MATERIAL IMMATERIAL ARTEFACT INFLUENCE

Studies in Material Thinking

AUTHOR

Elena Caratti
Erik Ciravegna
Umberto Tolino

ASTRACT

Designers are increasingly called on to put 'human experience' at the centre of their act: in the design process the user needs, (explicit or latent) become more relevant than the configuration of artefacts. This design perspective, strictly connected to emotional and existential values, has as a result the production of tools and artefacts that are able to influence or transform real life (the material) and human relationships (the immaterial). The issue of women refugees' reception, their practical needs and the problem of multilingualism constitutes the core of our project for the Sammartini Polyfunctional Centre of Milan. The final output of the research project (communicative artefacts designed to support the refugees throughout their period of stay at the centre) is the result of a combination of multiple human factors and experiences that affected all the actors involved: women refugees, representatives of institutional and non-governmental organisations, volunteers of the Centre, researchers and design students. The artefacts included in the toolkit are finalized to create paths of orientation in the Centre, to disseminate information, to enable the processes of social inclusion and the interaction between refugees and staff.

INTRODUCTION

One of the most important challenges for the European Union is the capacity to help and support one of the most vulnerable sectors of the population that comes from other parts of the world.

Caring for and hosting asylum seekers and refugees, in a context marked by a sharp contrast between a lack of resources and the need to maintain an adequate level of welfare, requires fair policies and rightful structures and services to be put in place. The geographical location of Italy has inevitably led to it becoming over the years a landing place for millions of people who cross the Mediterranean in search of a new life in Europe. European directives regulate the accommodation of the asylum seekers and local laws provide an answer to the urgent requests for solutions for temporary accommodation in collective centres.

The ephemeral nature of settlement in the centres, the precarious conditions of staying, as well as the variety of tenants' identities (multi-ethnical and gender turns), shape a new, important social research field that calls for and involves the design skills required to imagine new strategies and forms for collective living spaces.

Starting from these premises, a multidisciplinary group (designers, social workers and environmental psychologists) worked to redefine the characteristics and qualities of host-structures for asylum seekers and refugees in the city of Milan through a qualitative and applied research project founded by Politecnico di Milano.[1] In particular, a small research group from the Communication Design area was involved in the design of tools and communicative artefacts to support the refugee women of the collective Sammartini

centre in the city of Milan. The centrality of the user was the load-bearing value of the entire project: the specific daily needs and the linguistic limitations of the addressees were held in consideration during every phase of the project.

This approach required the communication designers to analyse and predict how the users could interact with the final artefacts—first of all by comprehending the human needs of people from very different cultural and geographical backgrounds. This is an ethical issue that recognises and respects the differences of the users as subjects that are different from the designers.

From this perspective the communication designer is a sort of "translator" in that, via configuration and transferral procedures, he/she performs a continuous mediation activity between the elements of context and the diversity (geographic, cultural and physical) of the players involved. The designer-translator not only performs a task which is linked to the aesthetics of products or the way they are staged, but also makes the contents available for use in terms of legibility and hierarchy, contributing to determining their articulation through graphic editing operations, renewing the possibilities of communicative access to contents (tangible or intangible), and creating tools for sharing knowledge and facilitating its dissemination.

THE CONTRIBUTION OF COMMUNICATION DESIGN TO THE RESEARCH PROJECT

One of the main purposes of Communication Design is the realisation of 'communicational situations',

with particular attention given to the impact that these can have on the knowledge, attitudes and behaviour of people. The discipline is not only based on visual composition and aesthetics, it is grounded on a research dimension with an educational value that requires a structured design process and the understanding of a complex of human factors related to language, experience, age, knowledge, education, memory, cognitive style, preferences, expectations, desires, and other perceptual, intellectual, social, cultural and emotional dimensions (Frascara, 2004).

A structured design process with an educational value, as well as taking into account the human factor, is a prerequisite and high priority in our research project for the Sammartini Polyfunctional Centre of Milan. In addition, as researchers deeply involved in gender issues, we put on a 'gender lens' as a specific perspective on recognising the particular needs of the refugee women with their young children.

