







# 1<sup>ST</sup> INTERNATIONAL CONGRESS OF DESIGN AND INNOVATION OF CATALONIA

---

17th, 18th & 19th March of 2010  
at Fira de Sabadell

**BOOK OF  
ABSTRACTS**

Organizers

**FUNDIT**  
Fundació per l'ESDi

**ES  
Di** Escola  
Superior  
de Disseny  
Centre acadèmic  
Universitat Ramon Llull

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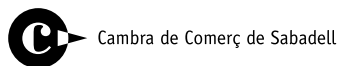
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# About the Congress

It is always advisable for all professionals to, from time to time, rethink and redefine their career in order to renew themselves and adapt to the new challenges and changes that social evolution and new technologies entail. This is especially true in times of severe financial, economic and social hardship, and of industrial and commercial constraints. If we are to believe experts, the economy will not ever quite be what it used to be; in this light, the design profession must adapt to this changing reality.

At FUNDIT and ESDi, we are convinced that applying design to business innovation will certainly be a major drive for economic recovery. However, because of this, we must be eager to spot the new needs and the new setting of the current situation and its immediate future.

At ESDi, now that we are celebrating our 20th anniversary teaching designers –the last of these two years as a centre entitled to award official university degrees– it seems the right time to reflect on where we have achieved and lay the foundations for the future ahead of us.

Organizing an international congress is a good culmination to the celebrations of our 20th anniversary. **The 1st International Congress of Design and Innovation of Catalonia** is a great way to share ideas and experiences with experts from around the world and to open our eyes, ears and, above all, our minds to new ways of focusing on academic activities. During two days, we will have the opportunity to initiate fruitful research paths, to share best practices with researchers, designers and entrepreneurs from around the world who share our ambition: using design to help build a fairer world, more sustainable and more comfortable for everyone.

**Llorenç Guilera**

Director of the Organizing Committee

# FUNDIT & ESDi: The commitment work

From the hand of employers in the textile sector, led by the Manufacturers Association of Sabadell, in March 1989 arose the Textile Design Foundation (FUNDIT), few months after was created the School of Design ESDi for the purpose of training design professionals in a university as it happened with the most advanced countries of Europe and America. Designers with a high capacity for observation and tests, capable to put their creative abilities in the service of economic and social development in a world that draws on the horizon even more open, multipolar and highly competitive. Design studies that were fully light in September 1992 due to the association agreement with the Ramon Llull University (URL). For the first time, there were design studies in Spain. Some pioneering studies in the country that marked the culture and values of ESDi, it explains that in 2008 ESDi would again be the first pioneer center in Spain teaching design in all disciplines, the Official Undergraduated University Degree in accordance with the guidelines established by the European Higher Education Area (EHEA).

Since the birth of FUNDIT, thus ESDi, the importance of design has increased significantly, designers of today are needed in all business organization that wants to compete with innovative products, quality, and put the technical and scientific progress to the service of human development. The design is not only an aesthetic value, is an essential and strategic value that requires us to have a look exogenous for integrate fully into productive activities, all working methodically and with scientific rigor.

Designers can not work alone. They require synergistic work with other professionals (using the scientific method and sharing the knowledge) and they need to know how to work closely with to enable the continuous flow of research, development and innovation. It is in this context that emerged from our Foundation and ESDi, the *1st International Congress of Design and Innovation in Catalonia* to be held on 17th, 18th and 19th March 2010 at Fira de Sabadell

under the slogan “Design: engine of innovation and social progress.” A Congress that will help to boost R+D+i activities in design and innovation as a way to improve competitiveness in international markets.

Some objectives will meet giving the quality of presentations and rigor of the 73 papers being presented, and 7 central papers issued by internationally renowned professionals. 73 papers written by 123 researchers and professionals from 14 countries: Germany, France, Argentina, Brazil, Chile, Colombia, United States, England, Israel, Italy, Mexico, Peru and Portugal.

To all of them and more than 350 attendees who have completed the registration, and the thousands that will follow the result of the congress through telematic networks, the gratitude of our foundation, because the wealth of ideas that bring their papers make us look forward to the horizon and bring light to issues and problems world faces on it's way towards the future. In this gratitude we can not forget the professionals who daily make possible ESDi, their students, the thousands of designers who have trained at ESDi, the businesses and institutions taking part in activities, ultimately those who make possible co-operation to compete in an increasingly global and more challenging world, and they know that the design working symbolically with technical and scientific progress is the engine of innovation and social progress.

**Josep Bombardó**

President of FUNDIT and ESDi



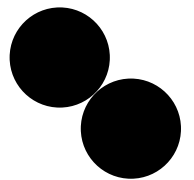
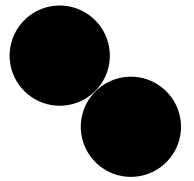
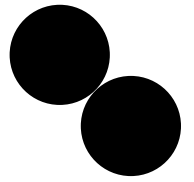
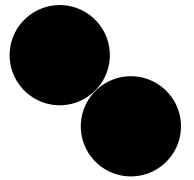
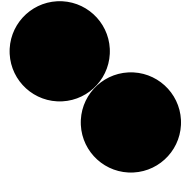
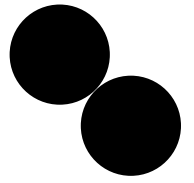
## **Welcome to discuss & reflect**

### **Welcome to this Congress of Design and Innovation.**

Design attitude provides the creative and wise approach that needs this industrial era. In these times of environmental and economic crisis, wit and good sense are more necessary than ever to ensure a sustainable world. Design and innovation have a role to play in such a venture. We must find new living conditions to meet current human needs without compromising those of future generations. We wish that this Congress becomes a forum for sharing criteria and raise the global awareness of all these issues so essential.

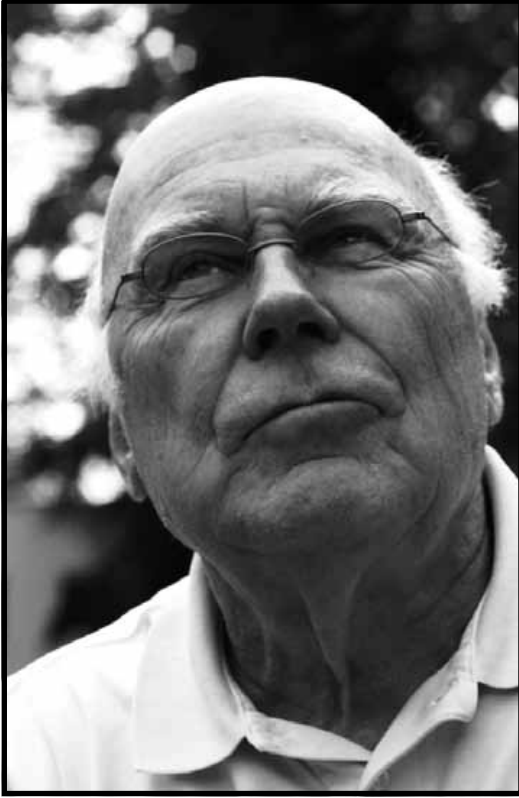
**André Ricard**

Chairman



**KEYNOTE SPEAKERS**

# Gui Bonsiepe



## Biography

Gui Bonsiepe (Germany 1934) renowned industrial designer, he studied and taught at the HFG (Hochschule für Gestaltung) in Ulm.

In 1968 he moved to different South American countries. He was founder and first coordinator of the Brazilian Laboratory of Industrial Design Florianópolis (1983-1987).

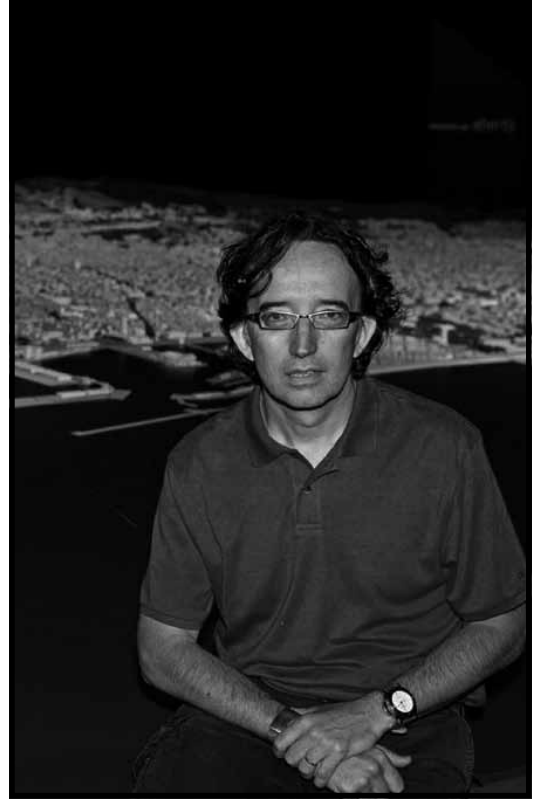
In the latest 80's he moved to the United States where he worked 3 years in a software house in California and was there where he began to know about new technologies. During 10 years he was professor of design interfaces at the University of Applied Science in Cologne.

## Design in Turbulent Times

Design and its possible roles are analyzed against the background of the triple present crisis: in the financial domain, in the environmental domain and in the socio-economical domain. The concurrence of these three different forms of crisis turns the issue highly complex compared to well-known historical cases. The loss of identity of the term «design» is commented that gained in horizontal expansion and lost in depth. Several interpretations of design in recent management discourse, with a prevailing marketing vision, are taken under review. The consequences of branding – with its emphasis on the creation of symbolic capital (Pierre Bourdieu) – on professional design practice are compared with former concerns of designers. The narratives of the causes of the present crisis are presented to check the possibility if and where design fits in and can contribute to resolve the crisis. The best-known historical case of design as a tool for crisis management in the automobile industry is compared with the approach taken by designers in front of the crash in Argentina in 2001/2002. The effects of the crisis on design education and the increasing academisation of design education are described. The role of design as an innovative activity is exemplified by eight different ways in which design innovations can manifest themselves.

## Emotional design on the Conceptual Age

We progressed from a society of farmers to knowledge workers to a society of creators, empathizers, pattern recognizers and meaning makers, designing for this new Conceptual Age requires a different approach where utility and usability are still important but a full range of emotions and the importance of “feeling good” must be part of the experience as well. Alfred Astort will outline some of the essential abilities designers and companies should master to succeed and survive on this emerging landscape.



### Biography

Alfred Astort is a user experience design lead at Microsoft's Entertainment Experience Group, a multidisciplinary team whose charter is to design world-class end-to-end experiences across Microsoft's Entertainment & Devices Division. For the last 18 months Alfred has been involved on the user experience design of the new Windows Phone seven series that were unveiled this February at the Mobile World Congress in Barcelona.

Previous experience includes shipping Photosynth and Seadragon while at Microsoft's Live Labs, a group focused on creating new and more intuitive user interfaces and experiences for emerging Internet technologies, founding one of the first Spanish companies specialized on web and interactive design back in 1996 and many creative roles in different companies in Barcelona and Seattle. Originally from Barcelona, Alfred currently resides in Seattle, USA.

# Antoni Garrell



## Biography

Industrial Engineering from the UPC (1975), Master in Management and Administration, and studies Ph.D. in Systems Support Decision Making. Since 1975 he has developed a strong professional activity in both strategic and organizational consulting and in the field of computer technology applied to production, management, marketing and content. He has been member of several boards of Management and advice business. He has authored 6 books and more than 500 articles and received several awards. At present he is the General Director of the FUNDIT for ESDI, the president of the Confraternity of Poblet, president of the Association Circle for the Knowledge and representative of the Parliament of Catalonia at the U.O.C.

## Competitiveness and design

Organizations face the challenge of competitiveness, knowing that only if they reach it they will be able to exceed its own expiration. To do so they will have to face the complex challenges posed by global markets and generate new differential products with high value to become reference brands and to increase profitability. These challenges require an ongoing and permanent process of R+D+I, and a set of factors that require to be highly productive. Since being aware of new developments in production processes that bring new skills to professionals; assuming the risks of globalization and the free flow of knowledge to apply innovation to achieve differential results and consequently achieve competitiveness in a global market that tends to be unique. This requires a balance reached through the trio that includes the innovative capacity, the addition of more productive systems, and the opening of markets to achieve greater product visibility worldwide thanks to globalization. Consequently the product innovation is the essential tool to ensure competitiveness and market reach significant levels.

To innovate in product involves to provide it with a differential value incorporating objective aspects associated with the technical, ergonomic and functional features, and others residing in subjective emotional states, social trends, situations or values that are transmitted. This is necessary to act on constituent components: the technology it incorporates, the scientific knowledge it uses and design, which provides rich content, ease of use and beauty. The innovation of a product is closely related to the balance between technology concepts, science and design and especially the contribution of the latter, the design, due to standardization of technology and the growth of free transmission of knowledge. Therefore, the design becomes the core element of any innovation process, as a tool not only to integrate the scientific and technological advances in products, also because it enables the user to accommodate it to their needs and characteristics.



# Francesc Aragall

## The design for all or how to combine social values with economic benefits

If we take into account that the clients' attitude is changing and that they are more and more demanding from very different perspectives, and that consumers are better informed and are more and more professional in their purchases; in a competitive environment, to be successful a company should: a) best adapt to the client's wishes and needs, or even anticipating them; b) believe in a solid reputation of commitment with the client, user and society.

Thus, the company that wishes to become leader in its market sector must be able to understand its products and services from the client, consumer and society's perspective. In order to achieve that, it is necessary to understand human diversity and be able to satisfy the different wishes and needs of each of the potential clients.

The strategy to face this challenge is called "Design for All" which aims at adapting environments, products and services to the needs and wishes of All, regardless of their age, gender, abilities, cultural level, creeds, values, sexual orientation, etc. To implement the Design for All the method H.U.M.B.L.E.S. (Aragall 2007) has been developed. It guides the company through the process of innovation, getting it closer to the potential users' needs and wishes.

Its main objective is to achieve an increase both in the number of satisfied clients/users, and in the company's reputation, by adapting the company's products and services to the diversity of wishes, expectations and needs. The seven generic phases of the H. U. M. B. L. E. S. implementation are:

1. Highlight Design for All opportunities.
2. User identification.
3. Monitor interaction.
4. Breakthrough options.
5. Lay out Solutions.
6. Efficient implementation and Communication.
7. Success evaluation.



### Biography

He is graduated in therapeutic pedagogy by University of Barcelona. He has developed his professional activity in the world of ergonomics, biomechanics, accessibility and Design for All.

Nowadays, he is professor in different masters and doctorate courses at Barcelona and Lisbon Universities, writer of the "European Concept for Accessibility" (2003 edition), and member of the "Grup de Treball d'Accessibilitat" in the city hall of Barcelona, among others. Employer of Barcelona Center of Design (BCD) and General Manager of ProAsolutions, consultancy of accessibility and design for everyone, and founder and president of the Design for All Foundation.

# Alastair Fuad-Luke



## Biography

Alastair Fuad-Luke is a sustainable design consultant, facilitator, educator, writer and activist working in the UK, EU and internationally. He recently joined Plymouth College of Art in the UK to run the MA in Entrepreneurship for Creative Practice.

As author of *The Eco-design Handbook* (2002, 2005, 2009) and *Design Activism* (2009), he holds a pluralistic vision of how design can contribute to a better, more equitable, world.

He was manager for DEEDS (Design Education & Sustainability), a European funded project, between 2007-2008, and from 2005-2009 was a board member of New York and Amsterdam based SlowLab. His research interests embrace "slow design", design to slow metabolisms, "co-design", designing together, and "design activism".

## Co-design (designing together): An approach to accelerate sustainability transition, social innovation and cohesion, and the regeneration of nature

Over the last 15 years legislative, socio-cultural and market forces have ensured that eco-efficient design is becoming more embedded within product, service and architectural design practice. Wasteful cradle-to-grave linear processes are shifting to cradle-to-cradle applications and Life Cycle Thinking. Yet eco-efficiency alone can not deliver transition to more sustainable economies (for example, the low carbon/cyclic/social/local economies). Eco-efficiency also can't guarantee eco-effectiveness, nor does it ensure that we can repair and regenerate the life supporting ecosystems on which we depend. Dealing with the multiple challenges of climate change, resource depletion and economic equity needs improved eco-efficiency combined with cultural, social and political behavioural change. It also requires a substantive shift in the way we perceive the role(s) of 'Design' and our perception as to who are the 'designers'. The meta-challenge is not climate change but social change.

This paper examines the rise of co-design, designing together, and its various approaches (co-design, participatory design, social design, transformation design, metadesign). It explores how co-design demands new skills and tools, and a willingness from designers to work in different, and rewarding, ways. It illustrates how the co-design approach can generate radical new enterprises that contest current production: consumption model. Co-design helps develop systemic, democratic and life enhancing futures that seem genuinely achievable. Furthermore, co-design presents new work opportunities in a continuing global recession.

## Robotics: A look to 2050

The robotics field has expanded from the very well known robot manipulators used in the industry for assembly, welding, etc. to the preliminary humanoid robots to help people in everyday tasks. In the middle there are many other robots, task oriented robots, that we will have an important impact in our society, for example the cleaner robot, kitchen robot, autonomous vehicles or autonomous airplanes and helicopters. The gap between the different robots is high, meanwhile we need to develop good mechanical devices and control techniques for robot manipulators, in case of humanoid we have to add cognitive skills like perception, reasoning, learning and plan execution. Moreover in the humanoid case, the design of the robot and the interfaces with humans will play an important role in order the humans accept the presence of robots in everyday tasks. In this work we will briefly explain the history robots from the decade of the 50s to the present days, and we will take a look what we expect to have around the year 2050.



### Biography

Alberto Sanfeliu received the BSEE and PhD degrees from the University Politechnic of Catalonia (UPC), Spain, in 1978 and 1982 respectively. He joined the faculty of UPC in 1981 and is full professor of Computational Sciences and Artificial Intelligence.

He is director of the *Instituto de Robotica i Informatica Industrial - IRI* (UPC-CSIC), director of the Artificial Vision and Intelligent System Group (VIS), past director of The UPC department *Enginyeria de Sistemes, Automatica i Informatica Industrial* and past president of AERFAI, and he is doing research at IRI, (UPC-CSIC).

# Eric de Perthuis



## Biography

Eric de Perthuis (France) graduated from the Dijon Business School specializing in Business & Marketing. He was assigned in 2006 as Director of the office for Spain and Portugal of Dassault Systèmes (DS), which is responsible for developing sales activities, marketing and techniques for market PLM (Product LifeCycle Management).

Eric has worked for Dassault Systèmes since 1997 in several strategic positions in sales and marketing, the latest being that of Channel Development Manager. Other positions have been Manager of Referencing and Strategic Campaigns, DS Partner Marketing Manager, Market Management and monitoring the release of CATIA V5, the company's flagship product.

