

Fabbrica della Conoscenza

XV INTERNATIONAL FORUM

Le Vie dei
Mercanti

Carmine Gambardella



WORLD HERITAGE
and **DISASTER**

WORLD HERITAGE and DISASTER

Knowledge, Culture and Representation

La scuola di Pitagora editrice

Fabbrica della Conoscenza numero 71
Collana fondata e diretta da Carmine Gambardella

Fabbrica della Conoscenza

Collana fondata e diretta da Carmine Gambardella

Scientific Committee:

Carmine Gambardella,

*UNESCO Chair on Landscape, Cultural Heritage and Territorial Governance
President and CEO of Benecon,
Past-Director of the Department of Architecture and Industrial Design University
of Studies of Campania "Luigi Vanvitelli"*

Federico Casalegno,

Massachusetts Institute of Technology, Boston

Massimo Giovannini,

Professor, Università "Mediterranea", Reggio Calabria

Bernard Haumont,

Ecole Nationale Supérieure d'Architecture, Paris-Val de Seine

Alaattin Kanoglu,

Head of the Department of Architecture, İstanbul Technical University

David Listokin,

*Professor, co-director of the Center for Urban Policy Research
of Rutgers University / Edward J. Bloustein School
of Planning and Public Policy, USA*

Paola Sartorio,

Executive Director, The U.S.- Italy Fulbright Commission

Elena Shlienikova,

*Professor, Professor of Architecture and Construction Institute of Samara
State Technical University*

Isabel Tort Ausina,

*Director UNESCO Chair Forum University and Heritage,
Universitat Politècnica De València UPV, Spain*

Nicola Pisacane,

*Professor of Drawing – Department of Architecture and Industrial
Design_University of Studies of Campania "Luigi Vanvitelli" - Head of the Master
School of Architecture – Interior Design and for Autonomy Courses Department
of Architecture and Industrial Design - University of Studies of Campania
"Luigi Vanvitelli"*

Pasquale Argenziano,

*Professor of Drawing – Department of Architecture and Industrial
Design_University of Studies of Campania "Luigi Vanvitelli"*

Alessandra Avella,

*Professor of Drawing – Department of Architecture and Industrial
Design_University of Studies of Campania "Luigi Vanvitelli"*

Alessandro Ciabrone,

*Ph.D. in Territorial Governance (Milieux, Cultures et Sociétés du passé et du
présent – ED 395) Université Paris X UNESCO Vocations Patrimoine 2007-09
Fellow / FULBRIGHT Thomas Foglietta 2003-04*

Rosaria Parente,

*Ph.D. in "Architecture, Industrial Design and Cultural Heritage" at University of
Studies of Campania "Luigi Vanvitelli"*

Editorial Committee:

Pasquale Argenziano

Alessandra Avella

Alessandro Ciabrone

Nicola Pisacane

Ciro Ferrandes

Rosaria Parente

Carmine Gambardella

WORLD HERITAGE and DISASTER
Knowledge, Culture and Rapresentation
Le Vie dei Mercanti _ XV International Forum

Carmine Gambardella
WORLD HERITAGE and DEGRADATION
Smart Design, Planning and Technologies
Le Vie dei Mercanti
XV Forum Internazionale di Studi

editing: **Ciro Ferrandes**

© copyright 2017 La scuola di Pitagora s.r.l.
Via Monte di Dio, 54
80132 Napoli
Telefono e fax +39 081 7646814
www.scuoladipitagora.it
info@scuoladipitagora.it

ISBN 978-88-6542-582-4

È assolutamente vietata la riproduzione totale o parziale di questa pubblicazione, così come la sua trasmissione sotto qualsiasi forma e con qualunque mezzo, anche attraverso fotocopie, senza l'autorizzazione scritta dell'editore.

Il volume è stato inserito nella collana Fabbrica della Conoscenza, fondata e diretta da Carmine Gambardella, in seguito a peer review anonimo da parte di due membri del Comitato Scientifico.

The volume has been included in the series Fabbrica della Conoscenza, founded and directed by Carmine Gambardella, after an anonymous peer-review by two members of the Scientific Committee.

Conference topics:

Heritage

Tangible and intangible dimensions

History

Culture

Collective Identity

Memory

Documentation

Management

Communication for Cultural Heritage

Architecture

Surveying

Representation

Modelling

Data Integration

Technology Platforms

Analysis

Diagnosis and Monitoring Techniques

Conservation

Restoration

Protection

Safety

Resilience Transformation Projects

Technologies

Materials

Cultural landscapes

Territorial Surveying

Landscape Projects

Environmental Monitoring

Government of the Territory

Sustainable Development

Disasters:

Earthquakes

Tidal waves (or tsunami)