The design process required the planning of the communication strategy, the conceptualisation and visualisation, and the production and printing phases. Nevertheless, one of the relevant aspects for the creation of the communication system is represented by a series of design activities, specifically two experimental workshops that were conceived and constructed at Politecnico di Milano, within the research activities of the Design Department, with the involvement of a group of students from the degree course in Communication Design of the School of Design.

Thus, the research project additionally assumed educational objectives—the participation of the group of students being useful in producing new and fresh ideas and concepts. Also, for the students

involved, it provided an occasion of enrichment in terms both of the project experience (competences) and—most importantly—of their sense of criticism and inquisitiveness from the perspectives of social responsibility and people-centred design. In other words, we started our work on the basis of a 'research model for the project'; this was oriented firstly by a framework of teaching/learning activities, which were then oriented towards research, critical analysis and the final goal of constructing communicative artefacts. This was strictly connected to the context in which women refugees live and interact.

The reflection, from a critical point of view, on the goals and the output of these experimental activities, which were built by the researchers with the support of the group of students, highlights the methodological aspects of the research contribution to the area of Communication Design and draws attention to the 'planning process' put into action for the realisation of a system of communicative artefacts as an essential tool for the (internal and external) operators and guests of the Sammartini centre.

Step by step, the entire design process was put in place as follows: the identification of the requirements referred to in the specific context of women's shelters, through to the articulation of new design proposals in the field of analogue communication.

DEFINING THE PROBLEM

A design intervention should be based on the recognition and definition of the specific needs and desired change of a considered reality, as well as of all the actors involved in such reality, so that each actor

could be involved in, and contribute to, the process of change activated by design.

To do this, it was fundamental to visit the Sammartini Polifunctional Centre in Milan and to interact with the operators that are responsible for the centre, which is funded by the Municipality of Milan and managed by a non-profit social association, called 'Farsi Prossimo'.[2] The purpose of such association is the welcoming of refugee women and their children, who are beneficiaries of international protection, and the provision of support for their integration into society. In particular, the Sammartini Centre offers reception and responds to the basic needs of its guests. Furthermore, on the basis of an agreement with the local administration, the Centre provides the refugees with Italian courses and training, practical support for obtaining documents (residence permit, health card, identity card), and support for all the concrete choices—also linked to the core mother-child relationship, if any—that allow integration into our country in the most positive way.

Key information for the project is the duration of the period of staying in the women's shelter: it can be long (eight months, renewable for up to 300 days). Time is the factor that has determined, in particular, the need to design long-lasting communicative artefacts independent from the temporary duration of the stay.

The structure of the Sammartini Centre consists of indoor and outdoor public spaces (offices, meeting spaces, infirmary, kitchen, dining hall, laundry, recreation room for children, relaxation area, nursery, children's outdoor play area) and indoor semi-private spaces (bathrooms, shower rooms, bedrooms for two or more people).

2 – See http://www.farsiprossimo.it

THE BENEFICIARIES OF THE PROJECT

The target of the project is represented by three main subjects: refugee women with or without children, the 'Farsi Prossimo' association operators and the Department for Social Policies and Culture of Health of the Municipality of Milan.

Women asylum seekers (or those with a permit for international protection with minor children) come from many geographical areas of the world. As stated by the Annual Report of the Protection System for Asylum Seekers and Refugees 2012-2013 (Atlante Sprar, 2013), the most represented nationalities among the beneficiaries were: Côte d'Ivoire, Ghana, Nigeria, Somalia, Eritrea, Ethiopia, Turkey, Iraq, Afghanistan, Pakistan. The women are aged mainly between 18 and 25 years, and the children between 0 and 10 years. Although it was not possible to detect exactly the level of education of the beneficiaries, the data included in the Atlante Sprar report highlighted that the most representative levels of education were primarily high school, middle school and elementary licence.

The IASC[3] Gender Handbook for Humanitarian Action of 2006 distinguishes humanitarian crises from practical survival needs and longer-term strategic needs. Practical needs of women refugees may include those associated with immediate conditions (food, shelter, water, safety, health, education), and in particular with their roles as 'caretakers'. Strategic needs are connected to the control over their lives and their relative position in relation to each other. In these terms, women refugees can require access to particular services, thus giving them greater control over their lives (professionally, in their social roles, etc.).

