'FIGURES OF DEMOLITIONS'. PROCESSES BETWEEN DEMOLITION AND CONSTRUCTION FOR THE HOUSING RENOVATION

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FOREWORD

Nowadays it is more and more evident that the obsolescence phenomenon of 20th century housing asks a conceptual and operative answer. In the past, one of the solutions was to totally raze down the degraded buildings to build up new sites. Today, that way to proceed does not work anymore because it does not create a durable and sustainable urban system. The conditions have changed and impose new points of view on the future which come from a re-elaboration of the present in obsolescence. One of these new visions comes from the possibility to consider obsolete buildings as a material in transformation, able to accept changes that can regenerate the existing conditions in order not to act with total demolitions, but to intervene through a process of demolition and construction. With precise and controlled actions it seems possible to give a 'new genesis' (both spatial and social) to the obsolete built housing heritage.

Conceptually, it means to carry out a theoretical and operational relocation of the demolition within the processes of architectural and urban transformation. It comes to articulate the modes of relationship between demolition and construction considering as object of the modification the existing in obsolescence. These ways must be able to work "in time", that is to instill a regenerative process in the long period able to house successive projects.

CONDITIONS AND GOALS

The selected theme is related to a Ph.D research work[i] whose aim is to show that, by relating the concept of demolition to that of construction, the former can become a new pragmatic tool that operates within the design process of the existent in abandon or in premature condition of obsolescence.

Demolition is seen as the essential stage of the architectural and urban transformation of the contemporary city, re-calling the practice of "build up on the built up spaces", which becomes a necessary action of modification which affects entire portions of the city, whether they are well established or newly formed. The intension is to demonstrate that, contrary to conventional wisdom, demolition is not merely synonymous with destruction and. Instead, it is an integral part of the transformative design process that exerts a more "refined violence" (Walter Benjamin) in which one breaks ties to make the path for the new. It is a conscious and planned demolition, which opens an existing area to regeneration.

Why is the concept of demolition used as synonym with destruction today? The reasons are quite complex and it is necessary to explain them in order to understand the goals of this research.

"All societies are built by demolishing," Françoise Choay affirms in one of her essays entitled *About Demolition*[ii].

Historically, within the process of urban and architectonic transformation, Demolition and Construction always have an interdependent relation. The dialectic, often conflictual, between these two concepts marks the limit within which the architecture takes place. It is a wide limit, we can say that it is a threshold characterized by a "rightful measure" within which the differences can coexist

thanks to a system of relations that regulates the transition between the opposites Inside this threshold it is possible to recognize what in urban studies is called the dynamic of the urban form, which takes place through alternative phases of stability and instability. During the stable periods there is the formation (construction) and the stabilization of urban, social and economic forms, while in the unstable ones breakings and lacerations (demolition and deformation) occur leading to different conformations, more or less stable, deriving from the previous arrangement.

Today these sequences of spatial and temporal relations seem to have been interrupted and the limit between demolition and construction sis not anymore recognizable. Inside this scenario the two concepts have no more an interdependent relation.
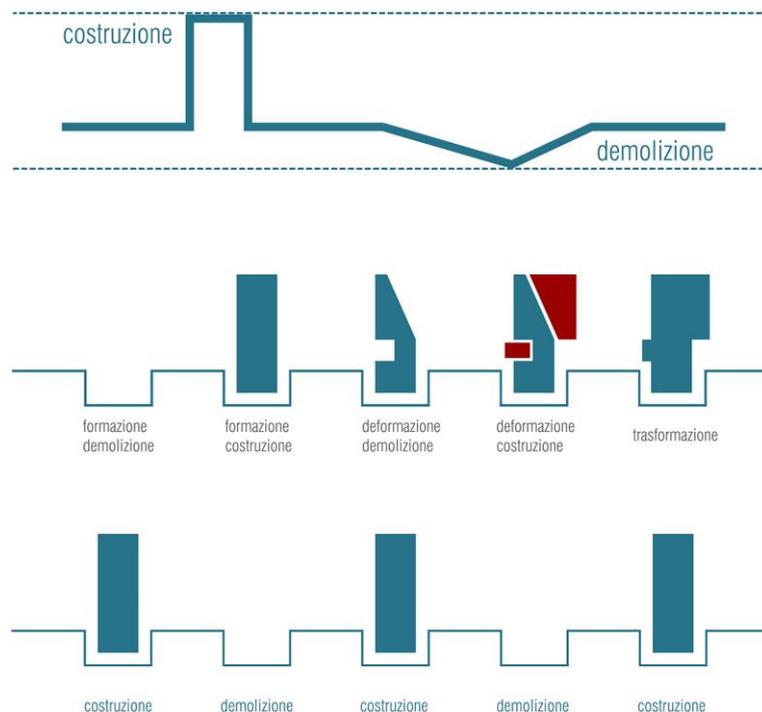

