideas and experiences and dispose of them after usage. (Koç, 2011, p. 22)

Based on this definition, it can be said that the aim at examining the behaviors of consumers is to be able to explain and predict consumers behaviors of buying. Using and evaluating the goods and services. The factors, shopping behaviors of consumers, which have influence on buying behaviors of consumers preferences and habits of consumption of them are generally; "...demographic factors (age, gender, income, educational level, geographical features, marital status etc.) psychological factors (need and motivation, training, perception, personality, attitude and believes) and socio-cultural factors (culture and subculture, family, consulting groups, social classes)." (Akyüz, 2006, p. 17)

Having an effect on shopping the behaviors of consumers, there factors are not under the control of the firms but they are essential for the firms as factors influencing behaviors of consumers and requiring attention during formation of marketing activities. Investigation of behaviors of consumer has a significant role revealing the needs and demands properly, determining the target group and succeeding in marketing activities devoted to this target group. (Tatlıdil, 2009)

The Factors Influencing Buying Behaviors of Women Consumer

In today's competition environment, the marketing effects for women consumer increase sales, market share and profit rapidly. The facts that, women participate in business life so much, they become more literature and they earn more, money; raise their economic income and make them powerful. The most important point in creating marketing programs gaining women consumer is to understand what standards of judgement in women are. (Tokol, 2008; Özdemir, 2005)

Women have more intimate relations than that men have. In this point, the issue of how the products will be linked to

the values of women is significant. Accordingly, in order to motivate and persuade them, paying attention to the elements which they cherish, they believe, they like and they want to succeed in and preparing marketing plans in this way are essential and convincing. (Özdemir, 2005)
Some important events in women's life such as marriage, moving neonate, a new job also affect buying behaviors. Each of life events initiates additional requirement and creates new works. In consequence of roles in daily life, significant events in family influence women so much. Buying behaviors of women can be analyzed according to their social values, important changes affecting their lives, their features in synthesizing and substantial elements in their communication structure. (Barletta, 2003; Tokol, 2008) Women see themselves as a part of community and look at the world in the perspective of group. In the definitions of success by many women there is building up happiness of other people. Women come together and talk about their problems openly when they have problems. Therefore, in order to draw attention of women consumer in terms of marketing, firms should focus on user but not product and they should mention the benefits of good/or service for human but not the features of product. (Tokol, 2008)

To make the world a better place is one of the important facts which women want. Thus, the issue that business firms fulfil their social responsibility has an important role in the buying decisions of women. Beyond the quality of a product on sales or service factor of it, the activities of a firm for social responsibility and social citizenship become meaningful for many of women. This situation makes stance of the goods or services of business firm more positive. (Özdemir, 2005)

Women consumers are able to see more details than men and they pay more attention to these details than men. They procure this by using two sides of their brains and doing works in many areas.

For example; according to a research made in Wisconsin University, the claim that women pay 70 percent more attention for the details around them and remember them more than men has been revealed. (Tokol, 2008, p. 89) Therefore, women consumer can develop on impression about the business firm from a lot of small details. To his respect firms can convert these features of women consumer into advantage.

Green Marketing

In the last quarter of the country, sensitivity to the environment has become one of the important issues because production processes and product damage the environment heavily with continuous updating of knowledge and technology. "...For the first time, in 1975 the issue of "green marketing" was discussed and defined in the seminar about "ecological marketing" held by American Marketing Association." (Kele**ş,** 2007, p. 13)

According to this definition, "...green marketing is the group of marketing activities which include production, pricing, distribution and promotion of nature- friendly products and comprise the process after usage in care both firms fulfil the needs and demands of consumers and they reach their aims." (Kele**ş**, 2007, p. 15)

For the last 30-40 years, sensitivity to the environment has rised considerably (Easterling & others, 1996) divides "green marketing" into periods for buying behaviors of women as 1960s as "awakening", 1970s as "activation", 1980s as "producer's and consumer's taking responsibility" and 1990s as "having power in market." Especially, 1990s comprise a critical period in which consumer market encounters with the environmentalist activities. (Aslan, 2007, p. 3)

Firstly, people have deal with revealing main problems of environment. Consumers have realized that protection of the environment is not only under the responsibility of institutions but they can contribute to the production of environment with their buying decisions. Nominately, they make the preferment of the product rise by buying the product which is less harmful for the environment and making it stay or the market. (Kele**ş,** 2007)

The concept of green marketing has been regarded as one of the main trends in modern industry. Particularly, in the countries which are industrially developed, rise of sensitivity to the environment in consumers and had regulations by states have caused the demands for ecological products increase and in many European countries, green movement has become successful in the political arena. (Üstünay, 2008) The reality in green marketing passes through marketing with green phenomena, implementation and entering resolution process. Thus, firm should follow the green development closely. "... In regard to the researches in Europe, 92 percent of products presented in market and 85 percent of production systems have been changed for the demands." (Üstünay, 2008, p. 75)

Green marketing is interested in fabrication of product in away suitable for the disciplines of protection of environment. It is focused on production with environmental responsibility. The consciousness of protecting environment is dominant in the perception of green marketing. The aim of green marketing focuses not on creating new areas of consuming but on getting the most out of limited natural resources by fabricating disposable products. By this way, it also aims at providing and protecting natural balance and reducing the consumption of energy to the least level. Moreover, green marketing targets preventing devastation of the environment, searching for alternatives which reduce environmental pollution done by industry, encouraging of using nature-friendly products, reducing packing operation into the least level and trying to create consciousness of recycling. (Üstünay, 2008)

Implementation of Green Marketing Strategy towards Women Consumer and Its Opportunities for Companies
The profitability of marketing activities for women is more

than men. The reasons of this situation can be explained as below. Two aspects of buying process of women make women consumer in the long run more profitable consumer than men consumer. These aspects are loyalty and word-of-mouth communication. Women are loyal consumes. Mostly they talk about consuming experiences with other people, they share more information and they are more sensitive to the behaviors acted against themselves, 70 percent of women learn new products from an experienced person. (Özdemir, 2005)

As a result of globalization; in on occasion in which rivalry increases, lifetimes of products shorten, differences between products decrease, customers look for some standards in order to make a choice. Also, business firms search for some standards which will make a difference in their goods and services, and enrich them in order to be successful. (Üstünay, 2008) Consumers demand that they use renewable resources providing recycle, reducing waste and creating less pollution and also the products should be safe in the ecosystem.

The most important reasons of sensitivity to the environment in business activities; in a word change in business activities are global problems of environment. Since buying behaviors in women consumer are more sensitive to the environment, the firms understand that they will make profit by using green marketing intensely. (Üstünay, 2008) Administrators of the firm should predict the demands for nature-friendly products, determine the sensitivity of their products, develop more reliable, healthy, harmless products and packing techniques, design production process using less source, minimize dangerous waste, manage technological risks and protect their studies and society. Therefore, they know that buy this way they can reduce expenditure by using less natural resources, provide quality control, draw attention of women consumer and gain more loyalty and confidence in trademark from them. Perception about the value of a good or service in women includes more than features and benefits of it. They expect that goods or services make their lives better. They want that goods and services save time, create a stress-free occasion, benefit the environment and people. (Özdemir, 2005; Üstünay, 2008).

According to the researches, 41 percent of women go back to the trademarks sensitive to the environment. Two out of five women regard social responsibility of the form as main factor in buying decisions. (Özdemir, 2005, p. 108).

Women consumers show their activities in protection of the environment with their buying decisions. They reward nature-friendly products in marketing condition by preferring them. For them, to be environmentalist is a life style creating minimum side-effect in biophysical environment. They can prefer a car smaller and expending less petrol. Preferring a detergent with recycle package to a non-recycle one and using detergents involving less toxic chemical are those of behaviors women act. Business firms sees green marketing as an opportunity in the way of reaching their goals. Activities related to the environment are used as an element of oppression over other firm which they compete with. Rise of moral level in firms by recognizing cost-decreasing effects such as efficient usage of resources and recycling employment is among other opportunities which green marketing creates. (Aslan, 2007; Üstünay, 2008).

Firm have not ignored this issue that women consumer esteem so highly. Moreover, the firms dealing with this issue see it as an opportunity and take a stand sensitive to the environment. They fulfill the demands of sensitive consumers by producing and marketing goods and services in this direction. Therefore, they can get important advantages in the market as compared to their rivals which sell insensitive goods in competition. Becoming green of production process mostly results in rise in fruitfulness of resources. It reduces cost-structure of the firm and empower its position of rivalry. Becoming green makes the firm different by presenting new products and providing additional-benefits for the old products in the market. This firm increases profitability of its products, in other words, it empower its position in the market place. (Aslan, 2007)
In the light of all the information stated above, high-level returns of customer are provided with green marketing efforts for the women consumer. As a result of this, high-level return of marketing cost is supplied. Since women consumer head for long termed relations of mark, firms not only will preserve the number of customer thanks to rising loyalty but also get more income.

Conclusion

Nowadays, it is clear that tenderness towards the environment increased and this tenderness is reflected mostly in the behaviors of consumers. Environment with rising problems day by day becomes not only an individual problem but also an important problem affecting all the society.

Gaining importance of protection of natural environment constitutes the agenda of firstly business firms, them consumers and marketing world. As a consequence of this, many firms are obliged to implement green marketing strategy in accordance with demands and wants of consumers. Especially, women are more sensitive because of biological and sensual differences of them. This situation affects majorly consuming behaviors. In this study, it is mentioned that implementation of green marketing activities has an influence on women consumer and benefits for the firms, it is seen that women buy nature-friendly products and prefer the firms taking a stand in this way. Wants and demands of women consumer from the firms change in the direction of producing products sensitive to the environment. When the firms pay attention for these desires of women and implement green marketing, they become more powerful and profitable than their rivals in the market. As stated throughout the study, women are loyal consumer. Their attachment to the firms which take women desires into consideration and understand their demands and expectations will increase day by day. It

is know that women consumers is more profitable area of market than men consumer. They show their activities in protection of environment with buying decisions and reward the firm by buying nature-friendly products.

By this way, business firms both fulfill their economic functions and the demands of women consumer. They provide support and aid for socio-cultural environment by being sensitive to this issue. Therefore, they increase their prestige, enlarge their market share, advance their profit margin and gain their goodwill.

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Market Analysis: co-creativity as a solution to branding strategies

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Abstract
Knowledge of the market where the company operates has always been crucial for designers to develop strategies, identity, and meet the needs of its customers, especially those working with branding. Market Analysis, by seeking to clearly identify the company's position in relation to its clients, turns out to be an essential tool for knowledge, creating a real touchstone for the designer to justify all his work. The Interdisciplinarity achieved through co-creation turns out to be a source of innovation to develop and create new tools to support design. The co-creation process is responsible for enabling the exchange of tools, procedures and methods from each profession and, just as with globalization, adds value to each area, becoming essential for develop new management techniques. This work, which was accomplished through a literature review, aims to highlight the advantages of the prior execution of a Market Analysis - a tool widely used in other areas such as marketing - which when formulated specifically to meet the needs of designers working in branding - provides a better understanding of your customer and target audience to be reached, and in this way, allows for a more complete and reasoned development of strategies and actions.

KEYWORDS: Market Analysis, Branding, Design, Co-creativity.

Introduction
Interdisciplinarity is now a factor of abrupt development in society, where different areas of knowledge work together to achieve a greater goal. Following the same line, we begin to realize the strong growth of co-creation in academy and also in businesses. In addition to seeking new ways of working with other professional fields or competitors, we begin investing in building knowledge together, adding additional collaborators, the customers themselves. Thus, today co-creation is now responsible for true innovation and represents real power in terms of development.

The role of the designer today can take on different dimensions. Depending on the projects carried out by the designer, they should be targeted to different audiences, since the client can operate in different markets. Being surrounded by such a diverse market, the designer should always focus on his work to reach the target business audience, which will not always be defined. The Market Analysis proves very useful, since it allows for the exploitation of the environment in which the company is situated, uncovering niches and potential customers, not perceived by the simple observation.

When we conduct a thorough analysis of the active market, the public to be reached becomes more evident and concrete, serving as an index of validity to support the entire project to be developed by the designer. In parallel we obtain valuable knowledge useful to the process of creating and implementing the strategy in design and management, especially in Branding - where the need for a holistic view of the market becomes even more critical. Thus, it's necessary to fully understand the business environment for the viability of innovation processes based on Design initiatives. In this regard, Kotler adds:

> *In a market with increasingly faster pace, price and technology are no longer sufficient. Design is the factor which will offer the company a constant competitive advantage. Design is the set of characteristics that affect the appearance and operation of the product in terms of customer requirements. (Kotler, 2000, p.313)*

This reality, aligned with a deep knowledge of the market in which it operates, allows the designer to have all the tools needed to plan, implement, and monitor a good branding project that requires a global view of marketing. This paper aims, thus, to emphasize the advantages of the prior execution of a Market Analysis, assisted by co-creation, to guide designers to structure their methodology, and know their customers and target audience to be reached. Thus, developing strategies and actions more fully and reasoned.

This work is based on the presentation of the advantages resulting from the use of a prior Market Analysis as part of the initial methodology when performing actions in design. It's intended, by means of literature to demonstrate the benefits that can be achieved with the use of Market Analysis designed specifically for using the designer. Seeking to complement and bring new arguments to the art of Design, the paper seeks to demonstrate the range ofe the potencial uses of Market Analysis.

Co-creation
Increasingly, we see a need that customers have to be part of helping create company value of products and services which they use, creating an ongoing relationship between the organizations with which they do business, after all the ultimate goal is to satisfy them. (Gouillart & Ramaswamy, 2010, p.3). The idea of co-creation, after the term was used by Prahalad and Ramaswamy in their book "The Future of Competition", became a widespread concept worldwide. According to the authors Gouillart and Ramaswamy (2010, p.4), commenting on the book "The Future of Competition":

> *The the customer experience is critical to what happens in the organization in terms of value creation, innovation, leadership and executive strategy. These extensive changes in business and society, required co-creation, in other words the practice of developing systems, products or services through collaboration with customers,*

managers, employees and others who have a stake in the company. Consumers want to define choices in a way that reflects the idea that they have value, and want to interact and transact in the language and style of your choice.

Ramaswamy and Gouillart (2010, p. 6) GO further, stating that co-creation:

[...]involves profound democratization and decentralization of value creation; the creation comes from the model focused on the company and transitions to interactions with customers, communities, customers, suppliers, partners and employees, as well as interactions between individuals in general.

Co-creation is then characterized as the junction and exchange of knowledge, experience and expertise between business, academic, professional group or individuals. Ramaswamy and Gouillart (2010) claim in their work that co-creation is infinite, since we can co-create everything, including the definition of co-creation. The recognition of the uniqueness of people in all their roles (consumers, employees, investors, suppliers and citizens) is a prerequisite for success in creating value. (Prahalad, 2008)

For Prahalad and Ramaswamy (2010) co-creation is the joint construction of value of everyone involved with the project - stakeholders, customers and internal staff. The process of co-creation therefore requires the definition and joint solution of the problem. This calls for an experimental environment where customers, suppliers and employees can dialogue and co-create their personal experiences. The authors state that co-creation involves the definition and design of new modes of engagement for individuals who are actively participating in activities and supply chain organizations. In the same way "businesses thrive if they are aligned with events of everyday life of each client." (Prahalad, 2008, p.103). Likewise, co-creation brings many benefits when applied to the academic environment, innovating ways and methods for the solution of demands.

Co-creation, like the complete use of integration between brand management and marketing tools, platforms and environments, requires interaction in order to maximize the energy and experiences of the participants. The idea of co-creation, by using a tool that seeks a better understanding of all the characteristics of the market, ends up being crucial to understanding the complexity of the information likely to be highlighted and that will influence the projects developed in branding. In this sense, one can integrate co-creation as a model to differentiate oneself by the pursuit of knowledge in several areas, including consumers themselves. Kotler (2011, p.12) tells us that "the role of consumers is changing. They are no longer passive, they are active, providing useful feedback to companies." The reason for the recognition of co-creation can thus be seen as a factor in creating value for current strategies and their importance in working with an area such as strategic branding.