3 – Acronym for Inter-Agency Standing Committee.

Other important actors in the context of the Sammartini women's shelter are represented by the Farsi Prossimo operators, including: one coordinator, two social assistants, five educators, six keepers (including two part-time) and one nurse. They represent the reference group that supports, takes care of, educates and guides the women refugees with their children.

It is difficult to clearly express in words the whole spectrum of the human factors that play a role in the relationship between the operators and refugees. However, the main elements that emerged in the discussion with some operators were:

The cultural, religious and linguistic barriers between refugees but also between refugees and operators;
– the organisational dimension connected to the short period of permanence in the centre;
– the emotional personal dimension related to the psychological or physical health state of the refugees;
– the protection and the education of the children;
– the relationship between the guests and their male relatives (husbands or other male family members) that in many cases are accommodated in male refugee shelters;
– the integration between refugee women in the centre and their integration into the social context of Milan, and
– the planning of their future after their period of stay in the centre (many of them try to migrate to North Europe).

All these 'immaterial factors' are played in the 'material realm', in this direction it was necessary to find a balance between the expectations of the guests and the real possibility of supporting them from an economical, political and relational point of view.

Also important was the role played by the network of public and private services supporting refugee women from the legal, medical, social, professional and educational point of view. These being: the Immigration Service Polyfunctional Center of the Municipality of Milan (Gorlini, Giorgi, Testi Centres); the Day Centres for Refugees of the 'Il Filo dell'Aquilone' association; the Services of Second Reception managed by the 'Farsi Prossimo' association (Casa Monluè, Casa delle Famiglie, Sprar Apartments); the schools for learning Italian; educational institutions; hospitals; central police station; prefecture; ASL; General Register Office; psychological or psychiatric structures; third sector associations and parishes of the territory.

DEFINITION OF OBJECTIVES AND BRIEF

The subsequent step towards meeting these premises is related to the choice of methods for the research development, a complex task since 'methods create frames, paradigms within which design decisions take place' (Frascara, 1997, p. 35).

To face the problem of the reception of refugee women from the point of view of Communication Design, we had to refer to multiple methods and media—the goal being to have the support of a combination of cognitive tools to assimilate and analyse the context, to reflect on significant elements,

to diverge from the common view of the problem, and to visually test and experiment new formats, visual languages and codes.

Inductive and deductive methods were supported by a set of explorative activities: in other words, the data gathering, the taxonomic procedures and the collection of references and case studies (qualitative research) were sustained and enriched by reflective methods (brainstorming sessions, reflective observations, visual mapping etc.) and, above all, by creative methods (abductive methods) and didactic experimentations.

The goal here was to identify what the project should do by, to quote Jorge Frascara:

> …*definition of the communication channels (how to get the product physically to the public); definition of the arguments (how to get the product cognitively and affectively to the public); and definition of the form (how to get the product perceptually and aesthetically to the public. (Frascara, 2004, p. 108)*

The choice of the media and the visual language were the key decisions of the project. In more detail, the objective of the project was to design a system of integrated devices related to the reception space and to the process of the stay (reception/stay/exit and entry into the social context) of refugee women.

