Recycling Industrial Architecture into the City Fabric:
The "Progetto-Bicocca" Pirelli International Competition, Milan, Italy

by
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Submitted to the Department of Urban Studies and Planning
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ABSTRACT

My research interests are in the form and design of cities. I perceive and understand form as physical elements, interaction and activities of people, the institution of control and management (political, social, and economical forces), and the various processes by which form is generated, modified and transformed over time. In particular, my interest is in the current theory and practice of "recycling" and reusing dismissed industrial areas into the city fabric.

Continuity in our cities is continually interrupted by urban fractures - areas with no current function, use, or character due to the loss of relations between physical aspects, social structure of the activities, inhabitants or history of the city. Of these "voids" the abandoned industrial areas clearly represent one of the most important components. Not only are these voids "physical", but most importantly, they are "functional"; they affect the functioning of the city as a whole. Often, their revitalization represents a rare occasion of rethinking not just that particular part of the city, but the whole metropolitan area.

The industrial architecture built around the early 1900's shows that structures which house technology generally have a short lifespan. The main problem can be attributed to technological transformation, the ways in which production is organized and carried out, and not, contrary to what one is to believe, only to architectural inadequacy. Therefore, with the continuous process of technological transformation, one can begin to grasp the dynamic of that sort of endless process of dissemination on the territory, of a huge and most valuable part of our architectural patrimony. Those cases represent intriguing examples of the product of the Modern Movement, which are becoming obsolete, forcing the present generation to take immediate action in deciding their destiny. The revitalization of various pieces of industrial architecture, in the last decades, provides a wide range of cases filled with indicative implications for the present and future pursuits of preservation and reuse.

Although, deindustrialization is a worldwide phenomenon, this thesis it is not investigating the international experience of revitalization in any depth. My thesis deals with the revitalization of the Pirelli - Bicocca area as a result of a long and complex process of agreement between Industrie Pirelli S.p.A. and the administrations of the Comune and Provincia of Milan, and the Region of Lombardia. Although this thesis begins by framing the case at the regional and metropolitan scale, the study will focus particularly on the "International town-planing and architectural competition" held on

the initiative of Pirelli in 1985. The outcome of a direct invitation, the "Progetto Bicocca" was exhibited at the "Triennale di Milano" in 1986, suggesting its high cultural contents, purpose and ambitions. A number of the most prominent and world renown architects/urban planners were asked to each come up with a new scheme for that extensive part of the city in which, at the beginning of the century Pirelli had located its plant - the Bicocca. Now the area is a vast discarded industrial area, an "urban void", as Bernardo Secchi defines it, in which Pirelli and the local authorities intend to create a "technological pole" by revitalizing and altering the character and role of this large and important "work-place" in the history of the city.

Drawing on the "Italian tradition", this study wants to understand the way in which "we" look at the city and its territory today; the way in which we select and make connections between its elements and relevant relationships; and especially our ability to devise theories that attempt to explain its history and possible destiny.

The two main issues that my thesis deals with are: the "image" and "sense of place" that each of the competition participants conceived and envisioned for the Bicocca area, and consequently for the city of Milan, in their proposals; and the anomalous way in which the operation developed in relation to more traditional Italian planning procedures. Therefore, these issues are addressed around the following questions :

-Did the program frame the problem correctly?
-How well did the competitors interpret the problem and the program?
-If these entries are representative of current theory, how well does this theory helps us to address problems of revitalizing old industrial cities?

To answer those questions this thesis:

- frames the problem at the regional and metropolitan scale looking at the abandoned industrial areas around Milan.
- defines the relationship between Bicocca and the rest of the territory: the context. With historical references to the plant's lifespan.
- understands the revitalization process: from the political constituency to the actual program.
- speculates around the following points of the first phase of the competition (1986): program, proposed theme, interpretation of the program -the conceptual basis of the proposals.
- analyzes the eighteen entries and identifies a methodology of interpretation and classification.
- looks into the second phase (1988) -the selection of three schemes: Gabbetti-Isola, Gregotti, and Valle.
- summarizes the main phases of the particular approach to industrial transformation carried out and concludes with some observations on the predominant themes emerging from the proposals to be assumed as a current thinking in urban design practice, and on the competition used as an instrument of urban planning.

Thesis Supervisor: Julian Beinart
Title: Professor of Architecture

ACKNOWLEDGEMENTS

This thesis ends a very intense three year dual masters degree program within the School of Architecture and Planning at MIT. During this fertile period, I have had the opportunity to work with a great group of people and this has influenced me tremendously, both professionally and personally. In general, since it is here impossible to name each of the wonderful people who have supported me, I wish to extend my thanks to the whole MIT community. In particular I would like to thank my thesis committee: Julian Beinart, Gary Hack and Dennis Frenchman. Each has been of great help in stimulating and sorting out ideas, and indicating a research direction when I was showing to have lost one. Their guidance has been invaluable, not only in this occasion, but through course work and extra curricular activities during my three years in the program. I would also like to thank those individuals who stimulated my thesis proposal efforts during the preliminary stage: Peter Droege and Masood Khan, coordinators of my group in the thesis preparation subject. In addition, my thanks go to other individuals: Tunney Lee and Paolo Ceccarelli, who have helped me focussing my academic objectives during my first semester of study at MIT.

Many thanks go to those that supported my research effort. Firstly, I would like to thank Eng. Gianfranco DeFré from the "Assessorato all' Ambiente" at the Regione Lombardia for refereeing me to the "right people" involved in the Bicocca event. In addition, many thanks go to Gianluigi Sartorio, professor of "Tecnica Urbanistica" at the Politecnico of Milan for introducing me to the various offices dealing with the Progetto Bicocca at the very first stage of the field inquiry. Specifically, I would like to acknowledge the assistance of the staff at the Pirelli - Societá Progetto Bicocca S.p.A., particularly Ms. Donatella Moro and her assistant Loredana for the enormous amount of material provided and time spent in assisting me. In addition, thanks go to Stefano Boeri of the department of "Scienza del Territorio" of the "Politecnico di Milano" for his very valuable suggestions and ideas on the subject. Special thanks go to Carlo Aymonino, Roberto Gabetti & Imaro Isola, Giancarlo De Carlo, Frank Gehry, Vittorio Gregotti and Gino Valle who among the eighteen competition participants were able to spend some of their precious time with me. The invaluable insights of their direct experience on the Bicocca Competition has been crucial for the formulation of this piece of work.

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Many have written of Bicocca being an "occasion" for the city of Milan; others that it would be a great occasion for Pirelli.Having studied it, I can say that Bicocca has certainly represented a great learning opportunity for me. The complex issues I was able to tackle together with the interesting ideas that came out from the competition have allowed me to learn a great deal. On the personal level, this thesis has represented a way of being directly involved with the Italian planning activities after six years of absence from Italy. It has been a very rewarding experience. Thanks to Bicocca.