Branding

Also known as brand management, branding can be conceptualized as a multidisciplinary systemic process, where the disciplines of management, marketing, design, human resources, and communication, integrate and interact. Thus, the goal of brand management, is to provide and enhance the durability with which the company will identify itself with the active medium, positioning itself in the market (Mozota, 2011). Branding ends up having the function of managing the various discourses of a particular brand, from various areas of knowledge, seeking to unify the expressions of brand identity. Marketing plays an important role in branding through its the planning and research of strategic information for the idealization of the product. Thus, design has the function to decode this information and visually express the brand through them. (Rodrigues, p. 2006)

The brand today can be described as the largest generator of value that companies may have. The management of this value is something that should be given high attention on behalf of the institution. Viewing brands as true strategies shows that they are important factors for differentiation, allowing one to identify the manufacturer and enabling consumers to attribute responsibility to them. In this way, the power to perceive and identify previous experience with brands and the quality and characteristics of products or services offered by them, the consumer simplifies purchasing decisions (Keller 2006). Along the same lines we have:

People relate to brands in exactly the same way as they relate to other individuals. In the minds of people, a brand is a person as much as a person is a trademark. People have names, and brands as well. [...] People project certain styles and images just like brands. This metaphor is productive. People are born. Brands are created. (Mozota 2011, p. 135)

It's clear, then, that the brand becomes a real connection between the consumer and the product, since it's responsible for presenting its attributes - that is, the products - to people. Only after this bond is created, will the tangible attributes of the product or service no longer be as important and will the brand be responsible for enabling the continuity of the relationship or not.

Just as people and their souls, character and features cannot be plucked in an objective manner, nor can they be in brands. The brand is considered in this way, an intangible attribute, in other words, not a physical thing that we can hold with our hands, or measure in feet or a scale; these are characteristics that fit the products and services. According Bedburry (2002) brands are living concepts in the mind, made from good or bad experiences throughout life. They consist of two parts, one part logical and the other irrational. The author reinforces:

The brand is the sum of the good, the bad, the ugly and what is not part of the strategy. It's defined as much by your best product, as the worst. It's defined as much by prized advertising as by those terrible ads, which even-

tually are forgotten. Brands absorb content, images, fleeting sensations. They become psychological concepts in the public mind, where they can stay forever. (Bedburry, 2002, p. 31).

The smart brand is one that communicates that which our perceptions and expectations want to perceive in your product. According to Rampersad, (2008, p. 1) the majority of buying decisions "are based on the reliability, trust and sense of connection that people feel about a service, product or person." Thus what actually ends up impacting these decisions are the relations of trust, which often have more value than the performance of the product or service themselves; it all has to do with branding. Peter Montoya adds in Rampersad (2008, p.2):

"Branding's function is to influence. Create a brand identity that associates certain perceptions, emotions and feelings to that identity. Branding precedes marketing and sales. Without a strong brand, marketing and sales will be ineffective."

Considering all these implications for good branding, we realize that a deeper knowledge of the market in which the company operates, made possible by the Market Analysis, is of fundamental importance to reconcile brand management with market realities. Mozota (2011, p.xi) to explain the transforming feature of design in projects related to the brand, adds:

At the moment in which design strategy creates value by improving the relationship between the company and its environment, anticipating a clear vision of future markets and competition, creating new markets and predicting trends, it generates an important strategic value, which may have a direct effect on the positioning of the organization. Design contributes to the management of change and the learning process in organizations.

From this statement by Mozota (2011), we see the intrinsic relationship between brand management and the market, which should go together. In this manner, an analysis of the brand's consumer market is essential before beginning the preparation of branding strategies, as the information gathered in the Market Analysis, will be responsible for providing the basis of all the Branding work and thus capture the market more easily.

Market Analysis

One of the most important decisions a company must make is how they will deal with markets, if in a homogeneous way or not and to what extent. (Kotler and Armstrong, 2007, p. 39). The market analysis gives us the ability to get a sharper view of the market, enabling us to create appropriate positioning strategies, identifying different ways of acting with a given audience.

The topic "market analysis" can be spoken of under different names. Ferrell and Hartline (2005) define market analysis as a "situation analysis", approached in conjunction with the internal review process. Weinstein (1995) refers to it as "analyzing the situation and the market." Hooley et. Al (2008) address it as an "analysis of the competitive market." Aaker (2001), in turn, refers to it simply as "strategic analysis", and indicates "market analysis" as one of its subitems.

We realize then that it's not possible to identify a single term used by authors of this subject. Parallel to the discussion regarding the name, it's clear also that there is no consensus among authors as to the content. These, however, point out some similarities that allow us to identify the most important topics.

Regarding Brand Management, as seen previously, the audience is represented by groups of potential interest in the organization, becoming markets when it focuses on them as recipients of its intention to offer them exchange values. According to Kotler and Armstrong (2007, p. 186), the market analysis may include three major tasks, illustrated in Illustration1: 1)Measurement and prediction of the market: the size of the current and future market, 2)market segmentation: choose the main target groups to attend, 3) Analysis of the consumer: to determine the characteristics of consumers.

Illustration 1: Market Analysis

Market analysis mainly serves as a starting point for unraveling a marketing opportunity. According to Kotler and Armstrong (2007, p.55) the marketing opportunity is "an area of need and interest for the buyer, whose satisfaction gives the company a high probability of achieving a profitable performance." The identification of market opportunities is something arduous. The three main sources of market opportunity according to Kotler and Armstrong (2007, p 55) are based on three situations, which provide: something scarce, something better, and finally something new. These situations give rise to market opportunities. Willing to take advantage of the various Market Analysis methodologies, directing it to the use and application in design projects, the analysis consists of the following subtopics: 1) measurement and prediction of the market, 2) segmentation and 3) analysis of consumer. Based on a model proposed by Kotler and Armstrong (2007, p.186), these three elements form an analysis considered the most pertinent to analyze a market where design and branding strategies should be developed.

Measurement and prediction of the market

In measuring a market, we cover not only the analysis of the current market, but also analysis of the future market and especially the forecast of the company's participation in it today and the growth potential that this may have. The measurement of the current market is very important to generate information about how much the company can

multiply its offer, balancing it with demand, by having an effective brand management.

The market forecast consists in calculating, based on current data, how much the demand may be during a certain period of time. For the calculation of this estimate we use several indicators. Michael Porter's (1986) proposal for the measurement of demand and analysis of strategic resources is to provide a matrix that addresses the relationships that lead the company to a gain or a loss of opportunity. The author states that there are 5 groups of influence that must be studied, known as "Porter's 5 Competitive Forces", which are: threat of new competition, threat of substitute products, bargaining power of customers, bargaining power of suppliers, intensity of competitive rivalry.

Likewise, it's important and interesting to analyze the competitive environment in which the brand is inserted. The competitive environment analysis is valid when you consider that without knowledge of the strengths of the competition or their probable actions, it becomes impossible to formulate the central component of marketing strategy - finding a group of clients with whom you have a competitive edge competition. (Hooley et. al., 2006).

Another important practice by Hooley et. al.(2006) is the practice of corporate benchmarking. According to the author, competitive benchmarking is the process of comparing the strategies and operations of your business with the reference companies within and outside the industry to identify the best practices that can be adopted or adapted to enhance your own performance. Benchmarking typically involves four major steps: 1) identifying who to benchmark, 2) identifying which aspects of the business to benchmark, 3) data collection and collation of relevant processes and operations, and 4) comparing with their results (Hooley et al., 2006).

The success of the organization, product or service is to meet the needs of customers better than the competition does. The same rule applies to branding projects, developed by designers; they should follow the steps in the same way, adapting them to their needs and thus, always conquering the target market. This is where we enter into the topic of market segmentation, which will be responsible for showing us where the customers are and how we can define the best customer profile to meet.

Market segmentation

Segmentation is the process of dividing markets into groups of potential consumer needs and/ or similar features which are likely to have similar buying behavior (Weinstein 1995, p.18.). The basic principle learned so far is that the more appropriate the strategy is for the characteristics and needs of the market, the greater the chance of success for not only the company, but the branding strategy as a whole. The authors Ferrell and Hartline define market segmentation as "the process of dividing the total market according to a product or a product category, in segments or relatively homogeneous groups" (2005, p. 153). Keller (2006, p.70) states that:

> *Market segmentation divides the market into distinct groups of homogeneous consumers that have similar needs and behaviors and therefore require specific marketing mixes. [...] The more segmented the market, the more likely the company can implement marketing programs that meet the needs of any consumer segment.*

Normally markets have many diverse groups of individuals and institutions, and it's difficult to understand the characteristics of readiness, behavior and needs of these groups. Outlining a strategy that meets all of these characteristics, eventually becomes a much harder task than in theory. Mindful of this feature, Weinstein (1995, p. 17) notes that "Currently, mass marketing is just a distant memory. Marketers today must address niche markets that exhibit unique needs and desires."

To become truly effective, segmentation must give rise to groups where members have similar tastes, needs, desires or preferences, but where each group is different. "Segmentation is one approach that lies between mass marketing and individual marketing." (Kotler, 2000, p.278). Thus, it's assumed that a certain segment of buyers has very similar needs and preferences, but there will always be differences between two buyers (Kotler, 2000, p.278).

For McDonald and Dunbar (1995), the differentiation of consumers highlights the key to successful marketing, and can thus bring greater adhesion between the needs of consumers with products and services offered by the company where brand management is to be implemented.

A market segmentation done well can greatly assist an effective brand management, enabling us not only to identify market opportunities, but also to examine how best to position oneself in each one.

As Hooley et. al. (2006) warns, the selection of which segment or which segments meet the potential market is a crucial step for developing a solid and comprehensive marketing strategy. Until the target segments are clearly identified and their needs and motivations fully exploited, it's impossible to develop a competitive positioning.

When evaluated, the different segments of the company must decide which will be chosen for implementation. According to Kotler and Armstrong (2007, p.173) "A target market consists of a set of buyers with common needs or characteristics that the company will meet". Thus we see that a market segment may be comprised of the target market, just as the target market may be composed of numerous segments found by the company when deciding upon the segmentation. It's up to the company, according to the results obtained in the segmentation, to choose which segments should work and from there, plan their strategies according to the chosen target market. Keller (2006, p.76), explaining the implications of consumer behavior applied to market segmentation states:

Often, segmentation is based on descriptive behavioral considerations. For example, marketers may choose to target a market according to age and choose to target a certain group, but the reason for that age group being an attractive market segment may be the fact of these consumers use the product more than others, are particularly more faithful to the brand and are more likely to seek the benefit that the product provides.

Thus we see that market segmentation when applied to branding, will only be complete and truly effective, when one takes into account consumer behavior and focuses the basis of every market analysis on this behavior. In this context, that we begin the analysis of the consumer.

Analysis of Consumer

As evidenced above, an analysis of the environment, business opportunities and those who will consume the final product, is essential when seeking satisfy the target audience. It's precisely by focusing on the consumer that highlights the importance of Consumer Analysis for the construction of an effective market analysis. Analyze the consumer becomes a strategic point in order to position the company in the market, establishing and maintaining competitive advantage. It's necessary to recognize that it's not possible to present a proposal branding (or design) geared to customer satisfaction without knowing them deeply. According to this conception, Underhill (2009, p.31) mentions that "marketers need to understand how their products, are analyzed and then purchased by the shopper." Agreeing, Kotler argues that "marketer's task is to understand what happens inside the buyer's conscious between the arrival of external stimulus and the decision to purchase. "(Kotler, 2000, p.182). About Consumer Behavior:

> *Consumer behavior involves the thoughts and feelings that people experience and their actions in the process of consumption. Includes everything in the environment that influence the thoughts, feelings and actions, such as others' comments, advertisements, information on pricing, packaging, product appearance and many others. (Peter, 2009, p. 5)*

Considering the market as "a group of individuals or institutions with similar needs which can be satisfied by a product" (Ferrell and Hartline, 2005, p. 152), it's assumed that the customer analysis is the center of a market analysis. To identify the main characteristics of our chosen target market, Kotler (2000) states that the consumer buying behavior is influenced by cultural, social, personal and psychological, where cultural factors exert the greatest and most profound influence. Regarding culture, Kotler (2000, p.183) argues that:

> *Culture is the main determinant of behavior and wishes of the person. As we grow, the child acquires certain values, perceptions, preferences and behaviors of their family and other institutions.*

Besides cultural factors, Kotler puts us that consumer behavior is also influenced by social factors as reference groups, family, social roles and status. Social classes are relatively homogeneous and enduring divisions in a society "[...] its members have values, interests, and similar behaviors." (Kotler, 2000, p.183).

Analyzing personal factors, it's clear that the buyer's decisions are also influenced "by personal characteristics such as age and stage of life cycle, occupation, economic circumstances, lifestyle, personality and self-image." (Kotler, 2000 , p.189). Still on the lifestyle Kotler (2000, p.191) puts us that "A lifestyle is the standard of living of the people expressed through activities, interests and opinions." In this regard:

> *Marketers seek to develop a consistent brand image for their self-image of the target market. It's possible that self-image of a real person (as she sees it) is different from their ideal self-image (as she would like to see) and his self-image according to the other (as she thinks others see it). (Kotler, 2000, p.193)*

About the psychological factors, it's how a person is influenced to buy. These factors are divided into four groups: motivation, perception, learning and beliefs and attitudes. "Recent research shows that each product is able to create a unique series of 'reasons' to consumers." (Kotler, 2000, p.194) As examples, we have the motivation to lose weight in relation to dietary products "The way motivated person actually acts is influenced by the perception she has of the situation. "(Kotler, 2000, p.195). About perception:

> *"The perception depends not only on physical stimuli, but also the relation of these stimuli with the environment and internal person's conditions. People may have different perceptions of the same object due to three processes: selective attention, selective distortion and selective retention."(Kotler, 2000, p.195)*

Thus, the analysis of the Consumer becomes essential to complete the market analysis, presenting as its center, confirming the importance of the consumer for the projects in branding.

Considerations

Analyze the consumer as part of the Market Analysis is crucial to developing strategies focused on how consumers actually make their buying decisions. Identify who is responsible for purchasing decisions, the types of buying decisions, and the steps in the buying process, it's just a structured way of trying to attain true knowledge of our customers, which, even appearing as an even more arduous than normal, it's essential to satisfy them.

The exchange of tools, procedures and methods known to every professional field, adds value to each area, being the co-creation, the responsible for make it possible. Requiring a more holistic perspective, the Branding demands more techniques to continuous search for information. The Market Analysis, when applied as part of the design methodology, it comes as a solution to these issues, providing precious information of designer's target

audience.

Throughout the article it was revealed that the Market Analysis is responsible for providing support to branding strategies, validating projects, and quantifying outcomes. The analysis must be designed as part of the methodology used by designers to equip their projects, serving as a source of rich information that will guide the entire creative process.

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Sustainability & Design in Architecture and Construction

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Abstract
In the construction industry different molds are used to give form and consistency to concrete, known as shuttering molds (plaques) and formwork. These are generally made of wood or steel and are used to pour the construction concrete in liquid state. After the time required, the concrete changes toward a solid state, becoming a volume. TetraBuild is a project that generates creative uses by recycling and reusing waste in applications that deliver new ways to create concrete volumes. The product developed by TetraBuild comprises the manufacture of concrete formwork with a plastic-aluminum based thermoformable material. The system comprises a contact plate to the mixture, combined with a bracing and joints system which behaves like a tight structure against the load of the concrete. The developing of such a building solutions, based on the manufacture of renewable plaques, previously obtained from the recycling of post consumer products, results in a new material that has many qualities, among which stand out to be 100% reusable and 100% recyclable. This new product sets up a sustainable technology development process in the use of formwork for concrete, designed for unique works of architecture, which seeks to reduce the ecological footprint.

KEYWORDS: sustainability, recycling, architecture, renewable formwork, construction, post-consumption, clean consumption, environmentally friendly, post-consumer recycling.

Introduction
Demands on what will happen, not a response to what happens is the projection basis of TetraBuild's work. Characterized mainly by its capacities of creativity and environment observation, especially in regard to finding solutions, the concepts of sustainability and environment play a central role in the process of research and practical application of TetraBuild's work. All the invested years in the project development account for the persistence and management skills for the viability of it, combining efforts of professionals from different areas in a constant search for sustainable solutions to provide concrete formwork systems to the construction sector; generating new applications of post-consumer recycled material. The project making is based on the reuse of waste materials like plastic and aluminum, by using tools such as creativity, design skills and research capacity towards the development of knowledge necessary to carry out innovation. Through a process of enterprise development marked by numerous milestones, TetraBuild formwork systems are mainly characterized by its flexibility and versatility, its lower costs and less environmental impact, all in relation to current formwork systems.

Body
TetraBuild is a project developed from the city of Valparaiso, Chile. It accounts for 5 years of work on the recycling process, particularly the plastic and aluminum material product obtained: a plaque or chipboard, similar to the oriented strand board (OSB).

What is proposed are innovations related to alternative construction processes and new materials based on the procedures and product research with a more efficient footprint.

Generating a new thermo-formable Flexible formwork system, based on post-consumer recycled material, as well as representing a positive impact on the environment, and given its thermo-formable characteristics, make it a versatile and flexible formwork that would aloud creating organic shapes for concrete that are now resolved at much higher costs.

For example, if we refer in terms of energy consumption, it can be noted that the overall energy consumption for the production of cardboard, plastic and aluminum is 50% lower than the production of a traditional glass bottle. But it is widely reported that glass is 100% recyclable, although it remains 4,000 years in the environment.