Figure 1. From above: the wide limit between demolition and construction; scheme of the dynamic of the urban form; alternation of demolition and construction.

Is it possible to recognize an overturning: on the one hand, building up does not allow anymore to develop a thinking able to make a place habitable, instead, it becomes a 'mechanic action' of building reproduction that destroys the meaning of the cities; on the other hand the demolition, deprived of its counterpart , is more and more linked to the destruction and interpreted as a dissolution action of historical heritage and urban fabrics.

This kind of disjunction has drawn a higher attention to an erroneous idea of total conservation that blocks the time flow and increases the actual critical condition.

The destruction, however, is driven by economic interests that justify political land use regardless of the effects of their actions, as those who favor these processes have only speculative interests. Through the continuous addition of individual and independent actions, the destruction can also destroy the sense of the city. Rather than building to make a place habitable, it creates destruction, rubble, scrap, waste, neglect and isolation.

The aim is the conceptual and operational relocation of the demolition within the processes of architectural and urban transformation.

Based on these initial observations, the questions to which try to give an answer are the following ones:

If the concepts of construction and conservation have been stripped of their existing meaning - that makes the place habitable and at the same time building the future through a renewal of past and present - and they are no longer able to define the existing city as they presently do, can the concept of demolition become a form of treatment able to regenerate the city and the country? Can the idea of "regeneration" be seen through a lens of demolition concerning the built environment?
If so, which "architectural figures" is it possible to associate with demolition?

ARCHITECTURE BETWEEN DEMOLITION AND CONSTRUCTION

In order to find an answer to these questions, it appears necessary to investigate the relationship between demolition and construction in order to draw demolition back into the discussion as part of the design process. The etymology of the terms help us in this direction as the analyze of the origins of the words allows us to find interesting points of contacts that open to new points of view and interpretations.

Demolition from the latin *Demoliri (De - Moliri)* which literally means *"to separate and outdistance parts joined together"*. The origin of the term does not recall the *reductio ad nihilo* (destruction), rather the term suggests a series of possible transformative actions such as separation, distance, shift, opening and removal. This kind of transformations can concern space (movement into the space), time (the time of the movement) and material (the transformation of the matter during the time).

Build up from the latin *Construere (Cum - Struere)* which means *"to place harmoniously and orderly"*. On the hand the term is related to an idea of solid and static structure (struere), on the other hand, it recalls actions related to build such as to arrange, to stratify, to order and to close, but it does not provide any information on how such acts are performed and under what dispositive rule. Such notions are in fact provided by the particle *Cum*. The latter, can determine the composition rules of the structural actions, both in time and space.

The term Build up in itself tends to the determination of something complete. It defines the relational logics of the structural actions and tends to reach a stable form able to last.

The concept of construction, devoid of confrontation and mediation with other instances, does not host the temporal dimension of change, as a result, it does not have the skills to deal with the changes of the condition of the places. In the moment in which building up is capable to assume the ideas of decline and crisis such as objects of architectural design, then it is possible to talk about architecture no more as construction, but as polarity between construction and demolition, therefore about Architecture as Transformation.

