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Co-designed signals.
Designing an open wayfinding system

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Abstract

A wayfinding system is a structured system of signs that has the aim to inform and orientate users in specific areas. A site becomes accessible to users through such kind of systems. Wayfinding helps to communicate and make clear functions, paths and becomes a true interface between a place and the users. Signals can have a stronger role in terms of visual language in making evidence to a place's identity. Enhancing it at the same time. Using Christian Norberg-Schulz words, a user is able to orientate him self in a site when the experience of that place is for him comprehensible. Usually a wayfinding system is designed as a closed and forced system, superimposed to a place's surfaces or spaces. But there are places that need a specific design concept to be adaptable to users needs, that change over time. Or to be adaptable to the place's needs, that change phisically over time.

Through an experimental project has been possible to set up an open wayfinding system for a parkland particularly used by free-climbers. A climbing area is a site where people can exercice their passion in rock free climbing and spend time outdoor. The site called Falesi di Calusco d'Adda - in the neighbourhood of Milan – is known for have inspired the background view of Leonardo da Vinci masterpiece "Gioconda (Mona Lisa)". The site is visited and used from enthusiastic free climbers, who use to personalize and naming climbing ways all around the site.

This context inspired a design concept for an open system of signs and typography. The concept is based on a set of elements and rules to be downloaded through a web site to implement information and orientation around the site. The specific web site has the aim to make accesible all the useful instructions and downloadable documents. The system is based on a set of pictograms and a personalized stencil font (the Calusco Font), to be reproduced on wood or stone, depending on the users' needs. The all visual design has been inspired by primitive signs and adapted to the need to reproduce it on different kind of surfaces using ecologic paint-spray.

All the design has been conceived to be easy to use from everybody, with a low budget and by making just a restricted numbers of operations. In this way the outdoor site can be enhanced by the community of users, that is engaged and partecipate himself to the process. The designer is not anymore just the author of a closed visual system, but of an open user-oriented process and accept the possibility that the community uses the elements in a freely way. This responding to an actual trend of engaging communities in the design and in the application of a designed system.

The aim of this paper is to present this experimental project, describing his design process and discuss some of the above mentioned topics.

1. wayfinding as open system

According to Lynch [1] as well as to Arthur & Passini [2], the term "wayfinding" refers literally to the meaning of "find the way" in an unknown place. It is quite obvious to say that wayfinding is the result of rules and habits referred to spatial orientation and that those habits are a base for humankind behaviors. To design a wayfinding system means interpreting those habits in specific places and giving it a proper interface so to help people to "find their way". The discipline of wayfinding design refers to the particular area of visual communication design called information design. It implies the development of maps, signages and other elements of identification that can help users to orientate themselves in a place. Designing a wayfinding system means to translate visually and in a comprehensible manner information related to an environment. This is why it is also possible to use the expression "environmental design".

A wayfinding system can be applied to small spaces as well to a large territory. It is not a matter of scale. In it there is a presence of skills related to different disciplines including graphic design, architecture, interior, landscape, industrial design. In particular, designers of visual communication can coordinate specific aspects such as the typography (or the study of typefaces in order to ensure readability in all conditions), colors, graphic organization of information, the drawing of signs and symbols to synthesize functions and actions. As well as to provide a consistent visual interpretation of the identity of a site and its functioning to ensure the correct use by users and to organize an appropriate design process.

A wayfinding system has not a unique task of orientate users. It is also a bearer of information about the space itself in terms of identity and values that can help to determine the look beyond its immediate understanding and to decode its complexity. It is so possible to define a wayfinding system as a system of disposals or as a disposal itself. The term "disposal" is used to mean the evolution of the definition of "artifact" [3]. That seems to fit better to the processes of knowledge sharing, over the provision of information, including "the point of view of those who enjoy, envisioning its outcome, the effects of the reception" [4]. An artifact is the result of a design intentional operation, which gives substance and form to a concept, to information and so to a "personality", the core of an identity. In the same way, a disposal puts in practice interactive processes able to define a personality. Processes that are themselves design, beyond the mere flow of information or the materiality of artifacts, but that determine a way of designing communication. By using Baule's words [4] the information content (the information on a place) interacts with the support that conveys them (the signals) and with the context. And "[...] necessarily interacts [...] with the form of writing that expresses it, with the format that contains it: these elements come together in a single device, where the pure piece of information is no longer separable, but becomes one in the device to communicate".