When supported by the use of waste material, TetraBuild enables to reduce the ecological footprint of formwork: there is no need to produce new raw materials (wood, steel) for its manufacture. It also allows the removal from garbage and landfills materials that are difficult to degrade. The objective is to convert the post-consumer packaging in plaques made from the polyethylene and aluminum present in these packaging. Recycled material plaques are achieved through a heat process that melts the polyethylene content, linking densely compressed fiber fragments in an elastic matrix of aluminum. Along with this, and given the characteristics of these materials, the feasibility of recycling and later reuse transforms them into a new raw material to serve again for formwork thermoflexible plaques: an added value to the world of construction.

Figure 1

The replacement of traditional formwork by the TetraBuild's formwork systems would generate savings and reduce the environmental impact in construction industry by replacing the wood (or steel) as a raw material by a waste material, (post consumer) that has its carbon footprint incorporated already. Thus, water usage is reduced along with the cost of processing the wood.

While TetraBuild aims primarily at the innovation concept, showing that this is a project that focuses on R&D, a powerful reason for the birth of this idea came as from an interesting alternative to generate social waste management. In other words, sustainability is an important issue for the team as to the society in which it is inserted.

A component for the creation and innovation that tends TetraBuild can be based on the manufacture of plaques –or plates- for obtaining agglomerates of recycled plastic and aluminum containers with the following properties to remark for it:

- Is available in large dimensions, wide and long (impossible of obtain through wood)

- Has an average density between 800Kg/m3 and 900Kg/m3

- Allows a solid and durable construction due to the increased resistance to atmospheric agents and to changes in temperature.

- Is 100% recyclable.

- Has no toxic or hazardous features (Free from urea formaldehyde and resin, commonly required for agglutination, and generally used in the boards).

- Can be sawn, machined, nailed and glued due to the absence of joints, faults, deformation and gluing.

- Does not splinter or crack because it has the same hardness throughout its surface.

- Does not conduct electricity.

- Has a thermal insulation that resists temperatures ranging from -58°C to 135°C

- Has a sound insulation that filters up to 69% noise.

- Is insensitive to putrefaction, insects and fungi because their particles are amorphous.

- Is resistant to moisture.

- Is flame retardant: it doesn't generate flames and has a low propagation thereof.

- Is thermo-formable and flexible.

- Contains no dyes, dyes or pigments, therefore does not pollute the air, soil or water.

- Has outstanding mechanical properties.

- Is resistant to impact.

- Is not corrosive.

Going back to the genesis of the project, some remarks are needed with regard to the origin of the conceptions which began this process of research and development. The bio-mimicry is known as a method that seeks to emulate the best ideas from nature to solve human problems by creating new technologies. Thanks to this way of doing things, we study the models, systems, processes and elements in nature to recreate (or be inspired by them) and develop new projects with low environmental impact. There are examples in the nineties where under these parameters some prototypes were established, particularly in materials science and in the conceptions of eco-effectivity.

On the other hand, as an alternative to the fast pace of life that carries the current way of doing things, there was a movement called Degrowth , which supports the regular and controlled reduction in economic output, with the aim of establishing a new relationship balance between man and nature, between the built and natural environment, minimizing ecological footprint.

That is why if there is a reference to the term sustainability, which could be equivalent to the ecological viability; we can say that socio-economic systems that work by destroying its biophysical basis are unsustainable. As sustainability is a principle of anthropocentric nature and sustainable development, on the one hand, is a specification of the idea of ecological sustainability (but also incorporates principles that are not included in the idea of sustainability) it can be identified within the three sustainable development components or pillars: the ecological one, the economic one and the social one, all as the analysis from the TetraBuild project begins from the economic side, considering a cheaper system (viable in terms of costs) and, in parallel, with the possibility of providing for the environment care so that, finally, it can be validated in society as a project capable of uniting these important aspects.

Then, we note that the objects around us are made from a variety of materials, which can be classified in different ways; for example, by origin. However, the most appropriate approach is to classify materials by their properties. Why? The possible applications of the materials depend mainly on their characteristics: that is the reason to choose this approach. In our case, we rescued the plastic property that makes waterproof products, among other features; and aluminum, which keeps –or maintains- without letting the light permeation.

If we were asked as why to choose a plastic-aluminum sheet produced from recycling, the answer would be its

format: it covers more area with less volume of material. Thus, the key difference between the circle and the line is set in the base element of TetraBuild. As these plates are not made of wood, but plastic aluminum, their carrying capacity becomes a comparative advantage. The easy to bend, stretching and receive concrete is a favorable opportunity to make the formwork. If elucidate the tension that can withstand a single thread of spider, which is between one and two million pascals (units of tension resulting from dividing the force by the surface), the formula tension + support + concrete in TetraBuild will help the generation of the curve. Moreover, bending and tension will help to regulate the load.

If we refer to the ability of the panels (plates, sheets or plaques, other names given to the format of the recovered material) the ability to withstand pressures of fresh concrete is 60 [kN/m2], equivalent to a height of 2.4 [m] of the same material. That is, the dimensions of the plates, associated with the ability to overlap, allow generating prototype in height due to the exercise of overlap of the plane and generate a volume is a property of the board and its composition.

As food packaging (generally of plastic and aluminum) need contain, support and maintain their properties, in the case of the resulting panel it is the same: it possesses a shape memory property which is given in most crystalline polymers or which may form an amorphous three-dimensional network.

Forms are generated due to the tensile structure tailored, not without previously waiting for the concrete due cure and harden. Because of this is that there has to be a previous mechanical fastening, by tie bars, tension fastening by using straps or a combination of both. Nevertheless, the formwork system that is proposed, aside from a minor transport item need (due to lower volume and less weight load) added to the lightness and smaller size of pieces, generates a set of formwork likely to be folded, packed and shipped, compared to a traditional formwork, with much less expense.

As the construction of a formwork means thinking negative, the mold and the curves are given by the breakdown of forms. Thus, straight folds help setting up the material, giving the curve the property that apart from holding, unloads weight (tension) in different directions

How much you can push the degree of curvature? The geometry provides answers: instead of putting to work the arches to compress, it should be done to stress. It's the same concept used by the first builders to build stone arches, with both members of the arc pressing on the cornerstone, which submits the stone (or concrete) to provide compressive strength to the curve structure. While the upper side of the arc works naturally to compression, the lower side or concave works to tension.

There are then two actions before building the mould, these are:

- 1º lift and tighten

- 2º sustain and support

As the composition of materials of the formwork system does not consider the presence of moisture and has a high sealing capability, enables a controlled hardens, ie, the better. And such as time-assembly is less than the one of traditional formwork systems for curved shapes, the setting time is adjusted to the requirements of this important physical property for concrete. The setting is a term used to describe the stiffness of the concrete paste, which refers to a change of a fluid to a solid state. To do this, we use the terms of initial set and final set to describe stages. The setting time depends on the water-cement paste, but also on the factors of temperature and humidity in which the mixture is: while the temperature is higher, the faster will set the paste. Nor it can be set a minimum or a maximum time for which it is expected that the paste hardens, because there are a variety of types of concrete, which will react differently to contact with water, temperature and the moisture found.

A comparative advantage is that for each retraction of the forms, the boards should not be cleaned and they will not need a release agent, a procedure that applies to traditional formwork. Moreover, like the metal casing, TetraBuild can not be built onsite, given its complexity. However, because of its resulting quality, smoother and homogeneous surfaces are achieved, in compare to those with wooden forms, due to lower friction between the board and the concrete during the lifting.

Incorporate recycled materials in the construction industry has as a fundament incorporating the concept of recycling and sustainability in a dynamic industry, that must meet environmental standards and, above all, is intensive in the amount of energy demand and CO2 emissions. According to the "Global Construction 2020" Oxford Economics, the construction industry represents, worldwide, a total of USD7.5 trillion, with projections to reach the year 2020 with a total of USD12.5 billion. That is, a growth of over 70% during this decade.

Given the importance of concrete in the construction industry -it is estimated that 2/3 of the total world construction is concrete - approximately 95% of the total construction in concrete (which considers mainly civil works and important part of the housing buildings) use standardized formwork, thus representing a very specific environment to reach out.

To cite a current example, the Popular Republic of China has three plants that recycle cardboard, plastic and aluminum, which are generated from recycled plates, called CHIPTEC. Due to its properties and its positive environmental impact, since 1997 the Environmental Protection Agency China recognizes CHIPTEC as one of the recommended technologies, nationally, for the environment

protection. Also, in 1998, CHIPTEC approved successfully the tests jointly made by the State Committee for Science and Technology, the Office of Building Materials and the Environmental Protection Agency, instances that yielded the result that the agglomerated product, made from the reuse of waste from cardboard, plastic and aluminum packages, was suitable for use as building materials, safe and environmentally friendly .

The formwork and molds industry is divided into two areas: i) conventional industry for concrete formwork and ii) non-conventional industry for concrete formwork. It is important to remark the influence of formwork regarding architectural forms that can be seen today in the world: the incorporation of curved shapes in building design stages are usually modified or adjusted, depending on availability of a formwork that meets the requirements for that particular design. For this reason, it is not surprising to verify that 95% of the buildings respond to standardized designs where conventional formwork can solve the various challenges.

In every singular work of architecture it can be seen that curves and shapes of the walls are complex to perform and, above all, representing high costs for standardized formwork companies. There are only two alternatives to achieve the task: you can use timber formwork to achieve the desired shapes or steel molds can be tailored to generate the desired shape. To demonstrate that due to the advancing technology -and between this, formwork systems- it is increasingly likely to achieve specific shapes and designs, is also proposing low-cost solutions compared to the younger generation of designers, architects and designers. Promoting the development of innovative formwork industry is looking to solve different problems: the viability of constructing singular works or the development of specific pieces, such as street furniture.

Figure 2

This brings us to the definition of the immediate environment in which TetraBuild will work: it is constituted by the elements, actors, rules and relationships that make up the remaining 5% of concrete construction. Its distinguishing feature is the type of formwork used, which we call variable formwork, as they relate directly to the singular architecture. Considering the environment in which it moves the construction industry in general and the singular architecture in particular and, taking into account the concepts linked to the social construction of technology, it can be noted that the sociology of science considers the artifacts as constructions - individual and collective- related to social groups, which rise on its own resources and interests in view of the findings of an external nature. That means that the point of view about the structure of the devices differ in the same measure of resources and interests. The support, stage and instruments are the product of human relationships; the built environment brings, therefore, the mark of those relationships, expressed in their configurations and their construction projects. The built environment has a recorded history in the objects that survive their dynamics: they are both socially produced and are never completely subordinate to external forces .

To demonstrate the concept of heterogeneous network (in which none of the agents and factors that comprise it is decisive for the historical fact) is a perspective that could define technology as a kind of family, of associated methods -and always challenged- by various forces and entities, human and nonhuman. Thus, we explain the operation of the network of interactions acting on the devices.

Heterogenous Engineering is at the same time, a social, economical and political enterprise. There are two methodological principles that establish the trends in this analysis: First, the symmetry, which postulates that the same type of analysis can be done for all components of a system, whether human or nonhuman, ie, whether an agent or a factor; second, the reciprocal definition, which postulates that the agents are entities that have a detectable influence on others . Hence, the possibility of recovering the waste material added to the possibility of using an existing technology (low demanding in terms of energy) and the characteristics of the formwork, create an attractive possibility: installing a product which configuration is intrinsically aware of its environment.

Nowdays, the carbon footprint of products represents an appropriate tool for determining emissions of greenhouse gases (GHG) from products and services, considering their environmental impact. This will allow TetraBuild improve its performance in terms of accounted emissions, prompting the consumers to define their consumption accordingly. So as they can today choose between a fair-trade product or organic ones, they can also choose a product with a lower GHG emissions footprint .

In this context, it is possible to identify the different ways or strategies that the pioneers and opinion leaders have adopted regarding sustainability issues linked to production and trade.

Some of these strategies are related to incentive such as tax benefits that the various governments have made available. Along with this, the concept of corporate responsibility has been increasingly positioning its role.

A second category of strategies have to do with the various certification processes and products that have been implemented worldwide , such as certificates generated around the International Organization for Standardization as well as the emerging markets for carbon credit.

The market for products with carbon footprint is developing, as discussed in a recent article published by The Economist . Consumers may not realize it yet, but behind the scenes important advancements are being happening. In Britain, a pioneer in the development of labeled carbon footprint, 9 out of 10 households bought products with that label (intentionally and unintentionally) in 2010. Total sales reached USD3.1 billion, a figure that exceeded the sales of organic products (USD2.32 billion) and fair-trade products (USD1.24 billion).

Also, since 2007, British organizations work on the development of the Public Available Specification (PAS 2050) to establish a methodology to determine the Product Carbon Footprint (PCF) for products and services . Producers may well respond to the consumers' interests, who every day become more aware and responsible with the environment. Companies that use labels can also improve their competitiveness as environmentally friendly products on the market.

After pointing out all the features in which TetraBuild impacts, as a project in development, various stages have been met as detailed below:

- In March 2006, TetraBuild won the competition "Recycle your box and build your company" organized by Tetrapak Chile and the Catholic University from Chile, which contemplated a trip to Brazil to visit recycling plants and production of plates of PE / AL.

- In March 2007, TetraBuild takes part of the International Institute for Innovation and entrepreneurship (3IE) at the Federico Santa Maria University, in Valparaiso. A fertile relationship that continues ever since then.

- In March 2008, TetraBuild wins the "Entrepreneurship Seed" award in the competition organized by Angeles de Chile (Chilean Angels) and Universidad de Chile.

- In December 2009, TetraBuild wins the Entrepreneurship Seed award in the contest Universia 100k by Santander Bank.

- In May 2010, a patent process is entered for a TetraBuild product. Currently this patent is being processed.

- In mid-2010, TetraBuild awarded the seed fund from CORFO (Line 1) for the development of market research, commercial research and a business plan.

- In May 2011, TetraBuild participated in "Chile Builds: New Solutions for new cities", in the Espacio Riesco, a trade fair that brought together public and private sector institutions with the latest developments in machinery, equipment and technology.

- In 2011, TetraBuild participates in "Santiago Design 2011" held in the Telefónica building, Santiago.

- In 2012, TetraBuild takes part of the Entrepreneurship Platform from Fundación Chile.

- In 2012, TetraBuild awards the seed fund from CORFO "Seed Subsidy with Flexible Assignation" (SSAF).

Figure 3

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The Brand DNA Process approach applied to region of Alvito, Portugal.

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Abstract
This article disclosures the "Brand DNA" validation process, applied in the field of territorial brands. The process defines the brand's essential characteristics, contributing to its significance in all its dimensions. It proposes a permanent interaction between several important stakeholders and the branding professionals, during the identity definition and contents creation for branding, through co-creation processes. Kotler (2010) says that the continued co-creation processes allow the brands to reach its stakeholders and main market. This platform leads to the input of important insights and the spread of the brand message essence, further than the traditional processes in which the agencies didn't have the same resources provided directly from its customers. The identification of the brand core can be achieved through its "DNA" validation. This way, significant experiences of the brand may be created from the interaction between its stakeholders and experts, which brings value inside an economy of experience. A brand can be compared to a living being, with the particularity that, if it is well managed, it can be eternalized. According to the concept of 'meme', suggested by Dawkins (2003) and extended in Virus of the Mind of Brodie (2010), was developed the BRAND DNA PROCESS®, wish consist in brand 'meme' validation methodology for corporations or institutions, to support their emotional, market, technique and resilience strategies. This paper demonstrates the BRAND DNA PROCESS® (Gomez et al. ,2011) application, which is a methodology developed by LOGO (Laboratório de Orientação da Gênese Organizacional) from the Universidade Federal de Santa Catarina, focused in the determination and/or validation of the "BRAND DNA". This is done by using co-creation and stakeholders integration techniques to define the memes, which should be used in branding processes. For a better acknowledgement of the process and its 8 steps, it will be presented a case study from Alvito, an Alentejo village from Portugal. This case study represents the process being developed from a territorial branding perspective, referring to an Anholt (2009) that says "territories can only change their image, changing the way they act".

KEYWORDS: Territorial Brand, Branding, Design, Brand DNA

Introduction
We live in an era where the level of competitiveness of products and services increases every day. Thus, the technology and production processes that were once a competitive nowadays are basic requirements to keep a product / service market. This global era, also enables the rapid spread of ideas, values and globalized brands. Every year a great number of brands that appear and disappear in the culture market, offering consumers various options to choose from.

The branding or brand management necessarily requires instruments of action, such as graphic design combined with strategies of communication and marketing. The multidisciplinary activities and products of the design proposes a holistic approach to branding that addresses the problem of communication, decipher it and generate creative strategies for branding. This is the theme of this study, which deals with the strategic management of graphic design applied to the branding of places, like countries, regions and cities.