Problematic issues and design constraints for the 'student-visualizers' were: how to ensure the access to information, how to overcome the language barriers, how to give visual information clearly and efficiently (Massironi, 1982), how to guarantee a low budget and the possibility of implementing information
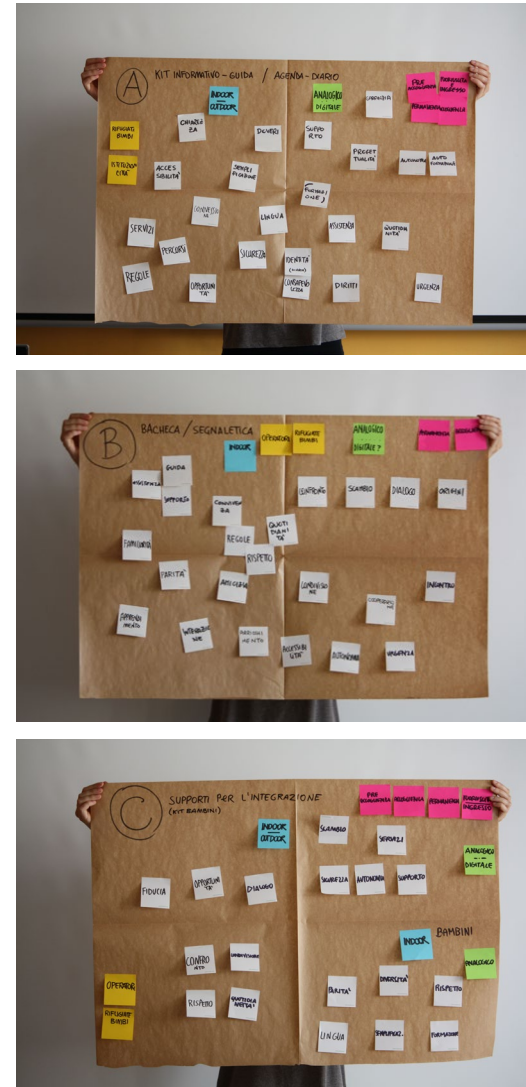

Figure 1. Output of the brainstorming activities with students.

autonomously, how to create flexible devices that could be workable in a design system. To reach these goals it was indispensable to reinforce communication with the addressees through a system of configurations easily understandable and adoptable: the language of pictograms, typography and visual maps (Frutiger, 1998; Abdullah & Hubner, 2006; Götte, Kneidl & Krampen, 2007).

TRANSFORMATION

Figure 2. Storyboard about the welcome process

The design proposal included three different systems of artefacts addressed to refugee women and to the staff of the Centre.

1. A 'Welcome Toolkit' for refugee women. The toolkit is a physical cardboard box with a personal label (a metaphor of the personal dimension of each guest, which can be preserved also after the period of permanence at the centre). Components of the toolkit are: a personal agenda (this is a diary journal where the refugee women can take notes, write personal

considerations or information), some informative cards (a visual guidebook of the main services in Milan: for health aid, fiscal or financial or legal aid etc.), a key holder for a personal key to the closet. The written text (in Italian, English and French) is supported by pictograms and visual maps of where to trace the personal desired itinerary within the city. The logic behind the toolkit was to realise a product (which was easily usable by refugee women) with low-cost materials. Each format can be printed at the centre and can be personally managed by the guests. The box can also be used to keep personal documents (for example, passport) or objects (photos, souvenirs, notes etc.)

2. A system of analogue communicative supports for the Sammartini Centre. The system includes: a set of cards, based on different colour codes and translated into the four main languages used in the centre, which summarise the regulations of the women's shelter (the cards are meant to be located at the entrance to each room); a series of graphical formats (printable autonomously by the internal operators) that are designed to remind the women of, for example, medical appointments, information about husbands' visits, cleaning duties or particular events (birthday parties, a new birth, the arrival or departure of other guests etc.).
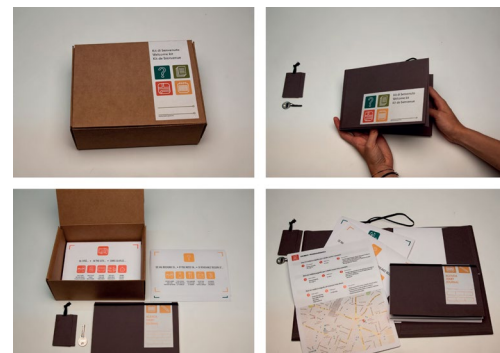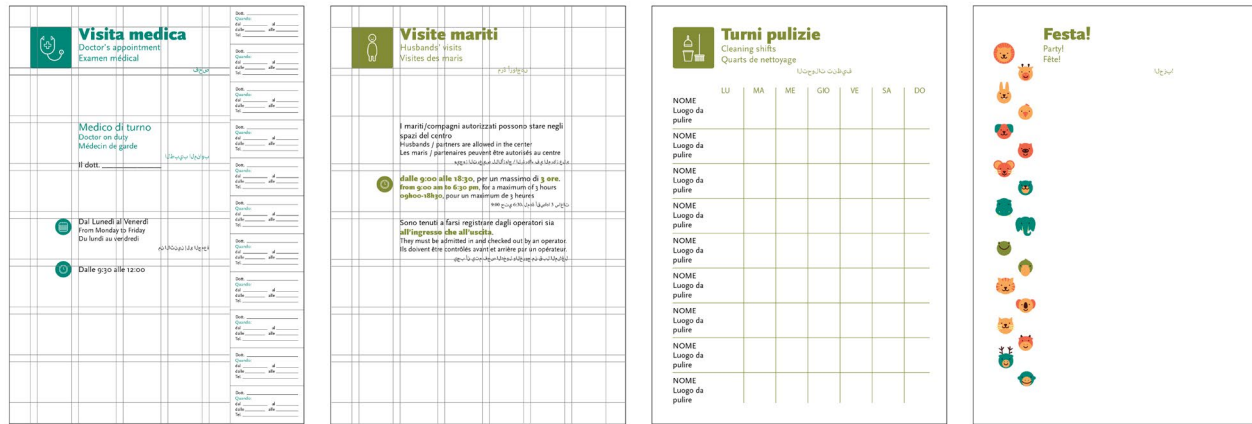