To my Family

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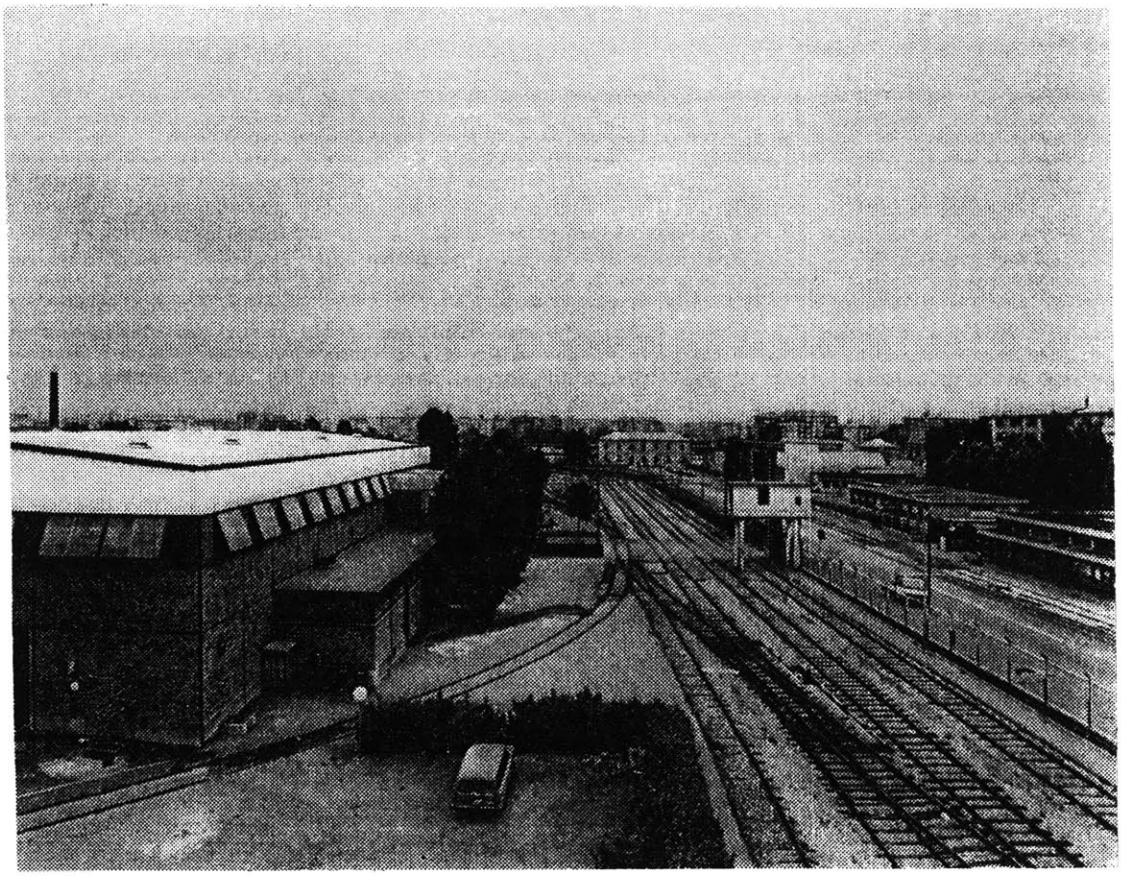
Chapter I: Introduction

Figure 1: Pirelli Bicocca, Internal handling system, ca. 1947

Figure 2: Pirelli Bicocca, Corpo Centrale and Greco-Pirelli railroad station



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1 Bernardo Secchi, "Un problema Urbano: l'Occasione dei Vuoti", Casabella No. 503, November, 1984, p.18

The industrial architecture built around the early 1900's shows that structures which house technology generally have a short lifespan. The main problem can be attributed to technological transformation, the ways in which production is organized and carried out, and not, contrary to what one is to believe, only to architectural inadequacy. Therefore, with the continuous process of technological transformation, one can begin to grasp the dynamic of that sort of endless process of dissemination on the territory, of a huge and most valuable part of our architectural patrimony. Those cases represent intriguing examples of the product of the Modern Movement, which are becoming obsolete, forcing the present generation to take immediate action in deciding their destiny. The revitalization of various pieces of industrial architecture, in the last decades, provides a wide range of cases filled with indicative implications for the present and future pursuits of preservation and reuse.[2]

Although, deindustrialization is a worldwide phenomenon, this thesis it is not investigating the international experience of revitalization in any depth. The thesis deals with the revitalization of the Bicocca area as a result of a long and complex process of agreement between Industrie Pirelli S.p.A. and the administrations of the Comune and Province of Milan, and the Region of Lombardia.

The end of Bicocca as a production center is also the end of a highly important and convulsive period in the industrialization of Italy, and especially of Milan and Lombardia. As the industrial economy gives way to an emerging post-industrial future, our systems, organization and needs radically will differ from those at the beginning of the century. Thus, it no longer makes sense to retain out-dated factories and an integrated industrial structure at Bicocca. Some of the plants and offices there had already been closed, their activities shifted to other locations, mainly in the South of Italy.[3]

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2 Constance Bodurow Rea, Rethinking the Industrial Landscape: The Future of the Ford Rouge Complex, S.M.Arch.S/M.C.P. Thesis, M.I.T., June 1991

3 Pirelli S.p.A., Scientific Committee Report: Science and Technology towards the XXI Century and their Impact Upon Society, Milan, Tipografie Pirelli, July 1987

The agreement reached with the local authorities lays down that, subject to land-use modification, Bicocca is to become an "Integrated Multi-functional Technological Center" which will host the following: public and private sector research and development centers, high technology industrial enterprises, centers for information technologies and telematics, servicing and maintenance centers for the laboratories, professional training centers, managerial and strategic offices, conference centers and services required to insure the proper functioning of the area's activities and high quality environment for the people working there.[4]

Although this thesis begins by framing the case at the regional and metropolitan scale, the study will focus particularly on the "International town-planing and architectural competition" held on the initiative of Pirelli in 1985. The outcome of a direct invitation, the "Progetto Bicocca" was exhibited at the "Triennale di Milano" in 1986, suggesting its high cultural contents, purposes and ambitions. A number of the most prominent and world renown architects/urban planners were asked each to come up with a new scheme for that extensive part of the city in which, at the beginning of the century Pirelli had located its plant - Bicocca. Now the area is a vast discarded industrial plant, an "urban void", as Bernardo Secchi defines it, in which Pirelli and the local authorities, intend to create a "technological pole" by revitalizing and altering the character and role of this large and important "work-place" in the history of the city.

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-How did the program frame the problem ?
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4 Ibid

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- summarizes the main phases of the particular approach to industrial transformation carried out and concludes with some observations on the predominant themes emerging from the proposals to be assumed as the current thinking in urban design practice; and a critical examination of the competition used as an instrument of urban design.

Two main issues emerged. The first one deals with the "image" and "sense of place" that each of the competition participants conceived and envisioned for the Bicocca area, and consequently for the city of Milan. The second, with the anomalous way in which the operation developed in relation to more traditional Italian planning procedures. It is important to point out that the operation for the revitalization of Bicocca began with an overall idea of the new functions that were going to replace the old ones. However, there was not a clear idea of the exact meaning and implications of a technological pole. The design competition, a tool traditionally conceived to produce design and conceptual ideas on a given problem, assumes in this case an unusual character. It was used to publicize the event in order to create interest around it and gain political and economical support. The choice of inviting twenty world renown designers was perceived by many as both an intimidatory action to gain legitimacy and an attempt to give prestige to the

operation.[5] More importantly, there was no solid program or process of transformation set up; instead, the designers were asked to come up with the program and process of reuse.

This thesis poses the question of the adequacy of the competition as a tool to design planning processes and programs. It raises the issue that designers perhaps are not the right people to came up with a "complete package" for a given problem. The problem is posed by the fact that we must not forget that there is a specific knowledge belonging to the realm of planning, as well as another belonging to the realm of architecture. The attempt of bringing together these two elements has created a new and unforeseeable set of complications. Perhaps, the uncertainty characterizing the unfolding of the event, together with the uncertain destiny of the new technological pole are the direct results of the fragile system set up by Pirelli and the public administration.

On the other hand, however, it must be acknowledged that the design competition produced interesting design and conceptual ideas for the new Bicocca. It also was able to provoke a rich and fertile debate about the problem of industrial transformation. Each project was based on different theoretical positions, and therefore, the emerging themes suggest the multiplicity of ideas circulating around the contemporary city at the moment. The underlying theme appearing in each proposal is the attempt to reconnect Bicocca with the existing city. However, as Gary Hack has observed: "the main issue of how to transform a place such as Bicocca has to be centered not on the making of a urban form, but in the questions of creating the institution and the planning instruments that promote a clear program. Certainly a competition cannot be a substitute for doing so."