The design management in an organization / service collects, manages and distributes the information that provide and enable the activities of Design and also the information and applications that are related to such activities. With regard to functional aspects, there is an oversupply of similar products. Thus, the aesthetic and symbolic attributes are relevant and necessary for differential products and brands. First, brands succeeded in remaining on the market, by virtue of the quality and benefits offered by their products or services. The experiential and tangible benefits, products and services offered by consolidated the reputation or credibility of the brands that have earned the loyalty of the consumer.

When there was a competitive product or service, with some competitive innovation in the market, brand reputation guaranteed the loyalty of consumers, while the company regained competitiveness of its products or services. But the increase of competitiveness and rotation of products and services made brands the stable assset and sustainable, even more than their products and services. This determined the continuance of aesthetic and symbolic attributes of the brands over its material expressions that are the products and services.

This article proposes a small research report on the area of Design Management, specifically the branding or brand management. The text is a result of studies and research conducted by the laboratory LOGO (Lab Orientation Organizational Genesis), Federal University of Santa Catarina / Brazil in conjunction with UNIDCOM (Research Unit in Design and Communication) of IADE-U Creative University / Portugal. The object of study is the process Brand DNA co-creative recognition of the organizational brand identity, which is developed by the laboratory LOGO / UFSC.

The process name brand DNA as a metaphor inspired features in Biology, by associating the genetic characteristics of living beings with organizations. Thus, it is considered that organizations also have certain characte-

ristics from their genesis, which constitute the essence of its identity and structure to your brand. Organizations as well as institutions, companies or other corporations, also the places and personalities can and use the concept of brand DNA, to define its market positioning and build a affective relationship with the consumer.

Brand DNA process and approach is adopted to identify and validate the organizational DNA of the brand. It is an approach that has emerged from studies that produced the DNA methodology Brand Tool (Gomez, 2009), which is already experienced internationally for eight years, with successful applications. The term DNA Brand Tool denominates a methodology that allows the co-creation of value for organizations by configuring its brand DNA, with participation from the very beginning, of the various stakeholders, sharing experiences in product design, service and communication. Since its creation, the Brand DNA Process has been applied in various areas such as territories, business start-ups, products, university laboratories etc.

This paper presents the practical application of DNA Brand Process, along with the methodology Ideas (R) evolution, which is based in the processes of design thinking, based on processes inspiration, ideation, and Implementation, focusing on transfer of a creative culture for territorial organizations , through a continuous effort of integrated innovation, applied to the region of Alvito, located in Portugal.

Design management and strategist design

Design "always involves both an intention, a plan or a goal, particularly in analytical and creative phases, and a draw, model or sketch, at the implementation stage, to shape an idea" (Mozota et al, 2011, p. 16). Design plays a key role in shaping the world and generate new products, systems and services in response to numerous market conditions and opportunities, working as a "mediator between the industrial and technological world and the consumer" (Mozota et al, 2011, p. 17).

Design also "supports the link between brand and strategy: 1- design and branding: design is a link in the chain of a brand or a way of expressing brand values to its different audiences; 2- design and corporate strategy: design is a tool to make visible a strategy" (Mozota et al, 2011, p. 17). In branding, design is "a discipline to solve problems related to the business and not just to create aesthetic appeal" (Phillips, 2008, p. 52). This highlights the strategic role of design, which "only becomes effective when you can solve the proposed problem. Therefore, it is necessary that the problem be clearly described. Moreover, the solution presented must be consistent with the business objectives" (Phillips, 2008, p. 40). If we wish design to be considered a strategic issue within the company, we need to act strategically, in coordination with the other functions of the organization. This naturally influences the design solutions, as they are part of the strategy" (Phillips, 2008, p. 24, 36).

The design with focus on strategy can be called "design management". Gorb (1990 cited in Minuzzi, Pereira & Merino, 2003) defines it as the "coordination of the design resources available in an organization to meet its objectives" or as an "effective distribution by managers of the design resources available to the company achieve its goals" (1990 cited in Best, 2006, p. 12; Mozota et al, 2001, p. 92). Thus, "the important aspects of design management involve understanding the strategic objectives of an organization and how design can play a role, and effectively implement the ways and means, the tools and methods, teams and planning requirements, as well as passion and enthusiasm to achieve these goals as a result of success (Best, 2006, p. 12).

According to Tim Bachman (cited in Phillips, 2008, p. 114), "design management articulates implicit and explicit communications that reflect the company's values", thus, "it adds tangible and intangible values to the company": it adds a brand. "Design management contributes to define the profiles of consumers and the values to be added to products and services in order to increase the company's business" (Fricke cited in Phillips, 2008, p. 115). It "helps the designer creating the differences that are perceived by consumers as benefits and that impact on their behavior" (Mozota et al, 2001, p. 110) by transforming the company meaning and image in a powerful tool to communicate, motivate and inspire (Larsen cited in Phillips, 2008, p. 117). To achieve this, "the establishment of the brand is the most used process. The differentiation and the brand management are part of design management (Mozota et al, 2011, p. 110). In accordance with Best (2006: 16), "within an organization, design management is present in the brand communication".

Mozota (2011, p. 125) explains that "the launch of a brand is one of the most effective ways to spread design across an enterprise. If the brand is well-developed and persuasive, promotes loyalty and encourage feedback from consumers", by transmitting the brand benefits, attributes and values, and reinforcing its meaning across all touch points experienced by the consumer. Design penetrates all components of brand value, mission, promise, positioning, expression and quality: "there is graphic design in the name and symbol of the brand; product design in the product performance; packaging design at the point of promotion; and environmental design in the store environment". All non-verbal elements of a brand – appearance, colour, touch, smell, finishing and sound – can be projected by design (Mozota et al, 2001, p. 127).

Design "participates in the brand valorisation making it alive in different bases: packaging, product, advertising, and in the long run, different markets. Brand features include credibility, legitimacy and affection" (Mozota et al, 2001, p. 135). In the relationship between branding and design management, "that means consistency in aesthetic and form, continued use of graphic codes and symbolic creation of new emotions" and meanings. Graphic design works in transmitting these emotions and concepts

through the visual elements that communicate the brand, regarding the form and the codes that compose of the brand.

Branding

Branding is a hybrid discipline, combining the fields of marketing, advertising, and design, dealing with management, communication, and form (respectively) (Gomez, 2009).

Figure 1 Disciplines of Branding

Branding makes a promise of the brand experience, how to live the brand. The means by which this promise reaches the client becomes part of the strategy used by the organization (Gomez; Olhats, 2010). This strategy is constructed from a vision, emerges from the values and culture of the company, is in line with the marketing strategy, and reflects a deep comprehension of the needs and perceptions of the consumer (Wheeler, 2008). "As the dominant form of communication, there is more to branding than advertising. This is because people seek a physical and sensory manifestation of a concept. Design is an emotional vocabulary that transcends words. It not only connects with consumers but also becomes the only brand language that matters" (Gobé, 2010, p. 114). It is also through branding that graphic designers create promise of value. "This area of design aims at conceiving complex systems of visual identity that fit with the company's internal systems of signage and communications. In its external communications, the company differentiates itself by a specific graphic and verbal language and applies these messages according to its different publics" (borja de Mozota, 2003, p. 8).

But above all, it is through branding that the relationship between the brand and the consumer is forged. "The nature of these relationships can vary, and these bonds help us to understand some of the possible meanings products have for us" (Solomon, 2010, p. 37). Self-concept attachment, nostalgic attachment, interdependence, or love, are some of the types of relationships a consumer can forge with a product (Solomon, 2010). Beyond a visual identity that the consumer can recognize, successful brands "connect with their consumers not simply by meeting their rational needs, but by addressing the emotional context of the need, as well" (Kathman, 2010, p. 107). Once there is an emotional bond between the consumer and the brand, the user identifies himself with the brand, creating a means of personal association of self image manifest through internal reflection and outward projection (Kathman, 2010). Further developing on this emotional bond, Tom Peters (2003, p. 155), author of Re-imagine!, states, "Branding is ultimately about nothing more (and nothing less) than heart. It's about passion...what you care about. It's about what's inside - what's inside you, what's inside your company." It is a language of feeling and sentiments, which, in a world of excess information and scarcity of time, is more valued than information (Neumeier, 2008).

Recalling the three disciplines that make up branding (marketing, advertising, and design), the element that most contributes to the emotion a brand can carry is design. "Until a decade or so ago, the public's taste for design had been stunted by the limitations of mass production. Now people have more buying choices, so they're choosing in favor of beauty, simplicity, and the 'tribal identity' of their favorite brands" (Neumeier, 2010, p. 22). Marc Gobé (2010, p. 109) creates an analogy where "design is to branding what jazz is to music: a new language of wonderful emotional experiences that unites brands with audiences. Design humanizes brands, stimulating our senses and feelings, and celebrates the power of collaboration and improvisation."

In this paper the concepts of branding are directed to the actions of the territory, when focusing on the construction and validation of the brand DNA of the Alvito village in Portugal.

Territorial branding

In the increasingly competitive world, the technology offers universal communication network construction opportunities and exposure of globalized brands. This explains the concern of territorial governments to increase the reputation and prestige of their territories, countries, regions or cities, to the international community. These places also have to compete for foreign investment, exports and camp tourism appeal. For example, each nation seeks to promote their identity, culture, history and other values, seeking to differentiate themselves in the global market.

In this context, the places strive to develop the intelligent management of their image. Countries or places that traditionally enjoy a positive image such as regions of Italy, France or Portugal, have competitive advantages in different spheres of economic activity. Architecture, art and, especially, aspects of French cuisine, Italian or Portuguese, among others, enjoy a good international reputation. This is also reflected in tourist activities, including the good reputation also favours the opening of markets for export products, and also attracts foreign direct investment business in these countries within and outside its territory.

Place Branding is a specific area of branding that aims to build and generate awareness of a territory: country,

region or city. In this sense, places are treated as companies and the work of branding is to build them a brand and manage it with negotiating purposes. For this, one must consider aspects tangible or intangible, or functional and symbolic aspects related to the history and culture of the territory. In the opinion of Ciflon and Simmons (2005, p. 242):
A brand strategy of a place consists of a plan to define the most realistic, most competitive and compelling strategic vision for the country, region or city, this vision must then be satisfied and communicated.

Olins (2005, p. 159) states that "within a few years a successful brand will be seen as an important national asset." Countries and territories have recognized the importance of having a strong, consistent, and that therein is represented the main features that differentiates it from others.

With the effects of globalization that has emerged in recent decades there has witnessing a high level of competitiveness between places be they cities, regions and countries. Factors such as size, location, economy, politics and management strategies are crucial in determining the level of competitiveness of these territories.

Thus it becomes essential for the appearance of that territory to define an identity in order to strengthen their positioning before the rest of the world. Thus arises the concept of Place Branding (authors). When one studies the place branding, places are seen and treated as brands, in order to win customers around the world. So the target market for place branding is global and competitive.

Place Branding combines communication and marketing techniques to promote the destination. As the brand image of the commercial products and services, specific rules governing the positioning of the brand, how its reputation is built, such as customer preferences are addressed and loyalty is achieved, and how the brand is managed.

Countries, regions, cities, towns and large real estate development projects are currently being processed into products branded with the planet, serving as a global showcase. (Marazza, 2010)

Paddinson (apud Moreira, 2010) states that the Territorial Marketing has been used by some cities to rebuild and redefine, with a strategy founded in local activities that reflect and reinforce that image. With this statement by Padisson we can understand the reason the actions why many of the actions of Place Branding taken by countries, cities and regions are directly connected with the definition and development of an identity that is unique and different from the others in order to be a reference and becoming the top choice of tourists and foreign investment. Anholt (2009) states that "the places can only change their image, by changing the way they behave." Anholt believes that for countries to change their image, they need to focus more on what they do and not what they say. There are several factors that influence the image of a territory:

- Policies economic, environmental and external;

- Dynamic development of tourism, foreign investment and exports;

- Cultural events, sports and political;

- Improved relations with other countries;

- Focus on strategic commitment to poverty reduction;

- A long-term visionary approach to innovation, investment and education.

The critical success factors for the development of places are largely linked to the capacity of creating a regional leadership and future vision for networking, promotion of entrepreneurship and community involvement in the regional agenda (Barclays, 2002). For that invest in building a regional identity becomes an essential task for government, population and market.

Reviewing Ideas (R)evolution

The IDEAS(R)EVOLUTION is a methodological approach that links creative thinking and tools within organizational structures. It is a UNIDCOM/IADE research project that has been tested and proven efficient among some industries and territories. This new methodological approach integrates several innovative and creative practices within businesses. It breaks boundaries and contributes in creating more flexible and competitive organizations. Such a concept is rooted in three main areas, namely: Land(R)evolution - Innovating Territories; Brands(R)evolution - Innovating Businesses; and Learn(R)evolution - Innovating Education. Each of these areas is presented with its own sets of tools and methods.

Based on three emerging approaches of design thinking (KELLEY 2006, BROWN 2008, MARTIN 2009), co-creation (PRAHALAD et al, 2004; FERREIRA 2008, GUPTA 2008) and branding (AAKER 2010, NEUMIEYR 2010) and by the conceptual and scientific data presented by Gomez and Mateus (2009), the methodology IDEAS(R)EVOLUTION is structured, in the most current management paradigms, as a way of developing a creative culture within companies, territories and educational institutions – users – in order to be more competitive in the market, as well as more collaborative in their internal organization and dissemination of their products and/or knowledge. With the IDEAS(R)EVOLUTION methodology, the user establishes a culture that: systemically demands the "next big thing"; prepares team work; defines problem solutions; as well as sets up a tangible management that orients people. Thus the methodology acts on all the issues identified by Mintzberg (2010). It acts on the user's collaborators mind-set, in other words it plans, motivates and prepares people for creative work. It enhances team dynamics, collaborative creative processes and prepares the environment for the process and the creative work (Brown, 2008) of the company, the territory and the educational institution. Thus,

these companies or organizations can focus on innovation and be adapted to environments that are constantly changing.

Within Ideas (R)evolution methodology one of the processes used for the stakeholders' technical / emotional approximation and involvement for brand strategies, is the construction of its co-creative "DNA". For this it has been used the BRAND DNA PROCESS® for fulfillment of this step, of approximation for all involved in the process.

Brand DNA Process

In its essence, the Brand DNA Process, developed by Gomez (2009), provides a guide to determining this DNA. Through evaluation activities with the company's stakeholders, the organization can explicitly verify the genetic characteristics that the brand holds (Gomez, 2009). The Brand DNA consists of four key words, like the four components of the human DNA – adenine, cytosine, guanine, and thymine – and one integrating concept that unites these four, like the hydrogen bonds that link the nucleotides.

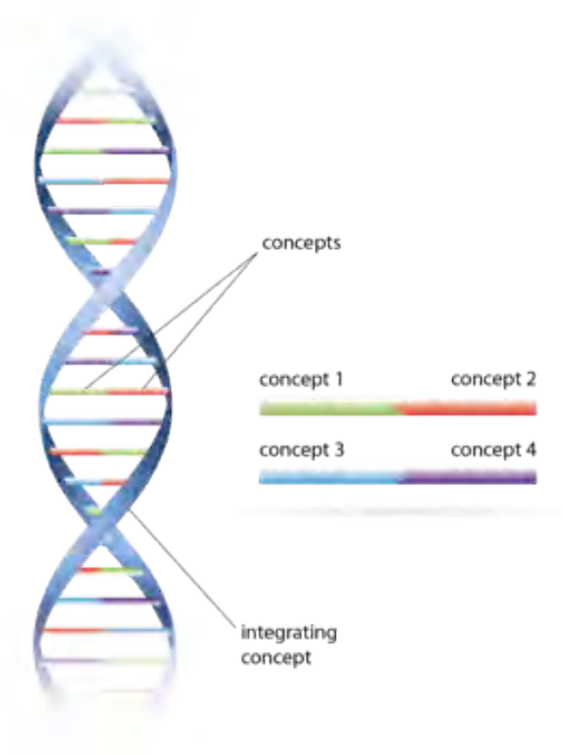

Figure 2 Brand DNA Components.