Prior to joining Dassault Systèmes, Eric worked for Parametric Technology (PTC) and SAGEM.

## 3D opens the door to the world we imagine

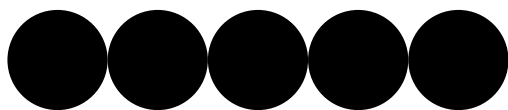
We all know that design is becoming everyday more a vital strategic tool in a business. The ability of designers to quickly explore, discover and create ideas, discuss them with stakeholders, modify them, make models, test and re-model before finally presenting a finished solution are no longer 'nice to have' but essential. Nevertheless, the appearance of sophisticated 3D tools has blurred the roles and responsibilities of designers and engineers, and finally has sometimes isolated the designer from the engineer.

The new 3D solutions portfolio includes a dedicated set of intuitive state-of-the-art applications for designers to express their creativity and explore more innovative ideas in 3D.

For the last couple of years, a number of renowned design schools experience CATIA for Design solutions, sharing knowledge and resources. These design schools have run pilot projects, exploring the intuitive CATIA 3D creation tool with very distinctive approaches, illustrating the combined ease-of-use of the technology and the perfect fit between the functions, the intuitive interface, and the designer's expectations.

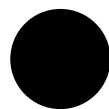
As you can imagine, DS continues investing on new technologies. The new design tools will enable the industry to create more and more realistic virtual 3D products for which form, behavior and interaction with complex elements can be tested in life-like situations.

That will benefit cooperation within the engineering and manufacturing communities themselves, enabling the industry to make critical decisions earlier, and leveraging experiences that will reinforce the strategic position of the designer.



## **ABSTRACTS**





**Branding**

## Storytelling: transmitting the brand's DNA through experience

.....

**M<sup>a</sup> Giuseppa Casado**

**D'Amato<sup>1</sup>**, Silvia M<sup>a</sup> Rodríguez  
Vives<sup>1</sup>

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.....

### Biography

**M<sup>a</sup> Giuseppa Casado** has a degree in Advertising and Public Relations and Master by UNESCO in Peace Studies and Development. Since 2006 she works as a researcher in the draft Habitat Trends Observatory. From ITC is involved in projects related to design and communication companies in the sectors of the habitat. Coauthor of Notebook of Habitat Trends and New way of life.

The presentation will explore 'storytelling' as a strategy for transmitting the company's brand image. It is a matter of generating a brand DNA that connects vitally to consumers, rather than simply of generating a branding strategy. The purpose of the brand DNA is to create a powerful bond between the consumer and the company or product, above and beyond the actual product purchasing process. Experiential marketing is an instrument that serves to create a bond between the product/service and the user, enabling users to perceive, translated into their own language, the underlying design, i.e. what the uses and the relationships are that users will establish with that product or design.

Storytelling is based in providing users with exciting stories through events, novel purchasing experiences, or *guerrilla* communication campaigns that users can tell their circle of friends about. A network effect can thus be developed between consumers who are, in addition, able to access free impacts in the mass media, generating publicity. On the other hand, unique occasions for encounters are created between the consumer and the brand, so that experience builds up in the wealth of memories that the consumer has in relation to the brand, company, or product.

The presentation will also examine some of the latest distribution trends in relation to consumer experience, as well as strategies for approaching consumers more closely and enabling the consumption act to become a memorable moment. Examples will be shown of guerrilla marketing, the creation of sales outlet environments or how to transmit a brand image through the sales outlet and to generate new ties with the user. Experiential marketing will be analysed from a new perspective, which brings companies and consumers into contact with each other through the generation of sensorial impacts.



# Elephants in Beit-Nabal'la

## Creating a Military Brand

---

### Liat Harel<sup>1,2</sup>

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---

### Biography

Designer of visual communication and  
illustrator, owner of a B.Des degree  
in visual communication and M.Des  
degree in design management  
from Bezalel Academy of Art and  
Design, Jerusalem. Her work focuses  
on branding, design and concept  
development, and the study of design.

Israel is a state in which the military service is obligatory for both men and women. Hence, follows, that when one Israeli meets another, one of the first questions exchanged would be – “what did you do in the Army?” The answer is a testimony not merely to the level of danger the respondent was exposed to in his military function, but also to his status, intellectual and physical capabilities, image and manhood.

This launched a research attempting to examine a **battle-supporting military-corps suffering an inferior image in the eyes of the Israeli public**, which eventually focused on the **Transportation Center** of the Israeli Army. The leading question that underlies it is: could the **Transportation Center become a “desired brand”, and if so, how?**

For studying the problems as well as proposing solutions, I needed to use all the parameters of my own identity: as an Israeli citizen living in a state where a fellow's station and image are much influenced by the nature of his military function; as a visual communication designer, aware of the importance of visual images and contexts, both particular and global; and as a design manager, trained to supply visual and strategic solutions to civilian societies, attempting to apply those tools to an Israeli Army corps.

First, the research scrutinizes the historical developments that led to the forming of the current Transportation Center, uncovering the glorious past of the force, its courage and bravery in Europe during the 1st and 2nd World Wars. Thus, it shows clearly substantial foundation for an image building narrative.

Then, using tools borrowed from **design management**, the Transportation Center's brand is studied on its elements of strength and weakness (SWOT), revealing severe image problems and a serious gap between essence and visual expressions (emblems, insignia). All these became basis for a devised strategic and design program, proposed to enhance the brand's image.

On the strategic side, this research emphasizes the heroic history of the force and other elements of strength unknown to the public at large; it proposes thereof, visual and technological solutions designed to improve the brand's image.

**Dealing with these issues raised the question why is branding of an army corps at all necessary?** The conclusions regarding this dilemma point at the feelings of pride, belonging and unity experienced by human-beings as primal basic senses, essential for their social functioning. A person needs to be and feel a part of some group or tribe. A military framework intensifies this issue. A soldier feeling unappreciated would suffer frustration and disappointment in himself and his environment. Unlike, if he enjoys support of his actions; he would then feel satisfaction and pride in his military affiliation for being an important asset.

The novelty of this research is in the applicability of Design and Brand Management's tools to an army corps which is unlike a commercial firm; also, in the combination between an academic theoretical research and a practical project consisting of field-studies, interviews and personal learning of the Transportation Center.

## The design as a solution for the food industries

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Design is a very powerful and competitive non-technological innovation tool at the service of companies.

This discipline is able to generate new innovative product and service concepts and to make their integration in the market easier through their communication.

Some companies of the food sector have been conscious of this power and have taken good advantage of it in order to be more innovative.

Knowing the reach and the power of design in reference to the food world is essential to become a leading company in the sector.

### Biography

**Mariona Lopez** and **Abel Benito** are the founders of 2creativo, a strategic review of graphic and industrial design in Barcelona. They work together since 2002, from his studio located in the district 22 @.

## Visual systems and innovation. Case study HDL

.....  
**Martin Lorenz**<sup>1</sup>, Lupi Asensio Lorente<sup>1</sup>

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.....  
**Biography**

**Lupi Asensio** BA in Fine Arts from the University of Barcelona (UB), speciality design. KABK Studies in The Hague (Netherlands). Specialization in Typography at the FH (University of Applied Sciences) in Darmstadt (Germany). Postgraduate Diploma in Visual Communication and Film Studies at the HFG (University of Art and Design) in Offenbach (Germany). Academic Director of the Masters in Graphic Design at ELISAVA (2008-2010) PhD in design at UB Founder Twopoints.Net visual communication studio, along with Martin Lorenz.

**Martin Lorenz**. Studied at the FH in Darmstadt (Germany). Graduated with specialization in typography and graphic design at the KABK (Royal Academy of Visual Arts) in The Hague (Netherlands). Professor in the Masters in Corporate Identity Design at ELISAVA. PhD of Design at the University of Barcelona, Founder of visual communication studio Twopoints.Net

Our society has been served well by deep and narrow specialties, but the nature of today's "big picture" challenges fall at the intersection of what we know. Not unlike cooking, the solution today is not just in the ingredient, but in the mix.

A visual system is what we understand as structure that manages and controls a visual identity, with other words, that regulates how to mix the ingredients. The visual system needs to allow diversity so the identity can change, but as well coherence, so the visual identity is recognizable. We will present the visual system developed by TwoPoints.Net for the finnish design institution "Helsinki Design Lab". In this case, the driving idea of the visual identity is drawn from the "space" occupied by the strategic framework of the HDL, which draws together a diverse group of actors and entities from various fields. In terms of visual representation, this space is filled by heterogeneous visual styles that serve to represent the actors (specialists) with different backgrounds functioning in a holistic way. The conceptual framework of this particular visual identity, in contrast to a "normal" branding, avoids homogeneity or uniformity in favour of highly diverse visual styles occupying the same space. Yet, given this embrace of heterogeneity, the visual identity maintains a sense of stability in order that the identity expresses trust, confidence and recognisability. Thus, the visual identity is both flexible and constant.

The identity contains two zones: A flexible image space that may house corporate elements or images that illustrate a specific content and the word mark space.

## Packing's guide for small and medium enterprises in Mexico

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### Biography

**Alberto Rosa** is an Industrial designer with graduate studies in Product Development and Ph.D. in Materials Science oriented polymer. Teacher-Fellow in the Department of Production and Development at the University Center for Art, Architecture and Design at the University of Guadalajara, Mexico.

Academic Group 381, Technological innovation by design of Universidad de Guadalajara, Mexico, has two main research lines, which mark the scope of members work. One of these lines supports infrastructure development in traditional technological processes, with the aim of remark the design importance as an activator of local, regional and national economy levels.

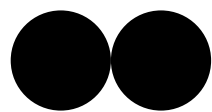
As result of our work, Academic Group has worked supporting small and medium enterprises (SME) developing products for these companies: some of them are agricultural products; others are small products made by a traditional way using low technology. The design in these cases has focused on branding and packaging for such products.

Developing these projects we have noted the lack of appropriate supporting literature for these companies; usually the packaging books are foreign and in many cases, those books only illustrate the final design solutions discarding the whole creative process behind them.

Attempting to remedy this deficiency, our Academic Group was given the task of writing and publish a textbook, that would serve both students and design professionals, as the small entrepreneurs, who want to know the design process and how to create trademarks and packages, suitable for this kind of enterprises.

A Project premise was to use only national examples, also include a book section with projects developed by faculty members. The publication of text do not pretend to substitute at any way the professional designer work, or to create a guide “do it yourself” for a packaging area, by contrary way, throughout the text is remarked the importance of professional designer leading these kind of projects.

Finally, by the nature of the project, the text received in 2004 an award from the National Commerce Chamber in Guadalajara, México, by its contents that support SME's in our region.



**Design for all**

## “TIBI & DABO”. Social robots design for public space

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### Biography

**Juan Alberto Favaro** is Industrial Designer. Graduated by ESDi, he has worked as a designer for several companies: Applus + (Technical Department), Tous (jewelry) or Evaluz (lighting). He is a professor of computer programs and expert in 3D modelling at ESDi. As a researcher, he has participated and coordinated several projects for I+D+i, noting “Designing Robots for public use: Tibi and Dabo”, “Ithaca: autonomous ocean sailing”, “Design for Equine-social” or “Eco-design street cleaning car in Barcelona”. He Currently focuses his work as a researcher in ergonomics and robotics.

In this paper we present the research process followed to develop “Tibi & Dabo”, a couple of social robots conceived to provide a wide range of services to citizens in Barcelona’s public spaces. Specifically, we examine the phases where Design played a critical role in making culturally acceptable for human beings the several technical innovations introduced by the engineering team, as one of the main challenges to face with when referred to Human Computer Interaction (HCI) field.

This order arises from the collaboration between ESDi Design School and the Institute of Robotics and Industrial Informatics (IRI), who coordinated the European, funded URUS Project (Ubiquitous Networking Robotics in Urban Settings). The project URUS attempts to analyze and test the idea of designing and incorporating a network of robots (intelligent sensors, devices and communications) that in a cooperative way interact with human beings and the environment for tasks of assistance, transportation of goods, and surveillance in urban areas in order to improve life quality.

According to the used methodology in the design of “Tibi & Dabo” robots, five factors have been analyzed to reach the project’s aims: 1. getting emotional acceptance, 2. communicating service vocation, 3. dignifying their robotic nature, 4. cultural/contextual identification, 5. photogenia – pregnancy. These objectives have been implemented trying to reduce the perceived complexity of this type of technology (GPS, locomotion system, lasers, security systems, cameras, etc.). In coherence with statements mentioned above, the design team worked simultaneously on the naming process: “Tibi dabo” is a Latin voice that means “I give you” (communicating vocation service), as well as a coincidence with the name of most famous Barcelona’s mountain; “Tibidabo” (context identification).

Their final shape comes up as a result of different conceptualization and development techniques, including iconicity pyramids, surveys, sociological and ethnographical tools. Once the formal analysis is performed through scale models and prototypes, advanced 3D software has been used for surface modelling, anticipating future scenarios for its mass-production with Rapid Manufacturing technology.

## Participation of disabled people in the functional and ergonomic design of their specific needs in daily life and at work

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### Biography

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Alcoy. **M<sup>o</sup> Susana Genís Domenech.**  
Occupational Hazard Prevention  
Master-Master Integrated Quality  
Management and Environment.

**M<sup>o</sup> Dolores Gregori** Contracted Doctor,  
Project Manager of Product Design.

The term “special populations” is used in ergonomics to refer to those users or workers who present specific functional features which require specific design criteria in diverse settings. Broadly speaking, under the category “special populations” we might include any person in the extreme percentiles of stature, weight or age.

This sector could include the elderly, people who suffer some physical, psychic or sensorial disability (temporary or permanent), and even any person included in the third age.

Society must ensure welfare for all of us and, in the case of the disabled and the elderly, satisfying their special needs constitutes a commitment we must make so as to provide the best solutions at any moment. Surveying their opinion will be one of the key stages in the design process. Therefore, when designing daily products for a specific group, in our case special populations, the participation of this community in the design process becomes a major issue.

## Information and signage for all in public health centers in Andalucía

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### Emilio Gil<sup>1</sup>

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### Biography

Graphic designer. Founder in 1980 of Tau Design, one of the pioneering Spanish companies design services, Institutional Communication and creation and development of Visual Corporate Identity Programs, Trained in the SVA (School of Visual Arts) in New York and Central St. Martins London as curator. Award "Laus of Gold" in Editorial Design, Prize Donside in Britain and "Certificate of Excellence" from the Type Directors Club of New York in 1995.

AEPD President, Spanish Association of Professional Designers.

Besides physical barriers, communication barriers are the main reason that people with disabilities feel discriminated against. Underlying these barriers are a lack of knowledge by society in general about the communications needs of these people.

Given these considerations, the direction of the Hospital Universitario Virgen de las Nieves in Granada (Spain), HUVN, launched in late 2004 an investigation in order to develop a pilot experience of Information and Signage Design for users of the hospital complex affected by some type of disability or absence. The purpose of it is to establish guidelines for improving Information Systems and Signage of public hospitals for this group of people.

Concerned about the needs of users with some shortfall, the Management of the Center develop a pilot study that could provide a solution to the deficit of information systems and signage at that time, directing research to provide alternatives to a real problem that affects a significant number of citizens, and affects the work of professionals working in hospitals or Health Centers.

The importance of the *Hospital Universitario Virgen de las Nieves*, as well as its historical roots, its broad spectrum of its activity, the number of people who interact with it as patients, employees, partners, and suppliers outside professionals and their dimensions and the variety of types of buildings, make the HUVN in an excellent setting for research on improving access and relationship of citizens with Health Centers in the Spanish Community of *Andalucía*.

The study is consistent with the contents and objectives established by Law 51/2003 on Equal opportunities, non discrimination and universal accessibility for persons with disabilities, establishing a "strategy to combat discrimination and accessibility universal" as well as to the intentions reflected in the Sustainability Report of the Hospital Universitario Virgen de las Nieves 2004. As stated in the introductory text of this report "with this Plan, the Hospital Universitario Virgen de las Nieves raises a new stage, designed to respond to new challenges and organizational assistance, in order to be in reference positions in the all National Health System (NHS), moving a concept of modern hospital, fully inserted into its own organizational culture of the XXI century, representing the Government of Andalusia in the forums on health and research work of national and international".



# Visual Communication Design for Human Differences and Needs: A Challenge of Inclusion for Social Progress

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**Biography**

**Germán Mauricio Mejía** is a colombian designer who has explored visual design issues in different media through design practice and research. He is assistant professor of Visual Design department at University of Caldas, Colombia. Currently, he is Fulbright grantee finishing a Master of Design at University of Cincinnati, USA.

Universal (or inclusive) design addresses the contemporary awareness of human differences and needs in solving design problems. It proposes to design for an expanded number of people by including those with a range of physical disabilities, so they can interact with the built environment. Even though this inclusion provides evident social benefits, a view of design problems that covers visual communication design demands the consideration of mental and cultural human differences and needs. The relevance of these differences increases when visual communication has aims of social progress and includes the needs of underserved populations. When a proper selection of human differences is taken into account from analyzing underserved communities, design has more effective tools to contribute in social progress. In this particular case functional literacy becomes the measure of disability for inclusion. This paper also presents two examples of visual communication design research and practice addressing these issues.

## Design of ceramic coatings that improve the safety and comfort in public spaces

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### Biography

Head of Design and Architecture Area at the Institute of Ceramic Technology. He was a member of the Association for the Promotion of Ceramic Design ALICER where he has been subdirector from 1993 to 2005. Coordinator in charge of I+D projects. Co-inventor of innovative products and systems related to tiles.

Some results of an R&D&I project that aims to develop new uses and functions for ceramic tiles are presented. Specific reference will be made to a new line of products, a pioneer in the sector, which links user needs to the most innovative mechanical engineering techniques in the design of ceramic coverings. The concept of this product was born from the CERGOCIVIS R&D&I project, which strove to incorporate the user in the value chain of the ceramic process by generating knowledge concerning the needs people have when walking on hard surfaces. At the same time, conceiving the product as part of an integral solution led to the idea of including properties that are important within the context, such as issues affecting accessibility, combinations with other elements or the subject's perception of safety and comfort. Such properties are: safe friction for all users, design, toe clearance to avoid stumbles, tile installation and design that transmit safety and subjective comfort, adaptation to the specifications of the new technical code, ability to be adapted to the accessibility regulations in force where the tile is used, and finally the strengthening structural design of the rib relief on the back of the tile (Strongrib), which ensures greater mechanical strength and resistance to building pathologies than most outside covering materials of whatever nature on the market. Products incorporating these technologies (CIVIS AGORA line) have been used in a real life situation in some streets in cities of Spain.

## Inclusive Fashion

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<sup>1</sup>Directora Programa Diseño de Modas. University of Andina, Bogotá Colombia.