Figure 3. The "Welcome Toolkit".

Figure 4 (top). New graphical formats for the Sammartini Centre.

Figure 5 (bottom). Selection of the developed signage system.

3. Indoor and outdoor signage for the spatial orientation and denomination of the spaces of the women's shelter. The goal was to design a way-finding system that could transcend language barriers, be clear in its structure, easily readable, self-explanatory and in accordance with the peculiarities of the surrounding context. The work of Communication Designers was to produce something that was both informative and instructive with an educative purpose. From this point of view the main objective was to imbue the reception of individuals with certain social values, rules and practices. The visual support system required deep reflection on what information should be provided (the message of the signage), where the information should be located and in which form it should be presented. The visual design phase, as expressed by the Signage Design Manual (Smitshuijizen, 2007), consisted of the following: making the typeface chart, including the standard sizes to be used; making the chart of all other graphic elements, such as symbols, pictograms, or illustrations; making the basic material chart; making the colour chart;

making the standardised panel-sized chart, including standard layouts; making the elevation placement chart; making a design for each individual sign type in elevation; review and approval by the operators of the Sammartini Centre.

The signage system that was realised (the content and the locations were defined with the operators), is characterised by a set of 24 white pictograms, on a colour-coded background related to different communicative purposes (indicative or imperative).

The system consists of an orange background for spatial information used by the guests, green background for the spatial indication of services (for example for infirmary), red for prohibitions. In some cases pictograms are accompanied by short text written in Italian (the choice of Italian is an invitation to the refugee women to learn the local language). An additional peculiarity of the project is that a set of pictograms was also designed for the children, just to make the space more playful, memorable and hospitable for them as well (in

particular, coloured illustrations of animals were associated to the different rooms).

CONVERGENCE

As the last phase of the project, convergence is related to: the realisation (printing, production, application) of the communicative artefacts; their dissemination through the media; the critical reflection on the overall results, and the possibilities for further improvements of the project.

All the devices were designed with particular attention to the needs of the project audience (the refugee women, with their children), but also to the specific environment where they live and interact with operators. Human factors were the fulcrum and core of the project beyond aesthetics; our goals were devised in relation to the realism of everyday life (with its practical and strategic needs) and to the emotional resonance of the 'reception', strictly linked to the women's culture, desires and memories.

Through our project we wanted to make a little contribution to the quality of life of all the actors involved in the women's shelter: guests, internal staff, external operators. The aim was to create a support for refugee women that overcame the limitations of written text and a specific language, and improved the usability of the space. In addition, economical and technical issues were relevant: all the devices were designed with the purpose of using basic, interchangeable and easily updatable materials, with the possibility to print the formats easily.

The project is currently at its application phase— although at present, only the indoor and outdoor

signage has been used, since this was considered by the operators of the Farsi Prossimo association as

> *the most evident and crucial problem for the Sammartini Centre: the organization of the space urgently needs the support of a signage for the orientation of the guests, but also for their education (for learning the main rules of the centre: basically, for example, how to correctly differentiate the waste).*

All the signs were printed on forex panels and were positioned inside the space. We are planning to also apply the signage system to the Monlué Centre, which hosts refugee men.