The concepts that make up the Brand DNA can be considered memes. Meme, according to Dawkins, "is the cultural counterpart of the gene, a unit of information that passes from person to person. […] Just as genes propagate themselves in the gene pool by leaping from body to body via sperm or eggs, so memes propagate themselves in the meme pool by leaping from brain to brain via a process which, in the broad sense, can be called imitation" (Dawkins, 2006, p. 192). Memes are to the 'non-living' what genes are to living organisms; they are the DNA components of society. As part of the Brand DNA, these memes transfer the characteristics of the brand through its various activities, creating emotional triggers, which generate a relationship between the brand and the consumer. The application of the Brand DNA Process can occur during the three stages of a brand's lifecycle: planning, evaluation, or restructuring. In other words, the Brand DNA can either help build a brand in its initial stages, evaluate the brand's identity as compared to its stated values, or rejuvenate a brand on its decline, amending the existing DNA and adapting it to the brand's new characteristics. Once the Brand DNA has been determined in collaboration between the designer and the organization, it should be integrated into the design, positioning, mission, name, product, values, sound, smell, taste, and services of the brand. The strategies developed following the establishment of the Brand DNA guide the organization to help apply the DNA in its various activities. It is important for the Brand DNA to be omnipresent and always faithful to the brand's true identity, thus serving as a tool to create brand elements, which consistently reflect the brand's deepest emotional attributes.

Since its creation, the Brand DNA Process has been applied in various areas: territories, start-ups, established businesses, etc.

Abordagem Brand DNA Process aplicada à região de Alvito/Alentejo

For the implementation of Process in Alvito Brand DNA and its integration with Ideas (R) evolution was followed the traditional model of application of the process as presented by Prestes & Gomez (2010), where the steps were clear and well distributed as follows:

- RESEARCH: even before any direct intervention with project interlocutors sought to through literature and Internet information about the town and their specificities;

- DIAGNOSTIC: Interviews were conducted with public management (stakeholders), with community members and surrounding communities (opnion makers), historical research and interaction with observational community for two weeks;

- SWOT ANALYSIS: We listed the problems reported by various stakeholder groups and evaluated according to their perspectives, the problems were located in time and space. The objective was to have material to counteract stakeholders in the next step;

- CREATIVITY BRAND: Event held with the participation of local community stakeholders mapped when performing the diagnostic step. In this event using the DNA Brand ® Tool Gomez (2009) were defined and structured the "fundamental concepts" brand Alvito;

- CREATION DNA: Validation of DNA developed with stakeholders in accordance with the information gathered and analyzed previously. At this stage the public officials were the main interlocutors, and that supported the research results presented to them, validated the results of previous steps;

In the case of this project the last two steps: PRESENTATION and EVALUATION are not presented in this article as happened at a different time and is not the focus of this work.

Figure 3 Alvito.

Figure 4 CREATIVITY BRAND

DNA Alvito

The DNA Alvito validated by DNA Brand Process (Gomez et al. , 2010) was represented in the following concepts:

- welcoming
- reliable
- harmonic
- authentic

Having as an integrator of concepts:
HAPPY PEOPLE

With DNA from Alvito validated whent of for the next stages of the project where, through the design tools used by the methodology Ideas (R) evolution to construe the Brand Book brand Alvito which was divided into: Essence of Brand, Strategy brand Design brand. This result was presented in 2011 and has been used by the community for the execution of their marketing strategies to expand the aggregates values of the region and expansion of economic results, financial, tourism and, above all, social outcomes. The final results have not yet been evaluated but has been positive responses from both the community and public management on the implementation of the project.

It can be concluded that the application of a co-creative approach, where the participation of all involved, within a holistic thinking perspective design extending the concepts of design thinking and strategic management of the design for the entire community, reinforces the role of territorial branding as an an important tool in the construction of the economic, political and social strategies of one region. The results it can be seen in Alvito and other areas where the Ideas (R) evolution has been successfully implemented.

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The differential value of Colombian artisanal crafts within fashion globalization.

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Abstract
It can be said that Colombian crafts and artisan work, as part of the nation's economical and socio-cultural activities, is of strategic importance to the country. Given that this product unites projection and border crossing qualities, such as: a wide variety of articles that expose the mastering of ancestral techniques and indigenous materials; the bearing of a mix of pre- Columbian, Spanish, African American and native elements; the affirmation of identity of a community, region or nation. Because of this, there are multiple reasons justifying the work of renowned designer and new creators, to empower artisanal production within markets where it finds great acceptance.

In this sense, numerous demonstrations from government and private entities have emerged, as a reaction to the extent of globalization, that has reduced the sensation of isolation experienced by a greater part of the developing world (in this case particularly Colombia), that have created projects and programs guided to solve the necessities identified in a given sector, such as the following: lack of research; difficulty in accessing new technologies; limitation in the development of new products and shortage of innovation in the design process.

With the approach towards the artisan community, the fashion designer has achieved integration between the tradition aesthetic of the artisanal with contemporary creative practices, giving way to novelty proposals that achieve the required dimension.

KEYWORDS: fashion, handicraft, innovation, creative, identity, culture.

The activity involving the transformation for production of individualized objects, also known as artisanal work, constitutes an important base for the economy and national development given that it represents the 15% of jobs in the manufacturing industry. In urban and rural Colombia, approximately 350,000 people –indigenous, peasents, raizals and Africo-Colombian individuals- are entirely dedicated to different jobs within the artisanal productive sector (Programa Gestión de Producto y Empresa de Artesanías, 2009), according to information provided by the Artisanal Sector's National Economical Census of 2007.

With the purpose to consolidate artisanal activity in the past decade, different state and private entities have been approaching this sector from the different perspectives of each region, with projects that "allow the becoming of strategic partners in the design, implementation and development of programs" (Ibíd.), in order to search for solutions to the lack of research, the difficulty in getting access to new technologies, the limited development of new products and the lack of innovation, among other needs of the sector.

Actually, these communities can strengthen the "value chain that benefits their economy and cultural environment" (Ibíd.), in order to lessen problems such as informality and the new generation's lack of interest to get involved in artisanal crafts. This can be achieved by bringing the possibility of interacting in family workshops or even build their own enterprises within the sector; while presenting it as a development and enterprising opportunity.

However, any project related to artisanal crafts brings a question: What's the criteria that allows to identify which activities can be considered artisanal? It's hard to give an answer, even in the reduced environment of the region's artisanal experts where there's no clear criteria regarding the subject.

With this approach, it becomes necessary to define artisanal crafts, which according to Artisanal Law #36, is identified as "a creative and permanent activity involving object production, performed mainly by hand and assisted in certain cases by simple machinery obtaining an individualized final result, determined by cultural patterns, environment and historical development" (Quiñones, 2003).

Different interpretations for this definition are always expected. Considerations arise in which artisanal crafts is catalogued as a productive process where artisan manual labor plays the biggest part. According to this definition, artisanal craft is conceived as a practice where, generally, the process itself determines the amount of pieces elaborated. However, it continues to not be limited to minimum manual intervention in the productive process, in order to be considered an artisanal activity.

From a different stand point it's possible to bring closer technique and the abilities acquired through practice to the threshold or art. "Unique pieces" or limited series can be considered a form of artistic expression, result of a process with the effort of being different from industrial products (Ibíd.). This leads, among other things, to the opening of new distribution channels directed to galleries and art fairs.

With both positions about artisanal crafts, it can be assured that its production in Colombia as economical and socio-cultural activity brings strategic importance for the country. Given the fact that Colombia's artisanal product has the image to justify its presence in the international market; even with the difficulties artisans face with export processes and sustaining the demand which is mainly focused on European, Japanese and American markets; where it's considered as an exotic product (Programa Gestión de Producto y Empresa de Artesanía, 2009).

Besides, it should be noted that the purpose of Colombian

artisanal crafts, at an international level, is to have the recognition of being an enormous source of jobs and income; as well as an affirmation and projection of a nation's identity, such as it happens in countries as Mexico, Peru, Ecuador, India, Iran and Indonesia (Ibíd.), where this activity has reached great development and their products have entered intensively in the international market.

Under this vision, creative individuals in Colombia with a wide trajectory and worthy representatives of national talent have achieved expressing in their designs the passion for artisanal work through the planning, gestating and conceiving clothing and accessories from a concept full of color, that reflects the ethnic and cultural diversity of different regions of the country.

In this sense, there have been manifestations as a reaction to the extent of globalization, that have reduced the sense of isolation experimented by great part of the developing world and have trespassed the economical and cultural frontiers of Latin-American countries such as Colombia. This phenomenon has unleashed a new feeling of patriotism that strengthens our identity towards the "homogenizing aspects of globalization" (Stiglitz, 2003).

Such has been the effect that its generated on some designers, the tendency of a sense of freedom, to intervene with the design of new projects that allow la use of codes of their own that strengthen the differentiating character of the Colombian product towards other productive cultures.

But without a doubt, what's most important has been the search for the capacity to express fashion centered in the use of artisanal materials and techniques; with fabrics developed from cotton, fique, wool, plantain and silk fibers, among others; bastkets made out of esparto, fique, bejuco, iraca and caña fleche to name a few. The same goes for embroidery and fabric applications, jewelry, works with seeds, nacre, horns, wood, leather, skin, ceramics, stone, bone and guadua. Elements that grant relevance and differentiating values to proposals that have been exhibited in past seasons in runways at local, regional, national and international levels.

These creative individuals have achieved to articulate the need to reaffirm and enhance local cultural identities with a global vision, in agreement with García Canclini's thesis where he states that even innovative ways of rethinking what's local are defied by that constant mobility of experiences and cultures, referred to by this author as hybrid cultures. But very often, "hybridization arises from individual and collective creativity (...) of popular sectors that (...) link their artisanal craft with modern uses in order to gain interest from urban buyers" (García Canclini, 2001).

In this creative process, the designer looks within and searches recognizing the origins of our identity and cultural hold, since historical moments in which different cultural began interacting (Hispanic, Indian and African). This allows defining the context and tradition that constitutes the ideal frame to innovate the design of clothing garments and compliments, elaborated with natural materials that present a wide spectrum of textures and colors. They have mixed artisanal traditional aesthetics with contemporary creative practices, contributing to the enrichment of new proposals that reach the required dimension to achieve impact.

Appropriation, reinterpretation and recreation of some artisanal products by designers and fashion design students, have as a result their modification regarding function and form, but without changing the essence of the structure (technique and material) that identifies them as a cultural symbol from a particular society, that resists and grows stronger in the fight against the global village. This way, intercultural affairs and exchanges around the world represent in many cases a reality that favors the different identities of cultural groups allowing for a higher degree of communication and negotiation among them, given the fact they generate mutual benefits and make traditions more respectable.

Fashion with Colombian identity for the world

The main interest of different entities such as Artesanias de Colombia, Proexport Colombia, Imagen Pais e Inexmoda has been to promote the nation and its artisanal work, searching with participation of fashion designers to boost their creativity and strengthen the national manufacturing industry, creating jobs and quality of life with the use of products, materials and techniques from artisanal communities.

Linking the creativity of Colombian designers with artisanal work from different communities, combining creation, production y commercialization of creative content in which Colombia possesses a rich tradition of materials and techniques, that even differentiate us from the rest of the world through versatility and originality; qualities that show higher competitiveness.

Showing a new and singular concept in fashion towards the world is the challenge assumed by designer such as:

- Francesca Miranda. Has recreated dresses, shorts, linen tunics and silk with traditional embroidery in a scale of crude tones, making use of ancestral elements, artisanal products, and the richness of indigenous tribes with the intervention of fabrics, dyes and ornamentation. Achieving with this Miranda's "sophisticated woman luxury" style as a design proposal that symbolizes the whole cultural legacy of a nation (Luna, 2008).

- Beatriz Camacho. This designer has demonstrated her capacity to fuse modern tendencies and our country's traditional garments, through collections with the use of materials like caña flecha from San Andres de Sotavento, plantain fibers from San Agustin, iraca from Sandona and horn from Barranquilla, among other raw materials of natural origin (ColArte, 2009).

- Adriana Santacruz (2001). This creator from Pasto, Colombia achieves, through a timely and harmonic work of color, volume and layering of fabric, a collection of structured garments in noble textures, woven in guanga (Pre-Columbian indigenous loom) with a color palette that integrates cold and warm tones, and that reflect the feeling and hands of the group of artisans from the Chiles Indian shelter. With this, she transmits a valuable lesson of memorial juxtaposition within a culture that struggles constantly between holding their roots and multiculturalism, fruit of a globalized world, but expressed within a contemporary aesthetic.

- Hernan Zajar (2011). For this designer, roots, earth, everything hand-made and an endless number of autochthonous materials, provide women a character of casual simpleness and a dose of authentic Colombia. Hernan Zajar, from Mompox, Colombia fuses earth and asphalt, traditional, artisanal and contemporary. To achieve this, he explores our roots and rescues elements such as totumos, palma de iraca, caña fleche and even threads of silk in warm colors to elaborate fabrics in croché and macramé.

- Judy Hazbun. Working with San Agustin, Sandona, Nariño, Usiacuri, and Atlantico artisans and with Tundama de Duitama fabrics has represented an unprecedented experience, by developing a both artisanal and sophisticated product (ColArte, 2011). Materials such as pieces of totumo and palma de iraca are mixed with silk fabrics in warm tones, but intertwined as threads, almost elaborating fabrics by hand with fibers made by artisans.

- Pepa Pombo. The warmth and originality of garments in twisted cotton, loops of thread and a variety of dyes, have allowed her to be signaled as a “texture artisan”. The creative and innovative manual work that have characterized her proposals for over 30 years, define the present style in the variety of textures in the fabrics that contrast with the smooth and simple fabrics made by the industry every season (Arango, 2011).

- Amelia Toro. “Design is everything” is the phrase that defines the lifestyle of this designer. Style that adapts to the needs imposed in the country, especially regarding color selection, but mainly focused towards a more universal design. Amelia Toro in her work takes conscience of the truly important, which is taking advantage on the national talent to elaborate her designs, that are highlighted by their manual construction and the delicateness of the embroidery present in every one of her collections. With and extraordinary mixture of contrasting colors, textures with diversity of fabrics and very contemporary silhouettes, she developed a collection based on the Molas elaborated by the Kuna Indians (Terra, 2008), resulting from this an unforgettable artisanal fashion show to show the world that Colombia is a country of authentic and innovative ideas worthy of export.

“Colombia Creativa” a project gestated in academia. Universidad Autonoma del Caribe and its Fashion Design Program have besought internationally strengthening the image of artisanal production in the Caribbean region and the talent of this institution’s new creators. Under this premise, a different focus towards design is projected; from academia involving in its process artisanal work, to achieve results worthy of being shown in the different stages and events of the textile-fashion-confection sector.

Implementing the project has represented major progress perspectives in the communities dedicated to these type of activities, given that in the development of the proposals students integrate their talent and creativity, with the skill and aesthetic of the artisanal work of important communities of great tradition in manual labor; present in the Caribbean region, especially in the state of Atlantico. For this, they base a given theme that sustains the process that allows to give shape to authentic designs that combine to perfection ancestral and modern, resulting in a new alternative of garments and accessories, full of colors and textures directed to the demanding fashion market.

The participation of the students should be highlighted. Their creations have represented the institution in academic missions and international runways such as Ecuador Fashion Week and in the past years, Miami Fashion Week; all thanks to the Colombia Creativa Project.

The Ecuador Fashion Week runway, in three occasions have represented the opportunity for a collective of advantaged students from all semesters to participate with innovative proposals for accessories such as shoes, bags and jewelry, as a sample of artisanal work in the Caribbean region. From the combination of ethnic, aesthetic and symbolic values of diverse artisanal techniques such as carving and painting in wood, pieces of totumo, palma de iraca, caña fleche or macramé, came the resources that with the innovative vision of the designer made possible the expression of significant and original compliments, articulated with dresses of contemporary character.

The participation in Miami Fashion Week has been constant during the past years, with the valuable support of the university and the Government of Atlantico. 2007 was the first opportunity to present in this event the first project of Colombia Creativa with the staging of 62 student proposals from the Fashion Design Program. These young talents developed an avant-garde concept of jeans wear design, for contemporary and dynamic women, taking as reference diverse Colombian artisanal expressions like filigrana momposina, palma de iraca threads, Cartago embroidery and the unmatched Muzo emeralds, on base textiles such as satin, silk and combined elastomeric fabrics like denim.

With brides dressed au naturale by our students, we made presence once again in Miami Fashion Week. These proposals gave strength to the identity of Colombian design in an artisanal and ultra-feminine runway where woven

palm, fique and croche with pearled threads where protagonists that highlighted the curves of the feminine body. Innovative garments were presented such as tight dresses with décolletage and bras that evoked an Indian legacy, given the use of rustic and natural materials in details as floral ornaments, draping and dramatic necklines.

For being one of the most elaborate work in exhibit during Miami Fashion Week, the Colombia Creativa Project manages in 2009 the projection and integration of Colombia's Caribbean artisanal craft within international fashion through an accessory collection made out of oversized purses, shoes, jewelry and elaborate belts woven in fique, yute and palma de iraca; decorated with coconut and totumo shell, in combination with noble materials such as leather and different natural fiber textiles.