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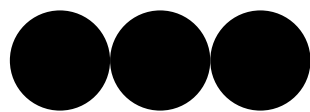
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The Fashion Design program, that takes place at the Fundación Universitaria del Área Andina in Bogotá, Colombia, has developed projects with a great amount of social responsibility. These projects have the purpose of ensuring inclusion of none taken care minorities among the academic design process. It is a mark labeled from the academy, oriented to enforce the shaping of new designers in professional level, as an answer to local demands. The main objective by using themed assignments is to open new working spaces for innovation, coming up with solutions to real needs. This is the perspective from which we committed the idea of putting on apparel projects for handicapped, eco oriented uniforms, body sizing studies for obesity and L.G.B.T population, being this latter group, focused on local government policies.

### Biography

Industrial Designer, specialist in Design Management and Education. Teaching design for 15 years. 22 years experience in product design. He was part of the winning team in 2000 of the India Catalina Prize Stories Children's Program Inventions.





**Design for local development**

# Design for social housing: The case “kitchen area - Basic furnishing kitchen for the housing in Colombia

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## Biography

Industrial Designer at the Autonomous University of Manizales, Specialist Management Design at University of Jorge Tadeo Lozano; Studying Masters in Sociology from University del Valle. Research Work in Urban Studies focused on ownership and rootedness, and Habitability in Social Housing. Currently teacher - researcher in the Department of Design at the University of Valle.

The paper “Design for the housing of social interest” seeks to present the Housing of Social Interest as field of pertinent intervention to the design and excellent as for the contribution that is considered possible from the Industrial Design particularly. This is approached from certain characteristics peculiar of the housing and of some related social practices, from the presentation of a concrete case of design of kitchen furniture (and their previous and later investigative exercises), and from the proposal of minimum components for the study and the intervention of phenomenon's associated to the housing of social interest (HSI from now).

The HIS is a housing solution whose projects are promoted and regulated by the state, in order to give solution to the problems of housing of social sectors under vulnerability conditions, mainly around the relative aspects to the acquisition (for it their character of subsidized housing) and to the minimum conditions of “worthy inhabiting”.

The HSI, from pertinent reflections to the Design, is characterized, among other things, to present considerable problems of accumulation associated to the frequent extended type family structure that inhabits it and to the presented extremely reduced space conditions.

Added to this, the conditions of accessibility and mobility are they excluding in occasions, and the behaviors relative to the material accumulation (objects) make even more critical this situation. These conditions establish a panorama enough restricted in appropriation and use terms; but at the same time they offer a pertinent and excellent opportunity to the design.

Initiatives like that of the “Premio Corona Pro Hábitat”, they seek to make in front of this type of problematic and to consolidate projects in benefit of the inhabiting conditions. In this mark, was developed the project “Zona Cocina” (2007) that being centered in three aspects:

- The efficiency in the use of the space (minimum available area) and rationality in the quantity and complexity of the components (minimum available resources).
- The possibility of adaptation and renovation according to the interest or each user's necessity - family unit -; well be for relative reasons to the particular likes, to ergonomic conditions, or of limitation situation, or to factors related with the gastronomic customs; without requiring qualified intervention.
- The generation of module elements that promotes and facilitates specific and varied practical functions according to their disposition and that serve like support of the form - aesthetic aspect.

Starting from this investigation experience + I design, and of the reflections that it raised, intends a focus model and minimum components for: 1. To consent and to recognize the situation in order to obtain precise descriptions and to understand the complexity of the related phenomenon's (of social order mainly), 2. To formulate and to consolidate a design strategy adapted at concrete objectives, and 3. Face the design process.

## Local development based on design: intervention in a handicraft rural community of Mexico

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**Héctor Flores Magón y**

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### Biography

**Héctor Flores Magón y Jiménez.**

Industrial Designer, Master of Product Design. Doctoral Studies in Social and Political Sciences. 33 years experience in productive projects and strategic design. 3 National Design Awards. Director and professor at the University of Guadalajara.

México, as many other underdevelopment countries, shows different faces in its political and social aspect that are reflected in economic and productive conditions, such as: the globalized Mexico, the traditional Mexico and the forgotten Mexico, in which design assume distinct roles depending on the facet in turn.

The paper presents the alternatives of participation-intervention of design in productive projects based on traditional technologies to modified non favorable situations taking into account the historical and cultural values, the know how and local resources to offer options to people for staying in their original places.

The description of process, approach and design achievements for local development is done through a case of study concern to a rural community that preserves a handicraft tradition –dating from the pre-Hispanic era- to elaborate objects made of volcanic glass called “obsidiana”.

Product design was oriented to tourism as a significant segment market taking into advantage the importance of nearest archeological locations, reproducing religious and utilitarian pre-Hispanic objects and diversifying products and segments of market to improve the economic retribution of work invested by producing more commercial value pieces.

Commercialization strategies defined the point of purchase development to be located at intense commercial transit sites, packaging design and a collective mark to represent a group of handicraft workshops in order to position products in not attended sectors before but with great sales potential.

Production aspect was developed with the design of a planing equipment with ergonomic and productive advantages that improves operation efficiency, security and comfortability for artisans. Aligning manufacture solutions to local materials and capabilities.

At present, united commercial representation of artisan’s workshops is develop to offer better attention to consumers and well stocked points of purchase.

The case of study presents how design integrates innovation technologies and traditional technologies values by incorporating diverse local productive activities, that wider the socio-economic benefits, reduce environmental impact and promote social sustainable development.

## **COMUNICA: Program for local economic development in the Canary Islands through the promotion of design and innovation. Pilot experience**

The canarian economy among other factors, is conditioned by the insularity, the territory fragmentation and the steep orography.

On the contrary, obviating the positive results we get from those facts, it is shown that the products and services elaboration leads a number of associated costs that grows up when it is been ready to sell overseas; the consequence is the lack of competitiveness.

From DI-CA, we also detect a biased vision on design profitability from the local business and own professionals –employers also thinks about the expenditure of no return, tangible benefits and a lack of retraining.

“Comunica” is an aligned action program that pretends sensitize canarian employers from the profits when they invest on design as an innovation that contributes to balance those overruns.

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### **Alejandro Gil<sup>1</sup>**

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### **Biography**

Bachelor of Fine Arts, specializing in Design from the Universidad de La Laguna. Visiting Professor at this University and teaching courses in Masters and experts. Has his own studio since 2003 based in Santa Cruz de Tenerife and is currently president of DI-CA, Association of Business and Professional Design of Canarias.



## Designing from “vertex” to “vortex”: conceptual implications and case studies in local development

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### Biography

He is full professor at ESDi, Ramon Llull University (URL) where he works as Director of the Department of Product and Interior Design. Simultaneously, he is PhD candidate at University of La Laguna. His research interests are in the Design potential to catalyze local and communitarian development processes. Graduated in Fine Arts at University of the Basque Country –including a stage at Norwich School of Art & Design–, and Master in Ecodesign at Elisava Design School, he is experienced professionally in socio-environmental communications, promotion of cultural heritage, exhibition Design and agroecology.

In line with emergent transdisciplinary perspectives to embrace complex flows of resources (materials, energy, information, knowledge, people...), Design is evolving from a traditional form configuration approach (vertex) towards a systemic innovation catalyser (vortex). It might be considered a sort of useful meta-discipline to ongoing processes in search of emergent paradigms for wellbeing, such as Sustainability. Far from other fashionable acceptations, this is what’s meant here when referred to “Design thinking”. In other words, our scope has evolved and broadened from focussing in the “vertex” to do it also in the “vortex”.

Somehow, what pretended in this paper is firstly, a conscious, etymological recovering of the word “thing” and its laying implications for today’s challenges in design for local development. “The Things” were the governing assemblies in ancient Germanic societies made up of the free people of the community meeting in a place called a “thingstead”. In English, this term is attested as “assembly” around year 685, and the meaning of personal possessions as “objects”, “articles”, or “valuables” first appears in 1300. Thus, considering design processes for local development as socio-material assemblies, it can be properly defined as a “strategic activity referred to different disciplinary levels (services, communications, products) to promote systemic innovation processes (environmental, social, economic, technological) starting from the territorial resources”.

Secondly, two interrelated case studies are presented here, converting theory into practice:

a) “CampusGuia: social creativity for local development” a decentralized R+D+I living lab stimulated by an international not-only-university two weeks event where participants work in close collaboration with locals in “ad hoc” constituted co-design communities. Focusing in Art, Landscape, Ecodesign, Expanded Education and Media, transdisciplinary workshops are performed simultaneously. Subsequent full swing processes transcend the Campus, being implemented along the years in the region, the north coast of Gran Canaria Island. ([www.espacioguia.com](http://www.espacioguia.com)).

b) From the above learnt lessons, a research program in Design driven territorial innovation arises, promoted by ESDi and University of La Laguna, to be carried out in 2010-2014 period: ”PROCEDER “Canary/Catalan Program in Design for Sustainable Local Development” in order to state emergent roles, methodologies, indicators and challenges for Design in this area. ([www.facultaddebellasartes.com/proceder](http://www.facultaddebellasartes.com/proceder))

# The Aesthetic Handcraft Object

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## Biography

Industrial Designer. Aesthetic and Cultural Specialist Nacional University of Colombia. Researcher of Catholic University of Risaralda, Colombia.

This paper arises from an investigative process in which it was wanted to understand the symbolic forms developed in the job of carving, which requested, at a first stage, a process of approach and recognition to the craftsman as the center of the qualitative analysis of the systems of the stories of their lives. Also, in a second place to know the form of the job through records that talk about the regional crafts process and its products related to the social-cultural contexts which finally condition and determine the features of the aesthetic craft object.

It is proposed in this paper, the analysis of the carving, and the aesthetic forms identified in the object done by the craftsmen of Santa Rosa de Cabal, to know the forms that characterize the object, as a product, to discover the dynamics of creation, the traditions and identities that remain in time and how through the contemporary aesthetic forms the composer forms can be read. To do this, in a first stage, a general characterization of the crafts job is developed; in a second stage the aesthetic categories of the crafts are presented; and finally the relational cast that evidence the type of objects found.

## Design and Local Development, Case Studies from the UK

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<sup>1</sup>University of Northampton, United Kingdom.

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### Biography

**Friedemann Schaber** is a Senior Lecturer in Design at the University of Northampton's School of the Arts and **Randle Turner** is the Divisional Leader. Their scholarly activities include prototyping systems for industrial design, new product development, and the introduction of live client projects with industry and local community into the design curriculum.

This paper will discuss, through the vehicle of case studies, how Design has been instrumental in regenerating local commerce. The examples will compare and contrast the UK Government's Knowledge Transfer Partnership initiative (KTP), which has been operating for some thirty years with live industrial design projects which are also the focus for certain aspects of the undergraduate design curriculum.

The Design Division has been actively involved in numerous KTP projects, which have benefitted local industry. One such KTP, located at a company within the vicinity of the University embedded a new design capability into a charitable organization, 'Sue Ryder Care' and reviews how the income generated was used for palliative care.

In contrast with the highly successful government funded KTP scheme a design brief will be presented that attempted to support a traditional and local manufacturing company, typical and historical to the local economy. The design brief was developed in conjunction with the senior management of the company, to harness existing manufacturing capability but with a new and innovative product range. The paper reviews the journey taken by both parties, and discusses the relative fortunes of the outcomes.

This contribution is informed by the authors' decade long engagement, with UK government funding organizations, as academic partners of knowledge seeking companies. The Northampton case constitutes a newer university that has grown out of a technical college and art school, this mirrors various other UK situations.

The authors have been researching and contributing to the discussion on the role of knowledge transfer in the global marketplace (Schaber and Thomas 2008), but also learning from the practical experience of acting as supervisors and working with industry on KTP, and understanding benefits and negative aspects for all the partners involved. (Betts, Schaber and Turner 2007) Conference participation and publications are the routine ways that academics share knowledge. In this case allowing the authors to identify and map out best practice and develop networks within the academic system. In conclusion the authors attempt to provide the international context of industry-academy collaboration in new product development.

## Win-Win. From the classrooms of design for small and medium enterprises.

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### Biography

Graphic designer based in Monterrey, interested in identity, editorial design and design education. He studied two master degrees, one in the University of Houston and the other at California State University. Currently works as designer and is a research professor at the University of Monterrey.

In Monterrey, Mexico, as well as in the whole Nuevo Leon State, micro and small enterprises are the ones pushing forward the State's Economy.

Even when Nuevo Leon is know for big corporations, it is at the micro corporation's level where the region's real development takes place. But for some small business the idea of having a well developed design strategy is still a privilege not easy to have. Not to mention that for some rural regions the concept of design does not even makes sense.

Is in these situations where a design school, an independent small entrepreneur and state programs working together, can promote the economy of our communities.

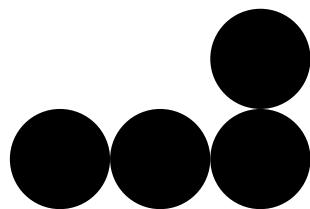
This whole process is not an easy task. Design schools must train students to become design professionals, but also individuals aware of finding opportunities of collaboration in social projects as well as the sense of responsibility towards them.

To achieve this, design programs and its curricula, must be designed to enhance a designer's own identity of what "Being a Designer" means. And considering both aspects: designer as individual but also as one who belongs to a society that has needs.

If a design curriculum promotes in a student a sense of responsibility, trains him/her to be able to respond creatively to society's and human needs and is also aware of other's reality, it can be considered a good design program.

The complete document shows five case studies based on social responsibility on promotion of our state economy through design solutions.

First an academic model is presented. Second a model of collaboration among entrepreneurs, state department for social and economic development and our design program. And at the end, some facts about right and wrong decisions and results achieved during the process.



**Design thinking**

## New tools to support the design for project methodology: a literature review

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**Miriam Andrés Romero<sup>1</sup>**, et al.

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### Biography

**Miriam Andrés Romero.** Diploma in Product Design by the *Escuela Superior de Arte del Principado de Asturias*. Master in industrial design management. Collaborative Research Group I3G (Research and Innovation in Engineering Graphics).

Industrial Design is an emerging subject with an on-going development. Nowadays, it is a key factor to increase productivity in the industrial environment, but it has a lack of defined competences or common targets. Furthermore, there is already a hard way to build a solid specification as scientific discipline. This implies that there is a connectionless between different studies made with many matters developed. In a previous bibliometric analysis, involving the main scientific resources, some define investigation areas have been recognized.

It is necessary to analyze each investigation area to obtain its background and the targets pursued. In this research paper we have dealt with the nearest matters close to us in depth, because of their future scientific evolution or fast applications in project development. In the conclusions, we highlight specific development areas to insist on, such as digital tools to improve technical support o methodological process in order to help design activities.

A bibliometric analysis in-depth is proposed, related to new technologies and software development. Our main target is to identify the different typologies of project and design management tools, in order to find new opportunities to improve these subjects. Finally, the results achieved by the most relevant scientific research groups in each area are shown.

## Visualization, presentation and data processing analysis of competitors from the theoretical definition of product: “state of the art map of the conceptual”

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### Biography

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**Juan Carlos Briede** Since 1999 works as a professor and researcher in the Department of Arts and Design Technologies at the University of Bio-Bio. He has developed work product and graphic design.

This article will deal with the developing and implementation of a visual model that organizes and directs the technique state starting with the theoretic definition of the product. A new conceptual map that allow us to test the art state through a new conceptual proposal of a product. This theoretic proposal mention and specify the qualities and attributes of the product through the use of words. These are analyzed in a separated way, and also look for solutions and principles in the products, those that exist in the environment as well as in the market. These attributes are structured in different levels, from direct competition, (typology of the product with the same attribute) performance within the artificial world and then analogies in the natural world. This model simultaneously incorporates the methodologic approach of observation and the study of the art state in a visual tool which makes easier both, the organization and the data presentation. It is very useful as a record and as a diagram to make conscious the decisions and relations carried out during the creative process. In this way, this work tell us about the methodologic approach applied by the School of Design in Universidad del Bío Bío, in which the model and the principal criterion of its structure were based. This is going to be exemplified through the study and develop of kitchen devices and accessories for Virutex-Ilko company by senior students of Industrial Design. Unquestionably, this tool makes easier the selection and organization processes of the art state, allowing us to contrast immediately the conceptual and constructive relationships between the theoretic and concrete attributes. The map directs the creative process throught the products innovation. This tool integrates and makes easier the knowledge management into two ways, helping in the cognitive process of design and as a resource to improve the communication process with customers.

## **(I+D+i)= imagination + design + inventiveness**

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### **Luis Corbella<sup>1</sup>**

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The necessity to turn into attainable, possible and but immediate, the innovating results of the search of proposals, products and messages but, within a society in crisis, of all the professionals, related to the Fine Arts, the Architecture and the different specialties from Design, in immediate benefit of its authors and of the users to whom it is destined, in the scale but next to the man and not to the inaccessible I+D+i of the great economic and political powers.

### **Biography**

Industrial Designer and Interior Designer. Ex-member of the International Federation of Interior Architects, Ex-member of Council Interior Architects. Interior Design Master Professor at the University of Salamanca and Professor at the University of Antonio Nebrija (Madrid). Honorary Member of the (AEDP).



## A new stage of design in the perception of globalization: the European perspective

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### Biography

**Marcos Dopico** is a Doctor in Fine Arts by the University of Vigo.

Graphic designer and partner at design studio: De dominio público. Associate Professor of Design at the Faculty of Fine Arts of Pontevedra, associate professor in the Higher Studies in Textile and Fashion Design in Galicia ESEDEMG.

There is general consensus regarding the description of the most recent years as the era of globalisation, in what is a direct consequence of the modernisation processes of humanity, linked to technological advancements in transport and communications, and, most strikingly, in the transmission of information and knowledge. However, if we extrapolate certain aspects of globalisation to the political-social context in which young designers have been trained, we can observe the way that vision of globalisation has acquired new meanings, changing the traditional, negative, perception of the phenomenon, associated to the capitalist behaviour of governments and corporations. This trend, set in the context of last decade's new generational clash, seems to be represented by a new generation of European designers, in the face of the prevailing Anglo-Saxon influence seen in the last few decades.

In the field of graphic design, the general perception of globalisation as a sham of which we must be distrustful is rooted in the post modern reaction –particularly in North America –toward the late modern movement which became established in capitalism through large corporations and governments, which had absorbed its clear and effective discourse. This was interpreted by the young designers of the 1980s as grounds for disagreement with the official political discourse. In this way, the modern movement went from being an art linked to European roots, with a strong ideological component, to becoming associated with the power of capitalism and politics.