An important future step will be the testing of the signage performance through qualitative questionnaires and interviews. Also, as a possible further development of the project, we may look at designing a system of digital devices to integrate the overall project and offer wider access to information and services.

CONCLUSIONS

In the framework of the overall design research project for the reception of refugees, the contribution of the Communication Design area was focused in particular on the generation of a low-cost system of artefacts for a centre for refugee women. The aim was to improve their access to basic information for everyday life and to facilitate their orientation inside the structure. The work led to the production of a series of multilingual communication artefacts, designed to accompany the guests throughout their period

of stay at the centre (from first reception until exit).

The positive aspect of this design research project lies not only in relation to the output of a single discipline (Communication Design); its value is linked to the whole research process and to the experience matured within the cooperation among all the actors involved (Poggenpohl, 2004). In other words, the project turned into a participative arena, shared at institutional level (cooperation between university and local administration), and with the involvement of all the stakeholders of the social innovation process: representatives of institutional and non-governmental organisations, volunteers, university researchers and professors, design students. Also, from a disciplinary point of view, the project came about from a collaborative process among different knowledge areas: with other design disciplines (Interior Design and Product Design) and with disciplines outside the design domain (Psychology and Sociology). This gave us the possibility to share different competences and different sensibilities strictly connected to design practice.

We worked together to define goals from a common perspective, to facilitate exchange of values and contributions, to define roles and responsibilities, to provide constructive criticism, to build positive reinforcement and, finally, to help all the actors to stay connected within the process. This cooperation can be seen as a virtuous example of a social innovation process, which means—in its definition—a process that is less concerned with profit and more with issues such as quality of life, solidarity and well-being (Røste, 2005; Moss Kanter, 2005; Mulgan, 2006; Mulgan, Ali, Halkett & Sanders,2007; Phills Jr., Deiglmeier & Mille, 2008).

Indeed, in order to face, and give new responses to, pressing social demands, governments are promoting the integration of innovation processes into their social policies, which primarily refer to guidelines, principles, legislation and activities that affect the living conditions conducive to citizen welfare. Basically, social innovation refers to novel solutions geared to respond to social needs, support human welfare and safeguard vulnerable groups in society; moreover, at a systemic level, it relates also to processes of awareness-raising towards fundamental changes in people's attitudes and values.

In addition to a few other actors—such as broker agencies—who are already playing a role in easing flows of knowledge, resources and best practice, and supporting organisational growth (Maddock, 2008; Mulgan, 2006), Communication Design may also effectively contribute to connecting the 'pull' (demand for innovation generated by real social needs) and the 'push' (a supply of workable, and communicable, ideas) of the social innovation system (Frascara, 1997). In particular, it may perform the function of directing and facilitating the information exchange processes, and may 'shape' specific communication contents to meet goals and synthesise the points of view (communication as a form of 'mediation') of the different actors involved, both governmental and non-governmental organisations (NGOs), citizens, etc. Through the designed communication artefacts and systems, Communication Design may act as a trigger and vehicle for the production, development, and dissemination of new ideas and views on society, as well as new services or organisational models initiated by governments. In addition, it exerts a transformative function towards citizens, guiding their choices and behaviours, changing their perception of society, raising awareness on social emergencies (Pira, 2005).

REFERENCES

Abdullah, R., & Hubner, R. (2006). *Pictograms, Icons & Signs*. London:
        Thames & Hudson.

Atlante Sprar (2013). *Rapporto Annuale del sistema di protezione per richiedenti asilo
        e rifugiati: [Annual Report of the Protection System for Asylum Seekers and
        Refugees]: 2012/2013*. Retrieved March 2014 from http://www.sprar.it/images/
        Documenti/Rapporti_Annuali/atlante_sprar_completo_2012_2013.pdf

Frascara, J. (1997). *User-Centered Graphic Design: Mass Communication and
        Social Change.* London: Taylor & Francis.

Frascara, J. (2004). *Communication Design: Principles, Methods and Practice.*
        New York: Allworth Press.

