REBUILDING THE HOUSING. CITY LIFE AFTER A DISASTER

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The reconstruction after a disaster is not just a matter of architecture, but implies the rebuilding of housing, which means the cultural relations between inhabitants and their environment. This paper reflects, trough a real case study, on the theme of the house, focusing on the relationship between public space and private space, often evaded by planning. Urban design and urban planning are not just a proposal for a new urban order, but for a social harmony. The urban planning of a new city implies a break with the traditional model of the house, not only in terms of housing types, but mainly because the use of public and semi-public spaces and the culture of housing. The inhabitants are often excluded from the official process of reconstruction. Nevertheless, the city is redesigning itself, from day to day, adapting ancient uses to new spatial forms.

Keywords: territory, reconstruction, social morphology, recognition, complexity.

INTRODUCTION



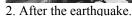
1. The map of the earthquake.

On the night of January 15, 1968, the earth shacked for a few minutes. When the powder is dissolved, 14 villages in the Belice¹ Valley (Western Sicily, Italy) have been erased from the face of the earth.

The 40 years following this event represent four decades of urban transformations and social adaptations. They have involved the most important institutions of planning, many national and international famous architects, and four generations of people.

¹ The doctoral thesis of the author is entitled "Permanence and Transformation in Architecture. Gibellina and Salemi: Lived Cities" (Barcelona, Universitat Politècnica de Catalunya, 2008). It analyzes the reconstruction of Gibellina and Salemi, after the Belice's earthquake. The first town today is a new foundation, the second one a case of urban renewal. To deep in this topic, see: Renna, A., De Bonis, A., Gangemi, G. (1979) *Costruzione e progetto. La valle del Belice*, Milano: Clup; Cagnardi, A. (1981) *Belice 1980. Luoghi, problemi e progetti dodici anni dopo il terremoto*, Venezia: Marsilio; Nicolin, P. (1983) Dopo il terremoto. After the Earthquake. Belice 1980, laboratorio di progettazione, *Quaderni di Lotus/Lotus Documents*, n.2, Milano: Electa.







3. Gibellina erased.

Reconstruction is an extremely complex process. We can consider it like a laboratory of architecture and human sciences. A catastrophe, in fact, whether of human origin - a war or a terrorist attack - or natural - an earthquake or a flood - unexpectedly breaks the normal, physical and social process of evolution of an area. In other words, a disaster exacerbates the dialectical relationship between permanence and transformation. It determines the evolution of the city trough time, and dissolves both the territory structure and the social organization of its inhabitants.

The reconstruction process highlights how we should combine permanence and transformation in architectural design and in the space usage, to allow the survival of city and inhabitants.

The proposed topic is sadly present in Italy, the last earthquake occurred only two months ago, in the region of Abruzzo, and ended with over 300 people dead, thousands injured and homeless and approximately 10 villages destroyed, including the medieval city of "L'Aquila".

The newspapers have reopened an old debate. It is better to build a "new town" or reconstruct every village "as it was and where it was"? Should we give priority to housing, infrastructure or monuments? This debate, in my opinion, diverts the attention from the core of the question. It is not important to determine what form of architecture best meets the needs of reconstruction, but which process, such as actors, resources and values must be chosen. How people can overcome the trauma of the earthquake and get back to live in harmony with their environment.

THE CULTURE OF HOUSING

We think that human beings are essential to the understanding of the places. So squares are not just an empty in the middle of a living space, but the place of cohabitation of different cultural contexts. Houses are not just a shelter for bad weather, but a complex way of live. Cities are not a mishmash of pieces indifferent to each other, but significant textures and people are essential to their survival.

Every place has a different culture of housing. It depends on climate and geomorphology, but also on people economic needs or political and religious beliefs.



the According to anthropologist Amalia Signorelli (1996:90) the house synthesizes the empirical knowledge of the group to which it belongs and the different relationship with the context in which it lives. For these reasons it is object complex. multifunctional and whose study essential polysemic, is to understanding the culture of housing.