Usually, a wayfinding system is designed as a closed and forced system, superimposed to a place's surfaces or spaces. Designers use to set rules and a series of artifacts to be placed around a site, following an often strict hierarchy. Armstrong [5] affirms that design has always been a discipline characterized by a certain degree of control, in terms of forms and shapes to use as well as of results to reach. However, there are places that need a precise design concept to be adaptable to the user's needs, that change over time. Or to be adaptable to the place's needs, that change physically over time. This is the reason the designer's approach has to be different, as well as to reconsider the whole design process. It is not possible to think anymore on a project as a static work, closed and finished over time. It is necessary to think about it considering its potential lives and developments in the coming future. Reconsidering the design process means that designers need to start to think of –using the words of Umberto Eco [6]– "fields of possibilities" instead of finished solutions.

The designer has to act as an expert and at the same time as a participant. He should be a "reflective practitioner" [7] who establishes a relationship with the various actors that enable him to be a mediator and activator of processes. The designer today is a "meta-designer": its role shifts from ready-made solutions to the

users' problems towards the ability to allow users to take part directly in the process of problem-solving. He "needs users generated content" [5] to complete his work, which has to be open to changes and revisions made by the ones who are usually the final users. Designers can not pretend anymore to control the whole process totally because stress now shifts from "work to progress" [8].

2. A design experimentation

In consideration of all of the above, an experimental project has been conceived to set up an "open wayfinding system" to be applied to a particular site used by a broad community of enthusiastic sport rock climbers.

Observing the contemporary practice, it is also possible to identify some case histories to be assumed as a reference as well as to be part of a small field of design experimentation. The most interesting and based on a similar design concept is the "guerrilla wayfinding" open source project called "Walk [your city]" [9]. It is a user-oriented process of urban signage production specifically dedicated to pedestrians.

The core of the project is a website where users can create their signals, order them to receive the printed matter at home and then install where they have observed a need around a city. It is a platform that encourages citizens to improve their communities by promoting and tracking walkability, collaborating with government to deliver real, physical change and accomplishing the mission of building safe and vital places to live.

The process needs the users, e.g. citizens, to be activated, and the role of the design is in the definition of the process itself. Users complete the cycle by installing the single signs, using the predefined set of formal rules. Citizens who use this platform become part of a participatory community and are involved in a process usually demanded to professionals.

Such kind of a web platform works as a participatory hub which gives an impulse to the motivation of different subjects –citizens, organizations, municipalities, designers– to freely associate with others in a community and finally gives the opportunity to lead initiatives outside a traditional market logic [10].

2.1. The background

Sport rock climbing is an activity in which participants climb up, down or across natural rock formations or artificial rock walls without the aid of artificial means (except for special shoes). It is necessary to equip the wall with nails to which the climber ensures himself to make the ascent safe. To equip climbing walls requires accurate knowledge, time and a reasonable financial commitment; Italian cliffs are equipped by private enthusiastic individuals or in some cases by associations, in any case all volunteers. Rock climbing areas (the cliffs, "Falesia" in Italian) are mainly self-managed. Cliff users manage independently nailing, maintenance, cleaning of the area and the access points and sometimes arrange extemporary forms of signs (fig.1). This lack of support, planning and, at least, of design, makes evidence to the participation of the users' community, strongly motivated in practicing their activity. Usually in such kind of areas provisory signals are used to identify paths, landmarks and rocks to climb.