Frascara, J. (Ed.). (2015). *Information design as principled action: Making information
        accessible, relevant, understandable and usable.* Champaign, IL: Common
        Ground Publishing.

Frutiger, A. (1998). *Signs and Symbols: Their Design and Meaning.* Lakewood,
        New Jersey, USA.: Watson-Guptill Publications.

Götte, M., Kneidl, M., & Krampen, M. (2007). *The World of Signs: Communication by
        Pictographs.* Ludwigsburg: AVA Edition.

IASC: Inter-Agency Standing Committee (2006). *Women, Girls, Boys & Men, Different
        Needs – Equal Opportunities, a Gender Handbook for Humanitarian Action.*
        Retrieved March 2014 from https://interagencystandingcommittee.org/gender-
        and-humanitarian-action-0/news/iasc-gender-handbook

Maddock, S. (2008). *Creating the conditions for Innovation.* London: National School
        of Government.

Moss Kanter, R. (2005). *Even Bigger Change: a framework for getting started at changing the world*. Cambridge, MA: Harvard Business School Press.

Mulgan, G. (2006). *Social Innovation: what it is, why it matters, how it can be accelerated*. London: Basingstoke Press.

Mulgan, G., Ali, R., Halkett R., & Sanders, B. (2007). *In and out of sync: The challenge of growing social innovations*. London: NESTA.

Phills Jr., J. A., Deiglmeier, K., & Miller, D. T. (2008). Rediscovering Social Innovation. *Stanford Social Innovation Review,* Fall, 34-43,

Pira, F. (2005). *Come comunicare il sociale [How to Communicate Social Issues]*. Milano: FrancoAngeli.

Poggenpohl, S. H. (2004). Practicing collaboration in design. *Visible Language, Special issue,* 38(2), 138-157.

Røste, R. (2005). *Publin Report No. D16: Studies of innovation in the public sector: A literature review*. Working Paper. Retrieved March 2014 from http://www.aviana.com/step/publin/reports/d16litteraturesurvey.pdf

Smitshuijizen, E. (2007). *Signage Design Manual*. Baden: Lars Müller Publishers.

ABOUT THE AUTHORS

Elena Caratti /
Politecnico di Milano /
Design Department /
elena.caratti@polimi.it

Elena Caratti, architect, MA in E-Design and PhD in Design, is currently Assistant Professor at the Design Department of Politecnico di Milano. Her research interests cover Design Theory and Design Education, most particularly Theories of Representation and Basic Design. She teaches Visual Cultures and Visual Elements of Design at the Design School of Politecnico di Milano, Degree Course in Communication Design.

Erik Ciravegna /
University of Chile /
Design Department /
Faculty of Architecture and Urbanism /
eciravegna@uchilefau.cl

Erik Ciravegna is a communication designer with a Master's degree in Industrial Design and a PhD in Industrial Design and Multimedia Communication (Politecnico di Milano). He is Assistant Professor at the Design Department of the Faculty of Architecture and Urbanism of the University of Chile and Visiting Professor at the Pontifical Catholic University of Chile and at Politecnico di Milano. His main research area is Communication Design. On the one hand, his work focuses on identity systems and packaging design, especially on the communication qualities of products and their information accessibility; on the other hand, he is interested in Social Communication and the ethical responsibility of designers. In addition, he works on the development of methods and tools (both digital and analogical) in support of research projects, as well as teaching and training activities.

Umberto Tolino /
Politecnico di Milano /
Design Department /
umberto.tolino@polimi.it

Umberto Tolino graduated in Industrial Design at Politecnico di Milano with a thesis for Philips Design. He has been involved in visual, product and interaction design since 1997. In 2002 and 2003 he was included in ADI Compasso d'Oro Design Index listings, and in 2007 was selected for the exhibition on The New Italian Design at the Milan Triennale. Since 2001, he has taught at the Design School and contributed to various master classes at Politecnico di Milano with topics based on digital and interaction design. Since 2010, he has been Assistant Professor at the Department of Design. For the last eight years, he has been visiting professor at Unisinos University of Porto Alegre, Brasil, with several workshops focused on territorial branding.