Volcanic eruptions

Floods

Hydrological risks

Fires

Landslides

Avalanches

Meteorite impacts

Hurricanes and tornadoes

Terrorist acts

Armed conflicts

Effects caused by mass migration

Predation

Unplanned urbanization

Uncontrolled development of tourism

**WORLD HERITAGE and DISASTER
Knowledge, Culture and Representation**

**Le Vie dei Mercanti
XV Forum Internazionale di Studi**

Napoli | Capri
15 - 16 - 17 June 2017

President of the Forum

Carmine Gambardella
President and CEO Benecon,
UNESCO Chair on Cultural Heritage,
Landscape and Territorial Governance

International Scientific Committee

Components:

Aygul Agir
Professor, Department of Architecture, Istanbul Technical University

Ahmed Abu Al Haija
Professor and Head, Environmental Design, Urban and Architectural -
Heritage, Faculty of Engineering, Philadelphia University, Jordan

Ali Abu Ghanimeh
Vice president Al al-Bayt University Almafraq – Jordan

Pilar Garcia Almirall
Professor, UPC Ecole Tecnica Superior d'Arquitectura Barcelona

Pasquale Argenziano
Professor Università della Campania 'Luigi Vanvitelli'

Alessandra Avella

Professor Università della Campania 'Luigi Vanvitelli'

Harun Batirbaygil

Head, Department of Architecture, Okan University, Istanbul

Cevza Candan

Professor, İstanbul Technical University

Federico Casalegno

Professor, Massachusetts Institute of Technology

Joaquín Díaz

Professor and Dean, Technische Hochschule Mittelhessen-University of Applied Sciences, Department of Architecture and Civil Engineering

Yurdanur Dulgeroglu

Professor and Head of the Department of Architecture, İstanbul Technical University

Yonca Erkan

Chairholder UNESCO Chair, Kadir Has University

Kutgun Eyupgiller

Professor, Department of Architecture, İstanbul Technical University

Yankel Fijalkow

Professor, Ecole Nationale Supérieure d'Architecture Paris Val de Seine, France

Carmine Gambardella

Professor, CEO and President of BENECON, UNESCO Chair on Landscape, Cultural Heritage and Territorial Governance

Paolo Giordano

Professor, Coordinator of the Ph.D. School in Architecture, Industrial Design and Cultural Heritage, Università della Campania 'Luigi Vanvitelli'

Xavier Greffe

Professor and Director, Centre d'Economie de la Sorbonne Paris

Manuel Roberto Guido

Director Enhancement of Cultural Heritage, Planning and Budget Department, Italian Ministry of Heritage and Culture

Bernard Haumont

Professor, Ecole Nationale Supérieure d'Architecture Paris Val de Seine

Tatiana Kirova

Professor, Polytechnic of Turin

Alaattin Kanoglu

Professor, İstanbul Technical University

Ilknur Kolay

Professor, Department of Architecture, Istanbul Technical University

Mathias Kondolf

Professor, and Chair, Landscape Architecture and Environmental Planning, University California Berkeley

David Listokin

Professor, Edward J. Bloustein School of Planning and Public Policy, Rutgers University

Andrea Maliqari

Professor and Rector of the Polytechnic University of Tirana

Sabina Martusciello

President of the Degree Course in Design and Communication, Università della Campania 'Luigi Vanvitelli'

Massimo Menenti

Professor, Department of Geoscience and Remote Sensing, Faculty of Civil Engineering, Delft University of Technology, The Netherlands

Rusudan Mirzikashvili

Head of the UNESCO and International Relations Unit, National Agency for Cultural Heritage Preservation of Georgia

Louise Mozingo

Professor, and Chair, Landscape Architecture and Environmental Planning, University California Berkeley, USA

Maria Dolores Munoz

Professor, UNESCO Chair, EULA Environmental Centre, University of Concepcion, Chile

Florian Nepravishta

Professor and Dean of the Faculty of Architecture and Urbanism, Polytechnic University of Tirana

Raymond O' Connor

TOPCON Positioning Systems CEO

Jorge Peña Díaz, Professor

Facultad de Arquitectura, Instituto Superior Politécnico José Antonio Echeverría, Cuba

Rosaria Parente

Ph.D. in "Architecture, Industrial Design and Cultural Heritage" at University of Studies of Campania "Luigi Vanvitelli"

Nicola Pisacane

Professor Università della Campania 'Luigi Vanvitelli'

Adriana Rossi

Professor, Università della Campania 'Luigi Vanvitelli'

Michelangelo Russo

Professor, Università di Napoli Federico II

Paola Sartorio

Executive Director, The U.S.- Italy Fulbright Commission

Lucio Alberto Savoia

Ambassador, Secretary General Emeritus, Italian National Commission for UNESCO

Maria Anita Stefanelli

Professor, Department of foreign languages, literature and Culture, Università degli studi RomaTRE, Roma

Elena Shlienikova

Professor, Professor of Architecture and Construction Institute of Samara State Technical University

Eusebio Leal Spengler

Professor, Historiador de la Ciudad de La Habana Presidente de Honor del Comité Cubano del ICOMOS