The power of identification of the house is so strong that normally lead us to associate the interior to it and its immediate vicinity with the concept of a private, intimate space, and we indicate as public the space outside the influence of the house.

4. Slowness in Sicily.

We are also interested in the Herman Hertzberger's definition of public and private space (Hertzberger, 1991:13)². The author argues that public and private are mistakenly considered as two opposing concepts. We should conceive them "as a series of spatial qualities which, differing gradually, refer to accessibility, responsibility, the relation between private property and supervision of specific spatial units". Consequently, not only the spaces of the house, but in general an open area should be understood as more or less public in accordance with the degree of accessibility and the form of supervision (who uses it and who takes care of it). The perception of this level of accessibility depends on the culture, which is ultimately a social convention.

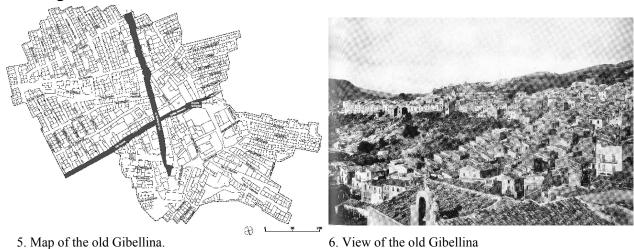
In this gradation of accessibility, the so called spaces "in-between" are particularly relevant. According to Hertzberger (1991:40), those spaces contain the great space for meeting and dialogue between different areas. The importance of this concept is especially evident in the threshold for excellence, the entrance of the house, which addresses the transition from road to the private domain. The threshold is in that sense a space with its own characteristics. Here the two worlds overlap, rather than a clearly demarcation of their differences.

Clarified these fundamental concepts, I will make a brief exposition of the culture of housing in Gibellina and Salemi before the earthquake. I will start from the description of the house parts and move forward to the level of the public road. The street is considered as an area for meeting other residents and, therefore, as an area of communal living-room. The spatial qualities of the house

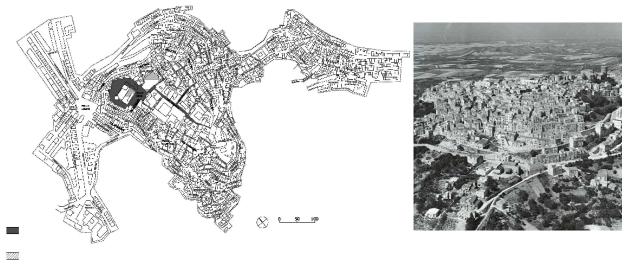
² Hertzberger, H. (1991) Lessons for Students in Architecture, Rotterdam: Uitgeverij 010 Publishers.

and its surroundings before the disaster will make us understand, by similarity or contrast, the reasons for the success or failure of reconstruction designs.

The model of the house in Sicily before 1968 is the rural home³. The rural domain is born and grows with the city, simultaneously with the organization of social classes settled on that territory. The different dominations alternated latifundium and communities of free peasants, but always organizing centralized settlements, surrounded by smaller suburban areas. In the Middle Ages Gibellina and Salemi represented the residence for the workers of the near latifundium on the hills. The first village has a polycentric urban form, from two main orthogonal axes.



Salemi has a spiral form starting from the top of the hill. Here, the castle and the Main Square and Church are located.



7. Map of the old Salemi..

8. View of the old Salemi.

³ On this topic see: Valussi, G. (1968) *La casa rurale nella Sicilia Occidentale*, Firenze: Leo S. Olschki Editore; Gambi, L. (1992) La casa contadina, in: *Storia d'Italia*, Vol. VI, Torino: Einaudi.



In both cases, the physical and symbolic centre of urban life is the main course, "the big road", which directs the political, economic and social development of the village. On it concentrates all businesses, including bars, clubs and barbershops, where the whole social life takes place. They are, off course, almost exclusively male spaces. The female spaces are organized complementary to the main road and in relation to their duties (the church, the market, the source, the laundry.