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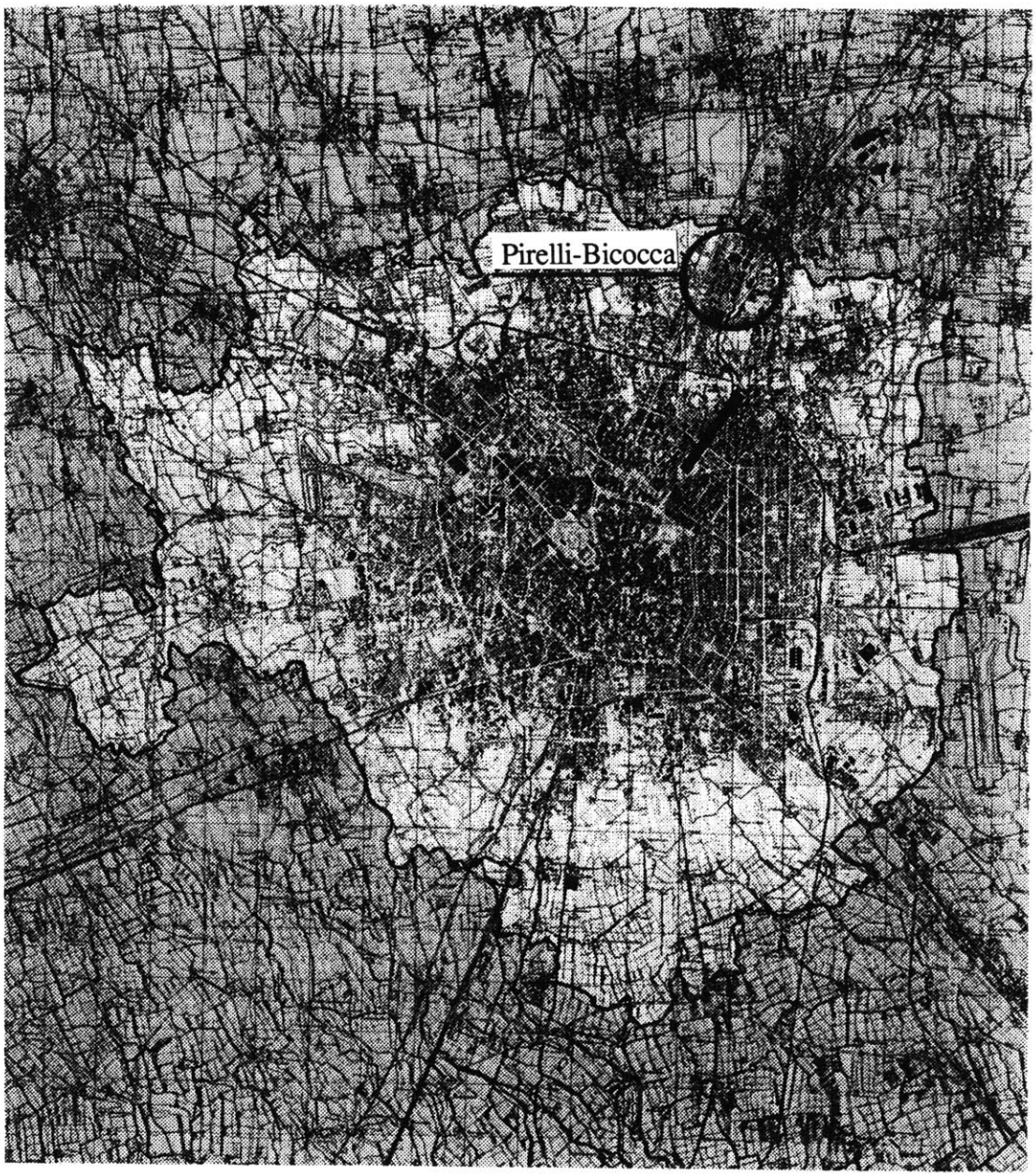
5 Conversation with Professor Paolo Ceccarelli, Cambridge, MA, April 1, 1992
Interview to Carlo Aymonino, Studio Aymonino, Venice, Italy, December 13, 1991
Interview to Giancarlo De Carlo, Studio De Carlo, Milan, Italy December, 11, 1991

Chapter II: The Context: Pirelli-Bicocca and the City of Milan

Figure 3: Bicocca within the Milan metropolitan area



A. THE URBAN SECTOR

The Pirelli-Bicocca area is part of an industrial basin which includes the Breda and Falck factories and links Milan to Sesto San Giovanni continuously without interruption. The urban sector[1] in which the area is situated is wedged between the Imbonati-Rossi-Astesani axis on the west and Viale Monza on the east, and is characterized by the presence of a rail and road network of urban and regional importance. This network fans out radially, similarly to the basic layout of Milan, but it has no connecting ring-roads with the same capacity. Narrowing down the field of observation, the sector includes a section which is substantially homogeneous in terms of buildings and history. The east and south sides of this particular part of the city are bordered by railway lines which have affected the composition of the urban tissue, creating barriers and limits that have inhibited further urban developments. To the east in particular, the Milan-Monza railway line and the Greco station set up a barrier between the Pirelli-Breda industrial axis and the area which extends from the historical settlement of Gorla and Precotto, spreading along Viale Monza. In this area, the urban fabric is dense and branches out in various directions. Land use is varied -residential areas and small businesses coexist with some industries and wide-spread commercial activities.

However, the railway line to the south perimeter acts as a border between two areas of the city that differ considerably in morphology and building density, as seen south of the railway and west of Viale Zara -where besides the difference in density, the building orientation differs from the district lying to the north between Viale Fulvio Testi and the Ospedale Maggiore. To the east of Viale Zara, the "Villaggio dei Giornalisti" (Journalists' village) is unique in terms of building morphology and type. Only the buildings on Viale Zara as well as the buildings to the north on Viale Fulvio Testi beyond the railway, have the same homogeneous layout criteria.

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1 The information included in this section are extrapolated from the volume Progetto Bicocca: An Invitation to Architects and Town Planners to Present their Proposal for an Integrated Technological Center, Milan 1986; and the analysis on maps and aerial photographs of the sector. The reader is invited to constantly refer to the illustrations during the reading.

Figure 4: Map of the urban sector comprising Bicocca

On the west side of the district, beyond the "Parco Nord" and Via Enrico Fermi, the built-up area lining the road is compact. It splits up into a system which gravitates around the Imbonati-Rossi-Astesani axis and has clearly-defined edges similar to those along Viale Monza.

The railway, the Via Enrico Fermi axis, and the Parco Nord describe the perimeter of an area contrasting with the features of the surroundings. These characteristics are the results of specific patterns and rules of growth, some of which are applicable to the Bicocca. In fact, the fundamental layout of the area is orthogonal, oriented to the strip of railway which runs from Milan to Monza, in line with the Testi-Sarca-Suzzani axis. The historical settlements of Segnano and Niguarda, and particularly the recent expansion of the latter, are exceptions to this. Segnano extends from the railway to Via San Basilio and is characterized by a fine, dense texture and a great variety of building uses: small industries and craft workshops with a considerable number of both new and old residential buildings. The nucleus of the area is made up of the "borgo" of Via Comune Antico -an area protected by the General Variant of the Milan Master Plan of 1980. At the upper border, this district meets the Pirelli Segnanino factory by a vast plot of kitchen-gardens. Niguarda is mostly residential with a considerable amount of small business activity and small-to-medium number of industrial plants, to the south. However, towards the north the layout is compact, preserving the building style of the original village. Generally speaking, this area is compact in the center along the main road but has a looser texture along the borders where, to the east, many tall buildings are wedged in between the two Army barracks of Viale Suzzani and Viale Cagni. In the rest of the area, development has generally respected the basic orthogonal layout, although differences exist in the building types, and in the relationship these buildings have with the roads and the open spaces.

Today the area in general is predominantly residential with some important industrial and other special constructions. Since the beginning of the fifties, the only significant buildings erected have been factories, army barracks and a hospital. The land between Via Sesto San Giovanni and Viale Sarca includes the Pirelli and Breda plants. From Segnanino to Sesto San Giovanni this consists of large production units and a dense compact building pattern made up of large blocks that are completely isolated and full of industrial sheds spreading out in an orthogonal network of corridor roads which change direction when approaching the Breda area. Other industrial plants occupy the left of Via Barbera, including the Tobacco Manufacturing plant running along Via Fulvio Testi, and the Wagon Lits complex set between Via Sesto San Giovanni and Pirelli Bicocca' s Corpo Centrale block. Other buildings in this area stand out because of their

Figure 5: Map of the area hinged on the Testi-Sarca-Suzzani road network system

size including the Ospedale Maggiore to the southwest, and the Army barracks in the center.