Isabel Tort

Professor, Director of the Forum UNESCO – Univ. and Heritage (FUUH) Programme Univ. Politècnica de València UPV, Spain

Andrey Vasilyev

Professor, Head of Department of Chemical Technology and Industrial Ecology, Samara State Technical University

Ornella Zerlenga

Professor, Università della Campania 'Luigi Vanvitelli'

Scientific and Organization Committee:

Alessandro Ciabrone, Coordinator of the scientific program and relationships with the International Scientific Committee

Rosaria Parente, Scientific Assistant of the International Committee President

Ciro Ferrandes, Luciana Abate, Giovanni Bello, Giuliana Chierchiello, Enrico De Cenzo, Carmine Maffei, Graphics and layout

Peer review

Scholars has been invited to submit researches on theoretical and methodological aspects related to Smart Design, Planning and Technologies, and show real applications and experiences carried out on this themes.

Based on blind peer review, abstracts has been accepted, conditionally accepted, or rejected.

Authors of accepted and conditionally accepted papers has been invited to submit full papers. These has been again peer-reviewed and selected for the oral session and publication, or only for the publication in the conference proceedings.

Conference report

300 abstracts and 550 authors from 30 countries: Albania, Australia, Benin, Belgium, Bosnia and Herzegovina, California, Chile, China, Cipro, Cuba, Egypt, France, Germany, Italy, Japan, Jordan, Kosovo, Malta, Massachusetts, Michigan, New Jersey, New York, New Zealand, Poland, Portugal, Russia, Slovakia, Spain, Tunisia, Turkey.

200 papers published after double blind review by the International Scientific Committee

Preface

A theme, that in addition to highlighting the word DISASTER, wants, as in all the editions of the Forum, place the emphasis on the word Culture, the systemic product of knowledge and applications, which has a plastic strength as Nietzsche pointed out, capable of healing broken parts, to recover lost parts, and as such belongs to humanity, the Man Artifex and Faber in its historical self-reproduction.

A faith in humanity's ability to achieve ever higher levels of knowledge to offer as patrimonial value, beyond disastrous contingencies, which contains reparative stem cells and also fortifies evolutionary processes involving the Skills and Work of Man, the fate of Landscapes, Territories, Cities, Architecture and Archaeology as Traces of Geography of the past that emerges in the Geography of the Present.

For these reasons, in Naples on 15 and Capri, on 16 – 17 June, the 15th "International Forum Le Vie dei Mercanti" will be held. An established event that in three decades has seen the participation of a scientific community from around the world grow, discussing multidisciplinary topics relating to the Landscape, Cultural Heritage, Government of the Territory, Design and Economics.

Therefore, I expect, along with the International Scientific Committee, contributions of studies and research relating to theories, concepts, applications, best practices to protect and preserve, in order to not only transmit to future generations the tangible and intangible patrimony of the World Heritage but also to orient the design processes and innovative planning for the modification that derive from the humus of identities and roots of the places, the regenerating sap of the places and of a "new", which, citing Argan, possesses a contemporary of what it does not have the same date.

The location is exceptional. Campania, with six sites included in the World Heritage List, two UNESCO Man and Biospheres, two assets on the List of Intangible Heritage, is one of the richest regions in the world for cultural and landscape heritage. It is therefore no coincidence that the Forum will be held in Aversa/Naples and Capri, with visits to the sites and presentations of operational projects by the scientific community of Benecon, a University consortium that hosts 250 researchers and distinguished professors of five Italian Universities, UNESCO Chair on Landscape, Cultural Heritage and*

*Carmine Gambardella
President and Founder of the Forum*



Le Vie dei
Mercanti

XV FORUM INTERNAZIONALE

WORLD HERITAGE and DISASTER

Knowledge, Culture and Representation

Naples 15 - Capri 16,17 June 2017

Design in the Edge. Strategies for enhancing self-innovation aptitude of fringes.

Jurji FILIERI,¹ Elisabetta BENELLI,² Laura GIRALDI³

⁽¹⁾ Design Campus, Università degli Studi di Firenze, Florence, Italy

jurji.filieri@unifi.it

⁽²⁾ elisabetta.benelli@unifi.it

⁽³⁾ laura.giraldi@unifi.it

Abstract (Arial – 11 pt – Lower case letters - Bold – left aligned)

In the actual scenario, which is deeply affected by information technologies, and characterized by the continuous growth of relational connections, the society is more and more like a wide global rhizome, wherein users are involved, together with objects, services and non-users. This audience network consists of various cultural sub-nets, which in certain ways are very similar to tribes. Since each one of them is always changing in terms of size and identity, design must constantly keep in touch with them, and learn through their relational ties in order to obtain effectiveness and relevance.

Including insights from “Actor-Network-Theory” and relational assessments, the paper outlines some first research hypothesis, about the transfer of design process in the edge of the social, as a new custom design strategy.