9. The main street in Gibellina.







10-11. Male activities.

12. Female spaces.

The urban structure of the village is a regular grid of roads between the areas of the city according to different social classes. In the central district public and religious buildings and palaces are located, while the edges are reserved for workers.



13. Unity of house and street.

But the core of the architecture of a rural village is the indissoluble unity of house and street ⁴, house and countryside⁵. In this way there is no mediation between the residence and the urban centre as a whole, as there is no intermediary between the individual and the whole community. The road is the natural continuation of the house. Indeed, the threshold is itself articulated as architectural space, made up of ladders, shelves and terraces.

⁴ "The only legitimacy of the street is as public space. Without it, there is no city", Kostof, S. (1992:194) *The City Assembled. The Elements of urban Form Trough History*, London: Thames and Hudson.

⁵ In general, in medieval settlements, the design of the road is made according to the human and animal step, to allow them the least arduous ascent possible. Moreover, the slope of the road is always in relation with pattern of water courses. The morphology of water implies therefore that of human settlements.

The threshold is not a place of rapid transit, but a living space, in which people meet and talk, work, play and keep food items. The threshold is the stage for many domestic and public rites⁶.

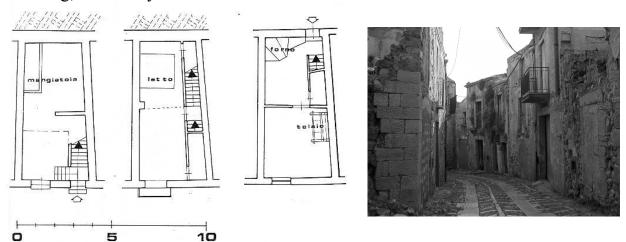






15. Public rites.

Regarding its internal organization, the home of the worker is the block building, formed by one or two rooms in one or two levels.



16. Typology with one cell.

17. Block buildings in Salemi.

The core of the rural house is the kitchen with fireplace and oven together. Separated by a partition is the alcove with the parent's bed, usually very high, in order to house the grain in it. Near the alcove, there is another key element of the house: the loom. Furthermore, the block type has a promiscuous use for men

⁶ "The quality of each [house and street] is dependent on that of the other: houses and street are complementary!" (...) "Paying equal attention to housing and street alike means treating the street not merely as the residual space between housing blocks, but rather than as a fundamentally complementary element, organized with just as much care so that a situation is created in which the street can serve more purposes besides motorized traffic. If the street as a collection of building blocks is basically the expression of the plurality of individual, mostly private, components, the sequence of streets and squares as a whole potentially constitutes the space where it should be possible for dialogue between inhabitants to take place." Hertzberger (1991:64).

and animals. Sometimes there is a space to shelter tools and fertilizers, or the entire ground floor is a shop according to the activity of its inhabitant.



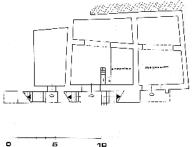




19. The loom.

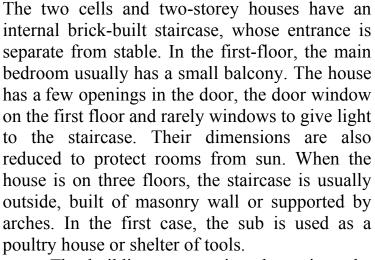


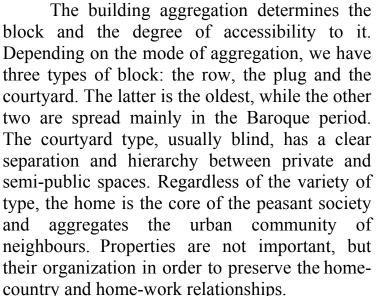
20. The stable.





21. Typology with two cells.







22. The courtyard.

THE RECONSTRUCTION OF HOUSING

After a disaster everybody feel lost, because really everything is lost. In particular, the destruction of the house as the subject par excellence of personal identification, involves the loss of centre of gravity of the individual. In this sense, the reconstruction of the house is to be considered extremely urgent and should come before of the monuments. The rebuilding of the house is closely linked to the reconstruction of living space. It is the way of life and the culture of housing of the affected population.