However, the American cultural heritage built in the 1980s and 90s on the basis of the rejection of the modern project began to be perceived in the last decade as a “loaned” or “intrusive” heritage, causing some European countries to seek a return to their own roots, which, paradoxically, are more closely linked to “the global” as a sign of identity. This new generation perceives post modern graphic culture as removed from its interests, as something imposed by North American culture, even as they turn their gaze back toward the idea of modernity, in the sense not of a capitalist corporate aesthetics, but as a cultural reference point which is both linked to their roots and suited to a global situation.

The recovery of universality, which is closely connected to globalisation processes, and the balance between function and form in their purest sense, have been boosted in the last decade, which has seen the plural approach of the 80s replaced by a new design identity, on the basis of a design ethics which has traditionally been rooted in society. This traditional austerity and the concern for issues relating to anti-consumerism, environmentalism and recycling, has made it possible to offer different interpretations of issues such as globalisation and identity, replacing the debate which took place in previous decades.

## Design Zoom – Future Needs

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### Biography

Prof. Dr. **Gerdum Enders** Surfboard designer at the company Bertrams Customboards, Managing Director of the company Global Mind Network GmbH. Professor for Designmarketing HAWK, Hildesheim since 2008.

### Design Zoom: Future Needs

Design Zoom is an interdisciplinary design congress in Germany focusing on future areas of need in design and on networking into society.

#### Transdisciplinary Format

Zoom in / Zoom out: Future experts from design, architecture, communication, mobility, psychology, food and medicine are coming regularly to HAWK to exchange their views and strategies and to present their knowledge from different booming industries like health or food industry, put into the context of design. This exchange principle is the basis of innovation design.

#### Open Space and Design

In between and after the presentations the creative dialogue is in the spotlight. The presentation topics are zoomed in further in temporary work groups. The participants have the possibility to discuss and phrase further questions about the respective topics. In an open discussion the speaker answers arising questions. A direct exchange between experts and designers begins in order to obtain new insights and to talk about the idea future.

#### Future means understanding the past

Societal future subjects always have a disciplinary history. The knowledge about the background of evolution breaks down the barriers of the own discipline and new things become visible at the interfaces.

#### Design as a future strategy

The objective of the event is to develop design as a strategic future tool and to use it for economy and research. New methodical approaches like system coding are being further developed. The idea of “cross industry thinking” is one of the guiding concepts.

#### Designers as innovation consultants

Designers are not purely designers tomorrow, but are more and more becoming innovation consultants, who need a broad creative mind. Design Zoom is an event that cross-links the mental portfolio of designers so they can use an enhanced pool of ideas as a market value.

## Importance of technical development of creativity in design students

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### Biography

**M<sup>a</sup> Rocío Gómez-Juncal.** PhD in Psychology at the Universidad de Vigo, is the author of multiple investigations of cognitive processes such as memory and creativity, and books on leadership skills and sales techniques. Professor of Psychology of perception and anthropology and sociology of consumption in ESDEMGA.

The creativity is one of the cognitive human concepts most difficult of delimiting, though all the definitions coincide with that the creativity is not a gift, but a quality inherent in any subject which secret is the absolute dedication and the effort supported for years. The styles of education - learning associated with different types of career education might be in the base of the results of researches that indicate that a relation exists between certain factors of personality and the punctuations that the subjects obtain in psicometrics test of creativity. In few studies on the creativity in the concrete area of fashionable design, is indicated that the quality of the design does not depend only on the talent of the designer but on the quality of theirs research in the processes of design. The education of the future designers must attend to a diverse range of styles of learning and therefore it is necessary researches on different educational methodologies that optimize the creative and formal results. In the present study we try to quarrel if a relation exists between the creativity and the creative styles of education - learning across the measurement of creativity in a population of students of the last courses of formations which formative methodology is clearly tending to the development of the divergent thought, comparing them with students of the last courses of university educations which teaching tends to the development of the logical - formal thought. The aim that we claim is to quarrel if really significant differences exist in the creativity of both population groups, and to try to relate it to the type of received formation.

# The Postmodernism in Design Research

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## Biography

He is a graphic designer in Colombia. Head of the graphic design project at the University of Caldas.

This essay about "Postmodernism in Design Research", is an urgent call to reflect on the way designers investigate and the situation to which post modernity brings us to in terms of education, the widening of the gap in science, discipline and visual arts, obtaining as a result the rejection of the knowledge and as a result of proximity, the way designers research, globalization and rush deepen and vanish the surroundings, cultures, ideologies, allowing the meaning of design investigation to be confused, destroying the knowledge obtained by others and shared on the internet, to this regard, researchers in different of knowledge are brought forward and some of their discoveries and serious questions about investigation.

The document draws on a parallel between the surge of investigation in communication and the state of design investigation. Additionally, it explores the possibilities offered by ambiguity as a change strategy and a possible alternative to face the topic of design investigation, since design as a discipline is relatively new, or at least this is what is believed and claimed. However, unlike what was said above, Turkish Ph. D. Nigan Bayazit claims to disagree; her present opinion is inspired in one of her readings, which brings down the hypothesis of "design is a new discipline", this document looks to answer the configuration, the structure, the values and the meaning of the systems used for the creation of objects, asking how design investigation appears as a methodology and its current state.

## Multidisciplinary team collaboration and communication are not easy

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### Biography

She owns a MFA in Design Education by The Ohio State University, is a design researcher and visual designer recently relocated in Barcelona, Spain. She is currently exploring integrative languages, through generative design thinking and co-creation, for team communication, collaboration and decision-making.

Since the beginning of the 21st century, different fields such as business and engineering have regarded design as an important strategic advantage to innovation because of the nature of design thinking and methods—team-based collaboration, visualizing knowledge, and the user-centred approach, among other characteristics. A good example is the collection of ‘opportunity-defining and problem-solving’ methods that currently are marketed as ‘design thinking’ and have become the rage in the business press—Harvard Business Review, Business Week and Rotman Magazine, to name a few. At the same time, the design profession is shifting from a design-centric practice to a multidisciplinary design practice that includes more disciplines for research, problem setting, and problem solving. The complexity of today’s design problems—the global economy, rate of change in new technologies, the challenges of sustainability development—requires diverse design teams, comprised of multiple disciplines as well as multiple cultures, to look at broader and different perspectives and larger scopes of investigation. Furthermore, the participation of multiple disciplines is especially relevant at the earliest stages of the design process or at the “fuzzy beginnings”, as different authors relate to them.

Due to the multilayered and multifaceted interactions between team members, effective communication and collaboration among people in multidisciplinary design teams becomes critical to ensure a project’s success, in particular, and for innovation, in general. Yet, team communication and collaboration are difficult. Each discipline brings its own knowledge and perspective to the process, which must be integrated to create a successful design solution. Engineers, for example, tend to be very focused on failure and on technological reliability. Designers, on the other hand, have a tendency to rely heavily on ‘intuition, fit, and feel’ when confronted with new problems, and focus on user and context, while business managers are trained to think first and foremost about the needs of the firm and focus on marketing criteria. These differences between design team members can create high levels of skepticism. However, the inevitable conflicts among these differing mindsets have the potential for triggering truly innovative contributions.

This paper explores the communication process between multidisciplinary team members during the initial stages of 18 different design project scenarios, in order to develop a frame of reference for multidisciplinary design team collaboration and communication. Field-focused interviews were conducted with distinct groups of stakeholders from the business, design and engineering professions, using participatory design research methods. Five clusters emerged to be representative of all the design project scenarios narrated by the interviewees. One important characteristic in all clusters was the role of the design managers who were central to the communication flow between key players in the process. They filtered the information from the client, decided which solutions were presented to the client, and selected the team players and the disciplines involved in the project. Consequently, the experience and skill level of design managers was critical in ensuring clear, effective communication among team members, and in fostering new ways of thinking integrated with new tools for the collective creativity.

## Two Color Proportion in Nature

.....  
**Bryan Howell<sup>1</sup>**, et al.

<sup>1</sup> Department of Industrial Design, Brigham Young University, Provo, Utah, USA.

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### Biography

**Bryan Howell** earned his MFA from UT Austin and BFA from BYU. He worked for frogdesign in Germany, USA and Singapore and for Dell Computer in Design & Engineering Management. He then ran his own consulting firm. He has been researching color proportion and teaching ID at BYU since 2005.

The purpose of this research is to understand two color proportion ratios in nature. Success in this endeavor would provide another key to understanding how nature orders itself and provide guiding principles for designers who look to nature for inspiration as they create.

This small, cross disciplinary team of researchers focused the study on two-color mammals, fish, reptiles, flowers and insects. After analyzing, charting and testing around 50 samples, they propose that nature exhibits six color proportion ratios.

#### Nature's Two-Color Proportion Ratios

1:1 | 1.23:1 / 1:1.23 | 1.618:1 | 3:1 | 4.5:1 | 6.9:1

An example of the above mentioned ratio 1.618:1 or 62% dark to 38% light can be seen in the rattlesnake image (Figure 1) and the Zebra image (Figure 2).

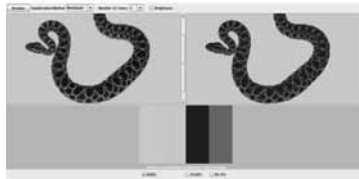


Figure 1. Rattlesnake Color Proportion 1.618:1

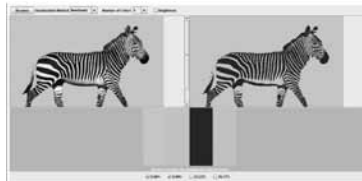


Figure 2. Zebra Color Proportion 1.618:1

The image on the left side of the screen is the original (with the background removed and replaced with a generic color); the image on the right side of the screen is the simplified two color version of the original. The blocks of color in the center, below the images, display the background color and the two colors of the measured object. Below those are the numerical percentages of the object (the background color is check marked which removes it from the ratio calculation of the remaining two colors).

Though scale, pattern and hue differ greatly between objects in nature, the team believes that Nature has an ordered method of color proportion use.

The paper explains the methodology and the custom made web tool used to obtain a robust method of measurement. It contains a collection of data samples and a list of ongoing questions about how nature uses color proportion. Finally, a URL and instructions on how to use the web tool are provided enabling readers to access the tool for their own studies.

# Metal: a tool of innovation for the design

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**Samira Kadamani**

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## Biography

**Samira Kadamani.** Industrial Designer, Master in Design, Product Development - Concurrent Design in ISTHMUS, Panama and DuocUC, Chile. Assistant Professor and Area Coordinator of Management Communication at the Department of Design at the Universidad de los Andes. Member of Research Group Product Design and Communication. Jewelry designer and consultant on creativity and development of product concepts with emphasis on communication and plastic.

**Freddy Zapata.** Industrial and product and set designer and artist. Master of Arts at the Royal College of Art in London, focusing on Product Design and Executive Master of Business Administration (MBA) at the University of Los Andes, Bogotá, Colombia. Associate Professor and Director of Design Department at the Universidad de Los Andes. Research Group Director of Design and Communication Products.

The Design Medium becomes genuine possibilities for creation, innovation and cutting edge to exploit their characteristics and applications. The metal media is not an exception in its use and application. Today we present significant opportunities to be considered as an ideal way to create in different fields. Its physical nature, today's technology for processing and allows processing able to be an excellent vehicle for creation. Also this leads to greater applicability in industry and developing products that benefit and contribute to improving the living conditions of people.

This project is based on methodologies of design thinking. From a year of exploration and experimentation with the medium metal building processes are identified through the machining and sheet metal processing. This will generate new experiences and discoveries of communication and interaction of products for the public space with the environment and people. Its added value is intended to be highly significant, aesthetic and functional.

The transformation of the medium, in this case, metal foils, and their interaction at scale in public spaces with natural light particularly in the city of Bogota, gives rise to a shadow planned experience communicating messages, and involves people marked places.

The result of these findings is not only a condition of creating innovative communication landscape in a public context or urban, but also give preference to the value of interaction with people in the creation of sensory experiences and meaningful and that can enable a positive appropriation emotional place and identity with their environment and city.

The spaces for experimentation and prototyping as a methodological process of building design are becoming more open and available to the designer and business. Through various means existing and emerging, and the particular nature of their use and transformation (technological and plastics), lets you view, in this case, innovative design not only opportunities but also social interaction and building identity in the city thanks to its results, and also directly creates a good opportunity for diversification of processes and services for companies in the metal-working sector specifically

## Creativity of the project through experiments with the environment

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### Biography

Researcher in the Department of Product and Interior Design at High School of Design ESDi where, in addition, he teaches the subjects of Ecodesign and Bionics. Founding partner of Nutcreatives design studio. Responsible for web RESSENYES on design and sustainability. He has experience as an environmental consultant and project manager of scientific and cultural dissemination. He graduated in Biology and currently trying to develop his dissertation in the field of biomimicry.

It is estimated that for about 4,000 million years ago the first living organisms appeared on Earth. From then until now, nature has been finding solutions to the needs of organisms through evolution, redirecting and continuously refining their systems. Bionics (also known as biomimicry or biomimetics) is a concept that is based on the application of these natural solutions to the disciplines of architecture, technology and design. Although the creation of these words are of recent origin, Carmelo di Bartolo and others agree that “the observation, study of nature in its forms and structures of its components, in order to get more information usable by the human being in the construction of their environment is an activity as old as human being”. This study of nature and the surrounding environment is essential as a first step in the bionic’s methodology proposed by authors such as Gabriel Songel. Songel defends bionics as a design methodology, since it is a compendium of creative thinking technique, technical design and research process. This document is intended to reflect the actions taken to date and those planned in the near future by the author, with the aim of confirming the bionics as valid methodology for projecting activity. Thus, this document is structured in the description of the workshop “Design of natural inspiration,” held during the academic year 2008-2009 at ESDi, where incidence is, above all, in promoting the creative process conveyed in experimenting with and in the local environment, understanding the creative process as the thought leadership, facilitate the processes of analysis-synthesis, seek out new relationships on a subconscious level, increasing progression of the subconscious to the conscious and check the value of the solutions. In turn, also identify the practical activities that are taking place and that will be developed within the teaching subject of “Bionics” aimed at students of design in the 3rd and 4th year of Design Studies, aimed in addition to testing and improving creative thinking skills developed during the workshop said, encouraging the investigation and the improvement and innovation of the design technique, ultimately, incorporation of bionics as a new method of projection in design.



# The Interpretation as a Method in Design or the Designer as an Interpreter

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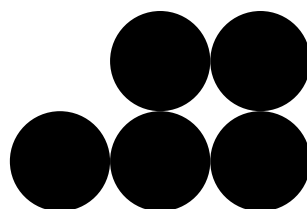
## Biography

**Liliana Soares** PhD student in Design at Aveiro University (PT), researcher from the Foundation for Science and Technology (PT). Guest Lecturer Assistant at the Polytechnic of Viana do Castelo (Por). She works in design and has published research articles in int. academic journals, conference proceedings and has participated in fairs in Portugal and abroad.

**Fátima Pombo** is an Associated Professor, responsible for the Courses of Aesthetics and for Theory and History of Design in the Department of Communication and Art, University of Aveiro, Portugal, where she has been Head of Design Course during four years. She is also Professor at Hogeschool Sint-Lukas Brussels/affiliation K. U. Leuven, Belgium in the area of Graphic Design. She has lectured extensively on design and aesthetics at international and national conferences.

In our paper we intend to focus on interpretation as a method in design resorting to three topics: (1) the concept of hermeneutics; (2) the prudence as a virtue and (3) the ‘change’ factor inherent to time. The first part of this essay focuses on the importance of hermeneutics and philosophic sciences on design method. Taking profit from hermeneutics (Hans-Georg Gadamer, Carlo Scarpa), the designer becomes an evaluator before the ‘problem/answer’ phenomenon. The way of searching during the projectual process led by prudence (Enzo Mari) will operate until the final deliberation, in accordance with the most favorable means. At that point, we will approach the complexity of factors involved in that decision process (Tomas Maldonado, Renato De Fusco). On the other hand, facing the ‘change’ factor (Andrea Branzi) as a key issue regarding the project, the designer answers to his own time, participating in its construction (action and transformation). Our thesis is that even negative conditions can be transformed in opportunities through interpretation, given their integration in the design process as strategic factors. If the whole and the part give meaning to each other, as a result, maybe the sense of an object lies on its use: establishing a dialectic in which they attribute and receive meaning. This means that an object doesn’t represent anything (Heidegger), the analysis of the hermeneutic circle is what allows us the understanding of the articulation with other fields. The equipment scenario is the field upon which we are interested in applying the method of interpretation, given that testing the hypotheses (experimentation), towards the projectual solution, integrates a particular system (contexts and meaning).





**Ecodesign**

## Bicycles for public transport. A contribution from the design for the sustainability

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.....

### Biography

Industrial Designer with deepening environment , eco-innovation, cleaner production , product systems, service and social responsibility studies.

Graduate studies in environment and development, with emphasis on environmental management.

Consultant and advisor on non-motorized transportation, a researcher in sustainable urban mobility programs, particularly in public bicycle systems.

The mobility status is a responsibility of cities in general, especially when it brings associated problems (car use), provides enough in the current environmental crisis. To fulfill this responsibility cities have taken measures such as restrictions on the movement of vehicles during certain hours and days a week, and other friendly measures such as improving conditions for pedestrians and cyclists. Today has been implementing a more sustainable option. Public bicycle systems (SBP).

Proposals to improve the social condition of mobility, must come from an interdisciplinary, one of those disciplines is on industrial design, and particularly since your design look for sustainability, which among others can provide in the submission of proposals whose platform are the service concept, which has its theoretical basis in dematerialization.

The present work is to offer service - a product that uses the bicycle as a sustainable public transport option. Based on the idea of a comprehensive sustainability, ie, environmental, economic and social rights, which are organized in this case, to meet the goal of allowing the movement and accessibility of citizens through sustainable transport system .

In this sense, design for sustainability poses new dimensions of action, not just product design, a redesign process, but to design the system in which the product / service is set, so that can guarantee closed life cycle and efficiently.

The conceptual basis of the methodology of this system has been promoted by the Interdepartmental Center for Research and Innovation for Environmental Sustainability Politecnico of Milan, the methodology proposed Product Service System (SPS), which offers businesses ways in which the creative process incorporates new brand values, find new ways to innovate and create wealth (Rocchi, 2002), different approaches to traditional practices of eco-efficiency and environmental management, geared more to management processes and / or products.

From this perspective Public Service Bicycle Transport (SPTB) is a proposed tool for implementing and improving public bicycle systems. Takes as directional axis relations system - products and services - program, the latter framed in the conceptual development of design experiences [1].

The tool takes four SPTB theoretical reference, first as a starting point the concept of sustainable development, second, the concept of sustainable urban mobility, third, the theoretical basis of production systems - service, and fourth, the concept of relational system man - machine - environment.