The transformative status constitutes a special condition of balance between addition and subtraction within a list of declinations of the relationship between demolition and construction. This declination aims to highlight the different modality to intend both separation and relation between the two terms. The elements of the list are: destruction, conservation, deconstruction and transformation.

Destruction - total demolitions | total reconstructions

Figure 2. Diagram showing the process from total demolitions to total reconstructions

In the East the demolition is known as a symbol of revenge against a West that for a long time has dominated. What belongs to the past is literally erased in favor of a Western image of the city that,

without links to the past, is always susceptible to substitution. Singapore as described by Rem Koolhaas in *Singapore Songlines* is the emblem of this destructive procedure.

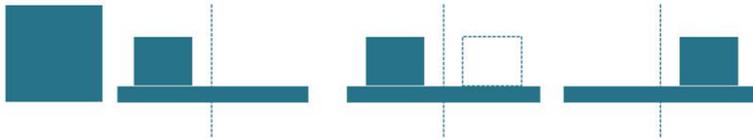**Conservation - demolition | reconstruction**

Figure 3. Diagram showing the alternation of demolition and reconstruction in the case of Ise temple

However, in the East the demolition can be understood as a conservatively action too. In Japan, the periodic reconstructions of the temples help to preserve and innovate the construction practices that would otherwise be lost. A particularly interesting case is the periodic reconstructions of the temple of Ise. What becomes important is not to know how much the new building is identical to the original, but how new knowledge led to reconstruction.

Deconstruction - demolish not to rebuild

Figure 4. Diagram showing the process of de-construction

In the United States demolition becomes the new economy of the shrinking cities.
Here the topic is not to rebuild what is demolished, instead the traditional demolition has been replaced by the De-construction, that consists of the dismantling and recovering of building materials which is combined with a recycling of the city voids for the development of the urban agriculture.

Transformation - balance between demolition and construction
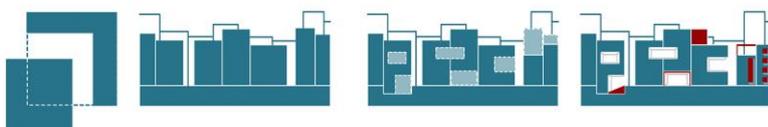

Figure 5. Diagram showing the dynamic of addiction and subtraction

As anticipated before the last step is transformation. This particular condition intends demolition as a transformative act, in which there is a balance between addition and subtraction. Demolition and construction have deep structural relationships which allow the modification of the existing. The case of the Confluence's regeneration in Lyon by Michele Desvigne is rather interesting. The project is understood as a process in time where the transformation can drag existing arrangements in renovated final configurations.

Certainly, this idea of temporality is not observable in the Singapore case, where the total disjunction between demolition and construction has led to a break in the chain of time, which has turned into an instantaneous pure moment of the present. In "The condition of Postmodernity" David Harvey defines this mutation with the term *pure present*, that means a time unable to accept the past and without basis

to think about the future. In opposition to this idea of time, Marc Augé in "Ruins and rubble. The sense of the time", describes the *pure time*. According to the French anthropologist the *pure time* is not chronological, but synchronic and layered, and made up of multiple pasts combined in a unique complex.