On one hand the peripheral sections become effective clusters for scientific survey, local production and diffuse design practices. “If the market is more and more searching for stories rather than products, it is necessary quickly gather changes in the culture. Since we can see only what we know, we belong in the [peripheral] culture” (Zurlo, 2012). On the other hand adopting reticular models in design means arousing interest in relationships.

Fringes of the network model demonstrates an amazing adaptive capability towards markets, so we need to pay more and more attention to their relational environment.

Keywords: relational design, network, fringe, context, rizhome.

1. Introduction.

1.1 Design as a relational practice.

In the present research, the topic of relevance is crucial and fundamental such as the in-depth evaluation of the relational tissue, which grows around the product, since they represent respectively the vector and the lattice pattern of cross-relationships for creating meaningful design.

After all, outside the network of user's interest, any object loses semantic quality and almost disappears. Since we know that the sense of an object emerges in the moment in which we find that something is connected to another thing (Zingale, 2012), that is to say when its bonds become significant for the observer and worthy of interest, we need a design method able to create meaningful relationships about the object, so being attractive for the market. Without the semantic relationship, which arises from the attention of the user or the observer, the object, so to speak, does not exist.

So to paraphrase the famous statement by Jacques Derrida “il n'y a pas de hors-text” (here understood in the post-structuralist explanation as “it does not exist no-text which is not text”) we can state that nothing exists outside the relational tie which connect at least two factors. Therefore we can say that the offline product never existed.

In this framework every design action produces the creation, or rather the transformation, of a relational environment, wherein users are involved together with objects, service suppliers, non-user actors and a number of other subjects depending on the specific context of use. Within this perspective the present research start analyzing all the different kind of relationships, we can observe

and isolate in a practical use scenario, and try to reassemble them, building relational pattern focused on the product.

Through a necessary provisional simplification we can observe that at least three different relational types simultaneously characterize any practical use scenario, and they are:

- the user-object relationship;
- the object-object relationship;
- the user-user interaction.

This simplified list of relational survey must then be integrated with the rating of a fourth effective and relevant relational component, which corresponds to the relational dimension of non-user society. In other words that part of the interaction web which, even if is not directly connected with the product in question, however surrounds it and constitutes the contextual environment, that somehow is still able to affect it. Precisely this human interactive component (inside the user and non-user population) in this research assumes a key role, since it represents and synthesizes the cultural framework in which user attraction and acceptance grow.

Looking the most objects and services, we note that each one can be described as the center of a variable relational model, involving users, non-users and other objects in a discretionary wide diffuse reticular map.

When in the 90s, the British anthropologist and evolutionary psychologist Robin Dunbar, director of the research group in social and evolutionary neuroscience at Oxford University, experimentally proved that humans could handle no more than 150 relationships, he established a kind of measure of cognitive limit, linked to the capability to process information, beyond which the relationships tend to deteriorate. In the Dunbar model the minimum core of individuals linked by close ties consists of about three or five actors. Then, proceeding from the center, the net widens beyond the first group, building concentric bonded groups that grow in a progressive manner with the same three basic multiplier.

In the theory the various circles of relation reflect the degree of intimacy and frequency of contacts: the inner circle is characterized by strong and frequent ties (close ties); the second consists of sporadic or irrelevant rapports; the last one is mostly composed of weak and rarefied bonds, or, in the words of Andrea Branzi, "weak and diffuse" (Branzi, 2006).

This pattern is today steadily remarkable growing, and it is taking a branched configuration, thanks to new ways of communication and interaction among people and objects. This process is basically powered by two main events: on one hand the technological development in communications; on the other side the improved people's ability to move or travel long distances.

1.2 The influence of Information and Communication Technology (ICT) on the relational context.

It is widely shared that one of the most powerful revolution of our time is the information and communication technology (ICT) one. It has greatly multiplied the number of relationships among people, so it transformed the modern man into a homo-communicans, which is constantly surrounded by the flow of information. Each one of these somehow influences the cognitive processes of the audience and helps to build that part of the local cultural heritage, from which user attraction, acceptance and satisfaction depend.

In a short period of time Internet, e-mail and social-networks have quickly become strong and effective means of communication, and they facilitated people contacts (increasing in number and frequency). In 2014 around 40% of the world population had an Internet connections (in 1995 it was less than 1%), and in July 2016 the International Telecommunication Union (ITU) estimated that about 3.5 billion of people were classifiable as Internet user (individual who can access the Internet, via computer or mobile device, within the home were the individual lives).

This studies indicate that in less than 10 years about half of the world population gained the opportunity to expand his own digital contact network. Furthermore in the last few years there's been a huge expansion in new technologies like mobile, with the consequence of producing direct effects on economies and social development.

ICTs play a strong key role to fundamentally transform the economic, social and political relationships and now they hint to influence even design and the system of objects and services the person usually interacts with.

1.3 Relational context analysis: a promising approach to design.

The stunning growth in the number of contacts, in the society of humans and objects, has caused, and today still continues to fuel, three significant phenomena that need to be examined in depth and integrated in the design process.