The stretch which links up these large complexes is made up of residential buildings, many of which were constructed as part of public housing developments. The layout is mostly loose, spreading out in lots, with the exception of the southern part near Viale Fulvio Testi towards the railway line, where the buildings line up along the edge of the road. Here, residential buildings are mixed up with small but significant craft shops.

Moving north, the pattern alongside the road alternates between built-up sections and open spaces. Parks and large open spaces allow an unobstructed view towards Viale Sarca to the west, and to the Parco Nord to the east.

Residential buildings have progressively filled up the space on both sides of Viale Fulvio Testi as a result of a series of large development projects carried out starting in the forties. Only the Niguarda neighborhood at the crossroad of Via Ponale and Via Suzzani, and Borgo Pirelli next to Segnanino date back to the beginning of the century.

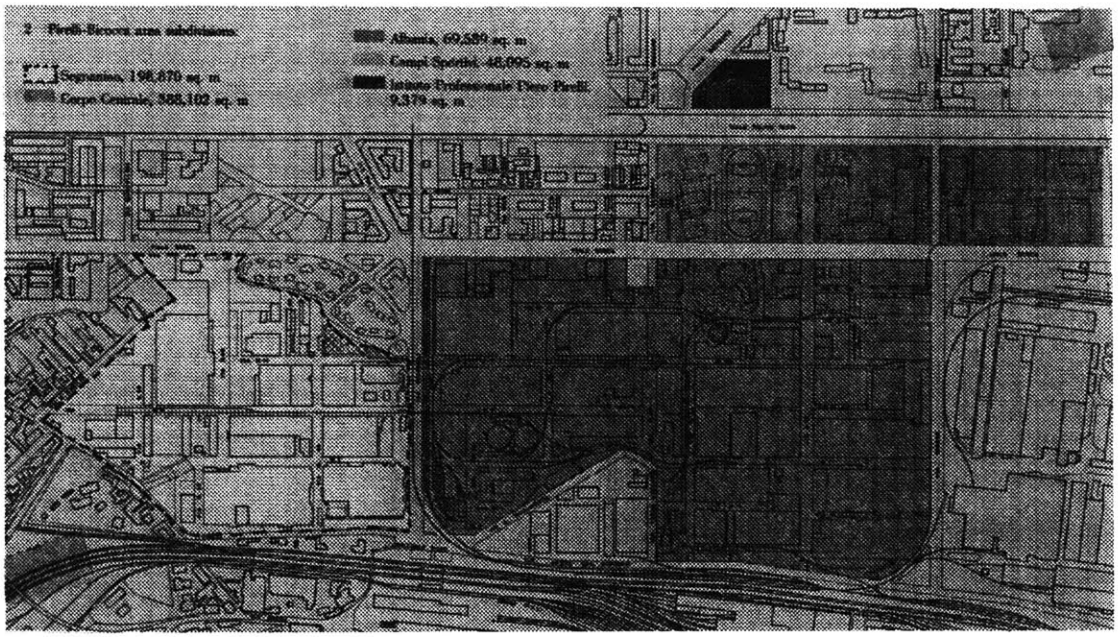
To the north, housing and local services have filled in the stretch between Viale Fulvio Testi, Via Barbera, and the municipal boundaries with Sesto San Giovanni; these and a number of industrial plants represent the surroundings of the Parco North. To the south the area is occupied by housing between Via Racconigi and the railway parallel with Viale Ca' Granda. The Viale Fulvio Testi axis is linked to the Ospedale Maggiore by a uniform building type constituted of social service structures and sport facilities.

On the whole, the area today looks like a collection of objects that recall the changing events in the planning practice of Milan in the last century forming a set of examples, types and various solutions all related to the themes of residential, industrial and public service buildings but are however, not related to each other. In fact, the area developed through a series of successive interventions, frequently conceived autonomously, and only in part coherently to the basic urban layout and the surroundings. Today this sector plays a leading role because of its strategic location in the regional metropolitan area and its complex relationship with the rest of the city.

B. THE PIRELLI-BICOCCA AREA

The Pirelli-Bicocca area is situated in the northeast fringe of Milan, bordering the town of Sesto San Giovanni.[2] Crossed from north to south by Viale Fulvio Testi, Viale Sarca, Via R. Cozzi, and Via Sesto San Giovanni; and from east to west by Via San Basilio, Via L. Emanueli and Viale Rodi, Via San Glicerio and Via Chiese. The area is divided into four lots: "Segnanino", "Corpo Centrale", "Campi Sportivi", and "Albania". In a more isolated position, to the west of Viale Fulvio Testi is the Istituto Piero Pirelli, considered an integral part of the area.[3]

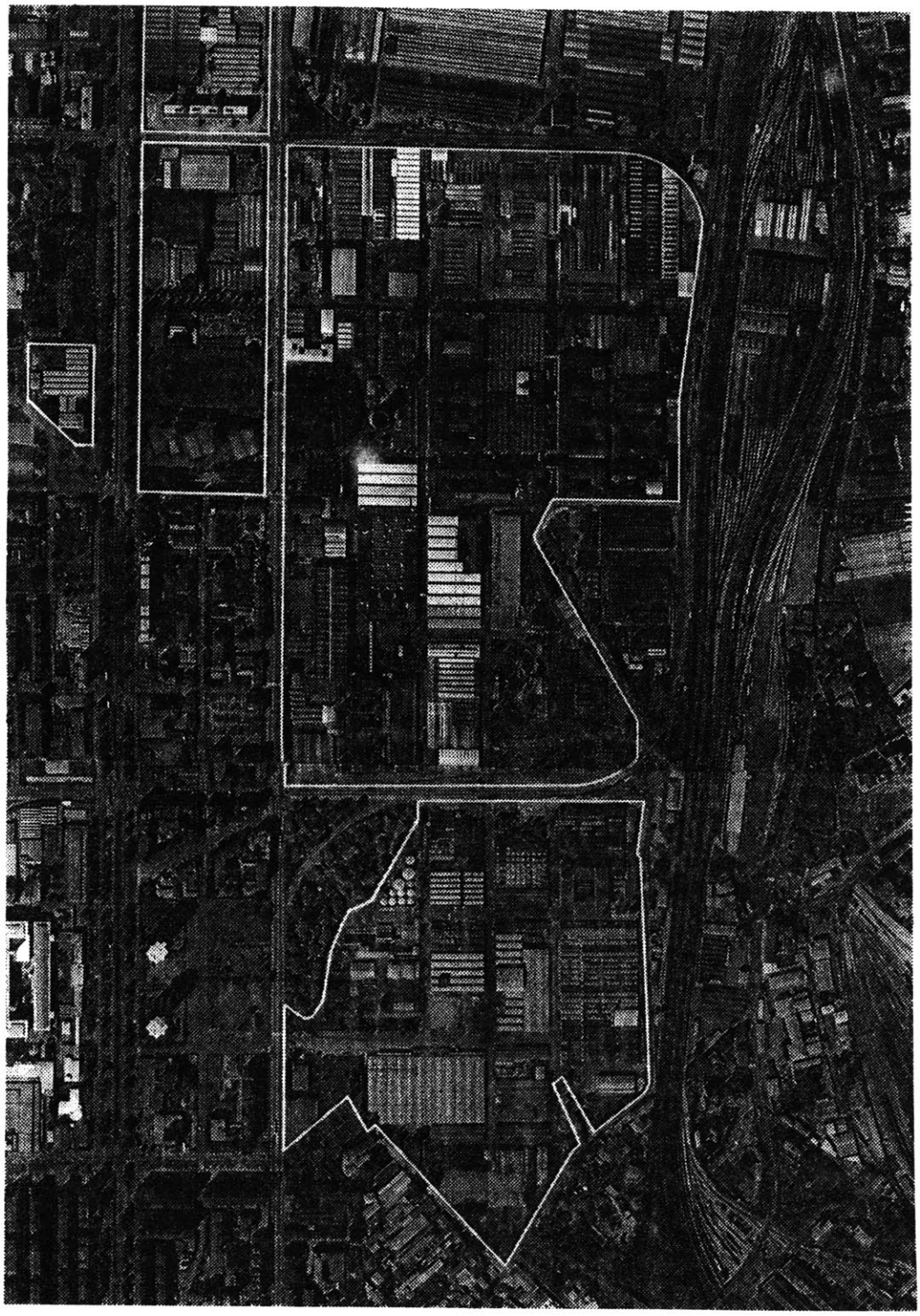
Figure 6: Map of the Pirelli Bicocca area subdivision