Fig.1 – Examples of extemporary signs in the site of Calusco d'Adda: an identification sign for a climbing route and a directory showing all climbing routes on a single wall.

All signals are made by users, as a result of their experience in a site and to share finally information on the site with other users.

A design response to the problems and needs above mentioned has been experimented in the Calusco d'Adda cliff area, that lays over the Adda river, not far away from Milan and Bergamo. That of Calusco is a very famous cliff in northern Italy and in use for a long time. It is a true reference point for many climbers due to the ease to reach it, to the huge numbers of the walls to climb, to the openness of the community of attendees. In addition, the site landscape is known for having inspired the background view of Leonardo da Vinci masterpiece "Gioconda (Mona Lisa)".

2.2. The concept

The experimental project has been conceived for the free climbers community and has been developed to enhance both the qualities and the values of the place (the site) and the community of users itself.

The project is based on a six key points concept. 1) DIY (do it yourself): the design it is not imposed as a closed system, but as a set of tools to be managed by the community. 2) Participation is encouraged: everybody interested in offering his own contribution can collaborate to the realization. 3).

Easy to use: all tools do not need any particular expertise except the ones the community already owns. 4) Cheapness: tools are all conceived to have low prices and to be adopted by using cheap materials. 5) Environmentally-friendly: respecting the place's identity tools and materials are mainly eco-friendly and with a low environmental impact. 6) No-logo, all the visual system is conceived by his visual language, without a traditional hierarchy and the identity is determined by the rhythms and the times of his application by the community.

2.3. The process

The selected site and his specific characteristics have been analyzed by on-desk and on-site research. The potential of the community has been deepened by engaging a small group of users and by on-desk research on qualified blogs and websites as well as on social networks. This to understand and verify the effectiveness of the concept and the participation of the community. To develop and enforce the visual and the tools system other cases of signage in other cliff sites have been analyzed, as well as the signage system developed by C.A.I. (the Italian Alpine Club). This is the only one to have been formulated in the course of time to be used as an orientation and identification system on mountains, hiking trails and paths around Italy.

A series of site inspections and surveys has been necessary to test the tools system and his application. To make easy to use the system, it has been implemented by a series of instruction manuals developed caring of methods and approaches most apt to the specific context. Finally, the traditional climbers channels of communication and information have been enforced designing a website prototype to be used as a community platform.

2.4. The final result

The visual identity is based on a set of pictograms and colors. A personalized stencil font (the Calusco Font) has been designed, to be reproduced on wood or stone, depending on the users' needs. All the visual design has been inspired by primitive signs and adapted to the need to reproduce it on different kind of surfaces using

Fig.2 – The stencil Calusco Font and some of the pictograms designed to define a consistent visual identity for the site.

ecologic paint-spray. Consistently pictograms and fonts are designed without right-angles (difficult to achieve by using the stencil technique). All the pictograms' figures are not closed, but worked out to be recognizable, consistent and easy to reproduce.

All colors have been selected to not disturb the context and to be visible: black, white and orange (Pantone 180) are the only colors suggested and of easy availability. Colors can be reproduced by using a marker pen for black (as it is even now by the climbers community) and eco-friendly water based paint-spray for orange and white. The wayfinding system is based on four types of signs (fig.3) conceived to make easier the site's exploration, to identify and inform on the points of climbing and hiking interest. The four types are the followings. Identification signals:

Fig.3 – Three of a series of four types of signs applied during an on-site test session: function identification, directional sign and identification of a single climbing route.

to be used to identify specific functions, like the picnic areas. Directional signals, to orientate users. Directories to organize information referred to the climbing walls. Identification and naming of single climbing routes. All signals can be applied by using the stencil technique except the directories to be printed on a stable support to affix to the climbing rocks.