This document is a progress of research work developed as a thesis to qualify for a master's degree in environment and development at the National University of Colombia, supplemented by the research and teaching at the School of Industrial Design.

## Landscape as Visual and Holistic System: conceptual and methodological parameters since design to urban sustainability of the landscape in Andean cities in half mountain

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### Biography

Architect, Visual Design Teacher/ University of Caldas, Colombia. Diploma of Advanced Studies in Urbanism, UPC, Spain. PhD student in Sustainable Technology and Humanism, UPC, Spain. Coordinator Master in Design and Interactive Creation at University of Caldas. Coordinator of Clinic Design at Universidad de Caldas, Colombia.

The holistic vision of the landscape as a visual system, integrates the studies of the senses, the symbolic, the objective, as well as complementary aspects necessary in the urban landscape actions, for avoiding the specialized actions, that don't favor its integral and sustainable developing. This lecture gives conceptual and methodological parameters of the analysis, design and planning for the urban sustainability of the half mountains of The Andes, with the objective of improving the interaction between the constructed space and the natural environment and to tend for a better environmental quality of the urban life. The proposal its focus in offering design instruments, for the analysis and intervention of the landscape in small and medium scale, with the criteria of a visual-environmental sustainability, that impacts the improvement in the urban living conditions and the wealth of the citizens.

The study promotes the acting in visual environmental design, as the discipline that projects in the ambit of the sustainable developing of the cities, where the quality in the urban livability, requires a specialized vision from methodological instruments of analysis and acting for an appropriate visual planning of the landscape and the fragmentation that has suffer the public open spaces on those cities.

The methodological criteria for the quality analysis of the landscape, begins with the combining of quantitative instruments that identify the level of visual saturation, in accordance to the human capacities of perception and urban space, as a unitary system from the culture. The morphological complexity and the visual relation between natural and constructed environments, are the particular characteristics of the half mountains cities of The Andes, that need methodological tools for the analysis of the qualification of urban environment, in order to be able to read into the conflicts and spatial potential, landscape and of visual communication that permits the alternative formulation of an intervention that guarantees the sustainability of the urban environmental quality of the landscape.

# Design of an innovative construction system based on plate girder laminated gypsum waste added with dry fibers of agave Tequila and EPS recycled plastic packaging

The work shown here has as a main objective to achieve a technique for extending the useful lifetime of some expanded plastic wastes, this project explores specially expanded polystyrene (EPS) wastes, well known for its multiple packaging applications. In the first stage of this research project the plastic waste was recovered, cleaned and grinded then the particles in different proportions were mixed with gypsum plaster and molded to obtain flat boards and panels, both groups were tested in laboratory, some results from the lab are mentioned in this paper, this data show that is possible to improve specific properties of building construction elements like plasterboards. Today the research group is divided into two teams, one responsible for improving the characteristics of the flat boards through the use of additives, aggregates and reinforcements like dried natural fibers as agave fiber, a plenty by product from the tequila industry. Another team is responsible for the design of a new construction system based on the elements. Some project's facts are discussed in this paper.

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**Biography**

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## Greening the cleaning: a case study in ecodesign of trolleys for urban cleaning in Barcelona

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### Biography

**Albert Llor** is a designer for ESDi. Has professional experience in product design, furniture, electrode - domestic purposes and industrial ventilation equipment. Specialization in renewable energy applied to the sector of eco-toys. He has been selected in the IDEA 2007 International Competition.

This presentation aims to show through a case study conducted in Catalonia, the application of ecodesign in a business level rather than considering it as a tool for environmental improvement but as a strategic methodology and process innovation continuous improvement.

The starting point of research is the growing integration of sustainability requirements of the processes of hiring services (buying public), by the government, as a responsible 18% of the PIB generated in Europe, plays a prominent role of encouraging eco-innovation for companies that aspire to compete in this market, according to the Integrated Product Policy (IPP).

Coinciding with the announcement of hiring the services of waste collection for the period 2008-2015 by the Barcelona City Council, the local environmental services company “Corporació CLD”, start a R & D project jointly with the Department Product and Interior Design of ESDi (center assigned to the Universitat Ramon Llull), under ecological criteria to redesign the service system-product of cleaning cars.

The Ecodesign therefore constitutes an emerging methodology of prevention at source with the aim of introducing environmental criteria into the design of products and services, to try to minimize their environmental impacts throughout the life cycle of the same; ergo, since the introduction of new concepts, selection of materials less striking, to optimize the manufacturing process, distribution, improving the use, to minimize the management and disposal of waste.

At the research process in ecodesign, both have integrated strategies and environmental tools (Assessment of Environmental Strategy-VEA, “and Simplified Life Cycle Assessment-ACV-with Eco-Indicators’99) as a sociocultural (Integration of groups, study and user participation, ergonomics, etc..) and economic (local suppliers, etc.).

The result has allowed CLD to reach a new model of car- nowadays running-, which represents a substantial innovation in environmental level compared to models previously used by the Group, but also in a ergonomic, social and economic level, as well as providing and optimize its function. In short, achieving a range of competitive advantages within a typology of product destined for the collection of garbage, but paradoxical and really often forgotten as regards the consequences of their own impact on the environment and its users .

## Ecodesign: fostering innovation in the enterprise

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### Biography

Àngel Panyella is the Manager of El Tinter SAL and partner co-founder of Club EMAS of Catalonia, grouping EMAS companies. In El Tinter is manager of the first company registered in ecodesign (UNE Norm 150301) of communication and graphics.

It is said that the economical, financial and ecological crisis shows the failure of the policy ‘growth without limits’, which does not taking into account neither the materials nor the resources and only promote consumerism. Some people say that we should keep doing as we’ve always been doing or even just doing it better. Recently, some ‘eco’ and ‘greenwashing’ trends have emerged; a “green” scenery of products and services that try to respond to the worries of citizens and consumers.

The companies worried for this situation wonder what to do; and an International Congress of Design—promoted by the ESDi—is an excellent place to talk about it. Three years ago the Club EMAS was founded—a group EMAS-registered companies that have chosen to include the environmental behavior in a systematic and rigorous way in its business philosophy. The EMAS-registered companies promote the incorporation of environmental and quality management systems and social responsibility, and have adopted specific commitments in all its production system. Those companies also aim to be proactive defending the triple function of the company: service to the customers, the environment and the community.

How should the redesign be? Do we have to crowd the market with products and frugal services with the typical “Use and throw” philosophy or with the new models “fass”? Do the design criteria have to be based on the most sophisticated technologies and not evaluate the impact in the human and non-human nature?

Or the new metaphor “Cradle to cradle”, with the parallelism with the processes of nature, not only aiming to reduce or manage properly the wastes and other impacts, but also work to make the products have a positive impact on the environment and the community? What is worth must be useful, and what it is not must have another function. Here comes a new type of design: the Ecodesign. The Ecodesign comes from the environmental responsibility of the company but opens new doors to the innovation, to the leadership and to reformulate the role of the of the 21th century’s companies.

Surely it entails new ways of defining and working within the companies, such as:

- a) Incorporation of environmental and social responsibility in the policies and the top management of the companies to set new strategies in the definition of products and services.
- b) Development of methodologies more rigorous in the comprehensive management systems, in the continual improvement practices, in the wide and multisectorial view of each and every process, even expanding the activities beyond the traditional practices, e.g. the energetic cogeneration.
- c) The research and the innovation become part of the daily “what to do” of the company and stand for a change in the mentality of all the collaborators.

The XXI century’s company must please and provide services to all agents interested: partners, employees, customers, consumers, administrations, citizens, consumers, suppliers, and the Ecodesign maybe is another tool.



## Design, environment and sustainability. New attitude for social activism

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### Biography

Design historian, Phd of the Faculty of Fine Arts, University of Barcelona, BA in Geography and History and graduated in Audiovisual Communication. Lecturer at the Faculty of Fine Arts, University of Barcelona. Member of GRACMON, consolidated research group at the University of Barcelona. Board Member of the Design History Foundation.

This paper is part of a research on the social commitment of the designers. More specifically, it focuses on ideas and attitudes in relation to sustainability. Since the late 1980s, concern for the environment has been increasing among designers and, for many of them, has become in one of their priorities, especially since climate change appears to be a reality.

Although there are not many design projects that are done in a sustainable way, there are various initiatives ranging from the creation of organizations to web page with various resources. All of them show that the attitudes and behaviours of designers are moving toward a model of more sustainable design and production

In this paper, I focus on this change of mentality within the design community, on the designer's thoughts and the actions being carried out to achieve a more sustainable world.

## The Green Map of Natal - RN

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### Biography

Designer enabled in Product Design and Visual Programming with masters and doctorate in Production Engineering in the area of Product Design and Ergonomics. Professor of the Design course of Federal University of Rio Grande do Norte - UFRN, Natal - RN, Brazil.

The Green Map System was created by Modern World design of New York, USA. Is a system of creation of urban areas maps that makes a connection between the city and natural environments. The Green Map is extremely useful to imprint information offer, especially for the eco-tourism and culture of a city. The Green Map of the city of Natal in the State of Rio Grande do Norte is being developed in order to educate, inform and promote ecological awareness towards Natal, the Green Map will identify points of environmental and ecological importance, as well as the city's natural reserves providing simple and quick references to the needs of users and informing the 'green' Natal city.

Natal Green Map targets: the eco-tourism development in the city. Learn about the local green areas for helping its preservation. Create an ecological awareness for the population, particularly by encouraging the development of the city's parks. Innovation in fact to be used in the design of Natal Green Map, the georeferenced images use to provide greater accuracy and better documentation of tourist attraction points, as well as complaints of abuses against nature. Be used by cell phones with cameras and GPS, making use of the fact that the number of mobile phones in action in Brazil and the world is much larger than the number of PC's enabling ubiquitous computing.

The Natal Green Map project wishes to promote ecological awareness involving teachers and pupils of UFRN mapping from significant points of the city of ecological point of view by establishing a point of convergence of effort for this mapping and becoming, as far as possible, a community effort.

## Graphic ecodesign: design and commitment

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### Biography

**Manuel Reyes** Degree in Graphic Design and creative design, La Ulotja. He was a designer for the service image of the City of Santa Coloma de Gramenet. Since 1997 co-operates with the company El Tinter at the design department, where it develops the management system "+ 1" and a series of projects of ecodesign within the UNE 150301.

Today, working as a designer is difficult if you are not aware of life evolution in the planet. The financial, economical and cultural crisis forces us to reconsider our function. What does the graphic designer have to communicate and how? Which material or virtual resource to use? Why and what's the point of the designer's work?

The ecodesign is the procedure of creating products, services and communications taking into account the environment in all the phases of conception, production and use, that is to say, in the whole life cycle of the product.

We have the challenge to find ecocriteria to create products and useful and attractive messages:

1. Graphic communication needs a material—most of the cases paper or cardboard—made of wood from forests. There are alternatives, including recycled materials or even alternative materials (virtual and telematic).
2. The communicative material has a format and a volume to be assessed with a deep study enabling minimization of the volume and maximization of the profit.
3. Shapes, colours and typographies are the key point of the communicative and publicity appeal, and not all the materials used to reproduce them have the same environmental impact.
4. There are types of communication ending in a while, in a few minutes, even in a few seconds. Improving the stay, taking more advantage of it or reusing it can improve the durability of the resources.
5. Bring the information where it's needed; that's the challenge. The transport and the logistics of the products and services as well as of the information itself involve an economical and environmental cost that sometimes surpasses the cost of the product itself.
6. The complicity with the promoter or the customer in incorporating criteria for the analysis, saving and more rational use of the products and services ecodesigning them so that the result becomes more fruitful.
7. The soft design. It's said that the time flies, although the last crisis has led some thinkers to reflect on the uncontrolled consumption growth, the infinite time acceleration, and the frugality of the good moments. Is it possible to make communicative proposals that regain beauty, usefulness and good soft-enjoying?
8. What to do with the refuse? Both during the production process and afterwards (the use of the final consumer) we have to: Reduce, Reuse and Recycle; The Three Rs.
9. Too much conditioning for the creativity? The development of a methodology with procedures previously discussed and reasoned that include registers and quality controls with participative and proofing processes can be an incentive for more useful creations and at the same time respectful: the ecodesign.

The ecodesign is today a chance for innovation and commitment with the human being and with the land; it is possible that in a few years we will be able to suppress the 'eco' prefix, but nowadays, still like informers and communicators, we have this commitment.

## The responsibility for environmental conservation: ecodesign

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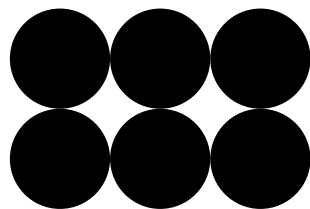
### Biography

**Silvia Rossi**, Architect from University of Fine Arts, specialized in Solar Energy Solar at the Solar Center UNC USA, a researcher at the Experimental Center of Production in the FADU, UBA in building materials with recycled of Recycling Museum and DIHA study and factory.

Ecodesign, as a concept, did not exist until a few years ago. Historically, until the industrial revolution, all the designed things depended directly of nature, later there was a mixture of unsustainable designs with the ecological ones and in the last 50 years the population increases and the human activities changed the natural systems in noncomparable ways to another historical period of the Earth life to which we need to add the physical aspects with his changes and natural cycles. The Ecodesign concept was added to the dictionary to distinguish itself. It was necessary to take a position in the matter, like a resistance to the industrial depredation. To reject what was careless of the environment. The garden design lead and taught us at a time in which knowledges, like so many other things, moved away from the totality, to be reduced to the stingy and limited to the premise of the solitary work. It is distinguished, to share, to multiple in many common interest disciplines, the awareness of the environment and the relationship with the object. The design is, then, something more than a personal or banal interest of self creation. It is an object (or architecture or engineering, or more) where one carefully studied the energy and the use of the water necessary to create it, and how much it will need during his life and how much it will use in his post use, or recycling. The materials which it will be create, with the lower environmental impact possible and they should be easily degradable without contamination. that their creation is of a novel design and a true contribution to a better quality of life, to an environmental improvement, with easy maintenance and cleaning and that is the trigger so that to other cities in future can reformulated similar designs that help to local development, so that the objects do not need to travel long distances but to be developed in their atmosphere, according to their needs. Under this condition we presented and displayed the 2 last designs as a grain of sand for the contribution to the immense beach of ecodesign.

A) Vertical Green unit to use as a virtual wall and improve the interior atmosphere.

B) Unaytodas is a sustainable kitchen unit with green vertical; a module designed for the saving of resources: water, electricity, illumination, gas, spaces of recycling for worms compost and the use in the same microgarden of aromatic species. In his versions house or restaurant they are 2 modules of different characteristics, equals in dimensions and functions according to the type of restaurant, the modules are made up according to the needs.



**Miscegenation and multiculturalism**

## The Design as a social aggregation factor – Copyshop Project - Superflex–

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### Biography

Master in Communication and Semiotics from the University Pontificia Católica of Sao Paulo and Bachelor of Visual Arts. She works as a researcher in art, communication and technology and she has presented and published in prestigious institutions theoretical works.

This article aims to point out the industrial design as a factor of social cohesion through the practices of contemporary artists' collective Superflex, Denmark. Based on relational aesthetics advocated by French researcher Nicolas Bourriaud the group plans through their projects, build the art through social exchanges. For that act in specific contexts in order to embody their projects. Thus, the artistic collective Superflex, Denmark, deployed in small communities in Thailand and Brazil, the project Supercopy. Among the projects that fall under the proposal are Supercopy Guarana Power, proposed in Brazil and PH5 Lamp, proposed in Thailand. Guarana Power involves the production of a guarana soft drink that can compete with a famous drink guarana produced by multinationals. PH5 Lamp already implies the use of Thai households, a copy of a lamp made by the famous designer Poul Henningsen in 1958. The lamp, which is known to be part of most homes Danish middle-class time is taken up by the Thai and used as a means of lighting the homes supplied with biogas energy systems. (The construction of small biogas plants are also part actions of Superflex). There was, therefore, that these actions of Superflex, industrial design has played a social aggregation thanks to the ideals of relational aesthetics. For the production of such products, both the Brazilian and the Thais learned about design, aesthetics and manufacturing products. Through the lessons learned were able to create objects with marketing and aesthetic values. The objects produced emerged after exchanges, discussions and negotiations between the public and artists.

## Future guidelines on design emerging in the old classic cinema

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### Biography

Bachelor of Fine Arts, Photography, from UB (1993) and PhD from UAB in Audiovisual Communication and Advertising (2008). She is a multidisciplinary artist and career official of the high school faculty of the Generalitat of Catalonia.

The present study begins in the literary Utopian path that treats about the future societies projected since Plato up to H. G. Wells, with the object to explore in which terms the universal cinema has adapted its visions. After extracting to the light the characteristics and components (so much objects as concepts) of the imaginary futurist detected in the primitive universal cinema, we discover that archetype is generated as model, being continued and being consolidated in the classic cinema. It is described how is the archetype model and how it is generated in the creative process, that is related at the same time to the principal elements of the philosophy of the human creation (art, science, society...) out of the fiction, dedicating a special attention to the relations that are established between the iconographies and sceneries of the movies with the area of the design (Industrial design, architecture, urbanism and interiorism). Which is the infiltration of exterior influences of the architecture and design inside the fiction? And what of this model, imagined in the past to be represented in the cinema when we try to visualize the future, has to see with our reality? From some example, we will see as the objects or elements that possess more character of anticipation, are not, precisely, those who have been imagined to recreate in the cinema a future world, nevertheless those that have been added by chance with another purpose (not for describing the future model); curiously these types of elements are those who have more possibilities of appearing outside of fiction in the future, belonging to our real world. Also it is exposed as the cinema has represented the social debate (specially about the problems around the design) of the mechanization, in favour of the progress, opposite to the positioning that proclaims the return to the past preindustrial. And finally, we reveal which are the messages of warning and advices that the man of the past sends to the man of the present, of an emergent way from the primitive and classic cinema, referred to the design. Between the warnings thrown from the past, the cinema is announcing us of the danger of creating false needs in the society and which the human being should feel obliged to have to attend to them. To the design is requested, among other things, that does not lose the perspective of future, which make us go on with our progress, that attends to real needs, and not to groundless, so that our society can finish flooded with products that practically we never manage to use. By the other hand, the human being is not afraid to the machines, only he is afraid of himself. We are not perfect. We accept the progress, always that we create ourselves attended by the science, but in no case we will agree to lose our identity.

## Rest-lessness. Contemporary Nomadisms.

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### Biography

Multimedia artist, professor and head of the audiovisual Video Unit at ESDi. She has received prestigious awards as the Premi Espai (Girona, 2006), New York Foundation for the Arts Fellowship (2005), SVA Alumni Society Award (New York, 2004), Eyebeam Internship (New York, 2004), Diapason Gallery Residency (2004), Scholarship Foundation "la Caixa" (2001) and Peggy Guggenheim Collection Internship (Venice, 1999). She has participated in international festivals and exhibitions in Europe, USA and China. She is currently a PhD candidate in Fine Arts from the University of Barcelona.