According to Marc Augé, in order to recover a condition of *pure time*, linked to the past and projected into the future, it is essential to come back to the ruins, not only historical, but also contemporary, as the only elements capable of opening a new time for a new architecture. The ruin is the formal expression of the tension between past and present, nature and spirit, demolition and construction, as stated by Georg Simmel.
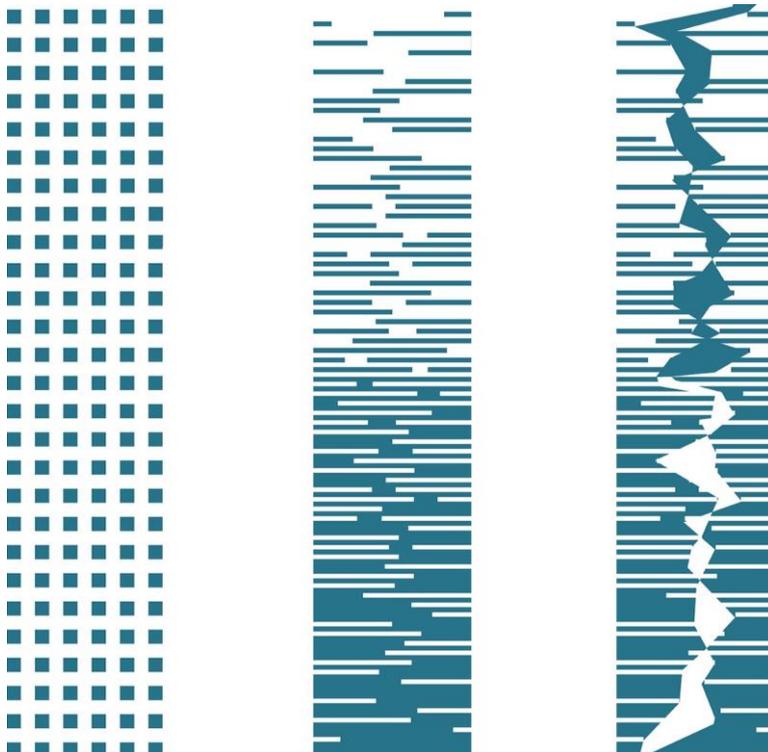

Figure 6. From the left: Pure Present; Pure Time; Ruins in the score of the time

REGENERATE THE OBSOLESCENCE

In light of the above, nowadays it appears increasingly necessary to recover an idea of architecture turned to the ruined and decadent existing as a heritage to take care. The 'care' is possible if the design of the new is replaced by a process of transformation of the built environment, within which the demolition plays an essential role. Now that decay, decline and abandonment are an evident phenomenon, this change of glance is even more important and need to be addressed through a renewed thought about the future of our cities, which should also be able to consider the decrease in a purposeful way. Against disappearance and immobilization, targeted demolition works could re-insert the time in the constructive process and give new directions to what seemed destined to oblivion.

Figure 7. Regenerate the obsolescence

It is about activating regeneration processes in which the demolition is able to highlight the original structure of the existence: that is, those resistant elements to which cling to start over. The original structure remains stable inside the change and opens to a new cycle: a regeneration that came from the origins. As a result, the new beginnings provided by the regeneration are never absolute, but relative.

The regeneration task is to intervene on conditions of obsolescence and abandon. It does not invert the decadence process, but accepts the ongoing changes and open to new ways to look at the future .They concern the reuse and recycling of the existing gathered in the idea of radical reuse (Paola Vigano)at. Within the present states of living necessity, you can trace *survival practices* that manipulate existing urban arrangements through subtractive actions. Just from these practices - through their abstraction and reworking – it was possible to obtain a wider range of strategies geared to the willingness to make the place habitable again.

FIGURES OF DEMOLITION

These strategies are referred to a demolition taxonomy of actions between demolition and construction. These terms are used to clarify the modes of relationships between demolition and existing obsolescence in a manner that instill a regenerative process. The taxonomic terms were grouped into three categories entitled 'Figures of demolition'