Finally, it can be said that hundreds of designs elaborated in Colombia –with different artisanal techniques and great aesthetic qualities- are pieces making history in national fashion, precisely because they're being internationalized as a sui generis product that has positioned itself in the most demanding markets. In order to strengthen the artisanal production developed with diverse aggregate values and enter new markets, there must be multiple actors operating articulately and constantly; this means, artisanal communities, raw material producers and marketers, and private and public institutions at a local, regional and national level in strategic alliances that allow each and everyone to collaborate and contribute achieving a higher participation and acknowledgement within the international market.

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The essence of "simplicity" in Design is also an Engineering parameter

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Abstract
Design and Engineering are today less an act of drawing or projecting something, but rather the act of drawing a program that in itself conceives a diversity of solutions pertaining to the service or function that we intend to draw or project.

Today, Simplicity is a quality that not only arouses the passionate devotion for a product aesthetics and design, but also became a strategic key tool to allow business to confront their own complications.

So this paper aims the essence of "simplicity" and how it shows up in several existences, whether it may be in Design, whether it may be in Engineering.

KEYWORDS: Simplicity; Design; Engineering; Theory of Information; Believes Systems

Introduction
From John Maeda (2006) it's clearly known that the study of what is Simplicity is central to Design and Engineering. This paper deals about this introducing a method to measure Simplicity.

Design and Engineering are today less an act of drawing or projecting something, but rather the act of drawing a program that in itself conceives a diversity of solutions pertaining to the service or function that we intend to draw or project.

This drawing or projecting activity may thus be defined by the creation of new materials; genetic manipulation; software and interface conception; formulation of new forms of languages, mostly those of visualization nature; conception (drawing) of social, political and cultural ideas; generation of new behaviours with growing complexity.

By opposition and in consequence of complexity, and also from the intervention of Design and Engineering, we all can access better life quality; we can access better technological artefacts and products and allow its interaction in a simpler way.

So this paper aims the essence of "simplicity" and how it shows up in several existences, whether it may be in Design, whether it may be in Engineering.

The first time ever someone described how the better organization and functionality of systems can be linked to Simplicity was, in 1870, Claude Bernard (GENE, 2007). However Simplicity, as commonly understood, is not an easy thing to describe, much less to comprehend. What is taken as Simplicity is an undetermined number of concepts to explain what supposedly Simplicity is. The result is a great dispersion that cannot afford reasoning. Some have been able to reduce the given conditions for the existence of Simplicity to ten concepts designated as laws (MAEDA, 2006). However we cannot consider it as a definition to describe "simplicity" because such multiplicity is just and only descriptive. If we ought to have a classic image of the state of the art for Simplicity we can remember the first knowledge of the relation between triangle sides, which was an in-equation:

$$a + b \geq c \qquad (1)$$

Or in-equations have an infinite number of solutions. For millenniums solutions where published with possible triangles. The amount of three side set measures could close in in a triangle. So it was until Pythagoras simplicity:

$$a^2 + b^2 = c^2 \qquad (2)$$

As equations have a finite number of solutions never again was it necessary to write down tables for possible triangles. The comprehension of real space metrics brought up the great growing efficiency to whom that draws structures. The solution for the problem of knowing if three given measures of line segments would originate a triangle is said to get simplified, and metrics allow simplicity.

Just as in the time where one could only know that the addition of two sides of a triangle is bigger or equal to the length of the third side, to find the solution for simplicity we can also, today, establish tables.

One of the most recent (2006) is that of the mentioned Maeda. It functions as a synthesis proposal in the rules of Simplicity built in ten laws judged by being different and independent from each other.

This chapter aim is to present a measure for simplicity that will turn it into a parameter central to Design and Engineering.

Until now there are a certain number of rules or laws for Simplicity. As mentioned, the most recent attempt to reduce notions diversity, Maeda (2006) defines ten laws. But every time we arrive at a number ten we cease the main question again. Why ten? Why not eleven or nine? Maeda and his theory of Simplicity suffer from the fact of not having been brought to the Science domain, meaning it is not measurable.

Thus this chapter object is also to clarify Information's concepts, taken as data synonymous, stated arguments and rarely faced has Science parameter, either in Design or Engineering, so thus measurable, though observer dependent and relativistic.

In this context, the chapter is meant to suggest, until designers find out about it, that Simplicity can be measurable and can be so from Fisher's Information Amount (1925) definition. At the same time the notion will come by that simplicity's measure is also relativistic yet measurable, thus "mathematizable" related to math, using concepts initiated by Jacob Bernoulli and those more recently funded in mathematics by Dempster and Schafer (1978).

In 1925, Fischer, upon realizing that just like space and time, information is something we all know until someday someone asks us about it. Yet he also knew that physical language description is based in the fact that, whether or not knowledge gathering of its essence, time and space are measurable. With measure one can admeasurement, one can establish comparisons; one can recognize solutions, and future can be sounded.

In 1925, before a set of data Fisher foreseen the possibility of measure or calculate information amount over an unknown variable. A set of data gives an information amount over an incognita that can be measurable or calculated. After Fisher, measuring or calculating the information amount that allows a set of data to acquire uncertainty's reducing became a possibility. After Fisher it became possible to know if one is acting upon the incognita, guessing, predicting or foretelling.

The method had been established by Jacob Bernoulli back in 1713. In its "The Art of Conjecture" (Ars Conjectandi), he establishes the way to calculate the probability of happening. This probability (probilitas) is not the case. It is not a synonymous of chance. It is the method of how sure one is about something that is going to happen to the incognita. Bernoulli proposes the method we have selected to present the theory we are about to show, the method of combined argumentation.

We will increasingly use the results from Melo-Pinto (1998) in the recognition technique (the knowing of what the incognita is) and by the mathematic method of arguments combination however developed by Dempster and Shafer. They both have defined the set for each argument and its weight as a function in the System of Believes.

In this chapter it will be established that for a given System of Believes there will be as much simplicity as minor it will be the number of data set elements that will be giving the higher amount of information about the incognita.

Also it will be concluded that before a same set of data there will be Systems of Believes for whom there will be higher concentration of information about the incognita.

So this chapter is about a measure of Simplicity before a System of Believes. Simplicity is as bigger as minor it will be the number of elements of the data set that brings the higher quantity of information about the incognita. The relativistic character of Simplicity's measure will be evidenced as well as how to manage it following from the System of Believes properties.

In parallel it will be established that Design concepts, as well as those of Engineering, have been guiding conception's structuring for Simplicity showing that the concepts expressed in this chapter are not as where possible triangles tables before metrics knowing in Euclid's space, rather therefor a metric for Simplicity.

This principle may be sustained by several applications, particularly through the Universal Principals of Design. It is also build in arguments or data, as proposed by Lidwell et al. (2010), when stated that Design essence is one of the meanings of artefact that surround us and that we effectively use in our daily life. So we will do the demonstration of how Design Simplicity is also an Engineering parameter.

Following Claude Bernard, who in 1870 discovered physiologic medicine and stated that the condition for a free and independent life lies in the stability of the internal mean, which naturally depends on the wellbeing of each individual, and it's built under his own system of believes. Simplicity is also related to a system of believes, and as such it will always be associated to the seer that applies it or observes it. So one can state that "Simplicity" is relativist, once it's System of Believes' is dependable and that variants from the same System of Believes can be understood as a School. Enough will be that a set of designers or engineers share the same arguments to each one of them as well as the same weights.

Simplicity

The social and economic impact of information systems in society is a reality in part due to the progress in telecommunications in its most recent shapes, internet, television, computing systems and mobile phones. However a new challenge arouses in the digital era, related either to Design, Engineering, or Technological level employing, which consubstantiates with the need to attain Simplicity, either to contents, either above all to the drawing of the related interfaces.

Actually Simplicity is also a quality that not only arouses the passionate devotion for a product aesthetics and design, but also became a strategic key tool to allow business to confront their own complications (MAEDA, 2006).

So we can state that Simplicity is something we all long for... For example to refer to the unquestionable commercial success of Apple's iPod – a device that has less functionality than others available in the market with the same function: a digital music reader. People want and prefer products they can use with simplicity.

Has referred, the first time someone describes how things are in fact simplicity-related was, back in 1870, Claude Bernard. But simplicity as usually referred can be everything but simple.

In the realm of this paper will thus be transmitted that it

makes no sense the idea that necessarily individuals who work in science have to speak or write or act mandatorily in a complicate and not complex way, when one just wants to communicate.

Today, the request is to know how to communicate with simplicity, with clarity, interest and repetition, if thus is necessary, to achieve that the main principals to transmit are understandable (KOTLER, 2000).

Already Priest António Vieira, in one of his most important sermons, "O Sermão da Sexagésima", spoken in Lisbon at the Capela Real, back in 1655, were he vindicates clarity, simplicity, syntactic and dialectic rigor, rigor in logic thinking, and what he defines has an oratory art of aesthetics simplicity, advocating that the preacher should opt for a single matter, define it, share it, confirm it by the Holly Readings and with reason, preacher should always use, ever if possible, examples and rejecting contradictory arguments, so he may be able to conclude and persuade...

It is this persuasion capacity that by nature is present in human life through different degrees and combinations that allies simplicity and complexity.

But what is effectively Simplicity? Having also apprehended how really complicate it is to establish Simplicity measure, Maeda (2006) was able to describe Simplicity in ten (chapters) laws: To reduce – the simpler way to achieve simplicity is by means of a conscious reduction; To organize – organization makes a system of many look like a system of few; Time – time economy transmits simplicity; Learning – knowledge simplifies everything; Differences – simplicity and complexity need one another; Context – what lies in the simplicity's periphery is definitely non peripheral; Emotions – more emotions is better than less; Confidence – in simplicity we trust; Failure – some things may never be simple; Singleness – simplicity is to subtract the obvious and to add meaning.

Then he adds three more components, which are: Distancing – more seems like less simply by going far, far away; Opening – opening means simplicity; Energy – use less, win more.

Sill according to Maeda, simplifying a project is harder than making it complicated. The great majority of examples he uses are the result of experiences and problems he subdued.

However his considerations about simplicity in life, in business, in Technology or in Design or Engineering, are not to be considered has having been obtained in the basis of a method from a scientific nature.

As well has we do not consider a science that same method of gathering that catalog of squared angles registration that we referred in the framework of this chapter.

It finds out that, as to the meanings of simplicity, that we are allowed an infinite variety of data, and as such the information we have is still short, so being before an inequation as it has an infinite number of solutions.

In this paper we will led to know, as Pythagoras did through is theorem, that there is also a way that allows us to be objective, measuring, on the contrary of the description from MAEDA's (2006), one can describe Simplicity has it has been sustained by Fisher (1925), as the first definition of information amount.

In a predictable future Simplicity is thus doomed to be a Design and Engineering motto, of a whole Industry, has it has been in it's own time the discovery of Pythagoras's Theorem... shortly, we aim to give to understanding that simplicity is not something intuitive. In fact, today we possess and have access to a great data complication, on the other hand and by the same data they are a complicated process, so we have very little information, which by analogy leads to conclude that if we are before an enormous simplicity, a few data set will give a great amount of information about the instrument, the system, whatever.

Simplicity, like easiness, hardness's, information or complication, are matters of the observer's measuring. It depends on his own believes systems.

Theory of Information and Believes Systems

According to (DREKSTE, 1999) Theory of Information is a branch from probability theory and from statistics math that identifies the amount of Information associated or generated by an event occurrence, or the realization state of things, by uncertainty reduction and the elimination of possibilities, presented by the event or by the state of things in cause. Relatively to Information it is always mentioned "choice" and "amount" and how to measure Information.

Sir Ronald Fisher (1890-1962), a renamed scientist from the 20th century with large contributions to Statistics, Evolutionary Biology and Genetics, introduced in 1925 the concept of Fisher Information, long before entropy notion-1from Claude E. Shannon (1916- 2001) with the maximum probabilities techniques and variable analysis.

However the concept and notion of information is vague and intuitive. In 1948 Shannon gave us a more recent definition of Information amount, being the measure of freedom of choice of each one of us when we select a message (data) between all messages from a set.

To Shannon, the content of Information in each message consists only in the quantity of numbers (bits), of zeros and ones leading to the message conveyed. The Information can thus be processed as a physical measurable amount.

A possible structure for Information levels are: Bits and Bytes/Signs; Symbols; Data; Information; Meaning; Knowledge (Tacit; Explicit); Perception; Meaning.

It is so deductable that the Theory of Information explores the possibility of quantitatively measuring a message's information to utter analysis of its meaning (CARVALHO RO- DRIGUES, F., 1989).

From now we can conclude that before a set of data it is possible to "know" if it has higher or less Information over a variable we do not know but want to know.

The probability is a measure of how certain we are and it's achieved with a combination of arguments. An argument may be defined has a thinking to prove or refute a given question.

When an argument fits with math, one can make predictions. When an argument is an image, one can forecast as "an image is worth a thousand words" being objective. When one has both arguments (image plus math) one can acquire certainty. Each argument must have a weigh and the set of arguments with their relative weigh is a System of Believes.

Probabilities are estimated by the number and weigh of the arguments that prove or indicate that a certain thing is, was or will be. Arguments, by themselves, are intrinsic, or artificial in the daily speech, they are expressed or come out according to the cause considerations, the effects, the observer, the connection, indication or any other circumstances that may have any relation with the thing under proof. It can also be external and non-artificial, coming form the observer's authority and his witnesses.

When we approach the matter of information we cannot avoid the observer's role. Carvalho Rodrigues advocates that the measure we take from the amount of information in messages received by our senses is based in perception. He gives us the example of two woks from the Russian painter Kasimir Malevitch2 (1878-1935) founder of Supremacies (1913), who painted ***A Black Quadrilateral and White over White***, he had genius enough to show in these two works the «the pure feeling supremacy's, or the perception in painting», being painting only a ***color construction on a two dimensional space.***

When we ask what is in those paintings the immediate answer is: A black quadrilateral and a white quadrilateral. However we are before a white canvas in the first painting and a canvas with an almost imperceptible line in the second.

It is exactly over these paintings that that we allow to the black quadrilateral and to the white square higher information amount, because they induce in each one of us feelings which in turn generate action. We also know that ***"the rarer the event the higher the turmoil in all human structures".***

In this case we were led to conclude the less probability for an event occurrence, or yet, the minority of its frequency, the bigger our perception upon it, so the higher amount of information it contains.

"It is this supremacy, the supremacy of our perception over our feelings, the supremacy of information amount we can measure in an event, over its frequency that commands our behavior that induces major modifications in systems" (CARVALHO RODRIGUES, F., 1989).

It is not surprising that human made creations in the most diversified systems are fragile and precarious and induce great complexity. A system with a great amount of data to obtain less information is said to have a highly disordered structure, and induces in the observer a huge ignorance. On the contrary with an orderly and well organized structure with a set of data with few elements, one can obtain all the necessary information. In short, the degree of knowledge we can have over a determined system is maximized if its uncertainty is zero.

To do so, a method has been developed to calculate the information amount that events generate in the observer, tested in several domains, in studies related with the lost of cohesion from a society before events related to epidemics, the effects caused in a army before loss in combat, or still with the detection of faults related to tannery industry or the determination of fibers distribution in paper industry.

So in this paper realm we are teaching a method to measure information amount. The concept of measure enhances the observer's existence. So, the measure of information amount to Simplicity is a relativist measure, it is always dependable on who is effectively observing, because it depends on the observer's System of Believes.

In this sense, the choice of what messages or which messages' specter to allow measure may take the designation of those messages as relevant factors to a determined structure within a system.

So convictions and concepts into which each observer allows importance, are what we designate a System of Believes. Naturally each observer will have his own, and it is single, and by the time the observer is growing through out his own existence and the world around him, he accumulates ever more believes and concepts in respect to series of things.

One of those things would be, for instance, what the Simplicity's meaning is before a determined individual or group of individuals. Probably meaning can change from one individual to one another. Not in general, but in its specificity, which as we saw can induce to several definitions for Simplicity.

As we assessed by Maeda's (2006) proposal on the concept of Simplicity, the concept of Information as we understood is also from a relativist or subjective nature, due to the multiplicity and variety of the existent definitions.

We are thus before a probability: the measure of certainty of who we really are, is obtained by the combination of arguments we presently dispose, knowing that there is a weigh for each argument. This set of arguments, plus each argument weigh is, in turn, the System of Believes (MELO-PINTO, 1998). Finally we can also state that before the same set of data, different Systems of Believes will also give different results.

Schools, either from Design or Engineering, where created as to allow the same school's System of Believes to deal with design or the project with the fewer possible data.

The question now raised is how in Design or in Engineering we built a System of Believes to allow design or the project simpler in it and for it's users? We can state that it can be made through combined arguments or weights that are part of the System of Believes.