All instructions downloadable from the web platform (fig. 4) are defined by a simple and narrative visual language to easy explain how to compose and apply the four signage types. On them there is a description of materials and tools needed, techniques to use, and there are suggestions of dimensions and positioning. On the web platform it is possible to download for free the Calusco font (Open Type files, to be used on all operating systems), all pictograms and stencil masks (as pdf files) to customize and print. A social and a sharing area is also provided to be used by the community to implement information on the site and toward the development of the signage system with comments and photos.
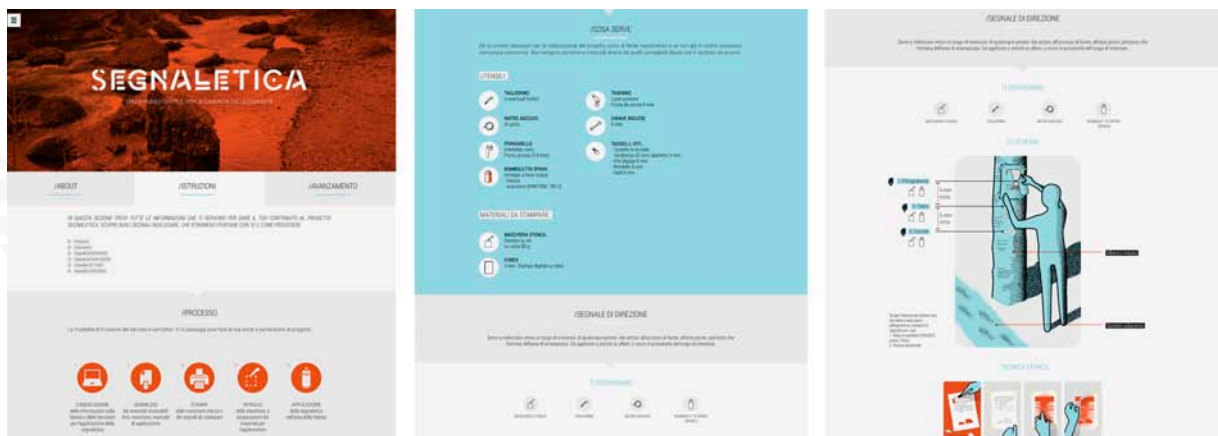

Fig.4 – Screenshots of the website area dedicated to the wayfinding system instructions. In the page, it is possible to download instructions to be printed and the Calusco Font to use on various operating systems.

3. Conclusion

Using Christian Norberg-Schulz words, a user can orientate himself in a site when the experience of that place is for him comprehensible [11]. The aim of the experimental project above discussed has been to develop an appropriate design tool consistent to a particular community needs (the rock climbers) in terms of spatial and functional identification, orientation and accessibility.

Starting from the users' current practice the all tool aims to enhance the site's identity and fruition to make it more comprehensible, by including the community itself in the process of enhancement. The role of the designer is to "enable" this process through his own competencies and knowledge, by supporting it by an appropriately designed tool. However, it is not only a matter of being a "server" or problem-solver, designers are becoming more and more providers of instruments for an autonomous construction of solutions instead of providers of single solutions [12]. Accepting the idea that users can modify the design application over time.

The web platform is not central in engaging the community, which has been involved in the process from the beginning, but the technological support facilitates the sharing of information referred to the tool. Responding to a precise need as already explained.

The community participation is considered not as an add-on or option, but as a necessity. According to Davis [13], participation has been assumed as part of a process to increase the likelihood to add value to the design practice, providing inspiration, insight, and the opportunity to "design in a more empathetic manner".

The obtained design results and feedbacks from tests allow to plan future developments for the experimentation by contacting rock climbing associations to organize direct meetings and involving them in the project dissemination. Next steps should be: publish an online accessible website; share results with the rock climbing communities; collect useful feedbacks and precise the potential application of the tool to other cliff sites around Italy.

Fig.5 – On-site test session photos: identification sign for a single climb route and directional sign along a trail realized by using water based paint-spray and a black pen marker.

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In this way design research creates new balances between anthropical transformations and the surrounding environment, contemplating all its facets.

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