Bicocca measures a total of 714,035 sq.m. (approximately 185 acres); 372,385 sq.m. of which is built. Although only a small part of the plant is in use today, it was fully functional until very recently. It is in fact only at the beginning of the seventies, that Bicocca, following the destiny of many other large industrial sites around Milan,

2 See fig. 3
3 See fig. 6

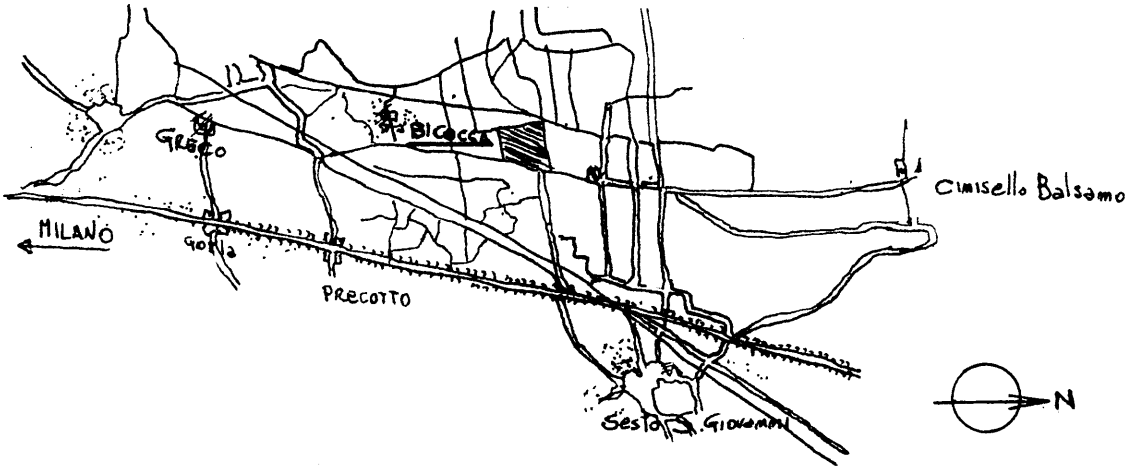
Figure 7: Aerial view of the Pirelli Bicocca plant and surrounds, ca. 1985



underwent a process of deindustrialization and consequent dismission. Today, the complex is what remains of what has historically been considered the most important and representative industrial settlement amongst all Pirelli factories. The plant was developed and modified over the years through successive interventions. It reflects, as Reyner Banham observes, " a slow, patient and adaptive growth, ..."[4]

The first installation of the Industrie Pirelli in the Bicocca area goes back to 1908. The company was founded in 1872 by Eng. Giovanni Battista Pirelli. Already by the turn of the century, having gone through a phase of production development and expansion of its own market, it faced the need to create new installations able to cope with the increasing demand of rubber products, and with the production of a new item, the electrical cable. Therefore, under the push of new productions, in 1907 Pirelli purchased an area of 170,000 sq.m. from the "Società Anonima Quartiere Industriale Nord Milano"[5] in the open country side of Milan (at that time), where it began its new plant, Bicocca.

Figure 8: Map of the Bicocca area and surrounds, 1906



The land lay within the neighborhoods of Niguarda and Greco Milanese, bounded by what is now Lane No. 13 (then the road to Cinisello), Via Chiese, Greco railway station (already functioning at that time), Via Padre Beccaro and Lane No.26.[6] Bicocca

4 Pirelli S.p.A., Progetto Bicocca, Milano: Edizioni Electa S.p.A.,1987, p. 35

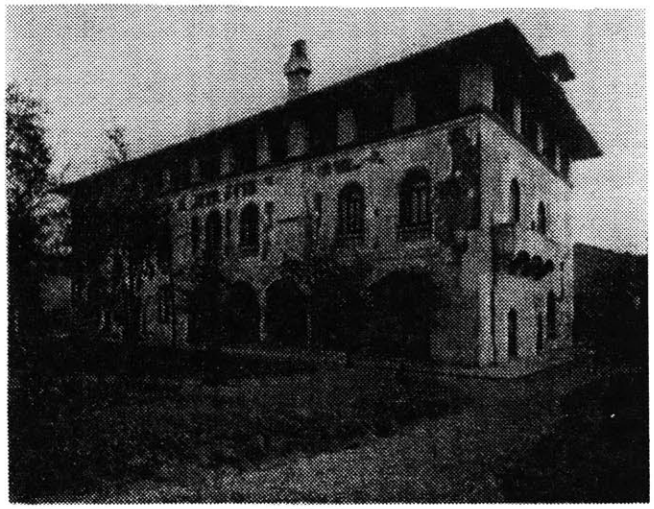
5 A stock joint-venture company operating in the northern industrial sector of Milan.

6 See fig. 8

was linked to the city by a street car line going from Cinisello to Milan; and it was four kilometers north of the "Fabbrica Città di Milano", of Via Ponte Seveso[7] - Pirelli's main production facility in those years (now disappeared).

In 1916 another parcel of land was purchased between the present Viale Sarca and Lane No. 13; it included the "Bicocca degli Arcimboldi", from which the plant derives its name, and other buildings later demolished. The "Bicocca[8] degli Arcimboldi", a great example of fifteenth century rural architecture, was built around 1475 by the "degli Arcimboldi" family. Later, at the beginning of this century, passing on to other noble families, it was acquired by the "Società Anonima Quartiere Industriale Nord Milano."[9]

Figure 9: The "Bicocca degli Arcimboldi", 1922



In 1916 Pirelli bought the property and used the villa, today listed as an historical monument, to set up a museum dedicated to rubber.[10] Later, beginning in 1922 it housed a school for children and another for professional training. Today, the building

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7 Pirelli S.p.A., Progetto Bicocca, Milano: Edizioni Electa S.p.A., 1987; in the introductory remarks, Leopoldo Pirelli emphasized the fast growth of Milan mentioning that "via Ponte Seveso (now Via Fabio Filzi) at the turn of the century was open country side and today is the site of the Pirelli skyscraper, the Regione Lombardia headquarter, the hearth of Milan."

8 "Bicocca" in English means "hovel".

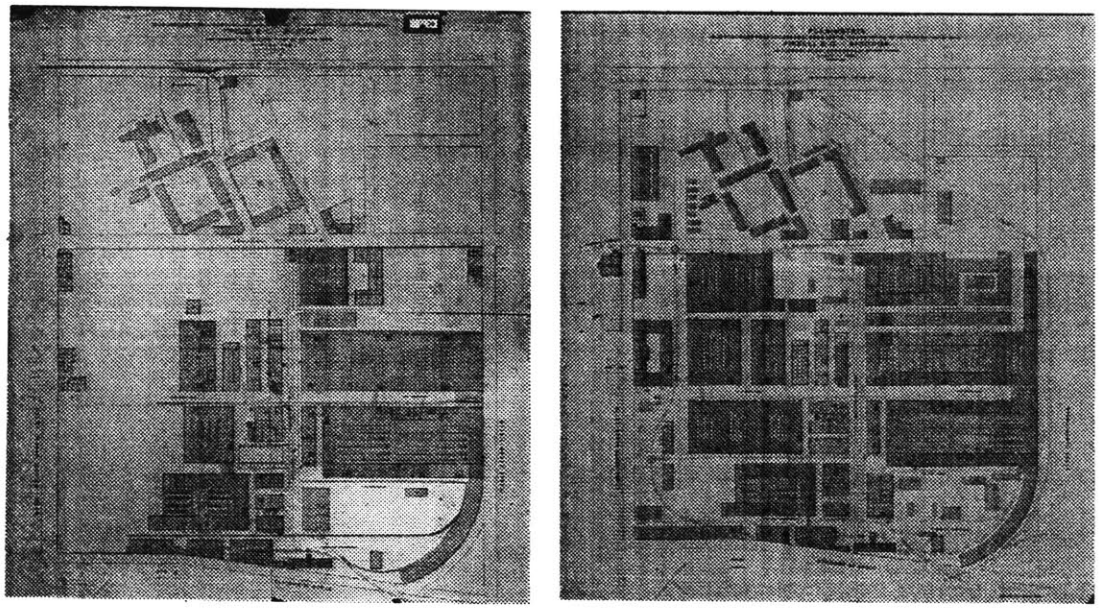
9 See footenote # 5

10 Ibid, p.7

is used by Pirelli to receive delegations and for official ceremonies. The building as it appears now, is the result of successive restorations carried out during the course of this century.