The first category, *Measure distances: the Interval*, considers the demolition as a strategic action that can give measure to those areas that today would likely to be razed to the ground because they were considered too large or inaccessible. The interval is considered as an extended limit, a break able to separate and connect at the same time and, if suitably measured, it is able to give rise to new relationships. The spacing operations (intervals) are identified in order to restore the right fit, that is the measure allowing to establish relations between built, open space and connective space and allows to live the place again. They are: **Separate, Reduce, Include**.
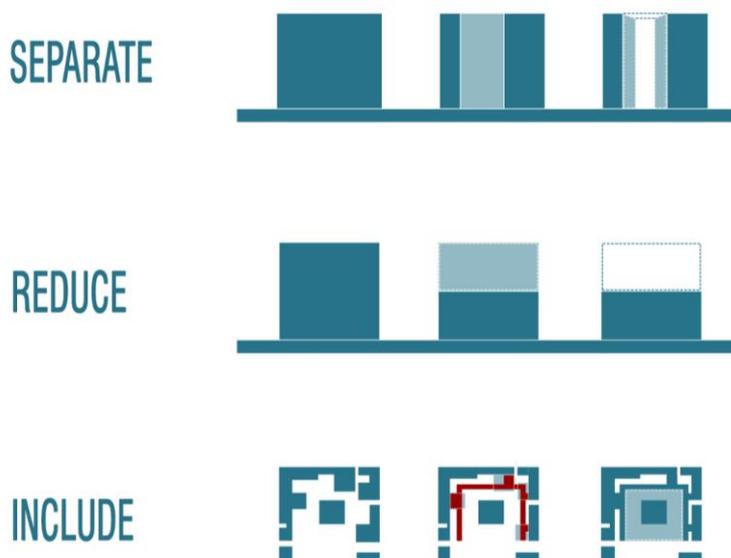

Figure 8. Measure the Distance: the Interval. To Separate, to Reduce, to Include

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Separate and Reduce are related to new areas already in obsolescence, particularly those urban ones recently formed as grand ensemble or former dormitory district that are today in advanced states of decay and are often social and spatial enclaves. In order to open up these locations to the city and get them back as living spaces, the separation allows to regain a recognizable measure by determining sequences of rhythmic spaces, while the reduction has the opportunity to redesign the relationship of the buildings with the ground and the sky and between interior and exterior. Finally, **Insert** provides the ability to annex recognizable breaks within the urban fabric through the redesign of edges and margins of the open space.

Figure 9. Before and after the intervention. From the left: Le Caravelle, Castro and Denissof, Villeneuve-la-Garenne, Paris, 1195-2001; Leinefelde, Stefan Forster, Leinefelde, Germany, 199-2007; Dornbusch Church, Mexiner Schulter Wendt Architekten, Frankfurt am Main, 2003-2005

The second category, *Designing absences: the Void*, considers the demolition as an essential action of the abandoned or overly dense areas, where the concept of emptiness requires a re-signification. The void is understood as an active and participatory entity and it is considered a strategic operator of the regeneration project. The identified strategic actions are: **Subtract Include, Connect**.
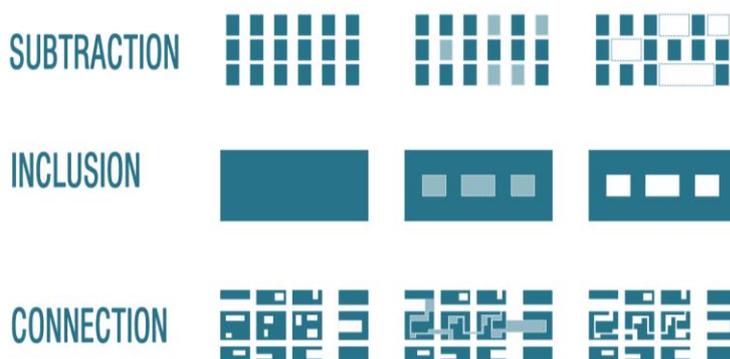