- On one hand this diffuse information network, which is made up by many different layers like a rhizome, and which consists of a lot of cross ties between actors and factors, it has generated a continuous network, wherein each peripheral portion and marginal micro-system is connected to the others, through a sequences of more or less numerous connections. This process mostly cancels the

“geographical” distances between operators, and opens the scene for possible decentralized processes of production and/or design, for factories and designers.

- Secondly in the global network, the characterization/differentiation of the peripheral contexts appears always more marked, due to the different relational arrangement that locally set up. This aspect finds a parallel research reason in the Actor Network Theory (ANT), mainly supported by the sociologist Bruno Latour, inasmuch we find that any relational tissue is in no way ruled over by superior powers and never responds to pre-ordered laws, but they arise spontaneously, according to indigenous processes of aggregation, that are different, place to place. The result is a continuous liquid model, in which the border consist of monads and tribes in constant transformation, where a tribe is viewed, in the developmentally meaning, as a social group existing before the development of, or outside, any kind of state. This explains why for example a product, a material or a color may be attractive for some potential user groups marked by a few close values (e.g. nationality, religion, culture or militancy) and simultaneously arouse indifference or even rejection in an other community, even if near or partially similar.

- Last we must point out the constant variability of the bonds configuration, more marked especially on the edge of the diffuse pattern, due to the continual reconfiguring weak ties, which represent the largest component in the fabric of relations that characterize the user and non-user population. All of this corresponds to the constant and rapid market volatility in terms of attraction and acceptance of products and describes, on a local scale, the processes of genesis, metamorphosis and evolution of style and taste of public opinion.

After all when entering into relationships with the others, every actor participant in a relational pattern establishes ties with different characteristics. The first and more apparent is their strenght, and this is the main important dimension when describing the qualities of a relational scenario. The strenght or weakness of these ties determines their shape in terms of stability or fluidity in time, and their closure or openness toward those who are not part of the plot in the moment. For these reasons, if we want to effectively come to the production of really effective design, there is a need to move from a focus on product features improvements only, towards a wider systemic approach that takes into consideration new relational qualities. In this perspective, as suggested by Deleuze and Guattari (1980), we should move from a pivot-unit model, which is built on the central values of the object (i.e. the functionality of a kitchen knife; the comfort of a t-shirt; the performance of a computer, etc...), to a multiplicity pattern, in which products are part of a wider system of interactive actors, and where even the lateral interaction of outer players (such as non-users) helps to define the project.

Starting from these considerations, the paper firstly try to mark a first relational taxonomy of the object, that will be usefull for creating a new design method or weighing up new influential elements in it. Then the paper opens the debate on the surrounding relational network and the way in which its esteem could enhance the design process. Through the analysis of some case studies, and integrating insights from the ANT theory and the method of the Sociology of Association, the paper then outlines some first research hypothesis on how the counting of the relational component behind the product could enhance and facilitate user attraction, acceptance and satisfaction.

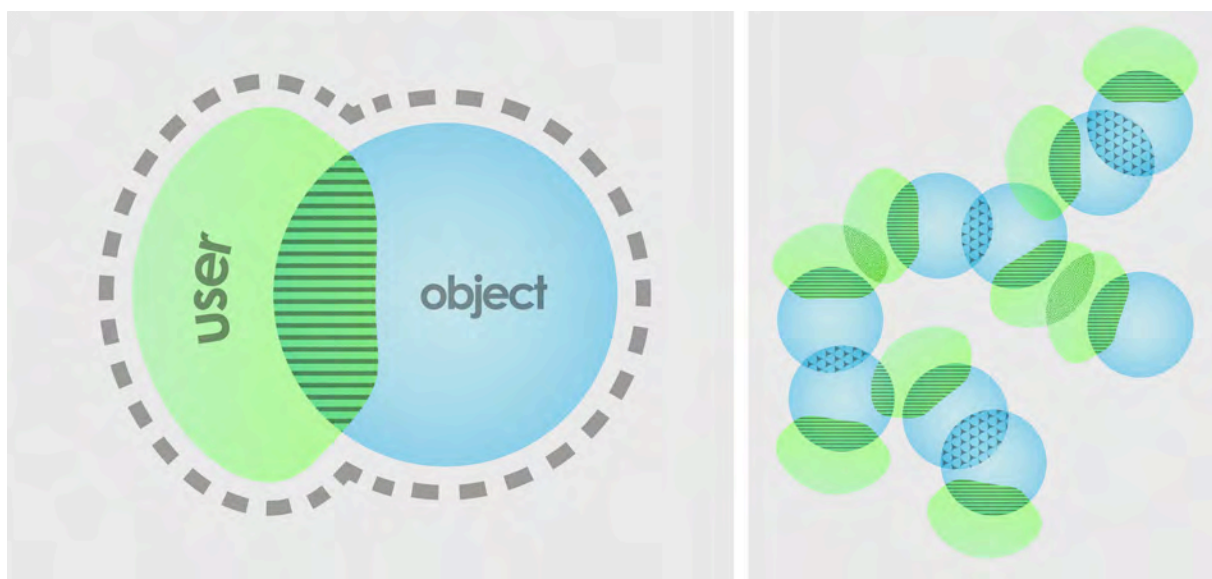


Fig. 1: A simple “object-user” molecule highlights an overlap space, which corresponds to the direct Interface relationship of a product (left). A complex relational system (right).