Unfortunately, the first difficulty for the people of Belice was the interminable wait to get a home. After the first few months in tents, people have been living for 13 long years in barracks. The inhabitants were excluded from the reconstruction process, in conditions of insecurity, unemployment and despair.

Some barracks were erected near of the 23. The barracks. old centres, others in different locations, with the negative consequence of separating the population. It generates, in addition, a paradoxical situation in which coexist three different realities and states of mind: the memory of the old village destroyed the dream of the new city under construction and the daily reality in barracks.



24. Barracks adaptations.

Out of all expectations, with time the settlements of barracks begin stabilizing and organize real towns full of services and public spaces. The cancellation of spatial hierarchies favours and social extraordinary increasing in social cohesion and strengthens the bond between people and their surrounding. More than 30 years after the experience of the barracks is remembered as positive.

When people moved to the new towns they felt shocked and disorientated. The aim of the plan was to modernize the urban centres improving transports and employment opportunities. Nevertheless, the new scale of the project completely overturned, in urban size and density, the old home-street relation. The first shock for the inhabitants were the transition from the hills to the plain and the vast scale involved. The new streets were conceived for vehicular traffic and for a future urban growth. This development never occurred, and actually there are huge urban voids everywhere.



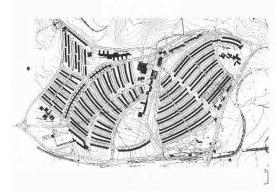




25-26. Urban voids in Gibellina.

27. New roads in Salemi.

The shape of the new towns follows the northern model of garden city, but also the Sicilian examples of reconstruction after an earthquake like in Val di Noto (XVIIth century). Public buildings are organized along a central axis and the residences in symmetrical wings or according to a radial pattern.

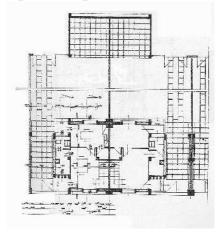


28. Map of new Gibellina.



29. Map of new Salemi.

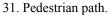
The renewal of the urban form is also extended to the scale of the house. The planners are convinced that it is necessary to break the traditional social hierarchies of the old space. The new typology is a row house with two or three levels and two faces: on the one side there is a pedestrian path, on the other a vehicular access. The consequence is a sharp division between public and private spaces. The internal distribution must absorb this information by placing



30. Ground floor.

the living room facing the pedestrian street. The house gains in terms of space and services (many houses before the earthquake had not running water) but it has completely lost the social dimension of the traditional threshold, because of the excessive size of the pedestrian path (20 meters instead of the 7 of the medieval street). The typology does not exploit the architectural elements of its Mediterranean culture as the balconies, the porch or patio. Those elements would have reduced the visual and physical distance between the two street fronts.







32. Vehicular access.

Open spaces between houses are configured for rapid transit but not allow the activities of production and social exchange of the traditional city. Another shock is added to the change of scale: the transition from a model of home as an artefact of sociability with its production areas to a new city house, understood as a market product, where just sleep and laze. The difficulty of recognise themselves in the new individual and collective spaces and integrate new patterns of life, leads people to ignore more and more of their surroundings where ultimately prevail anonymity, emptiness and decay.

Despite the new problems that the reconstruction added to the hardships of the earthquake, this case study shows an extraordinary lesson. Beyond the urban form provided by the plan, there is another morphology, the social one, which finally decides what is needed and what it is the meaning of every place.

At the territorial scale, people are buying land adjacent to the new towns to



33. New main street in Gibellina.

restore the traditional unity of house and work, city and landscape denied by the plan. The same Municipalities are recovering certain spatial characteristics of the old villages. Some roads, for example, are remodelled like the great model of the street, with shops on both sides spread on the ground floor. Unfortunately, the good intention was thwarted by the actual vehicular use of the street.