In the same period, installing two of the most important research laboratories on the Bicocca site, Pirelli started a series of experimental activities that had a fundamental role to play in the future development of the rubber industry. The invention of oil-filled cable for high-tension power transmission and studies on the production of synthetic rubber are two of the most important achievements of those pioneering years.

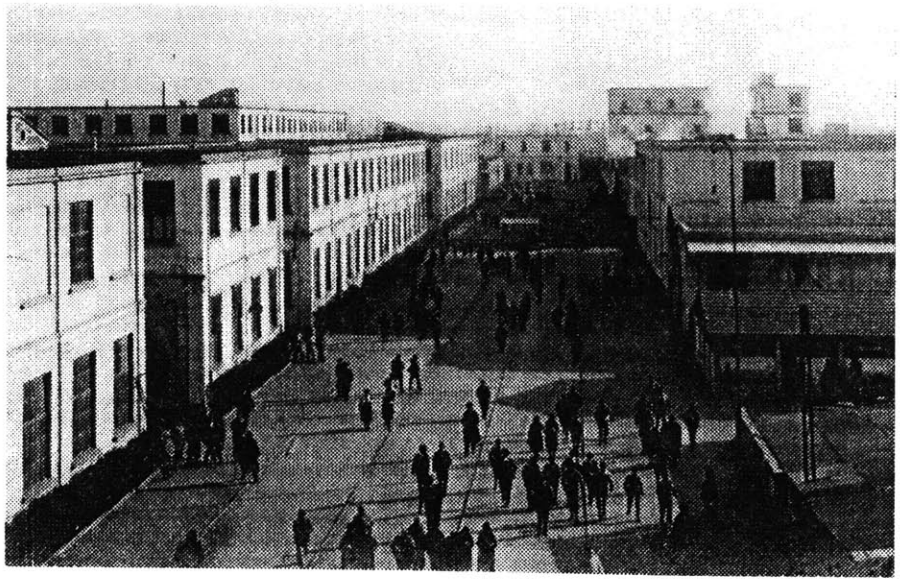
Figure 10: Map of the Bicocca complex in 1917 and in 1922

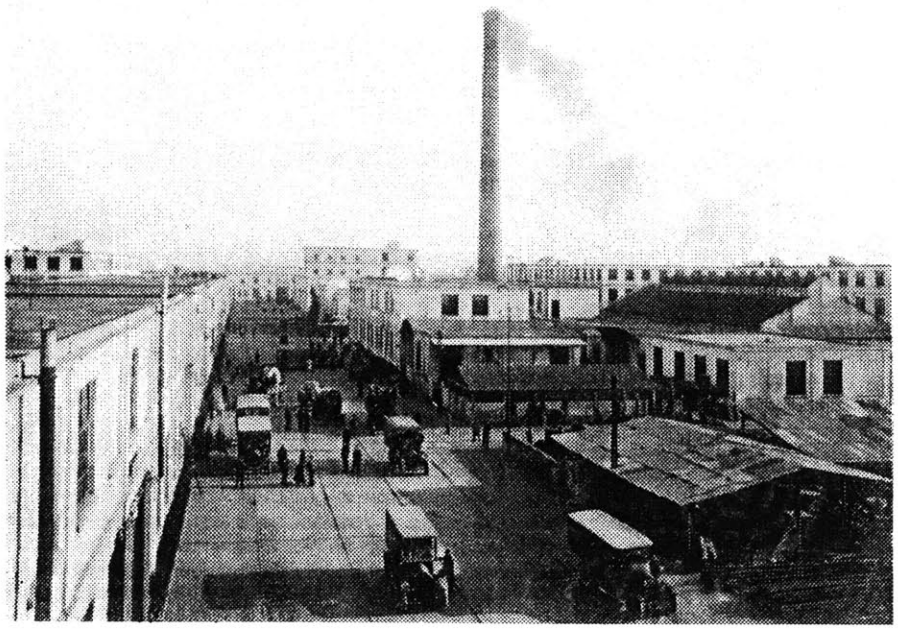


By the twenties the Pirelli-Bicocca plant already had a defined physical structure. The plant was organized on the orthogonal grid of a well defined hierarchical road network system, aligning it with the regional railway. The new rational organization overlay the old original stretches of roads which are still visible around the villa of the "degli Arcimboldi". Construction of new buildings proceeded by filling up the lots generated by the orthogonal grid, until saturation; and after filling up the available land, extra space was created by adding new floors to the existing structures. By then the plant's "tissue" had already begun to appear very compact, characterized by continuous façades

along the main roads, had the effect of "bringing the old city environmental atmosphere into the factory."[11]

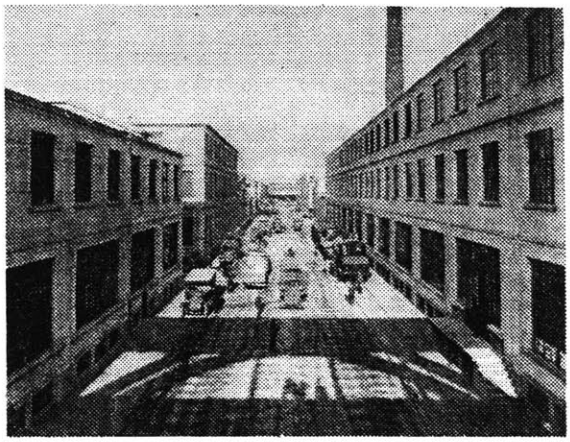
Figure 11 - 12: "Vialone dei magazzini", now Lane No. 14, ca. 1922





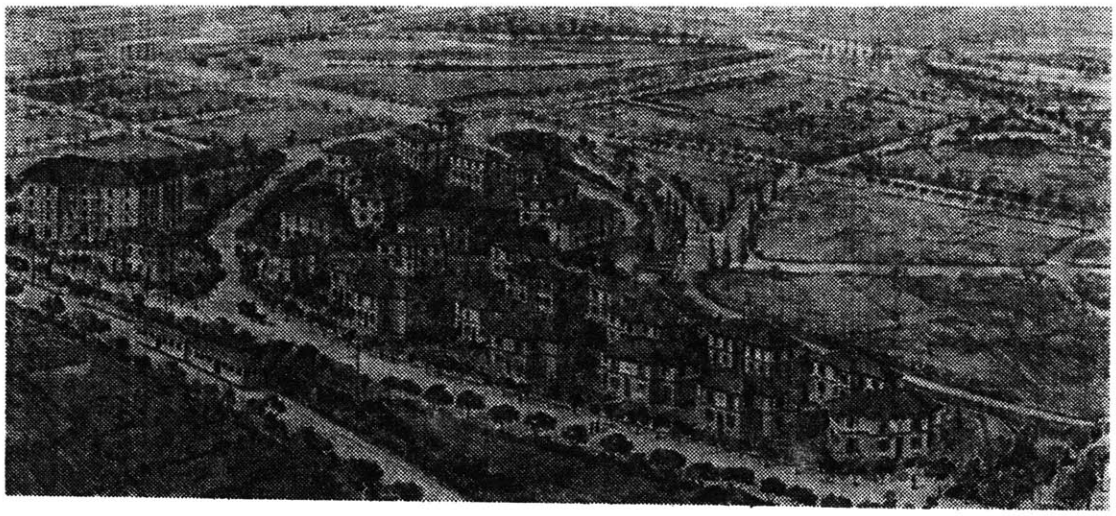
11 Pirelli S.p.A., Progetto Bicocca: An invitation to architects and urban planners to present their proposals for an integrated technological center. Milan: Pirelli, 1985