According to Melo-Pinto (1998), decision process results from information gathering droved to that decision. But all along, the natural appearance of new arguments (partial or not) may drove us to remake believes by the light of new data.

"Design Universal Principals" may be those "arguments" than can be embodied as Design essence. They are, no less, and according to Lidwell et al. (2010), the meanings we give to the artifacts we use, in usability terms as well as in its influence, perception and usage call in everyday life, and can assume their selves as combined data and arguments.

Has seen before, different arguments combining with a specific weigh is what embodies our system of believes.

The issue we could now raise in this paper is what is the reason why some products are most desired by some certain people over others? Which method could be used as to allow knowing which arguments each one of us gives more or less relevance?

Today we know that the supposed commercial failure of some products is due not only to problems related to an operative-functional nature, but also because they didn't made sense to the target they aimed. So we can state that this is a consequence of something that does not fit with the positivist perception of a certain user.

In that sense, this chapter now aims to let know the "Design Universal Principals" (LIDWELL et al., 2010), as a first guide to interdisciplinary reference not only to designers but also to engineers, it combines a vast set of arguments in the shape of 125 concepts related to Design and also with Psychology, Engineering and Architecture, organized through five categories, it can be used as a guide to structure the conception for Simplicity, not only for Design, but also as reference for Engineering: How can Design and Engineering's perception be influenced?; How to help people learn about Design and Engineering?; How to improve Design and Engineering's usability?; How to raise the call for Design and Engineering?; How to improve decision taking in Design and Engineering processes?

These five categories are in turn subdivided into 225 contents that raise questions as diversified as: accessibility, archetypes, linings, cognitive dissonance, color, comparison, confirmation, consistence, convergence, cost-benefice, development cycle, errors, safety factor, Fibonacci's sequence, figure-background relation, usability-flexibility, forgetting, form and function, Gutenberg's diagram, hierarchy, highlight, iconic representation, interference effects, Prägnanz' law, legibility, life cycle, mental map, modularity, normal distribution, among many other, and truly it reflects a decision process, as it has the capacity to combine some of the mentioned arguments that may simplify processes while elaborating a Design or Engineering project.

But is it possible, as we call upon those 225 principals, that we became paralyzed while project acting? After all, where to start projecting, which or what aspect should we allow more or less importance? Supposedly hardly anybody will be able to give the answer. Even so, believing the existence of those "believes", there can only be, at the most, one or two... So, assuring the 225 (152) "principals" will not be in fact a statement to consider.

What will make sense is to state, that at the most, there was someone who described 225 arguments or weights to build or describe his own system of believes.

So the concept of Simplicity in Design or Engineering is the one in which effectively each observer believes as its own, and that it naturally depends on the amount of information he has relatively to the data he possesses, as the result of combining different arguments or data:

Set of data *C*

$$C = \{C_i\} \qquad i = 1,m \tag{3}$$

Set of data *D*

$$D = \{D_j\} \qquad j = 1,n \tag{4}$$

Maximum Information Amount given by set of data *C*

$$H(C) = \sum H_i \qquad i = 1,m \tag{5}$$

$$H_i = \sum p_i \log p_i \qquad i = 1,m \tag{6}$$

Maximum Information Amount given by set of data *D*

$$H(D) = \sum H_j \qquad j = 1,n \tag{7}$$

$$H_j = \sum p_j \log p_j \qquad j = 1,n \tag{8}$$

Before a system of believes Bel_j in which $i = 1,m$ the information amount allowed by the set of data *C* is:

$$H_{ii}(C) = \sum Bel_i \otimes H_i \qquad i = 1,m \tag{9}$$

Before a system of believes Bel_K in which $i \wedge k = 1$, m the information amount allowed by the set of data C is:

$$H_{ki}(C) = \sum Bel_k \otimes H_i \,,\; k = 1, m \wedge i = 1, m \qquad (10)$$

If $H_{ji}(C) < H_{ki}(C)$, then the system of believes Belk is better than the system of believes Beli forthesetofdata C.

If $H_{ji}(C) > H_{ki}(C)$ is the system of believes Bel_j is better.

If $H_{ji}(C) = H_{ki}(C)$ are Beli and Bel_K equivalent to the incognita knowledge.

The same is applied to the set of data D.

$$H_{jj}(D) = \sum Bel_j \otimes H_j \qquad j = 1, n \qquad (11)$$

$$H_{kj}(D) = \sum Bel_k \otimes H_j \qquad k \wedge j = 1, n \qquad (12)$$

If $m < n$ and $Bel_j = Bel_K$ when

$$H(C) \geq H(D) \qquad (13)$$

It indicates that for the system of believes Beli C we need less number of elements than the set D to give higher information amount about the unknown variable. So, C is simpler.

If $m < n$ and $Bel_j \neq Bel_K$ when

$H_{ji}(C) \geq H_{jj}(D) \Rightarrow C$ is simpler.

If $m < n$ and $Bel_j \neq Bel_K$ when

$$H_{ii}(C) \geq H_{jj}(D) \qquad (14)$$

Bel_K system of believes makes set D the simpler set though with more elements than set C.

$$H_{ii}(C) \leq H_{jj}(D) \qquad (15)$$

Bel_j system of believes extracts more information amount than set C with fewer elements than D. C is simpler.

$$H_{ki}(C) \geq H_{kj}(D) \qquad (16)$$

C is to system of believes K the simpler. It has less element number and allows higher information amount about the unknown.

$$H_{ki}(C) \leq H_{kj}(D) \qquad (17)$$

$H_{Ki}(C) \leq H_{Kj}(D)$ (17) *Belk* system of believes makes set D the one that gives higher information amount about what we do not know.

In conclusion we can state that for the same system of believes the set that gives higher information amount is the simpler.

For the same set of data the system of believes that allows a set of higher information amount about the incognita is the most adequate to predict.

One can thus deduct that simpler is what needs less number of elements or set of data to obtain the same information amount or even higher.

This is the essence of Simplicity, and it can be sustained in “Design Universal Principals”, in the quality of an interdisciplinary reference guide, either in Design as in Engineering.

However and as complete as it may be, the set of data that can be involved in the conception of a project of Design or Engineering there will also and always be present a System of Believes built over a given observer, to whom the information amount over the unknown variable will be zero, as also, there will be a system of believes that before a very incomplete set of data will obtain the maximum information amount over the unknown variable.

We can thus deduce that Design in particular and its several schools are liable to be related to math. That schools are a system of believes, and they must be not simply a place for knowledge transmission but also a place that promotes knowledge emergence associated to Simplicity.

We will be, as much, before arguments or weights that each School created to give sense to its own project, in this case having as basis the combining arguments according to Dempster-Shafer theory.

Truly a designer can assign determined values to the arguments or weights in cause and another designer can assign to the same arguments or weights another set of values.

So Design is no longer a derivation from art, not even from object engineering (MOURA, 2012). Design can be what informs about human creativity, that emerges from the combination and interaction between the several fields of creativity itself, to what we would like to add that it depends on the combining of different arguments and weights of the system of believes to what that designer pertains and that will always be the one he received in its School as a student.

We here designate as pertaining to a same school all those who share the same arguments with the same weight.

So we can state that we can have as much Schools or Systems of Believes as the nature of arguments (Ma) or weights (P):

$$\{Ma_i, P_i\} = E_i \qquad (18)$$

$$\{Ma_j, P_i\} = E_j \qquad (19)$$

$$\{Ma_k, P_k\} = E_k \qquad (20)$$

So that a School can be shaped:

$$Bel_{i,k} \bigcup Bel_{i,l} \bigcup Bel_{i,m} \Rightarrow Bel_{i,k} = Bel_{i,l} = Bel_{i,m} \qquad (21)$$

when:

$$\frac{m}{n} \cong 1 \qquad (22)$$

The result is that a System of Believes is a School, a cluster, and it shares the same arguments with the same weight allowed to the same arguments:

$$Bel_{i,k} = E_i \qquad k = 1,\ldots,m \qquad (23)$$

So we can deduce that Schools have the gift to simplify things. And that the set of data or arguments is equal to 1. Naturally the better the School the less data it will need to explain or transmit its knowledge.

Conclusion

In conclusion, some aspects can be evidenced. The essence of the meaning of "Simplicity" is not one of easy understanding in the way it has been, so far, descripted. The common knowledge is that there are undetermined number of definitions to explain what effectively is Simplicity. That "Simplicity is relativist", as an example of "easiness", of "difficultness", of "information", or "complexity", among others, are issues of each one measurements. As a system of believes it will always be associated with the observer. That like "Simplicity", until now the concept or notion of "Information" is vague and intuitive. That before a huge Simplicity, we will be before a major amount of information, with restricted data. That Design in particular and its several schools are also passible to be related to math "mathematization". That Maeda's laws to describe "Simplicity" are a set of arguments and weights built in Maeda's System of Believes. At last that a school is always committed to its shared System of Believes, and as such it is responsible for values, ideals, feelings and actions transmitted to those who are or where, part of itself.

In conclusion we dare state that if we were in the presence of a philosopher he would say that the true definition for simplicity would be: it exists as to make sense within the world that surrounds us.

It will be then demonstrated that "Simplicity" (its measurement) in particular that of Design, being measurable, is also an Engineering parameter.

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Specification sheet: Tool for collection planning

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Abstract
The technical articulates all marketing processes, design, pattern making, cutting, sewing control, distribution and marketing of a garment, communication and minimizes risks, optimizing processes to develop sequentially and evaluative fashion clothing and accessories consistent with the trend, feeling or concept obtained in observation and description of the behavior and desires of the client that directly affect the purchase decision.

The design of the sheet is determined by what it does, as does and who does the organization, using planning tools organizations have the capacity to generate products with qualities and characteristics that meet consumer and distinguishing it from their competence in the planning of a garment is important Interrelation of processes allowing the organization to establish and implement the processes required to create competitive advantage the consumer in mind.

KEYWORDS: specification sheet, production, processes, consumer, design, mode, pattern design, strategic, to optimize, quality, procedures, confection.

Related to the product, the aspects that define the design of the specification sheet are raw material and inputs, technological processes, financial and human resources, not forgetting the quality management resources. The specifications of a collection rest in a document with its own characteristics: model specifications, textile samples, model characteristics, garment master, color chart, materials and inputs identification, responsibilities and functions by process, measures of finished garments, average raw material consumption, process operations diagram, specifications of scale and patterns trace, specification controls, and the definition of marketing and distribution in order to clearly identify consumer needs.

To avoid non-conformities with the product and reduce the risk and probability that a given event, may or may not occur in administrative, productive or marketing processes, it's necessary to establish a planning process that's basically characterized by the establishment of the vision, mission, objectives, strategy and financial budget so that during the elaboration and fabrication processes, a garment or product in general meets quality specifications.

It´s important to plan a single specification sheet as tool because:

- Minimizes improvisation and time management, financial and technical resources are more demanding.

- Information management among enterprise entities is more effective.

- Facilitates the identification and knowledge of needed human resources in order to achieve the process of elaborating a garment.

- Planning creates social competences towards the product.

Developing a collection plan in different genres with particular specifications and needs has become a culture of quality in itself that creates and innovates proposals with identity and a high degree of competitiveness towards national and international markets. Fashion is based on behavior, tendencies, sensibilities and concepts that guide the designer to a global vision without leaving guidelines previously established on individual and/or collective criteria from every region. The manufacturing process of a garment is basically established in the research of the social, political, economical, cultural and natural environment, patterning, cutting, confection, control and verification in the process and marketing, distribution and following of current and potential customers; which leads to defining technical specifications by product and process.

Within the identification of the aspects that structure the format of a specification sheet, you can find definitions of consumer groups with specific needs, characteristics and behaviors from which it is needed to define aspects such as demographics, geography, psychology, consumer profile and universes (Borre); the last understood as the group of garments and accessories with similar characteristics that must be presented under a given group. These proposals are determined by occasion and are interpreted according to fashion sensibilities of every consumer profile and lifestyle. They're classified as: Formal, Casual, Jeanswear, Khakis, Sportswear, Street wear, Active, Leisure, Beach, Underwear and Sleepwear.

Specification Sheets

1. Collection Specification Sheet: it's the definition on the subject of inspiration; it's solving the research problem. What solution should be given to consumer needs in a given moment determining subject, specific subject, concept, segment, consumer, time and universes which are also defined in the Market Segmentation Sheet.

The point of inspiration is founded on a situation, tendency, or concept from the designer's daily living; these may be: inspiration through characters, religions, political tendencies, fine arts, film and/or theater, sports, history, among others.

2. Collection Master: Flat designs of every garment are illustrated, identifying color, textile base and process references.

3. Color Technical Chart: The color chart is founded on

the subject of inspiration, concept, sensibility or current tendency that is in turn influenced by national and international movements. The color chart is classified as follows:

- Basic colors

- Complementary colors

- Accents

It is also based on universal color theory and all its characteristics, such as warm color as a result of a mixture of red and yellow and resulting in an endless variety of colors. Cold colors as a result of combinations of blue that with another primary color allow the fashion designer to play with a wide array of color. In the Color Technical chart, the meaning of every color is given, as well as a reference to Pantone coding.

4. Materials and Inputs Sheet: this sheet shows common name of fabric, technical name, woven type, compatible thread, compatible needle, width of fabric, price, most common use and conservation.

The management of this concept of texture for the creation, development and application of tendencies in fashion market is vital, given the fact that the textile and non-textile base to be used in a collection will guide and frame the silhouettes being structured; these may be smooth, corrugated (corduroy, Indian fabric, knitted, channeled, etc.) and/or semi-corrugated (linen, lycra, Jacquard, crepé, etc.); these creates aspect and application diversity in different garments (Duarte).

5. Confection Details and Finish Specification Sheet: contains design sheet, model specifications, raw material and inputs, color chart, inner and outer seams, pattern descriptions, controls, layout of the fabric, basic size patterns, specifications of finished garments measurements, scaling, operational sequence, variations, cutting order, production order, product costs sheet, among others.

Besides, these sheets possess other characteristics that define new fashion proposals:

- Model specifications

- Model characteristics

- Responsabilities and functions by process

- Process operations diagram

- Average of raw material consumption

The design, pattern, cutting, confection, marketing and distribution of a garment has a process that must be planned with time in order to define purposes and strategies to achieve the outlined objectives and get to know through market research which are the true consumer needs.

Planning using specification sheets as a tool that defines and envisions a process for raw material transformation towards the delivery of a product with specification the consumer truly needs.

Conclusion

A specification sheet articulates every manufacturing process of a collection plan both in and outside and organization, ensuring communication within different parts involved in the transformation of raw materials, passing through diverse processes until a product meeting established specifications that fulfill client needs is obtained. The specification sheet is not just a format, it's a document and register where all information regarding design, patterns, cutting, control, quality, marketing, distribution and feedback processes is articulated.

The organization of this sheet is a planning tool that establishes the sequence of procedures to define processes in time, space and client response; it's the development of alternatives that interrelate towards the single objective of envisioning the how, why, when and who executes within the different social and cultural environments in the organization and their impact towards the consumer.

The definition of the specification sheet as a tool for collection planning envisions the feasibility of produced garments, quantifies true facts that motivate obtaining pre-established and unexpected timelines in unexpected situations that allow flexibility in decision making that lead to design, patterns, cutting, control, quality, marketing, distribution of a garment within the organization.

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What We Have Learned in Finland: Design as a Driver for Innovation

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Abstract
The notion of innovation is going through a change. Value is no longer created by companies or experts but users and communities in context with use. The role of design has been widened from traditional, production driven form-giving to service definitions, customer understanding and comprehensive development of organizational structures and business activities.

Design cannot be developed separately from other competences. It has to be a part of not only the operations of companies, but also national innovation strategy on a wider basis. Production and technology driven innovation is not enough – we need a customer and user specific viewpoint for developing new. This perspective is needed more extensively than just in the form of designing products or services.

The growing need of production driven companies to be a part of the world economy sets pressure and challenges to local and regional economies. Numerous countries have introduced different kinds of strategies, so that these countries could compete in the global markets. We have started to apply the notion of creative economy for producing new information and tools, with the help of which we can create new kinds of possibilities for traditionally production driven operating areas.

With design thinking as a comprehensive approach we can improve productivity, build added value, and create a real connection between the industry and customers. Without exception, the most successful economies are those which have understood the value of design and constantly support creativity and its applications as well as possibilities in a wider context.

KEYWORDS: design thinking, innovation, service development

The Disappearance of Manufacturing

Since the 1990s, Finland has experienced the transfer of production and the manufacturing industry out of the country. Offshoring or transferring operations abroad has been more common in Finnish industrial enterprises than in many other EU countries. The industry of high technology has offshored and transferred its operations abroad more actively than other industry sectors. (Statistics Finland 2008) Other EU countries have clearly been the most popular target when industrial enterprises have transferred or offshored their operations abroad. Especially the new EU countries of Eastern Europe have attracted industrial production from old EU countries, but also old EU countries have hang on to their position as a target country of transfers quite well. From Asian countries China has been a clear number one as a target country of the transfers of operations of Finnish industrial enterprises. (Statistics Finland 2008).