At the home scale, from the mid 80s, people start changing the original internal distribution adapting to their daily needs. Living rooms and especially the kitchen, the true core of the Mediterranean house, are redirected independently

⁷ French philosopher Paul Ricoeur has studied the philosophical issue of recognition as a necessary step for the proper process of memory, especially in cases of trauma, in: Ricoeur, P. (2004) *Parcours de la reconnaissance*. *Trois études*, Paris: Éditions Stock.

of footpaths. It determines the main front of the house and its area of relevance. External stairs as well as terraces on the roof to look at the landscape, tend to reproduce the relationship with the typical features of the old villages.







34. External stairs.

35. Eclecticism.

36. Looking at the landscape.

The roofs also serve as a place where to meet women, instead of the courtyards. The common place for social contacts, such as chatting on the balcony, was in the courtyards. The excessive width of the street made it difficult. The same footpath is filled with benches, gardening, sheds or parked cars.

As regards, however, the area of the lot and the use of the annexes, gardens are often transformed into vegetable gardens and garages. Sometimes the entire ground floor is adapted bend to the needs of the community. Many are converted into shelter for tractors and tools, others into shops and restaurants.







38. Shop in a car.



39. Bars and restaurants.

The most recent innovation in the culture of housing is something new in terms of use: a widespread form of Bed and breakfast. A northern pattern again that reads back the Mediterranean value of hospitality.

These examples show that if every area has its equipment, this encourages people to take responsibility for maintaining them, reinforcing the emotional bond with their daily environment. Only in this way thus users become inhabitants.

There are also other considerations to add. Architectural spaces are always the result of the long evolution of urban form in tandem with the changing of cultural needs. This process of work in progress construction, not just of a

territory, but also of the collective imaginary and memory of its inhabitants, ensure that they recognize in their own living space.

A new architecture is always settled in a complex existing context, build on relationships of continuity, opposition or innovation. The kind of relation is proposed by the architect. Nevertheless, architecture just makes sense if it is used. The usage of a space is a plural, sometimes controversial, but always interactive process⁸.

Plans and designs gain in terms of sustainability, effectiveness and legitimacy taking part in the real urban and cultural evolution. For that reason the design process should be sensitive to the so-called "territorial capital" (Dematteis, 2005:27)⁹. This is a concept both functional and relational, which includes:

- The characteristics of the natural environment and its resources:
- The historical and cultural heritage, material (monuments, landscapes, etc.) and intangible (language, etc.);
- The fixed infrastructure and facilities;
- The so-called relational goods (Storper, 1979b) embedded in local human capital (social capital, institutional capacity, etc.).

REFLECTIONS ON THE PROCESS

We have presented a case of reconstruction after an earthquake in which the proposed plans and designs did not meet the real needs of the inhabitants (in terms of usage and symbolic meaning). As a result people did not recognize the new architecture. They have gradually distanced themselves from the process until the refusal and the abandonment of many buildings in state of ruin.

Nevertheless we have observed, especially in the home domain, a spontaneous reaction of inhabitants. Over the years they have reinvented their living space according to their culture and priorities.

The point is: the reconstruction process is more important than a particular formal result. So, it is strongly necessary to make clear from the beginning what actors, what resources and what values are at play and how.

Rebuilding strategies after a disaster are various, but generally can be grouped into the following categories: total transfer in a new site, duplication next to the first nucleus and recovery, for settlements only partially damaged.

⁸ The so-called "scuola territorialista", which collects geographers and scholars of urban and territorial planning, based on the consideration that the local development derives from the relationship of territoriality that binds, in an interactive process of long duration, a society and a territory. In Italy see: Magnaghi, A. (2000) *Il progetto locale*, Torino: Bollati Boringheri; Dematteis G. (2001) Per una geografia della territorialità attiva e dei valori territoriali, in: Bonora, P. (Eds), *SloT Quaderno I*, Bologna: Baskerville; Dematteis, G., Governa, F. (2005). *Territorialità*, sviluppo locale, sostenibilità: il modello SLOT, Milano: Franco Angeli; Magnaghi, A. (2007) Scenari strategici. Visioni identitarie per il progetto del territorio, Firenze: Alinea.