2. Methods.

2.1 The transition from texts to contexts of relationships.

What is here proposed is a change of scale in the design survey, whereby it is possible to determine new strategies for the project: from the single object to his practical use scenario.

This step partly follows and is equivalent to the concession by which, in the modern history of semiotics, the object of analysis of significant units (texts) has been extended to the broader meaning apparatuses, sometimes different or seemingly dissimilar from the linguistic model, by the Anglo-Saxon socio-semiotics. In the science of signs, this inclusive transition, aimed at considering even most complex systems and factors not directly related to text, on one hand produced the overcoming of difficulties that had blocked the theoretical production, on the other it brought back under the lens of the semiotic investigation new key segments of the contemporary material culture and production, such as publishing, advertising, food, art, fashion and design.

In the same manner, the present study suggests the extension of the investigation spectrum to extraordinary and systemic entities related to the product. From text to context, the first-one become the formal model for describing human, social, cultural and historical phenomena, including design.

Innovations and processes mentioned have led to the sharp increase in the number and volume of relationships surrounding the user-object “molecule”, transforming them into effective influential factors.

Using a graphical model representation of contexts of use, to represent how these have changed over time, we can observe a general evolution process that leads to the saturation of the reticulum. Modernity has produced two main phenomena on relational networks, as follows:

- the increase in the number of individuals with whom each one comes into contact (in other words the number of factors connected in the model – the points in the chart);
- the growth in the number of bonds (the connecting lines in the diagram).

We must add the additional effect of an exponential growth in the operating frequency of each relational tie, that, in the diagram, we can translate into the line thickness. This is an even more important phenomenon than the previous, which has proved essential, for example for the design of many electronic devices or of the graphical user interface (GUI) of softwares and apps.

The gradual saturation of the map describes contextual models, that are more and more complex, wherein relevant topics come into a new condition of promiscuity and mutual influence. In this scheme, even indirect relationships and marginal ones are decisive and could facilitate user attraction, acceptance and satisfaction.

2.2 Discrimination of relational contexts through patterns.

Consumption behaviour arises as a matter of individual choice and personal need, but is more and more influenced by external habits and inclinations depending on the circumstantial surrounding relational lattice. Try to interpret this second component, which is so decisive in generating buying behaviours, first of all requires a careful evaluation of the type of influential links, and suggests the need to exemplify some leading relational models around the product, through the preliminary determination of borderline cases, to be refined by interpolation. Based on the conviction that every design action (including product and service design) corresponds to the production of a field of relationship, it is important being able to foresee what kind or relationship will be helpful to strategically achieve relevance, attractiveness and acceptance in the specific public. Therefore it will be necessary conceive what tools or methods are helpful and effective in terms of the preliminary assessments.

The present thesis proposal is intended to focus mainly on the survey research of social relational aspect, temporarily abstracting from direct interactions (i.e. user-object; object-object), which however have to be included in the overall assessment.



Fig. 2: A simple “object-user” molecule highlights an overlap space, which corresponds to the direct Interface relationship of a product (left). A complex relational system (right).

The relational network arising among users (and non-users) contribute, in no small way, to determine processes of appropriation and acceptance of the product, and constitutes a sort of generous cultural background for the creative design of goods.

The expected results from the survey process can hopefully come together in an organized system of information and/or appropriate tools to guide the creative process towards products with a high market penetration.

Trying to outline the relational contexts in which virtually all objects can be placed, we can draw a first major distinction based on number of human users interacting (or not) with the object:

a. Mono-user context of use: scenario characterized by the exclusive presence of a single user or observer, in which emerge only direct relationships with the object. Going deeper is then possible to discriminate even the type of the relationship in unidirectional and bidirectional, depending on the transit characteristics for information delivered in the interface connection.

b. Multi-user context of use: context characterized by the simultaneous presence of a large number of users (at least two individuals), where in addition to many direct relationships with the object placed in the center of the model, can occur even a serie of indirect relationships between everyone involved. This second component of indirect relationships proves to be anything but marginal. On the contrary it represents the social and cultural fabric of connection on which in large measure depends the audience attraction and acceptance.