In general, reducing workforce costs and better competitive edge thus gained in the markets have been some of the central reasons when companies have offshored and transferred their operations abroad. Reducing workforce costs has allured industrial enterprises to transfer abroad clearly more commonly than service companies. (Statistics Finland 2008) Transferring abroad is certainly speeded up by many other factors, as well, such as access to new markets or the availability of new technology or know-how. From Finnish industrial enterprises, 26 per cent considered access to new markets as the most important reason for transferring operations abroad. Studies have shown that Finnish industrial enterprises have evaluated the effects of offshoring and transferring operations abroad on their competitiveness as very positive. (Statistics Finland 2008).

In a global economy countries and areas compete over investments and increasingly often also over skilful workforce. Global offshoring of operations has become more common. In addition to production, also a part of research and development operations have been transferred abroad, in the vicinity of manufacture. The main reasons are costs and the need to adjust production to the local markets. The fear has been that buying design services will be transferred abroad in a situation where central Finnish industrial enterprises no longer feel that they achieve sufficient know-how from Finland. This is possible if the design industry stays in a “stable” state and does not grow and develop enough. Also the sensitivity to economic fluctuations of design operations has been experienced as a threat in Finland as the economic outlooks of global economy vary, since during bad times companies cut back precisely on design activities. (Punnonen 2008).

The Growth of Service Production

The significance of industry in the economy of Finland is greater than in most other developed countries. The growth of the production and export of industry pulled Finland out of the depression of the 1990s. During the 21st century, the structure of economy has been undergoing a strong change. Manufacture of ICT, which was the engine of growth, was treading water for a long time, and at the end of the decade production and export plummeted as a result of the crisis.

In the 21st century, service production has begun to grow incredibly fast. The share of services from the production and employment structure of communities has grown steadily since the 1970s in all developed countries, while at the same time the share of agriculture and industrial

goods production has diminished. Along with the change, services have become the largest economic field in the Western countries (Wölfl 2005).

Today, the service sector share of output and employment in OECD countries is about 70 percent (Figure 1). The importance of services seems to still be growing in the coming years, primary production (agriculture) and processing (manufacturing industry) losing its units, so we cannot claim to be living in an industrial society anymore (Figure 2). We now speak of service economy or even experience economy (Pine & Gilmore 1999) when describing our servicizing society.

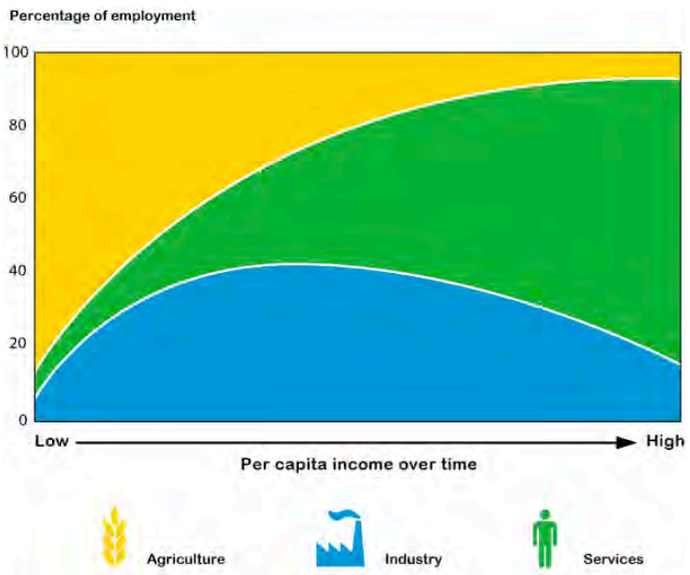

Figure 1: The changing structure of employment during economic development. (The World Bank 2007)

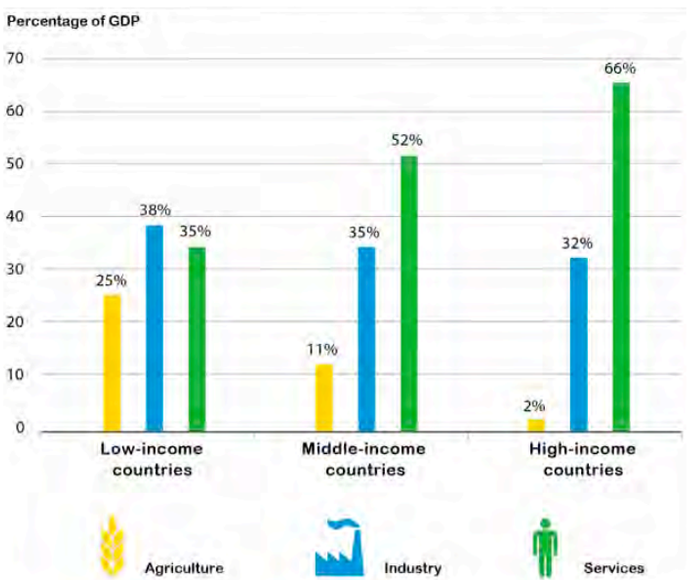

Figure 2: Sectoral structure of world economies. (The World Bank 2007)

The growth of service production is an inevitable part of the structural development of economy, which in Finland is based on services created through an industrial core (Eloranta, Ranta, Salmi & Ylä-Anttila 2010). This is not only a question of maintenance services related to companies' own products, but of wholly new forms of services. The growing role of services is the consequence of several different factors. These factors are related to the rise in living standards, servicization of industry, growing supply of business life services, utilization of technology in service production, and the freeing of service trade.

Rising Living Standards and the Demand for Services

Most of the consumption directed at services is related to obligatory everyday expenses. These include, for instance, health services, loan interest, telephone charges, maintenance and repair of vehicles, workplace lunches and insurances. The rise in living standards and the growth of the purchasing power of consumers have changed consumption habits by increasing the demand for optional services. The increased optional consumption is directed at travel, traffic, eating in restaurants as well as wellbeing and recreation services. The increase in the demand for services can be explained theoretically based on needs. As people's basic needs are satisfied, emotional and pleasure-related needs as well as needs relating to self-development and self-fulfilment become important. The experiences a service company can offer are more important for a contemporary consumer than they were before (Lämsä & Uusitalo 2002, Suutari 2005).

As a result of mass and serial production and as supply has increased as a consequence, industrially manufactured physical goods have started to resemble each other more and more. Differentiating goods in the markets merely by quality, performance or even appearance has become increasingly difficult. (Mager 2004) Since a mere core product is no longer viewed to guarantee competitiveness, a growing number of industrial enterprises has begun to practice service operations alongside productional operations by linking services to their products (Grönroos 2000, Tekes 2005). By investing in services industrial enterprises strive to differentiate their products in the markets, to ease the sale of their products, to lengthen the duration of customer relationships, to answer demand and to create new growth possibilities in the partly already bored markets (Brax 2005).

The servicizing of industrial enterprises has led to a situation where an increasing amount of the turnover of industry sectors becomes from services. In the turnover of the Finnish elevator and engineering company Kone Corporation the share of repair, maintenance and modernization services has already risen to about 60 per cent (Tekes 2005, Kone Corporation 2005). In fact, it is increasingly difficult to draw a line between industry and service sectors, since services and products are intertwined more and more closely. In fact, we have started to talk about the servicization of industry and the industrialization of services. (Suutari 2005).

The Switch from Manufacturing to Services

In recent years phenomena have come up in which the role of design is not targeted at the implementation of strategy but at the innovative, user or customer driven development of it. The role of design has been directed away from designing services or products and towards designing design – or enabling innovation. A good example of this is the whole field of electronics, in which services and experiences have become an inseparable part of products and their use.

Traditionally, design has operated within the limits that earlier phases of the product development process have set for it (Järvinen & Koskinen 2001). Design has been realized from the perspective of styling, i.e. improving the aesthetic looks of the product. Design should, however, be understood as a comprehensive planning process that covers all stages of product development. This planning process and the design planning methods used during it can be wholly utilized also for service planning (Ramlau 2004). Design is, therefore, a decision-making process in which an idea becomes an end result, either a physical product or a service. (Nyberg & Lindström 2005).
Although the presence of customers is in a central role in the planning of products and services, customers are only rarely present in the design process (Kinnunen 2003). In particular, developing services has as a main rule been organization driven, and the actual needs and wishes of customers have not been studied a great deal when creating ideas for services (Kinnunen 2003). This claim is supported by the research by Hollins (2003), since from the service companies that participating in this study, 48 per cent did not carry out market research before developing a new service. A large part of these companies got an idea for new services by copying from competitors or by looking for ideas only from inside the organization, from managers, leaders or suggestion boxes. Some gathered ideas also from customer feedbacks they collected. (Hollins & Hollins 1991)

Those service companies that collect information about their customers are often limited to the methods of traditional market research, such as questionnaires measuring customer satisfaction (Andersson 2005). Furthermore, new services created in service planning processes are not often tested by customers before they are launched to the markets. Services are often only tested expensively in the markets – sometimes successfully, sometimes not. (Kinnunen 2003)

Strategic Design as an Instrument for Change

A research conducted by Deloitte reveals that manufacturers rank customer service as their second-highest supply chain priority, outranked only by quality. However, very few companies (from 3% to 8%) collaborate extensively with customers across key areas from strategic planning and forecasting to inventory management and cost reduction. (Deloitte Touche Tohmatsu 2003) In nearly all potential collaboration areas, manufacturing companies work more extensively with suppliers than with customers. In essence, more companies are looking “backward” (collaborating with suppliers) rather than forward (collaborating with customers).

Strategic design can be understood to be related either to the task a company has outlined for design (design strategy) or the process in which a company utilizes design when aligning the vision of the company’s business activities. Professional design of high quality views and considers the world around the design task widely, such as the company’s goals, strategy, markets and customers, needs and characteristics and also psychological and technological viewpoints (Mager 2004). Thus, already defining the design tasks, i.e. important decisions on what is designed and for whom, is design (Goldschmidt & Fich 2004). Professionals of business administration, who have fairly traditional tools in use, can be challenged with other kinds of methods by the creative industry. Becoming aware of this is not yet on a very strong basis in corporate practices. Design is certainly utilized in larger companies, but in small and medium sized enterprises it is a big challenge.

It is in everyone’s interest to build organizations that are not merely focused on pursuing profit, but strive to create value by understanding people and by utilizing creativity. By following a human-centred process companies can be sure that the product or service to be developed will be competitively effective, impressive and will satisfy the needs of its users. Permanent competitive edge can also be achieved by improving the effectiveness of operations as well as the quality and aesthetics of the products. (Stone et al 2005).

Human-centred thinking does not guarantee commercial success but creates better requisites for the possible achievement of it. Companies that have taken human-centred thinking as a part of their own processes in all areas of business operations have been able to stand out with better products and services.

Measuring the Value of Design

The influence of design on the commercial success of a company is hard to measure with economic indicators, since the influences of design are often only qualitatively perceivable success factors of a company. It is also difficult to isolate the impact of design from other internal and external factors that influence the success of a company, such as marketing, sales or the general competitive situation. (Press & Cooper 2003) Design is therefore a fixed and inseparable part of the product and service.

The economic impact of design has been studied by, for instance, Aalto University Design Factory (Design ROI research project), Danish Center for Design Research, The Research Institute of the Finnish Economy ETLA, Swedish Industrial Design Foundation SVID and British Design Council. All of these studies clearly show a positive correlation between the inputs made for design and the economic success of the companies. The quantitative research

carried out by ETLA proves that design is significant with regard to both the competitiveness of national economy and the economic success of companies. The deeper design has been integrated into the innovation activity of the company, the greater is the competitive edge brought forth by design. Studies show that companies that have invested in design succeed on average better than companies that utilize design only a little or not at all. (Nyberg & Lindström 2005) Although the connection between design and innovation and, on the other hand, between design and the increase of value is comparatively clear, the use of design in companies is still relatively minor from an international perspective (Nyberg & Lindström 2005, Press & Cooper 2003).

The advantage created by design can be defined in many different ways. Firstly, the use of design leads to lower production costs, as long as a more efficient production method is built with its help. Secondly, it can influence the growth of sales if the preferences of consumers can be better met with its help. Thirdly, design can also enable raising the unit price of a product. (Nyberg & Lindström 2005).

The advantages of design can also be seen as impacts on living standards and as economic influences. The impacts on living standards can be seen as an improved aesthetic nature, better usability, and an increase in the recognizability of the product. Economic effects are reflected as increased sales, profit and economy of the company. (Press & Cooper 2003).

Design has a major role also in recognizing and creating symbolic values of products. With the help of products people communicate with other people, define themselves into social groups, and show their personal social standing in the society (Bürdek 2005).

Therefore, design should be considered a vital operation in organizations and companies, one that is seamlessly in connection with their innovation activity and identity. In the intensifying global competition companies must both innovate and develop new and better products and services, and these products and services as well as the company itself must stand out from competitors in the markets. It has been shown that designers and design bring creativity and innovativeness into a company. (Press & Cooper 2003).

Conclusions

Design is a powerful tool for developing businesses and helping organizations transform and enhance their performance. Good design is good business, having the capacity to translate user needs into new services and products; it is the connection between innovation and creativity. We have good examples of global companies transforming themselves into global phenomena and generating mega trends in different production areas, all this having a strong emphasis on the role of design in management and development (Danish Centre for Design Research 2011).

The challenge now is to fully integrate design thinking into the development agenda of national economies. Few countries have succeeded in this task. For example the Danish Centre for Design Research, created in 2003 to promote design research in Denmark, has achieved great awareness in the areas of business and creativity; their program extends from the enhancement of design education to problem solving in new areas, such as production methodology, health care, etc. (Danish Centre for Design Research 2011).

Through the British Design Council, the UK has a great history with opening up the dialogue around design and its importance for the economy of Britain; currently, UK firms consider design as the sixth most important engine for business success. (Design Council 2011) During 1995, Brazil established its own design program PBD to enhance and add value to the country's identity and production, the main goal being to improve the existing industry and to launch the Brazil Brand in order to improve the national industry. (Galvao 2011).

Design research is a key factor for business success, which is why worldwide design programs and policies have been implemented to enhance competitiveness and to generate economic and technological excellence.

Among all countries that have structured design strategies, Finland stands in the front line implementing a more elaborated design policy based on areas that include design education, design promotion, design support for businesses and a national design policy, which is supported by the government. (Bom 2008) The Finnish design policy defines design in the following way:

> *Design means planning which takes aesthetic and ethical considerations, usability and marketing into account and which is targeted at businesses in industry, trade and services and at public sector organizations. The object of design may be a product, a service, communications, the living environment, and a corporate or organizational identity. (Saarela 1999)*

This experience cannot be ignored when analyzing the reasons why the economy and social system of this country have endured dramatic global changes while still leading the competitiveness rankings during the course of many years.

There is no specific national policy for supporting design in Chile, but a few initiatives can be identified in the form of design education, promotion, associations, and awards.

Chile should have an appointed party for whom the task has been given to promote design and the use of new roles of the creative economy. Statistics compilation and rationalization of the indicators of the field are prerequisites for determining and verifying development. Furthermore, without indicators the advantage cannot be communicated to the users of design and services. For statistical purposes it would be a good idea to separate the turnover

of the sector from the impact the operations have on the targets. If we can show the impacts on efficiency, innovations or business activities, it is easier to promote the field.

The development of Chilean design policy should be tied to the idea of a national innovation system and the broadening of the discussion to all players that were considered a part of it.

The promoting party of the design field has an important role in increasing awareness in companies. Service companies need information of service design and of user-driven defining possibility of service. The innovation activity of production driven companies can be enriched with the help of the possibilities of service design only if the initiative starts at the company's management level. With regard to companies, the role of the previously presented promoting party of the field is then highlighted as an operator directly networking with the management, so it cannot be labelled as a promoter of traditional design or its message will not reach the management.

Chilean companies are restructuring their production and services. In practice, this means finding new opportunities. Design should be integrated in Chilean organizations in all operations where new is developed or customer understanding is created. The role of design should not be limited merely to operative levels, but we should move on to using design methods and design thinking more generally for creating new and for user-driven innovation. Raising awareness at the management level is the most important element: the management of companies and organizations should be involved in this raising of awareness instead of assuming the passive role of a recipient.

Design thinking is one way to support this organizational change and help develop a culture of design in Chile that can help Chilean companies move beyond their norms and create new markets. Investing in these design processes can be a sustainable business advantage. We are encouraging to think about the big picture and to manage the holistic design process with a focus spanning from strategy to implementation. This way, companies could better respond to current and future needs.

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