This paper proposes to take the nomadism's point of view, either from the perspective of Occidental Critical Theory — under the guidance of Rosi Braidotti — or from an Artistic and Design approach, whose discourses have been affected by the extensive use of new digital technologies. Nomadism, as constant displacement — either physical, symbolic or virtual — implies connotations which have an influence on essential concepts as time, space, memory, home or roots. These connotations mean a non pre-defined perception of the world and involve a political commitment. Today, we will focus on the concept of space as territory. The aim of this proposal is to analyze the occidental contemporary reality, and to propose new strategies of social and political action from the Art and Design field, starting from a nomadic subjectivity — which participates on this complex reality— and which is truly committed with territory and its inhabitants.



## Dynamics of sustainable uses built by woman

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### Biography

She is Industrial designer in the Universidad Jorge Tadeo Lozano in Bogotá, Colombia Masters in Anthropology from the Universidad de los Andes in Bogotá, Colombia. Teaching and associate professor at the Universidad de los Andes in Bogotá - Colombia. Participates in researching group design and culture. Advisory projects with the artisanal sector and with displaced.

The extension of objects towards the inside of societies rises from a domestic scope, where parents focus their efforts, not only on service for their loved ones but also on the construction of behaviors that are, in most cases, repeated by the children, multiplying the information transmitted in at home.

In the study “Object re-use: social relationships, power and meaning” the way in which the woman brings about re-use dynamics is put in evidence. This dynamics relate to the extension of useful life of the objects in their original condition, meaning that in this condition the validity of the object is maintained from their use and function, even if their appearance changes from user and context. From re-use is possible to identify the manifestation of different ways of relation and re-significance which give meaning to objects; they don’t take place in commercial transactions due to the motivation mainly caused by memories, feelings and desires, among others, and not because of the issues related to equivalences given by the economical exchange value.

The woman, besides being the developer of object re-use dynamics surrounding the family seems to be the anchor that through objects holds the identity of the group, collaborating to the structure of social networks in which values related to reciprocity, protection and continuity emerge, all at the same time associated to the functions of maternity, breeding and socialization of the material and social Selves in the group.

Beyond the representations that outline the transition or personal bonds and meaning, re-use dynamics seek ways to materially transcend, prevailing over current consumption. This ways to transcend do not only contribute to the measured consumption of goods and services in the home, but also promote the wellbeing of future generations, indirectly supporting the saving of primary sources and consumables whose unmeasured use has led to the social phenomena of an unsustainable world in terms of it’s own resources and energetic reserves.

In this sense, an actor that must be kept in mind at the time of designing products and objects is the woman; for it is through her that the processes of social reproduction of those under her responsibility are established.

In addition, to think about products or behaviors in which more than two or three people engage around the same object (shared appropriations and possessions) is a challenge for design, for it encourages us to stimulate and generate experiences within the home that contribute for this role to transcend.

We should learn to see users as active social actors of processes that can modify the environment in a sustainable way for everyone. In this way we can talk about social innovation in design.

## Designing nationality

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### Biography

He is a Designer in Visual Communications and PhD in Communication and Image Studies (Kent University, UK), where he researched the link between national identity and Image. He has carried out image and identity design works in 17 countries. He has his own studio: Guerrini Design Island.

Among the multiple identities that define social groups, it is the national one that gives the largest political impact globally. Thus, even though most of us malign, disbelieve, criticize or fear the national idea, the world continues to be articulated through this form of organization.

Even today there are nations who imagine and re-imagine themselves. Old and new nations, nations in construction or decline, nations that are assumed or denied, nations that respect diversity or totalitarianism. At the same time, they are all nations that are building identities.

In these nations, the Ideological State Apparatus creates certain feelings, thus producing nationality (Anderson, Gramsci, Laclau). To do so, these states distribute cultural fictions or symbolic fables, all of them images designed to obtain a monopoly on cultural norms and discourses.

However, to carry out this construction of national identity, the state must embody certain common content and have the power to institutionalize this content. In addition, there is a need for support media, channels of material culture through which to broadcast speeches of nationality such as public architecture, monuments, statues, cockades, uniforms, tickets, flags, coats-of-arms, school books and propaganda campaigns.

This occurs because the social significance of the images and objects and the social significance of the act of seeing, representing, interpreting, desiring and imagining as sources that provide power to the images (Lacan). This way, if we accept that there is no identity without its image we can think that the construction of nationality is the result of an act of design, the design of identity, understood as a political action of the first level.

Under this framework, it is important to discover the mechanisms and resources used by States to construct national identity from the design of images, as this will help the designer to expand the options and know the effects of design image work. For example, it will help the designer understand how to contribute from their work to the democratization of the national culture.

This process described above is not included in the academic training of the designers of visual communication, even if some of them are likely to be in charge of distributing images for the government or even for ideologically based institutions and organizations. Then, the discovery of this process can be seen as an innovation.

## Public space and cities: setup, development and education

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### Biography

Graduated in Architecture. Experienced in Design, construction and consultancy. On 1994 linked to the academy. Specialist on teaching university and expertise in education and community development. 2006 to date Coordinator Faculty Architecture USB-Cali-Colombia.

A reflection of the public space issue in Santiago de Cali is proposed due to the way in which the informal vendors occupy it, the relationship with design, how it environmentally affects and the approach that can be given specifically from education, specifically teaching of Architecture. It is also intended to make a contribution to understand that the actual city requires actions of professional practices related to design management and space construction. The text is part of investigations done throughout my in course Master thesis work entitled "Public Space and Informal Vendors. Practices, tensions and construction of the place".

The questions asked about the issue are: What is the city's concept of development and its nexus with design and configuration of public space? What is the relationship of physic environmental, sociological and economic components with the concept of city development and public space? What are the imaginary of public space users? What is the concept of community in public space?

If we refer to the concept of development of a city in Colombia, it can be stated that one of the elements that have been development indicators is its urbanization degree, it is a factor that has been linked to social problems generated mostly by rural migration to urban centers displaced principally by violence situations, but also as a search of better opportunities. This phenomenon evidences the increase in number of persons working informally to solver their basic needs.

By involving the concept of informality, the space can be considered social practices because it refers to the physical place where the activity is performed and the subjects that constitute it.

Historically the informal vendor has been linked to life processes of the street, with its path have taken place probably during generations and the interaction with the community environment which is its context, a decisive influence on the processes of conflict and coexistence, therefore it is important to understand that the study of public space, in addition to its physical infrastructure, should observe the practices that occur in individuals who remain there.

It is essential to integrate different disciplines, such as architecture, design, sociology, environment, among others, that study issues involving public space, which have important methodological elements and analysis, complementing its different point of views and realize a knowledge integration that contributes to the formulation of politics about planning, urban development and study of problems of space through citizen participation in order to understand the city without fragmentation that normally generates intervention politics in our cities.

## How to educate in design respecting cultural diversity

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### Biography

Academic Coordinator of the Career of Art and Design Business from the San Ignacio de Loyola University. Researcher and lecturer of a series of conferences on topics of Design Identity, multiculturalism and Social Inclusion.

Speaking of humanity is to talk about diversity. Diversity is different cultures, the diverse cultures that make up our world. Communication and interaction between them will open up new cultures that are capable of respecting the diversity of races, creeds, thoughts, social status, sexuality and ideology; it means learn from the difference.

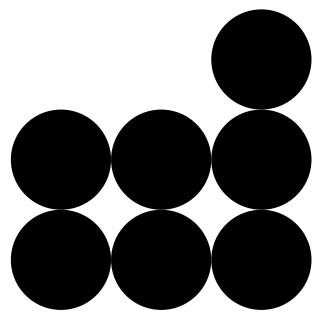
Speaking of Design and Education in a multicultural environment is to recognize the enormous privilege for a visual communicator, then the challenge becomes more interesting because if we want to study a target of different natures, we must start by considering all aspects to ensure that the communication reaches clear and direct. If we manage to educate in an environment such as that described we will be contributing to the formation of a human being sensitive and tolerant, with a vision to create a better world.

Educate in design is to develop a curriculum thinking in student's ability to recognize and accept the reality where he belongs and, from this, develop the skills to implement the features of this diversity in the development of human communication systems with social responsibility. The student has to generate identity reinventing its culture inheritance and make it present, so if it is possible all the individuals from each multiplicity of cultures that belong to the target will feel identified. These generate social inclusion.

The career of Art and Design at San Ignacio de Loyola University in Lima Perú consist in five years of education, the curriculum is divided into two years of basic design studies, two years of specialty such Graphic Design, Multimedia Design, Interior Design and Photography; and one year of Management and Thesis. During the first two years, the student take courses such as Color, Composition, Drawing and Typography and also include two courses especially design for this purpose like Development and Identity I and II. We have assumed the responsibility to study our multicultural reality to generate identity as a basis for the development of graphic elements and communication projects, considering the pragmatic, syntactic, symbolic and aesthetic way that all projects must have. There exists courses in each specialty such as Identity, Design and Social Projection I and II; Identity, Decoration and Design I and II, that allow the student to identify the reality and propose solutions according with our diversity.

We understand that belong to a multicultural country like Peru, with a great diversity of cultures and ethnicities, to propose a curriculum that consider these items in the education of students, we are seeking to develop a better country and therefore, in the globalization era, a more tolerant world.

If we understand that human beings are different we can believe in the hope of understanding and live in freedom that is what multiculturalism seeks.



**New technologies in design**

# A View from the Clouds: Teaching Global Design Using Google Apps

This article documents a trial use of Google Apps<sup>1</sup> as the platform for an introduction to engineering design course with a strong global component. It includes assessment data from 29 students in the USA, from the Engineering Design Program at Penn State University in Pennsylvania, and 19 in Spain, from Tecnun, School of Engineering at University of Navarra in San Sebastian.

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## Biography

Mechanical Engineer who worked for multinational Alcoa. Studied Industrial Design at Domus Academy in Milan. Worked with Stefano Giovannoni there. Spent one year teaching Design at Tongji University in Shanghai. Now she is Associate Professor at University of Navarra.

## Data as raw material

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### Biography

**Alberto J. García Ariza** Associate Professor in the Faculty of Fine Arts of Pontevedra, University Vigo, in subjects related to Design, Art and New Technologies. His research deals with the possibilities of programming code as a creative tool for design.

Technically speaking, data is anything that can be stored by a computer (Moock, 2001), and only in the moment it gets its meaning is turned into information. The meaning (context) is what shapes data into information. Whenever we are programming, we use variables to make all these signification processes. As we learn to code in any programming language, we always begin with variables and datatypes (numbers, strings and boolean) as programming implies dealing with not only raw data but information. Every data must have its meaning to the programmer, as they are his/her ingredients. Therefore we can assume that data can be anything.

Nowadays we are exposed to much more data than in any other time in history, many more of which we are able to manage. Saul Wurman exemplifies this stating that a Sunday edition of The New York Times has more information than a Renaissance average person could access in his/her whole life. With all this information, we find a top priority in establishing information apprehension models. Besides, there are other kind of data that are not accesibles at first glance as the emerge from the relationships between other data or elements. Lastly, a third question related to the analysis of the information present in the society is that we find dynamic datasets, this is, they change through time.

It is at this point where a computer shapes itself as a meta-tool to deal with all these data. And it is at this poing when we find data visualization as a recurring topic in the fuzzy space as the Science, Digital Art and Graphic Design is.

Computers are tools that have spread through every Design process; re-shaping the role of the tools we use everyday. But computers are much more than tools, they are meta-tools, dynamic and fluid, that are based on and work with information. We need to trascend the limitations we find in commercial software and build our own applications, as a new way to deal with the new needs we find in understanding information, and as a remedy to the homogenization in the results.

Computers are machines that work by algorithms, and they use data as their raw material.

## The influence of “Uncanny Valley” effect in Designing a Social Robot

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In this present work we propose which features and functionalities we should consider in the design of social robots according to the “Uncanny Valley” effect. This effect, described in the 70s, argues that when robots have a human appearance and a performance very close to reality, they cause a rejection response between individuals. This effect is reflected in a minimum in the valley of the graphic between social acceptability and the degree of human appearance.

If in the social robot design is not taken into account this effect, it may cause displeasure in people who must deal with it, as consequence the rejection will be immediate. To avoid falling into the valley, the robot should either not to look so much like a human, although their communication skills and work were “very human” or, conversely, completely resemble to him. In the second case, it must be guard all the aspects involved in its design to make humans think that it is “one more of them”. The article will conduct a review of this new vision of design: “the uncanny valley effect”, explaining where the robots are placed in the graphic, and mention which features make stronger the acceptance of the design.

### Biography

**Anaís Garrell** is graduated in Mathematics from the UB (University of Barcelona). Currently completing doctoral thesis in social and cooperative robots in the Robotics Institute and Industrial Computer IRI-UPC.



# The design of visual communication: toward a social objective

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## Biography

She owns a BA in Visual Communication Design from National University of Litoral de Argentina. On 2003, has developed brochures for the Municipality of María Grande, Entre Ríos and developed the corporate brand design for the city Villa Elisa, Entre Ríos, on 2005. She was responsible for the design team on "TECNOGRAPHIC" years 2003/2004 and held a teaching internship at the Chair "Graphic Design Workshop 4" by the architect Horace Gorodischer, within the Faculty of Architecture, Design and Urbanism at U.N.L, Santa Fe, 2004.

The aim of this research is to know and understand how and with what purposes young people use the new technologies, to analyze how often these tools are utilized and study their influence on young people's everyday lives, observing how they affect their interpersonal relationships with their peers and adults.

From the Visual Communication Design we operate in these new electronic spaces, dealing with the changes that the use of these technologies produces on young people, which determine their behaviors and inner realities. We therefore decided to consider as our unit of study a group of people between 15 and 17 years of age who, according to Juan Antonio Huertas y Griffa- Moreno, are trying to consolidate their personal identity, are about to exercise their civil rights and start to internalize values in a responsible and justified way. For the data collection, we will consider three educational institutions from Santa Fe city, a private school, a state school (both of them located in the centre of the city) and a suburban state school, with the aim of observing the different social realities of these groups of young people.

Nowadays, with the new technologies, the users can have a leading role, can transform stories and create new ones, according to their preferences and needs, leaving behind a passive role and becoming an active participant in the world of art and culture.

This thesis aims to investigate the new contemporary and structured scenario from focusing on the impact that the new technologies cause on the contemporary society and their influence on the different ways of thinking and acting of the social agents under study.

From our discipline we agree with the ideals of the French author Gerard Paris Clavel, who states that 'Design really makes sense if it pursues a social objective. With its capacity of symbolic expression it can promote understanding of the problems our society faces'.

To reach the objectives initially expounded, in the first place, it would be necessary to investigate cases of analogous groups which reflect social problems, incorporating all the necessary theoretical framework from disciplines such as sociology, education, psychology and communication, among others, in order to give scientific support to our focus of study.

Therefore, we propose an interfase prototype, as an interactive support capable of raising adolescents' interests, which we will denominate [www.activate.org](http://www.activate.org). Activate is proposed as a site of social characteristics intended to promote reflection, debate and the participation of young people, about their realities through contents of general interest, discussion forums, chat, and also spaces to develop their own ideas and exhibit their projects. It will be an open website that will have everybody's participation and initiative; it will be interactive, because it promotes the sharing of experiences and it will favor the exchange among young people, combining information and entertaining.

## Incremental design method of information systems based on Internet

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### Biography

Multimedia Engineering at the UPC and a Masters in Interactive Systems for MECAD / ESDi. His current research work is linked to the development methods of artifacts in the context of collaborative design.

We are not afraid to be wrong if we say that design is one of the sectors that has been most affected by the revolution in Information Technology. From a business-economic point of view as well as research and teaching, design as a sector has in the ICT a key factor in its development. ICT is not only a tool when producing design artifacts but represent a scenario in itself, where designers can provide knowledge. Thus, we find innovative products and services results of design efforts that could not exist without Internet and ICT.

The aim of this paper is to present the design method of applications and Internet-based artifacts, a method adapted from the proposed by Pahl and Beitz (1995) and that enables us to generate innovative product-services in a minimum time to the demands in the online training and health areas, just 2 of the sectors with opportunities to develop R+D+i through technology and where design can be positioned as a determinant factor.

## New systems to dynamize innovation

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### Biography

**Jordi Pla** Degree in industrial design at EINA and Master's degree in digital design at ELISAVA.

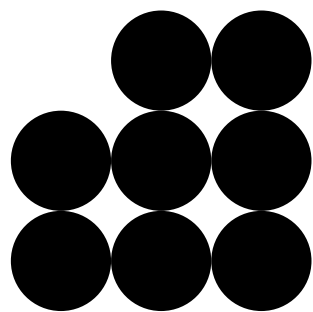
**Pol A. Fantoba** UPC Technical Industrial Engineer and Master in product design at ELISAVA.

On 2007 both founded the design study: Pla & Fantoba. Product design as street furniture, interior, home accessories, eyewear, merchandising and packaging, perfumery, etc. In addition to innovative projects with materials on avant-garde.

It intends to highlight the current problems existing in the innovation projects through two case studies on patent protection of knowledge and also the system of collaboration with technology centres and public institutions.

The aim is to show the current workings of this technology projects, identify problems and propose a organizational solution that makes it easy, centralize and create a better efficient flow of information between parts. The end result should be an intense debate that encourages reflection about the current system, give light to new and dynamic strategic solutions that enable people and businesses to increase the guarantees to access into the world of innovation, doing this with equality, quickly and professionally.





**Pedagogical challenges in designer's training**

## A critical exploration of the impact of an intervention that aims at developing y7 D&T students sketching and modelling skills on the level of their self-regulatory motivation

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### ..... Biography

Creativity in Design - A critical exploration of the impact of developing Design & Technology students sketching and modelling skills on the level of their self-regulatory motivation.

The aim of this study is to investigate how the tutoring of student sketching and modelling skills can affect levels of student self-regulatory motivation.

A pilot study was carried out to explore the techniques used during teaching sketching and modelling in Design and Technology classes in secondary education and their effects on the motivation of the participating students. Subsequent to the pilot study was a main action research investigation in the form of a school intervention in a group of Y7 mixed ability Design and Technology students in a mainstream secondary school in Peterborough.

A number of methods were employed including structured and semi-structured pupil and teacher interviews, self-regulatory questionnaires and lesson interventions. In addition, the sketches and models produced by the students both pre and post intervention were discussed and critically reviewed against the wider literature. The findings indicated that there was an increase in the self-regulatory motivation levels in the students that took part in the main study after the tutoring of free hand drawing and modelling skills.