Drawing a deeper distinction in the category of multi-user context, we can distinguish:

b.1. Linear relational pattern: some objects show to fit into sequential lines of connection, where there are only direct relationships between the actors who "live" the context.

b.2. Polar relational pattern: characterized by the multiplicity of direct relationships to the product.

b.3. Reticular relational pattern: Entity typically present inside the complex relational contexts, in which there are direct and indirect relationships, varying in number. It constitutes the most appropriate model to describe almost the totality of public context of use of the objects and in fact reduces the level of approximation in the interpretation phase of the market.

b.4. Diffuse relational pattern: this is a system with the natural attitude to grow by aggregation and multiplication of previous models leads to the development of an extended tissue, liquid, without any solution of continuity, describable mainly as a rhizomatic formation. The common systems are themselves made up of ramified systems even diversified, but connected to each other, through which the information distribution becomes widespread. It is a kind of network made up of networks, a global network of local networks, inside which every change, even partial, produces changes to the level of the social fabric which it relates.

As already mentioned, this research aims to focus attention on the marginal and surrounding fraction of the relational network, and want to investigate what contribution it can offer to design processes.

The use of the simplified representation through models find a suitable error compensation instrument in the size of the the discretion of investigation radius. In effect, isolating a portion of the relational plot, large as desired around the object, it determines the context of influential connections (the relational senario), capable of advising driving information for the project. The greater will be the circle, the more precise and exhaustive will be the context/scenarion description, resulting in a desirable increase in the chances of success of a product.

Within this perspective, several authors converge on the idea that a strong support could come from Internet and the huge modern diffusion of new communication media. So almost all of them consider promising to use this crucial relational innovation for displacing preparatory survey activities, production processes and now design practices too.

3. Conclusions and insights from case studies.

3.1 Peripheral design strategies.

With reference to the system of peripheral contexts, that we have already described as monads or tribes, and we have recognized as being responsible for the degree of acceptance of the products and public awareness in the local, design and production system can choose between two different positions. On one hand it can choose a mono-centric arrangement (traditional operative way), thus maintaining a lateral position, compared to most of the peripheral contexts, which represent the market. On the other side it can implement poly-centric policies so to decentralize part of its organizational and operational structures directly into each one of the user contexts, that correspond to target.

The pyramidal systems, typical of the first hypothesis, while not denying the reticular distribution of the relational fabrics which form the markets, require the predisposition of tools of investigation, detection and processing (more or less effective as scientific instruments) to transfer information from the peripheral networks towards design centers and production departments. This kind of process produces effective results depending on the objectivity and sensitivity of the instruments used for data detection.



Fig. 3: The research suggest to transfer design process and production into the border relational contexts so becoming part of the market and earning effectiveness in the local.

The diffuse pattern (or poly-centric model) instead suggests an alternative solution, purified from error that can not be estimated, and proposes peripheral design strategies, where all or only a part of the design process is transferred or relocated directly in the center of border relational networks, which corresponds the local markets.

This new arrangement, which covers the company (production) but also the design process (project), provides an extraordinary analytical ability, which is sensitive and effective especially regarding indirect contextual relationships. This leads to new design tools, aimed to guarantee greater satisfaction and acceptance. Beyond that, the transfer of the design process within the border contexts, allows a quick read of those changes that characterize modern society, and somehow it offers the opportunity to the factory to take action and communicate with other factors of the environment. New information technologies and the processes of technological miniaturization offer the material and technical support to implement the horizontal transfer of the manufacturing. New participatory design strategies offer instead operative instruments for transferring the design phase, up to the business planning, in the fringes of the global relational network (directly in the local).

3.2 Mykita - My Very Own project.

My Very Own is a new production project and a catalogue of frames based on additive manufacturing processes and 3D scanning technology, where each piece is designed and tailored around the face of the wearer.

Pioneering German design house Mykita has recently teamed up with technology partner Volumental in a bid to set a new standard for digitally tailored eyewear, where anatomical design meets avant-garde technology, in order to offer the perfect pair of glasses, designed according to the requirements of the user and the topography of his/her face. The project foresees the opportunity to apply to some predefined models of the common collection, the digital data relating to the user's face, previously acquired by means of a three-dimensional scanning process, in order to let them adhere perfectly to the purchaser's physiognomy.

In the first step of the procedure a scanner, as it is placed inside the natural environment of the general user (such as an optic store), compiles an accurate 3D model of the customer's face, which then go on to be tried in a digital fitting. The 3D scan is responsible for capturing the topography of the face, forming the basis for MVO bespoke eyewear design and production. Thanks to this technology the bespoke service is so precise that it caters to micro adjustments in frame width, breadth of the nose bridge, frame to face angle as well as temple length and radius.

In the entire process each model maintains its aesthetic characteristics and its distinctive look, while the parts in contact with the face are designed to fit the specific shape of the face.

Mykita MVO program integrates three digital technologies (i.e. 3D scanning, parametric design and additive manufacturing) to tailor design and fit of a pair of glasses to the individual topography of each face. Nevertheless it assumes the advantage of easily transferring information across the network of digital communications and so prefigures a new peripheral transfer process of design centers, in this case aimed at the highly customized solution of the physical interface between a pair of glasses and its own user/wearer.