Figure 10. Designing absence: the Void. To Subtract, to Include, to Connect

The **Subtraction** considers the demolition project of buildings or urban wastelands from which a re-appropriation is not expected. The **Inclusion** provides the possibility to intentionally determine voids within very dense fabrics in order to insert public spaces and services often lacking in overpopulated areas. The **Connection,** finally, allows the void from a relational perspective: through targeted demolitions you can weave new connections that transform the urban space into a porous and permeable body.
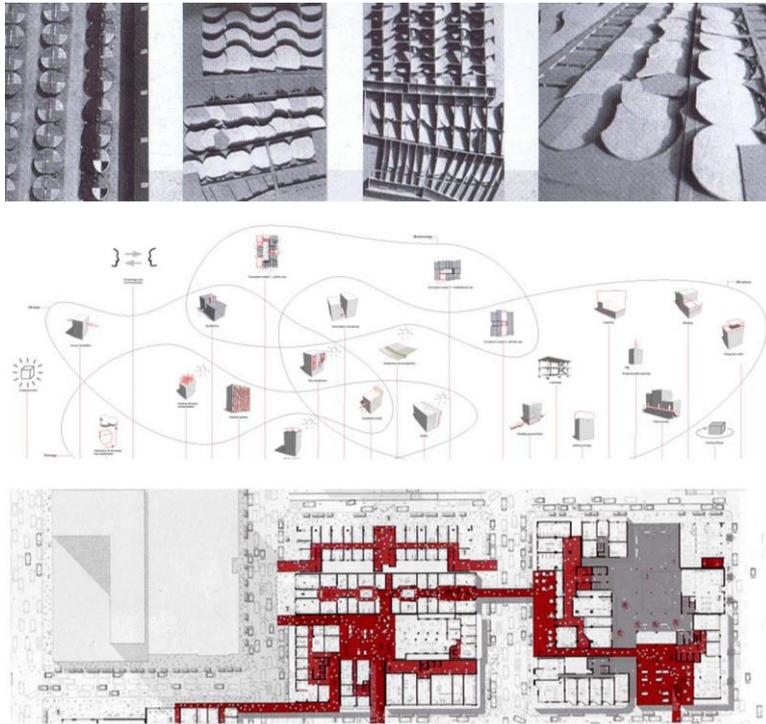
Figure 11. Strategies of intervention. From above: Decamping Detroit, Charles Waldheim and Marili Santos-Munné, Detroit, Usa, 2001; Jacarezinho Celula Urbana, Bauhaus Dessau Fondation, Rio De Janeiro, 2000-2004; Jeppe Radical Re-use, Research Project Witwateran (ZA) and Leuven University, Joannesburg, 2009

The third category, ***Redial memories: the Trace***, traces the particular cultural values in cases where the architecture is presented as an 'discarded artifact'. In this case demolition takes on a very delicate role in the generation and publication of collective values. The traces left by the existing are read, selected and interpreted to give new direction to the existing. The figure of the trace allows to activate and recollect memories of places in anproactive approach because it is a key element between past and future conditions. In this case the strategic actions are: **Stratify, Excavate, Regenerate**.
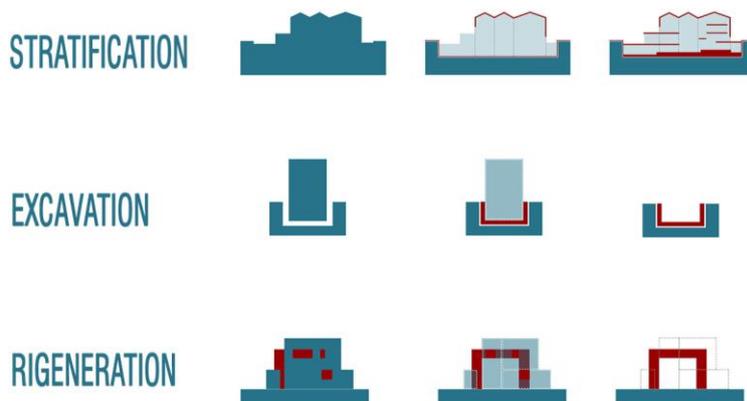
Figure 12. Redial Memories: the Trace. To Statify, to Excavate, to Regenerate

Stratify: intends a reverse and subtractive stratification, which allows to uncover different stories distant in time, but present in space.

Excavate: allows to underline an absence through an excavation, the signs of the pre-existing are activated as elements of the memory.