# More than Thousand Words

## Interactions between photography and design

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### Biography

Professor and researcher of in  
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Course Lecturer in Photography at  
ESDi since 1993. Since 1987 he exhibits  
his work at various galleries and art  
centers such as Centre D'Art Santa  
Monica in Barcelona, Vienna Faber  
photo gallery and at Exhibition Hall  
Caixa Terrassa. His work is in Fund Art of  
the *Generalitat de Catalunya* located  
in the MINAC.

This paper is a brief historical revision of the relations between the products of the camera and the different areas of design, aimed at defining the role to be integrated in this specific field of application.

Taking as its starting point the early nineteenth century, analyzes the sociocultural circumstances in which both disciplines arise, as well as his points of connection, and the progressive leading role that the photography was adopting in the mass media printed until reaching the consolidation status during the 20th century as an indispensable element in the work of the designer. Along this period, the photographic image gradually conquered an own status in the incipient field of the graphic design, thanks to the obvious epistemological duality of its representations, capable of placing themselves in the field of art or science with apparent naturalness, extending his primacy as a system of visual representation to the other branches of design, as technological advances allowed new uses.

During this period of time, a narrow collaboration was established among both disciplines in which the photographs acquired two clearly differentiated roles: one documentary, thanks to the capacity of the camera to produce representations provided with the aura of truthfulness and honesty reached in her contact with the science, and thanks to her particular technical idiosyncrasy; and another predominantly artistic and creative, with the common goal of providing a special type of knowledge and access to the real characteristic of the medium.

Finally, the study concludes emphasizing how the unprecedented popularity of the camera, stimulated by the digital revolution, and the facility to manipulate the photographic image that from it stems, have caused a new panorama in which the boundaries among the documentary and illustrative uses dilute, creating a new visual paradigm in which the graphic design and the photography reach a level of communion unknown up to date, increasing its presence in the society, and assuming a relevant role in culture and communication in the beginning of the 21st century.

## Training Students in a Method to Critically Assess a Design's Rhetorical Nature

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### Biography

He earned his MFA from UT Austin and BFA from BYU. He worked for frogdesign in Germany, USA and Singapore and for Dell Computer in Design & Engineering Management. He then ran his own consulting firm. He has been researching color proportion and teaching ID at BYU since 2005.

The objective of this report is to demonstrate a method to teach students how to critically assess the rhetorical (persuasive) nature of objects and compose a meaningful, written narrative about the design.

Young design students typically lack depth and understanding when discussing a design or an object. Generally they limit themselves to a collection of style platitudes that express how the object makes them feel, like: "that's so cool".

This paper proposes a method of discussing, thinking and writing rhetorically about design that can be taught. When this method of thought is embraced by the students, they consistently and meaningfully get beyond design style platitudes when discussing design. They begin communicating about the design's rhetoric.

The method of training is framed by the published design selection criteria for a product design exhibit, directed by Paola Antonelli, and displayed at New York's Museum of Modern Art (MoMA) during the winter of 2007/8.

This framework, as defined by Antonelli, is composed of six areas of exploration:

1. Form and Meaning
2. Function and Meaning
3. Innovation
4. Cultural Impact
5. Process
6. Necessity

Within these six areas of exploration the students research, contemplate, discuss and deconstruct how objects communicate. Using examples provided by the MoMA exhibit and from the book "Humble Masterpieces" also authored by Paola Antonelli, students discover why some designs resonate over time and become an integral part of our cultural fabric. Conversely, they discover why other designs lack the rhetorical content to sustain cultural meaning over time.

Once the students understand the method, they are asked to demonstrate their new knowledge by selecting a notable object and researching its history. They are expected to discover and construct a rhetorical narrative for the object and present it using 250 words or less and two images.

This paper will explain typical design school student assumptions regarding the communication of design. It will break down and explain the components of the methodology, and provide examples of both MoMA and student writing to demonstrate how the framework is utilized.



# Teaching design, learning design: tools, goals and the creative long-term perspective

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## Biography

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Dipl.-I.-Des., Berlin University of the Arts,  
Berlin design representative for two  
UNESCO conferences/workshops,  
freelance design work for the Goethe  
Institut, elmarflötto, etc.

This article approaches the topic "New Tools for Design Education" from two perspectives, that of design teaching and that of learning how to design. Introducing the general framework as well as the specific structure of the University of Art (HBK) Braunschweig, I will present "Tools and Goals for Teaching", including educational objectives, competences, and my method of "Parameter Projects" for the transparent positioning of teaching content within the area of basic design principles. The objective of "Lifelong Learning" refers to a professional attitude enabling responsible and creative design work. "Tools and Goals for Studying" describes four instruments for a self-reliant approach to designing. These range from "Change of Mode", "The Process of Development" to "My Way" and, in particular, "The Creative Loop".

## The prototype design: attitude change

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### Biography

**Mario Alberto Pinilla** Industrial Designer with expertise in electronic engineering. Teacher Researcher University of Andes. Director of research group on technology design and health. Participation in various international conferences. He has won prizes in design competitions in Colombia.

The awareness of reality that surrounds people is affected by the circumstances that transform how humans execute and realize things. When the surroundings offer situations of stability it establish a conformism that maintains the human being in a dimension of permanence, where it references, describes or explains what other propose without necessarily searching for comprehension. Therefore, the artificial world is executed, elaborated and controlled in an adaptive and easy way. On the other hand if the reality is charged with uncertainty that breaks the tranquillity, it obliges to make changes and a new dimension appear that permit the felling of being active and motivated with a sense of freedom that provokes and anticipates the generation of creative acts.

On another front, the relationship of cognitive activities and instrumental content should be given the benefit of communication and coexistence between individuals. This way the universe of the abstract content do not designate a material reality and at the same time do not try the representation of concrete things, connects with the universe of the representation of physical and real world of things to adequate the surroundings to wishes and needs that aspire concrete answer. In consequence in this category ideas and concepts are conceived to evolve to a concrete and real dimension.

Understanding how the relation between the activities content with the way human beings do things permit us to comprehend the conditions that must exist for the realization of a prototype in design. With these reasons it establishes an outline of relations of the categories of execution and content. In this approach it can see the emergence of four action scenarios with components that affect one way or another on human behaviour beings toward the realization of things. Precisely to understand the connection of prototyping concept with the purpose relation outline, it was necessary a study of the type concept, sketching and modelling of the scheme to establish a differentiator that permits to understand and highlight the essential qualities of the prototyping concept.

## Career guidance for designers in four steps

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### Biography

Professor at the Escola Superior de Disseny de les Illes Balears. She has extensive experience in career guidance and career planning in business, legal, and organizational support, coordination and management of cultural activities.

“In the context of lifelong learning, guidance refers to a range of activities that enable citizens of any age and at any point in their lives to identify their capacities, competences and interests, to make educational, training and occupational decisions and to manage their individual life paths in learning, work and other settings in which these capacities and competences are learned and/or used” (Council of the European Union, Brussels, on May 18, 2005).

Guidance helps people to discover themselves, to focus on what is really important for them, to choose a career or a job, and to direct their future, no matter their age or the moment in their lives they requests for this service. Guidance is useful and necessary because it helps people to anticipate and reduce the unemployment, it also diminishes the instability of the labour market, and at the same time it improves the efficiency of the labour market. This paper will set the guidelines for a professional guidance for designers, a group specially needed for this range of activities along their entire active life, so that this essay has been organised in the following way.

First, in the philosophical phase we need to make concrete the point of depart that will be the backbone of our action plan. Then, in the analytical phase we must have the maximum of possible information than will help us to prepare a SWOT analysis, we sill analyse the pros and the cons, we will evaluate the alternatives and the cost of opportunity of each one, and finally we will chose the most suitable option.

We will bon on later to the operative phase with the communication plan strictu sensu and with the on-line communication plan, where we will discover the most useful communications tools. Last, we will enter the action & develop phase where we are going to put into practice in the real world everything we gave thought about the action plan, evaluated in the SWOT analysis, prepared in the communication plan, and finally we will write details in the agenda to define all the steps to give and the concrete actions to realize.

These are all the phases, the individual life path we need to follow to develop a program for professional guidance, in which we must be capable of foreseeing problems, causes and consequences, to solve them, to evaluate alternatives we did not have had in count before. We do all this because, whatever happens, always we need to have a plan, a plan of contingence, even in good times and in bad times, even if things happens as planed or not.

## Unknowledge as a value, knowledge as a system

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### Daniel Yacubovich Bursztyn<sup>1</sup>

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### Biography

Studies of fine arts, graphic design and illustration (Technion, Tel Aviv). Art history (Open University de Tel Aviv). Since 1989 Professor in workshop form and colour (ESDi) exhibits, writes and develops his work in Barcelona.

Time and practice has shown that, in the teaching of colour and form, certain elements invariably become apparent and, as one continues to work, become even more so.

Education takes place on a number of perceptive fields and, in this discourse I should like to deal especially with the dynamic, in a flexible and topological sense, between the teacher and the student.

The levels of “traction” in this dynamic lead to important differences because very quickly the physical “mass” becomes inevitably apparent: a group of capable individuals, in determined moments, of acting as a group before the teacher, out of a conscious or sometimes even unconscious sense of themselves as a group. When this happens it provokes specific group behaviour, the most important and curious of which, in my opinion, is what we might term “the unasked question”.

I should like to make clear that in this particular point in question, aspects of authority are totally irrelevant and what is important is the sense of what I have called denotative and connotative perception. The content of the subject in question ended up coinciding with this dichotomy, or at least contributed to its development.

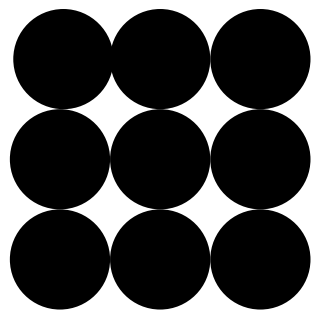
Education requires stimulus to awaken a natural curiosity. We might ask what we are interested in knowing or what we might be told could be worth knowing. In general, I feel students believe in a question that is crucial, one that will cause a ‘landslide’ and do away with any imagined equilibrium. Asking it would lead inevitably to chaos.

Students do not usually ask questions, not because they do not know what to ask, but because they know only too well the weight a question carries. They are so well aware of it that they are careful what they ask. They do not ask at all.

And it is here that the teacher finds himself alone. It is not a matter of levels of knowledge or information but of values.

In the subject of form and colour I have observed an interesting phenomenon – form generates comment, while colour does not. When I began to look into the reasons for this, I became aware of a difference of a semantic nature: colour denotes, whereas form connotes. Colour is a fast-moving stimulus that penetrates us through light, more so than form or even than movement.

This phenomenology, I realized, could prove an incredible teaching instrument. With it, it might be possible to demonstrate to the student up to what point one’s perception is divided between what one thinks he/she know and what in fact he/she really does know. A critical revision of perception explored in the classroom in laboratory terms could thus result in the stimulation of the process of asking questions.



**The design as an activator of the economy**

## The design system of Mexico City, past, present and future: Preliminary results of a research based on the model of the Barcelona design system

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### Biography

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Researcher at the Faculty of Sciences and Arts for Design at the Metropolitan Autonomous University in Mexico City. PhD at the UPC-Barcelona TECH (2008). He has experience in the design, development and exploitation of multimedia spaces. His research activity is centred on design and innovation of products and services supported on the Internet.

The need for a study such as this, arises when after the public presentation of a design policy for México (April 23th 2008) to the Honourable Chamber of Deputies, more efforts are needed to understand the real scope and potential of design infrastructure in Mexico City and consequently to count with the necessary elements to outline the future design scenarios and develop strategies that may support the policy on national design. The proposal of this study and the decision to carry it out starts from the premises derived from the international debate on the role of design as engine for innovation and social development. Besides it is based on the concept of design system that other countries have adopted to impulse their own design policies.

The study was developed starting out from the experience of the project “Disseny\_Cat: Elements for a Design Policy in Catalonia”, their general objectives were to model the Barcelona design system and come up with action plans in favour of this sector. It set off from the initial hypothesis that the methodology proposed for the project was a trustworthy instrument that will facilitate to achieve the purpose of this study in an adequate manner. To visualize the system and identify its main functions and the role played by the different actors, a group of design experts was conformed, and to whom initially it was asked on the actual situation about the design system of Mexico City.

Amongst some of the findings of this research it was identified that some of the institutional agents in the design system of Mexico City are diverse, atomized, fragmented and with no articulation between them. This situation allows the assumption that the lack of a real demand of professional demand services respond among other factors to the incomprehension of the design discipline within the sphere of competitiveness and the innovation processes, besides it is indispensable a joint effort by the different actors of the system to establish a national policy that might impulse design as strategic factor in the economic development of the country.

It is recognized that the design system of Mexico City counts with a series of institutions that even though they do not work as desired, by the only fact of existing they endow the system with solidity and permanence, because all OF THEM give strength to the system and have allowed it to survive, in spite of the indifference and neglect of those dedicated to design. During the last few years, many of these institutions besides grouping themselves in associations have entered into a diagnosis of self evaluation, and more recently into a process of accreditation through external evaluation.

Summing up, this work presents some of the obstacles that obstruct the interaction between the different actors of the design system of Mexico City. In the future, it will be necessary to develop different strategies and action plans to contribute so that design may be transformed into an engine of the national economy and the Mexican society.

## Model Cul. DI. Var. A look at design and innovation in SMEs

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### Biography

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Industrial Designer, U. NAL, MA in Design, UP, and Strategic Management Specialist of Design, UBA, Professor of Industrial Design Program and Researcher, Research Group G-MAD from Catholic Popular University of Risaralda, COL.

The countries that traditionally have had a culture of design in which the economic policy bonds to the promotion and development of design in the industry, have done efforts to check the activity of design in PyMes, and its contribution to the innovation. Through these institutions methodologies and instruments to do measurements have been consolidated, as well as some studies that have allowed to have a historical record, which have contributed to the improvement and support to PyMes in the matter of design and innovation.

In Colombia there is still the job to advance in this type of studies that allow to establish where we are, and from there where we go, related to the design linked to the entrepreneurial strategy, competitiveness, and local development. The efforts in this matter are being done by the academy or by individuals.

From this point of view, this paper is a small contribution to the specific case of the activity of design in PyMes. This way a model of analysis and formulation of strategies called CulDiVar is proposed,-To cultivate the design, the innovation and the value,- starting from the statement that the culture of design is a job we should do, in which organizations PyMes that get it and consolidate it may generate value and innovation in their products, actions and communication to open themselves in a competitive way to the market and contribute to the development of the territory. Through this 2 cases of PyMes the model developed is applied to know.

## Ethics codes as indicators of innovation in design: ICOGRADA case study

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### Biography

Degree in Philosophy. PhD on Research in Design by the Universidad de Barcelona. Professor of History and Theory of Design in ESDi.

The paper raises the hypothesis about the existence of innovation indicators that fix the degree of innovation of a product. These indicators are Design history and Design theory, and inside design theory, the ethics codes aiming to work as translators of social and technoscientific changes to principles or rules of morality (in an universal context). The ethic codes collect the innovation in professional field earlier than the laws of a country.

The hypothesis is based in the analysis of twenty-four ethic codes of graphic designers associations, made in the context of doctoral Research in Design at the University of Barcelona.



## 8 key factors to success as a designer in China

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### Biography

Partner and director of STIMULO study.

China is booming, that's not a secret. But its economy is not only growing fast, but also evolving from an OEM country towards an ODM and even OBM one (creating their own brands), becoming a huge consumer of design and branding services. Yes, most companies are still making money by just manufacturing, but for many Chinese businessmen that is already becoming too risky. Manufacturing in china is not so easy anymore. There is huge competition in any sector you look at, and you can always find someone who is ready to make it cheaper than you. World economic recession is making things much more difficult for them due to the demand drop. That's why many Chinese companies are slowly moving into the ODM and Branding world, trying to create their own products to be offered to their clients, or even to be commercialized by themselves.

If you add the fact that most of European companies are currently reducing their investments due to the crisis, you soon realise that China is a pretty attractive market for design agencies and professionals, exhausted of making efforts to get new clients in Europe. Some studios already noticed that and established their branches in China, but some others perhaps are just considering starting to make their first steps in that smoky and busy jungle. This speech has been made just for those who are seriously considering landing there in the near future.

It is not my aim to give advice about how to do business in China. There are many companies or public institutions who can certainly give you excellent information about how to start exporting. Moreover, there are lots of people who can provide useful details about the country. So my real aim is to talk about China from a designer's point of view, sharing years of experience of someone who has been developing some projects there, moving from "made in China" to "Created and Developed in China".

The speech has been organized in 8 key factors to have in mind when you want to start designing in China.

## The committed design as a trigger of the economy

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### Biography

Sanserif Creatius. Design studio specialized in graphic design and product sustainable. Founded in 2006, after nearly a decade of specific collaborations, has in his short trajectory several national and international awards. They have recently published ARTICULADO, a compilation of views and thoughts of designers around the world.

Now is the moment for industrial design to claim its rightful role in coming up with solutions to the economic downturn. And this is no trifling matter. The result of a decided commitment to design applied to industry has already proven itself in other times.

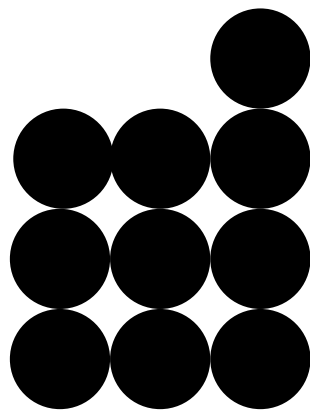
This was the case, for instance, of the USA at the beginning of the great depression. When people, and enterprises, were reluctant to spend money, we saw the appearance of many outstanding, irresistible products that stimulated the desire to purchase. These products offered solutions and improved processes, thus leading to greater benefits for the consumer and also for the entrepreneur.

This is not the only reason why an unwavering defence of design can shorten the current economic recession. We owe this to the economist Frédéric Bastiat. We can sum it up by saying that, to know whether a measure is good or bad, effective and efficient, one must look at the long-term consequences for the population as a whole, and not just the short-term effects for a small part.

The fallacy consists in believing that a child who breaks a shop window while playing is performing a good deed for the economy, because the shopkeeper will have to spend money to replace it, thus giving work to the glazier, who in turn will be able to spend the money he receives, giving employment to others, and so on. However, this way of thinking does not bear in mind that, if the window had not been broken, the shopkeeper could have spent his money on something else, which would also have helped give work to other people and, furthermore, they would have produced new things and not have had to replace something that already existed.

To understand the positive effect on the economy of a “well-thought-out” design, one first has to understand that in this realist fable there are actually three characters, and not just two. One, the shopkeeper (read consumer), is limited by the breakage to just one expenditure. The second is the glazier (read producer) for whom the accident plays in benefit of his industry.