Figure 13: Via Mediana, now Lane No.7, ca. 1922



Between 1920 and 1923, the facility began to evolve steadily with the construction of sport centers for its employees and the acquisition of other adjacent lots of land. The company also made an agreement with the "Istituto Autonomo Case Popolari"[12] to build the housing for its employees in the newly purchased land, creating the "Borgo Pirelli".[13]

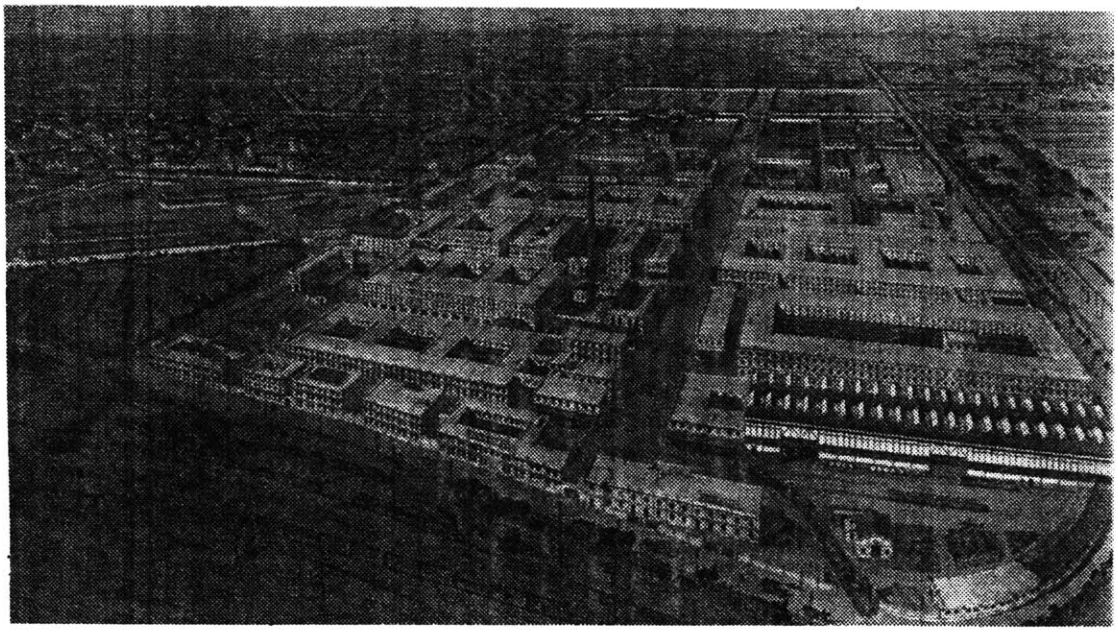
Figure 14: Borgo Pirelli, rendering ca. 1922



12 The autonomous institute for public housing

13 Pirelli S.p.A., Progetto Bicocca, Milano: Edizioni Electa S.p.A., 1987, p.31

Figure 15: View of the Bicocca complex in the mid-twenties



During the thirties, the company acquired other land adding up to the present configuration of the property. In the forties, the most active period of expansion of the Bicocca, the factory took on its present appearance, becoming Pirelli's leading production unit.

Figure 16: Aerial photo of the complex taken in 1947

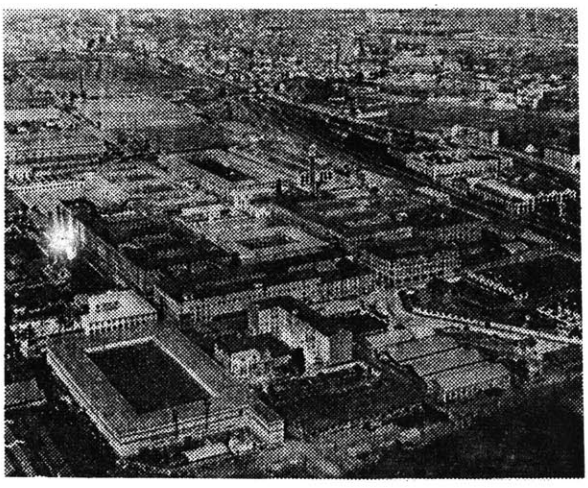
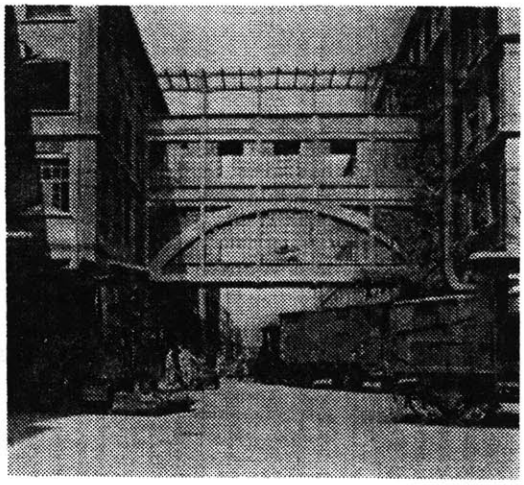


Figure 17: View of Lane No.24, photo taken in 1947



By the fifties and sixties the built-up area totaled 300,000 sq.m. The new constructions along with the continuous operation of adaptive reuse of existing buildings to the new organization of production, did not however change the original character of the facility. In fact, the new buildings, although different from the original ones, were constructed around the existing machinery allowing the introduction of new functions and technologies while respecting the original character and image of the plant.

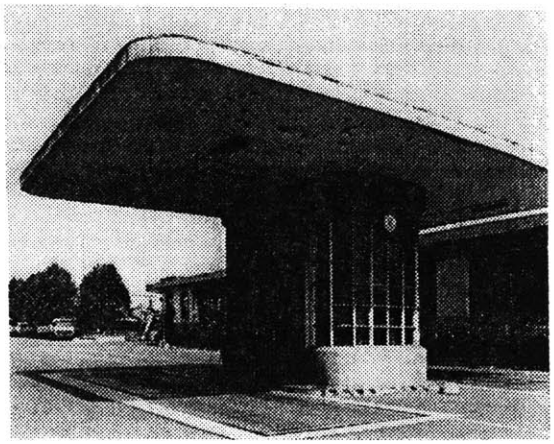
In the mid-seventies the Pirelli-Bicocca area faced a radical caesura. Due to a combination of the company's industrial restructuring and new technical requirements the factory lost its leading position within the Pirelli Group. As a result, some of the activities were moved to new and more suitable plants built in the south of Italy, while the buildings that had become vacant were partially reutilized for the production of specialized items, such as fiber-optic cables and high performance tires for race cars.[14]

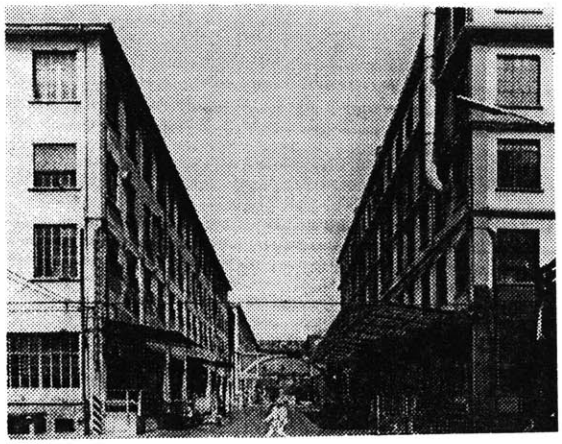
The early eighties marked the nearly total dismission of the plant, whole departments either stopped production completely or were slowed down, only to ultimately follow the same destiny. Today, only a few production activities are carried out in the Bicocca factory, and precisely in the Corpo Centrale block - where only electrical and fiber optic