Regenerate: the existing in abandon is deliberately demolished to become a generative trace for the new. The memory interrupted by abandonment has the chance to regenerate himself through the award of new urban meanings.
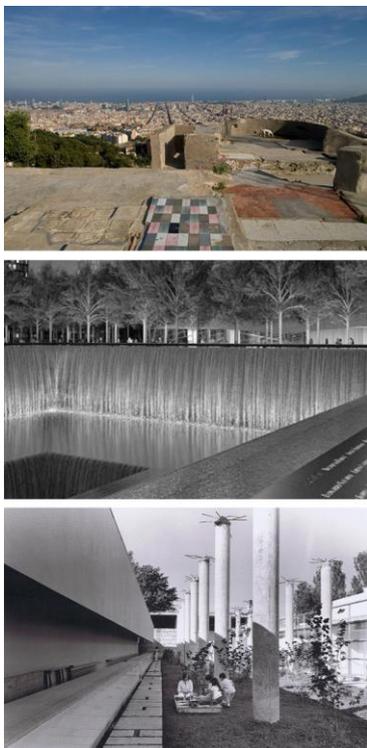

Figure 13. Regenerative project. From above: Tiro dela Rovira, Imma Iansana Ferre, Barcelona, 2010; Reflecting Absence, Ground Zero Memorial, Arad e Walker, New York, 2011; Braga market regeneration, Souto de Mura, Braga, Portugal, 1997-2001.

The taxonomy is essential to relocate the term demolition within the architectural practice. The aim of this cataloguing is to make it visible as a series of targeted subtractions, so that it may be more effective and sustainable both for tabula rasa operations and anachronistic conservations. In conclusion, we would hope that this research opens new ideas about destruction and construction that will evoke new areas of research.
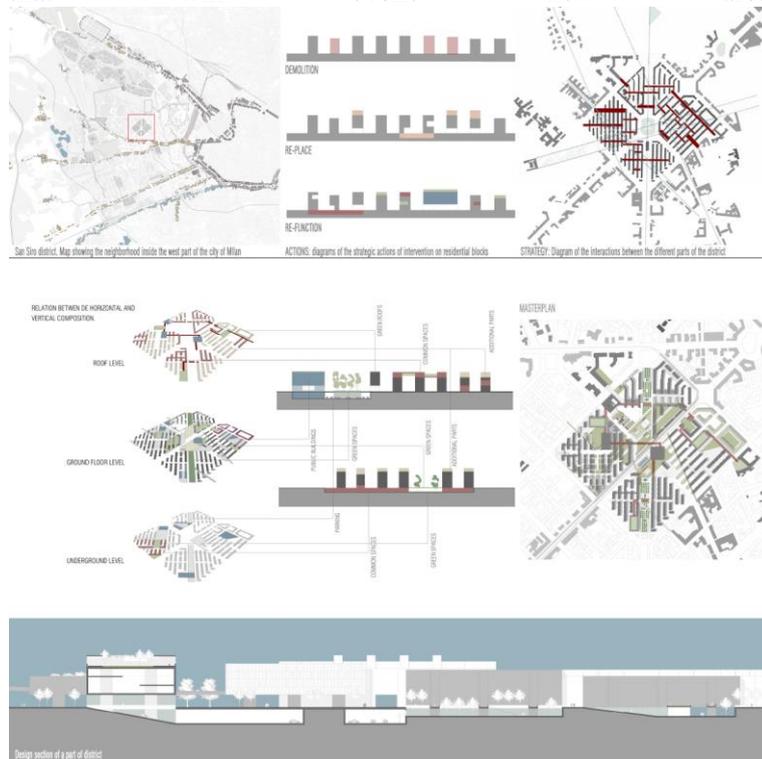

Figure 14. Case Study. Multiscalar Interception. "A methodology for delivering quality to the isolated city neighborhoods". San Siro District, Milan; Paola Bracchi, Narges Golkar.

The project was developed within the Ministry of Education research Prin 2008, title: "Rigenerazione di tracciati e tessuti marginali. Metodi, strumenti e strategie di progetto per nuove forme di abitare sostenibile", National Coordinator: prof. Gianfranco Neri, University of Reggio Calabria. In particular the project is part of the studies developed by the Politecnico of Milano Research Unit, Scientific responsible: prof. Ilaria Valente.