⁹ This concept emerged for the first time in the 3rd Report on Economic and Social Cohesion of the European Committee and in the Territorial Outlook of OCSE in 2001.

Gibellina is an example of new foundation, Salemi a recovery in the same place. Nevertheless, we can not say which had better results. The complexity of the context makes unpredictable the reconstruction process. At the same time we have been surprised by the positive outcome of the period of barracks. The more proactive steps in the experience of Belice always coincided with the increasing participation of their inhabitants. When the organizational machinery of the reconstruction has become too big, everything started going wrong. The inhabitants felt foreign to their living environment both when the role of private and public initiative (municipality, architects, technicians, etc.) was overestimated and citizen participation was underestimated.

In general terms, it seems that technicians and administrators have a sort of fear of disorder, chaos and unexpected. Therefore, they usually opt for solutions impersonal, "objective" and "organized" rather than give confidence to the individual involvement.

City planning is extremely difficult and uncertain, because the city is not a monolithic entity, but a fluid reality. It is a work in progress combining social and physical elements together. The city can therefore be regarded as a complex system. It consists of many parts that interact with each other and with the environment through a variety of channels. Some parts of the system tend to organize itself locally and spontaneously in unpredictable ways.

For that reason, since the first moments after a disaster, the point is to define and manage the reconstruction process as a complex system¹⁰. With this end in view we propose the conceptual model of the Local Territorial Systems (SLoT) (Dematteis, 2005). A SLoT is a local network of different actors, both public and private. Depending on the mutual relations and with the local milieu it can behave as a collective. In general terms the model SLoT "describes the relationship between local interaction, the potential of local governance and development. The local system is so designed as formed by two sets of components, and three sets of relationships. The components are the networks of local actors and the territorial local milieu. The relationships are those of local players among them, those among the local milieu and the spatial and between local components and levels of over local scale "(Dematteis, 2005:29). Without a planned control system and a strong interdependence between parts and between them and the environment, all agents are converted into anarchy. So the most important thing is to understand the interrelationship between the actors involved (stakeholders). This task is hampered by the chronic lack of

Designing Business Architecture, Butterworth Heinemann.

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¹⁰ The theory of complex systems is growing in recent years because it seems to give excellent results in applications to the world of economy, enterprise, biology and social sciences. The systemic thinking is, in short, the art of simplifying the complex, to see through the chaos and manage interdependencies. What we are saying is that there is no single solution but a set of diversified and repeated solutions. One of the basic texts on the subject is: Gharajedaghi, J. (1999) *Systems Thinking: Managing Chaos and Complexity. A platform for*

synchronization between policy times and organizational needs. Moreover, stakeholders have to feel authors of the renewal. When the outcome of the process is perceived as the result of a single individual, others began to attack it with the intention of imposing its personal brand in the process. Equally fundamental is the system of communication and positioning, both internal as external, of each actor. By mediating between different needs, it becomes possible to design and plan common tasks aimed to develop shared goals that enhance the potential of local territorial milieu.

We may conclude that the long-term viability of the Organization for the Reconstruction depends on its ability in adapting ¹¹ itself to a changing environment. This requires a modular, multi-dimensional system with flexibility, positive relationship between members and speed of decision-making.

The problem is that the public administration is still working under the old logic of the State as a producer of goods and services, rather than as a generator of policies. With this last model the society itself should be able to produce those goods and those services. Today there is a new concept of State as a network that exceeds the traditional hierarchical model of governance which we are used to 12. According to this new pattern, the public-private partnership created ad hoc for the reconstruction should first organize and generate information and second manage resources (economic, political, territorial and cultural). This is the way to allow both the autonomy of the stakeholders and their conscience of the global state of the system.