The third is another industrialist whose work is effectively reduced for the same reason. It is this third character who is always left in the shadows and who, personifying what cannot be seen, is a necessary element in the problem. A design in which the aesthetic and the function should, today, be grounded on another value; a respect for the environment, in which the whole cycle is taken into account, from production and distribution to the selection of (natural, recycled, reused, etc.) materials, without overlooking their re-entry into the system after their first use life, in order to reduce the environmental impact.



**User centered design**

## Efficient design

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### Marcelo Alegre Poussy<sup>1</sup>

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### Biography

Creative agency specialized in concept and development of new products. The studio has won many international awards among which are the red dot award in 2008 for the chair Plek and iF Award in 2009 for the bell Onna.

In the current economic climate, in which business structures are being downsized, costs are being adjusted, and the environment is becoming degraded, we need to achieve maximum results using minimum resources.

Since it was first established, alegreindustrial™ has taken on this challenge in its day-to-day work by using efficient design. This efficient design focuses not only on ecological matters, but also strives to be efficient at every step in the process of creating objects and in the way in which they interact with their environment.

This quest for efficiency starts from the time that the design is first conceived, analysing its interaction with users, giving them more benefits than they expect. It continues with the best possible manufacturing process, using minimum resources (in terms of energy, assembly and distribution), right through to the design's launch onto the market, putting the necessary tools into place to ensure that its integration is as instant as possible, as well as long-lasting. And not forgetting the subsequent dismantlement of the object and the recycling of its components once it has come to the end of its useful life.

## Design thinking from sexuality

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### Juan F. Cardona González<sup>1</sup>

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### Biography

Professor of engineering and design at the EAFIT University.

Product designer and engineering at POLYLUX.

Project Engineer and risks DeLima Marsh.

Engineer Projects at Mercóvil (Ford Colombia).

Project Engineer at BASF.

It seems that today, in the modern world we live in, speaking about sexuality isn't rare. However, the fact is that society still has a lot of prejudices about sex. Therefore, understanding sexuality, away from morals judgements and in a serious way, is a pending issue for us to solve.

Design, as any other creative activity, can develop solutions to modify those prejudices into new concepts or ways of viewing human sexuality. This document is an invitation to look at sexuality through new eyes, without any complex. Its main objective is generate curiosity about the symbols, ideas and feelings in the domain of sex; translating them from intimacy to the outside world and use them as tools. There isn't any intention to judge moral values, but the necessity to think about sexuality with clarity.

The document deals with a series of topics where sexuality can be used as a source for design concepts, but at the same time points out why it is so difficult to use those topics with our paradigms. The idea is to generate, with such topics, some critical thinking about both elements: Sexuality and design.

The presentation is divided into two main parts. The first one is an introduction to ethics as a tool to judge the different concepts that can be extracted from the domains of sexuality in order to find a path which allows the designer to avoid his own paradigms. The second part is devoted to the sexual topics, such as gender, censorship, male chauvinism and other related aspects. Each chapter is illustrated with related designs or concepts and sets out some issues or questions to be answered.

The text makes reference to works by Ruwen Ogien, Desmond Morris, Anne Fausto-Sterling, Erika Lust and others, and addresses different areas, such as sociology, anthropology, art and philosophy.

# The Quest for the Golden Apples: A Model for Repurposing an Informational Signage System

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## Biography

Associate Professor of graphic design at Boise State University. John received his undergraduate degree from the University of Cincinnati and his masters from Florida State University. He has worked professionally in both the public and private sectors on a diverse range of projects including corporate identity, signage, exhibit, multi-media and publication design.

This is a case study for a proposed informational signage project repurposed to create an interactive learning experience for visitors to a city park. The repurposing takes the form of a series of games called The Quest for the Golden Apples. The quests are based on the information found on the signage designed for the Park or nearby features. The text and graphic content of the quests form a separate and distinct component from the informational signage itself. The impetus behind repurposing the signage was multiphasic. The quests not only serve as recreational activities but also as educational activities regarding the history, culture, and ecology of the Park. This is accomplished through visitor interaction with the informational signage and with the Park itself. The quests support the informational signage by showing how the Park contributes historically and socially to environmental conservation of the area. And, just as importantly, the quests serve as a device to lead people through the Park's environs to help distribute recreational use throughout the Park.

The Quest for the Golden Apples is based on gathering information from a set of clues to find where a figurative golden apple is hidden in the Park. The answers to the clues are found on the informational signage or nearby features. The quests can be started at many different locations within the Park. Each starting point has a separate set of clues that will lead to finding one of the hidden golden apples. A variety of quests could be designed for distance, duration, and degree of complexity to accommodate the interests of different types of Park visitors and demographic profile, such as age, disability, etc.

This research contributes to design pedagogy by explicating for students how the intent of one design system can be repurposed to serve other functions. The repurposing in this instance provides recreational, educational, and practical means of expanding the ways in which visitors relate and interact with the Park. This project advances education theories that suggest game playing can enhance learning (Lepper and Cordova 1992, Prensky 2002). Educators can make use of this research as model for repurposing not only other informational signage but also possibly other informational design systems in dynamic or print based media.

## Workshops of industrial design and furniture for children

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We want to present here the results of a teaching and learning experience on the María Martínez Otero Foundation, dedicated to industrial design. A number of workshops were carried out for four years attempting to get children closer to the process and tools of industrial design. The workshops tried to encourage their critical thinking by analysing everyday objects, comparing needs and uses, exploring the possible reuse of common objects for other purposes, and experimenting with creating new objects from existing ones.

The experience has shown that children can take part on the conceptualization of objects and furniture in their environment, getting involved on the different steps of development: from the analysis of individual needs to the assemblage of the final object.

### Biography

Doctor of Fine Arts (University of Vigo) is currently Professor of Fine Arts and Fashion and Textile Design at the Universidad de Vigo. For 7 years she worked in the Galician Center for Contemporary Art and held for 5 years industrial design workshops for children in the Foundation María Martínez Otero in A Estrada. She is part of the research group DX7 Tracker Visual Laboratory at the University of Vigo.

## The role of design faced to the new touch devices

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**Biography**

She has a degree in art history and is currently completing her thesis of research in the field of digital interaction design. She has worked as a designer for various design studios and digital advertising and currently combines work as a freelance designer with teaching in Digital Media Theory in different schools of design in Barcelona.

The research presented in this abstract aims to analyze the consequences of the emergence in recent years of touch devices. Multitouch systems, for example, booming since the introduction of the iPhone, have allowed users to familiarize with the use of a new device in the human-machine relation: his own body.

These technological advances radically transform our understanding of digital media. The new tactile interfaces gradually replace conventional physical interfaces such as keyboard or Mouse, transforming the way we use technology for new forms of interaction with digital media. The gradual death of the mouse, drastically change the way we use the screen, and therefore, the interface. Devices like the Wiimote renew the validity of the postulates of McLuhan on technology as an extension of the senses, demonstrating the urgency of redefining interactive languages.

In this context, the digital designer's role is at a new crossroads. If by now its role was part of the creation of visual interaction screen (web design, interactive multimedia design, etc.). Now his role is redefined. The appearance of touchscreen systems (increasingly larger and more immersive) and the widespread use of sensory systems, define a new area for design. Interaction design is now redefined as the design of space for interaction, ultimately, the design of the interactive experience. Thus, the traditional role of the interaction as a means to relate to an object, whether virtual or physical is replaced by the role of interaction as an end in itself in the design project.



## Interaction onto digital maps: guidelines to design *user-centered* interfaces

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### Biography

**Marco Mason** degreed at the University IUAV of Venice in 2003 and now follows the PhD programme in Design Sciences. He taught Representation of Architecture (2006-07) and Animation and 3D Multimedia (2007) and is teaching Processing Information Systems at IUAV. His main research activities are in the field of visual communication design.

The article deals with the aspects connected to the contest of the Web-GIS technologies and, it focuses its attention on the investigation of the multimedial visual interfaces apt to manage geo-territorial information throughout advanced informatics systems, with particular reference to the users and the rule they may assume within the construction, the management and the use of information. The point of view is that of the designer who intends to suggest effective methodological process and design tools he disposes of.

Visual interface design can not be the only way to design an effective geographic interface because the complexity and quantity of data. Paradoxically the visual design come just as last step of the design process. It is the result of system use of interaction design, information design.

In this paper we are going to explain a possible design way to whom refers in order to design effective information space.

## Methodology in the Diagnosis of the product range

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### Biography

Responsible of product design unit for ITC.

She has worked as the responsible of more than 10 draft audit firms, of the department of Colorificio design in Endeka Ceramic and the design department at the Company Fujairah Ceramic in UAE.

Currently she is in charge of the Study design Cerarq in Castellon.

A demand of the sector exists for analyzing its offer and its way of managing the creation and development of new products from an objective and external point of view to the company. This need comes caused by the existence of very wide portfolios of product, with commercial strategies in slightly definite occasions thought for the distribution and not for the final user and where we can think tipologías of very similar products that they do not contribute value diferenciador with regard to the competition, definitively, a product that sells in many cases for price to prescriptotes, without attending to needs and desires of the final user. User who on the other hand involves increasingly in the choice (election) of the products that are going to shape his (her, your) habitat.

An audit of product raises the coherence of the offer of product of a company in relation to its strategy and to the consumers to whom it goes. It supposes this way a reflection on the situation in the one that is the own entity as for its product.

The aim of these audits of product is to create the actions (shares) necessary for the rationalization, restructuring and update of the range of products of the companies of the ceramic sector, getting:

- To restructure the range of products on the basis of a few definite criteria.

- To update the range of products.

- To improve the brand image of the company.

- To improve the communication of the offer to the consumer.

- To implement the methodology of integral design orientated towards the client

In order:

- To increase the competitiveness of the company.

- To rationalize the launch of new products.

- To detect not covered segments.

This diagnosis determines the structure of range to be able to detect the segments or not covered niches and therefore needs inside the range, identify the major products of the company or with potential fort, as well as the products that contribute a marginal value to the portfolio From the point of view of the aims and aspects of bearing in mind at the moment of realizing the analysis there is applied a methodology definite but flexible and capable of adapting to every managerial situation of the ceramic sector.

## Park and school: new game concept

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### Biography

Industrial designer, she has worked for four years in a packaging industry and household objects. Degree in design from the Politechnic University of Valencia and responsible of the core group of innovative Santa Rosa.

Nowadays in general, the Brazilian education system gives value to the child's cognitive development. And it's done in detriment of the physical and manual activities, the human emotion and creativity and the integration between body and spirit. By this way, one of the most complex moments of childhood is relegated to the second level: children's games.

Would this fun be something really important to the child, or would it be just a waste of time, an unnecessary thing? School is a place for learning. Could these games happen there? What difference does to the individual? The playground. Do schools offer playgrounds for the children to joy? How are the objects at these playgrounds?

On the design's area, the question could be: What does the children like to play with? Do the objects they dispose of fill their needs? At this research, some answers were proposed to these and other questions. And more: the children's games were trusted that, yes, it is important in school' space and time. And the trade can offer more and better options. The scope of the research was Recife, Pernambuco, where we looked for kinds of school which were more hardness in these aspects. It was concluded that it corresponds to the ones of the municipal teaching network. As consequence, contextualizing the user-individual, the object and the institution, we defined the behaviors to be stimulated on the children and how to transform it into objects, through its aesthetical, symbolic and functional functions, and with it, the criteria for the playgrounds' design.

## Shellhouse - (living portable)

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### Carolina Pino<sup>1</sup>

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### Biography

Bachelor of Visual Arts Universidad de Santiago de Chile., Chile.  
 Postgraduate studies at the Universidad Católica Pontificia. Master in Interactive Telecommunications Program (ITP), New York University, U.S. Visual Artist, Academic Pontificia Universidad Católica. Faculty of Architect and Urbanism, University of Communications UNIACC.

The massive appropriation and uses of new Technologies had made a whole World change in a dramatic way. Social and economic evolutions lead by Internet, made reality, time and space to be different concepts today. Now and there is not what it used to be, distances and mobility thanks to the development of networks, allow us to have access to a sort of constant location.

Technology is ubiquitous, for all of us, even though not all of us have conscious access to it.

Shellhouse is a Project about these ideas, it combines opposite poles, to built in one object, a portable address, that can provide of shelter to homeless people.

Shellhouse is a concept, an idea that could be feasible depending on our own participation, but that it also make us questions about technology and its development, about technology and literacy. Technology and location.

## New ways of living, new users

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### Biography

.....  
 Silvia M. Rodríguez is responsible for Habitat Trends Observatory within the ITC, Institute of Ceramic Technology, Industrial Technical Engineering and professor of ceramic processes at Universitat Jaume I. He has over 13 years of experience in the ceramic industry and for years has coordinated the service area of architecture, product design, communication and training of ALICER (ITC). Co-author of *Notebook Habitat Trends and New way of life*.

Traditional marketing analysis fails to include new family models that have arisen in postmodern society, overlooking different groups of people, who feel that their particular product or service consumption needs are not addressed. The presentation explores the various family models that have arisen in the last few decades, and examines which products best match the needs of these new nuclei. Keys and premises will be put forward in order better to understand these and enable products to be created that satisfy the particular demands of different user profiles.

One of the major variables in understanding consumer behaviour is the family model in which a consumer decides to live. Although much has been said in recent years about the family crisis, sociologists only speak of a splintering of family models. The data speak for themselves, since 78.5% of Spaniards consider the family to be one of the most important issues in their life (source: CIS Barómetro nº 2578).

‘New Ways of Dwelling’ is a monograph prepared by the Habitat Trends Observatory, resulting from a year’s research into the most noteworthy changes in family households. It sets out the main changes that are occurring in the way in which we live, in our cities, homes, and daily products. In order to understand these changes, it is vital to address how they have evolved and how new family models and new units that live together have arisen, and to attempt to understand what they are like, how they behave, what their values are and, in short, what types of housing and products they need or desire.

Similarly, the main changes that have occurred, and those to be expected in coming years in cities and homes will be analysed and related to the demographic, economic, and social changes that have led to the emergence of new lifestyles and concepts of the family.

The presentation will describe the new households, relating each to a new matching type of product, analysing each user’s specific needs.

## Skills of a competent designer

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### Luis Soto Walls<sup>1, 2</sup>

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### Biography

Research Professor at the Universidad Autónoma Metropolitana in Mexico D.F. for 30 years. PhD in Architecture, Candidate for Doctor of Education, Master and Graduated in Industrial Design. More than 30 publications on design and education.

An increasing preoccupation exists on the relevance of the education offered by our universities and its relationship with the needs of the work market. University graduates must be able to obtain a job that allows their professional as well as their personal development based on the qualifications that they acquire during their education; this has forced universities to guarantee that their students not only acquire the knowledge and develop skills of the discipline, but also they acquire non-traditional competencies that companies require of graduates (employability) such as: social abilities, leadership, team work, management of stress and emotional intelligence; as well as positive attitudes like: discipline, responsibility, commitment, productivity, disposition to change and loyalty to the company.

The preoccupation of the education sector in Mexico on the claim that the formation received in our universities is not adapted to the professional development in the work market, puts on the discussion table the weight that the different sectors must have, since the economic one seemed to generate pressure to have professionals who respond to their short term necessities, leaving in second place medium and long term needs.

On the other hand, university titles and degrees are no longer a guarantee of stability in professional careers and they do not provide anymore a distinguishing element between individuals that allows them to validate their level of income and their status in their community. The system of higher education in our country has become complex and the offer of programs is increasingly diversified. The number of institutions that offer programs in industrial design have increased so much that the Ministry of Education has established a system that recognize the quality of some of the programs. However these programs respond to a diverse and sometimes contradictory set of demands of different sources: students and their families, professors and university administrators, employers, accreditation and evaluation organizations, governmental agencies, national and international professional organizations, among others.

The formation of the industrial designers is not free of this problematic issue, and this work presents an analysis of the conditions of the education in this discipline in our country from two points of view: the existing programs at an undergraduate and graduate level in Mexico and the situation faced by graduates in the work market, allowing to establish a profile according to the fields of development and the average salaries. A proposal of basic, intermediate and specific competencies necessary to mexican industrial designers is also presented, to support a proposal of the evaluation of the units of competency throughout the studies in the courses of applied design.

## Adaptable product

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**Biography**

**Oriol Ventura** is an industrial designer and graduated in Fine Arts from the Universidad de Barcelona, and one year of study at the Politecnico di Milano. Currently combines the tasks of teaching at EINA and teacher associated at University of Barcelona, with the design office Nieto & Ventura ED.

Most of the contexts in which we hear the term “design” –and this does not by any means discredit the discipline–, we also find many different perspectives of what this word denotes. Despite yesterday’s debates between formalism and traditionalism and despite design’s close interplay with art and the demands and economic control to which it is subjected, we have consistently observed one factor that has proven to be a constant: the relationship with the user.

The user, who can also be the creator of a product, draws on the necessary techniques to seek out, locate, define and improve the elements of his/her setting in an effort to improve his/her adaptation to it. Conceived as a temporary solution, this would be effective if the environment and the user did not evolve. However, the reality is otherwise. Well aware of the changing nature of users, environments and situations, we believe it is the product that should adapt as much as possible to the varying needs of the user and to the alterations in the environment.

Though seemingly abstract a priori, the issue of the adaptable product has already been addressed in the design field. Moreover, adaptability is not only applied to the end product, but also to processes, technology and materials, and it is ever-present where nature is concerned.

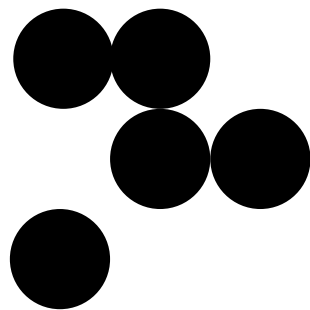
Adaptability as a concept is highly demanding, yet if we heighten our awareness and attempt to anticipate situations and offer solutions for them, the product lines we create will be far more stable, they will generate more user loyalty, and they will be more sustainable as regards our natural environment.

As a result of this conceptualisation and aware of the fact that this project could serve to help an increasingly larger number of users today, we were invited by the company Muros Móviles Acústicos TST to take part in the design of a “home space adaptability system”, TST\_HOME. This system enables the arrangement of the home space into several different configurations, according to the user’s changing needs.

With the experience gained through this project and the conceptual base put forth by this and many other projects, we believe it is important to be increasingly more prepared for changes, and to adapt as well as possible to them. Not only must we aspire to generate adaptability in our products, we must also propose new methods, techniques and materials that enable us to create varying configurations dynamically and parametrically, to reduce the user’s effort to adapt to the constantly changing environment as much as possible.







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