The research has focused on the development of a methodology for tissue regeneration marginal, particularly of the residential neighborhoods born between the two world wars in the west of Milan. We choose the San Siro district as case study on which to experience the methodology studied entitled: Multiscale Interseptions. The objective is to give quality to the living places through the activation of multiple relationships between the different design scales, to reconnect marginal areas and to open up public and collective spaces. To this end we identify three strategic actions: Demolish, re-function, re-place.

Is also possible to conduce these actions to those identified in the first category of the figures of the demolition: Measure distances.

In relation to the actions identified in the taxonomy we can note that: with regard to the separating it was thought to intersperse the buildings along the main axes, the latter from real limits are transformed into relationship points of the neighborhood with its surroundings. The action of reduce, involved the reduction of some buildings from the bottom, the ground floors are opened determining spatial sequences that allow a new permeability and accessibility to the neighborhood. Finally the act of Insert involved the annexation of the open space both inside the residential blocks and in the underground.

Furthermore, in some blocks, they were added plans to balance what has been subtracted, it is a repositioning of the subtracted volumes. Lastly the refunction has operated the change of function of some buildings, from private to public functions, necessary not only for the neighborhood but also for the whole urban area.

Article: Paola Bracchi, Narges Golkar "Multiscalar Interception. A methodology for delivering quality to the isolated city neighborhoods" Territorio, rivista trimestrale del Dipartimento di Architettura e Pianificazione 59 (2011): 97-101.

REFERENCES

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i Politecnico of Milan, Phd in Urban and Architectural Design, DAStU Department; Ph.DCoordinator: prof. Pierfranco Galliani; Phd Candidate: Paola Bracchi, XXV Cycle; Relator: prof. Guya Bertelli, Politecnico of Milan; Co-relator: prof. Alessandra Criconia, Univeristy La Sapienza, Rome. Dissertation discussion in March 2013 Title: Building demolition. Interrupted design and discontinuity within the process of urban settlement regeneration. Original title: Costruire la Demolizione. Disegni interrotti e discontinuità urbane nei processi di rigenerazione insediativa.
ii Translated by the Italian: "tutte le società si sono costruite demolendo", Françoise Choay, "Sulla demolizione", in *Il progetto della sottrazione,* ed. Antonino Terranova (Roma: Groma Quaderni, 1997), 19.

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BIBLIOGRAPHY

Augé, Marc. *Rovine e macerie : il senso del tempo.* Torino: Bollati Boringhieri, 2004.
Benjamin, Waler. *Il carattere distruttivo. L'orrore del quotidiano.* Milano: Mimemis Edizioni,1995.
Ciorra, Pippo and Sara Marini, eds. *Re-cycle: strategie per l'architettura, la città e il pianeta.* Milano: Electa, 2011.
Criconia, Alessandra, ed. *Figure della demolizione, ovvero la città come "manufatto disfatto",* Milano: Costa & Nolan, 1998.
Desvigne, Michel. *Intermediate Natures. The landscape of Michel Desvigne.* Berlin: Birkhauser, 2009.
Emery, Nicola. *Distruzione e progetto.L'architettura promessa.* Milano: Christian Marinotti Edizioni, 2011
Harvey, David. *The condition of Postmoderity: an enquiry into the orignins of cultural change.* Oxford: Cambridge Mass., 1990.
Harvey, David, *Rebel Cities: From the Right to the city to the urban revolution.* New York: Verso Book, 2012.
Koolhaas, Rem, *Singapore songlines : ritratto di una metropoli Potemkin o trent'anni di tabula rasa.* Macerata: Quodlibet, 2010.
Lynch, Kevin and Michael Southworth, *Wasting away.* San Francisco: Sierra Club Books, 1990.
Simmel, George. "De Ruine". In *Philosophische Kultur.* Gesammelte Essays. Leipzig: Klinkhardt, 1911.
Terranova, Antonino ed. *Il progetto della sottrazione.* Roma: Groma Quaderni, 1997.
Waldheim, Charles and Georgia Daskalakis, Jason Young. *Stalking Detroit.* Barcelona: Actar, 2001.