The architect, as one of the stakeholders, should address the design process with the maximum information. He also should be careful with the territorial capital of the specific place. At the same time, the constant connection with the other members of the system should prevent situations of no communication. In Gibellina and Salemi some high quality design failed because of a lack of political or economical support, others because of a misunderstanding with users. From another point of view, citizens called to participate in the process can express their needs but also understand the expert

¹¹ The Complex Adaptative Systems (CAS) are complex because they are different and made by multiple elements, interconnected, and adaptive because they have the ability to change and learn from experience. The term was introduced in the interdisciplinary Santa Fe Institute, by John H. Holland, Murray Gell-Mann and others. See: Mitchell Waldrop, M. (1992) *Complexity: The Emerging Science at the Edge of Order and Chaos*, Simon & Schuster.

¹² "(...) is gradually producing a new model of government where the responsibility of the executive is focused not so much in managing people and programs, but organizing resources, which often belong to others, to produce public value (...) in a mesh, multi organizational (...) very little that resembles a traditional organization chart, and looks more like a network of computers that can organize, reorganize, expand or contract depending on the problem of the moment. The networks "public-private" and acquire greater importance are various forms, ranging from ad hoc to activate intermittently, for example in response to disasters, with the stable association in which businesses and NGOs serve as channels for distribution of public services." Goldsmith, S., Eggers, W. (2004), Governing by Network: the New Shape of the Public Sector, Brookings Institution Press.

proposals. The design would be the result of a joint negotiation where all parties would feel recognized.

CONCLUSIONS

What are the limits of the proposed architecture in a place affected by a disaster? The answer to this question is not easy because the city is not a monolithic entity, but a plural and alive subject. The city is always under construction, it creates new forms and usages, but there is not a final result.

The analysis of a study case such Belice shows that the architectural goals do not match to the architect's initial idea and to the collective imaginary of its inhabitants: they are the result of a complex process of conflict and negotiation that ends up generating objects hybrids. In case of disaster, after an initial phase of chaos that needs rapid and authoritarian actions to aid the injured, there is no common recipe. Also the existing recovery is not better than a new foundation. Just make sense the comprehensive study done in each case. The important thing is to understand that a plan is not only a proposal for an urban order, but for social harmony. For that reason, architectural design is expected to be sensitive to the territorial capital in a broad sense (including geomorphology, typology and culture). The way of combining these implicit and explicit elements determines the recognition and care of the architectural object or its rejection and degradation. Without physical and symbolic recognition, there is neither memory nor overcome of the trauma produced by the disaster. So, we should protect the cultural relation between inhabitants and their surrounding.

This goal, of course, can not be the sole responsibility of the architect. Speaking about the limits of architecture implies a clear definition of its economic and political management. We should shift the emphasis by the architect as a creator to the object created, modified, stratified. We should understand design as an open process involving plural subjects and different local conditions (natural and social). The architect, as one of the actors, can contribute to creating an environment which offers far more opportunities for inhabitants to make their personal markings and identifications. In that way they can recognize themselves in their living-space and become responsible for its care and transmission. To make it possible I would like, by way of conclusion, note some considerations:

1) The study of the territorial capital should begin immediately, since the barracks. We understand the culture of housing as the result of a complex relation between people and territory trough the time. If the provisional city does not set up at the same site of the new city, this process becomes really difficult because of the lack of a gradual formalization of the culture of housing.

- 2) We can not lead to social change through a dramatic physical change because a new architecture is not born from nothing. It always increases a previous situation, both in continuity or in opposition.
- 3) In addition to environmental and economic sustainability of plans and designs, we need to ensure their political sustainability or "self sustainability" (Magnaghi, 2000). It includes the self reproduction of the territorial capital as the capacity to maintain over time its identity through a continuous process of updating from local innovations.
- 4) The public-private organization (municipalities, technicians, planners, architects, and citizens) that deals with the reconstruction should act according to the criteria of a complex adaptive system that better reflects all the richness of the territorial capital of a place. This kind of organisation manages resources, facilitates communication and information between all its members and allows the different parties to implement in a creative and autonomous way, each taking its share of responsibility.

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