In the entire project the parametric design is a process based on algorithmic thinking in which every single design is not a static unchangeable entity, but dynamic. The parametrically designed glasses of the collection comprise more than ten variable parameters. In this perspective, the program proves to be an open-end project, in which precisely the relational factors related to the specific market context, help to define and complete the shape of the product.

3.3 La.Mo, Università degli Studi di Firenze - Design in the Tribe. Experimental project of peripheral collaborative design.

Design in the Tribe is an experimental project of collaborative design, developed under the supervision of La.Mo (frame design lab of the university of Florence) with whom we have tried to transfer the design process of glasses directly into a local surfer's community, firstly placed on the north-eastern Italian coast. The experience has been planned as a partnership workshop, based on co-design strategies, to outline the influences and contributions coming from the mood and heritage of local group identity.

Like any other community, even the surfer one is articulated in a complex set of relationships and bonds between users, non-users (onlookers, companions, surf teachers, etc...) and objects.

The experience made up with the University of Florence tried to exploit at this stage all those indirect relationships, ignoring the direct ones, and rated how crucial boundary relational contexts were.

Excluding direct connections, what remains is a huge meaningful data tank, which is relevant and effective for the community where the product is intended.

Beyond new products design, through unconventional strategies such as co-design, the workshop has produced a kind of performance and happening, as the result of a set of unpredictable relationships, growing around the sharing event.

As well as non-professional users and non-users, representing the majority of the working unit, the workshop has been realized with the contribution and participation of a number of professionals, among them:

- Saraghina is the frame producer, which has made possible the realization of the project, guaranteeing the technical and productive support needed for the final realization of the products;
- La.Mo provided two design experts, who have coordinated and led the project, acting as a link and an interface between the company's technicians and the local community in the engineering phase and prototyping.

The end result was a series of sunglasses prototypes, which are capable of expressing a sensitive proto-thought by the local tribe. This first collection could work as a main mock-up, to be quickly transformed into a new standard production, and it is the key to open a constructive dialogue with the community who need it. By this way the factory (producer and designer) definitely earns reading skills and market interpretation, directly out from the contexts that surround it.



Fig. 4: The peripheral design process is a highly effective happening.

Bibliographical References

- ANTONELLI, Paola. *State of design 03: Thinkering*. Domus 948, 2011 June.
- BARTHES, Roland. *Elementi di semiologia*, Torino: Einaudi, 2002.
- BAUDRILLARD, Jean. *Il sogno della merce*. Milano: Lupetti, 1995.
- BONFANTINI, M.A., ZINGALE, S. (2005). *Sul contatto*. ZINGALE, Salvatore. *La semiotica e le arti utili in undici dialoghi*, Elettari, p. 85-207.
- BOURRIAUD, Nicolas. *Estetica relazionale*. Milano: Postmedia, 2010.
- BRANZI, Andrea, LINKE, Armin, RABOTTINI, Alessandro. *Gli strumenti non esistono*. Monza: Joan & Levi, 2013.
- BRANZI, Andrea. *Weak and diffuse*. Milan: Skira, 2006.
- DELEUZE, G., GUATTARI, Felix. *Mille piani. Capitalismo e schizofrenia*. Roma: Cooper & Costantini, 2003.
- ECO, Umberto. *Trattato di semiotica generale*. Milano: Bompiani, 1975.
- ECO, Umberto. *La società liquida*. *La bustina di Minerva* e l'Espresso. Espresso, 9th May 2015.
- GNASSO, Stefano, IABICHINO, Paolo. *Existential Marketing. I consumatori comprano, gli individui scelgono*. Milano: Ulrico Hoepli, 2014.
- GUATTARI, Felix. *Caosmosi*. Milano: Costa & Nola, 2007.
- LA PIETRA, Ugo. *The domicile cell: a microstructure within the Information and Communications Systems*. In AMBASZ, Emilio. *Italy: the new domestic landscape*. New York: The Museum of Modern Art, 1972.
- LATOUR, Bruno. *Reassembling the social*. New York: Oxford University Press, 2005.
- MANZINI, Ezio. *Design when everybody designs*. Cambridge: MIT Press, 2015.
- MARRONE, Gianfranco. *L'invenzione del testo. Una nuova critica della cultura*. Bari: Laterza, 2010.
- MARRONE, Gianfranco. *Elementi di semiologia*. Torino: Einaudi, 2002.
- MICELI, R. *L'importanza dei legami deboli*. Torino: La Stampa, 2013, September.
- VERGANTI, Roberto. *Design-driven innovation*. Harvard: Harvard Business Press, 2009.
- ZINGALE, Salvatore. *Gioco, dialogo, design: Una ricerca semiotica*. Milano: Ati editore, 2009.
- ZINGALE, Salvatore. *Il senso relazionale degli oggetti*. In BIAMONTI, Alessandro. *Giulio Iacchetti*. Milano: Franco Angeli, 2012.
- ZURLO, Francesco. *Le strategie del design. Disegnare il valore oltre il prodotto*. Milano: Libraccio editore, 2012.