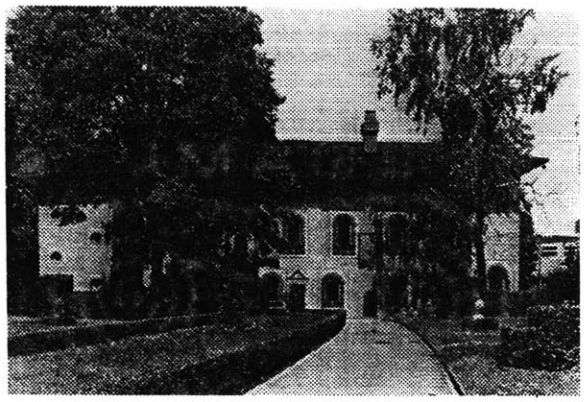
14 Ibid, p. 21

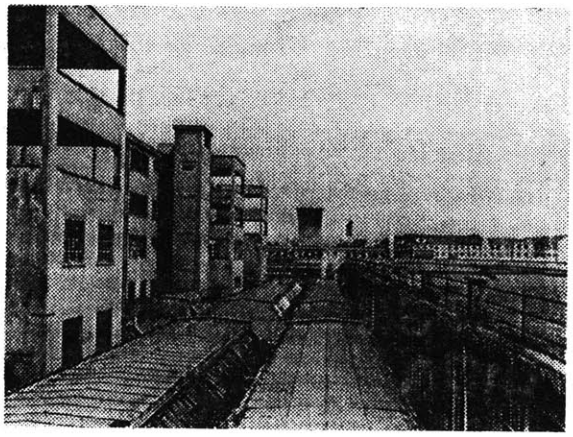
cables and high performance tires are still produced. In addition, in the same block, are located laboratories of research, and the management offices of the companies belonging to the Pirelli Group.

Figure 18 - 22: Views of the plant in the early eighties









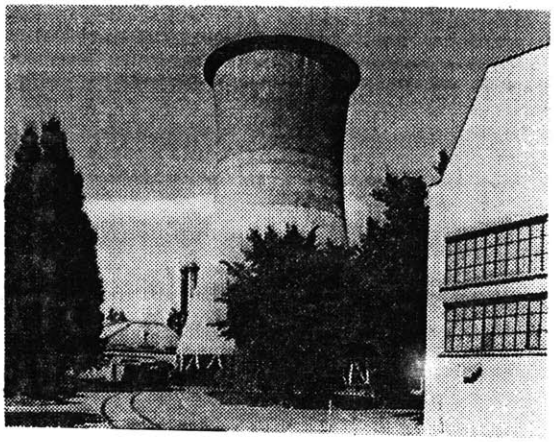
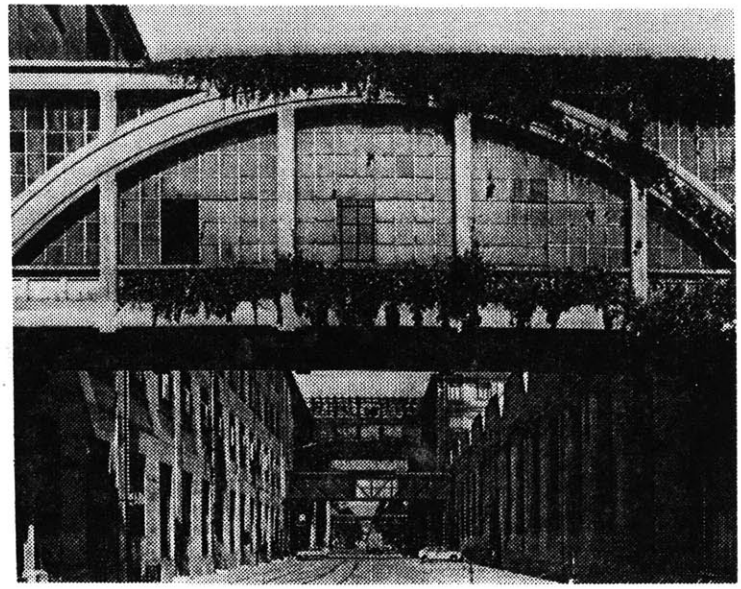


Figure 22: Corpo Centrale, tires division - Lane No. 24



Faced with this situation, some operations aimed at revitalizing the area were put into effect beginning with the mid-eighties. An agreement with the City of Milan Council that led to a plan of "Lottizzazione Convenzionata"[15] could be considered the initial milestone of the whole operation. This plan, which was already introduced as part of the 1983-1986 development program of the city of Milan, but never approved, involved the Albania lot, the Campi Sportivi and part of the Corpo Centrale. The agreement provided to maintain the industrial activities in the area nearest the railway and the alignment of office facilities along Viale Fulvio Testi and Viale Sarca. In particular, it provided for the conservation of industrial buildings in the Corpo Centrale, considered suitable for production for at least another decade. In addition, it sanctioned the transfer of ownership of the Campi Sportivi to the City of Milan, to become public park. The old industrial buildings on the Albania lot were to be almost completely replaced with a series of new buildings suitable for administrative, management, research, and development activities[16]. On the basis of this agreement, Pirelli set up a successive phase of studies that concluded with a second agreement with the municipal,

15 Special program involving the private and the public sectors. It provides the subdivision plan and the land-use changes of a property in relation to a development program for that property.

16 Construction completed in 1989

Figure 24: Aereal views of Bicocca, ca. 1986

provincial and regional authorities. The document generated is fundamental since it has set some guidelines of intervention that were incorporated into the "Bando di Concorso"[17] sent to the participants invited to enter the competition in 1986.

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17 Competition Announcement; for the Progetto Pirelli competition "Bando di Concorso" refers to the information package sent to the architects invited to enter the competition.

C. DISMISSED INDUSTRIAL PLANTS IN THE MILAN METROPOLITAN AREA AND HYPOTHESES FOR THEIR REVITALIZATION

Although the process of revitalization for the Pirelli-Bicocca area presents some special characteristics on its own, it is an example of a more general phenomenon of deindustrialization which has effected Milan and many other European cities ever since the seventies. This process is mainly characterized by the decreasing importance of industry in the local economical context and the increasing availability of land resources originating from the closing down or relocation of manufacturing facilities.

The effects of the deindustrialization process are directly visible and evident in the urban context of the affected part. Its affects are various and different; in large cities, the forms it takes on differ from those of the peripheral industrial basins. In central areas, the greater demand for land actually multiplies the opportunities for re-utilizing industrial sites, and on the whole manages to use up all the disused areas available. Another additional advantage for the urban industrial areas is their proximity to the city fringes offering a wide extent of available infrastructures.

Milan's situation perfectly adapts to the above scenario. Here the phenomenon of interrupting the process of re-utilization for a considerably long period of time (ten - twelve years), seen in other European cities, had little effect. The reason being that spontaneous market forces which guarantee the re-utilization of most disused areas within a sufficiently short period of time seem to be the most effective way to revitalization. This is confirmed by comparing the total surface area of the industrial plants which stopped production (115 hectares of land) and the total surface of the plants that remained in disuse (34,4 hectares), during the seventies in the Milan district. In addition, it has to be considered that the phenomenon is still modest in proportion, partially due to the presence of active market forces, and the effects of a long tradition of decentralization and relocation of industry. These trends have already dislodged many manufacturing companies from their city locations. Although the comparison between total industrial area and disused industrial areas is not very reliable (generally because the data available was gathered over slightly different periods of time and not

always using a consistent method), it nevertheless gives a general picture of the extent of the phenomenon in Milan around 1984. When the process of revitalization for the Bicocca began[18], the number of deactivated plants in the Province of Milan, excluding Milan, reached 234, a surface area of 1,250,000 sq.m. that was 5.6 % of the total industrial area. The percentage is a great deal lower for the district of Milan, where, still excluding Milan, the unutilized land from deactivated industrial facilities was 3.7 % of the total industrial sites. The figure is even lower for Milan, where only about 2 % of the total industrial area was deactivated in the same period. Although the phenomenon was still contained, it was expected to increase in the next few years, mainly within the city, where the dismissed areas or those to be deactivated represented a consistent stake: 3,200,000 sq.m. which is 19 % of the existing industrial area.

In addition to the small and medium-size companies, deindustrialization has also affected "historical" Milanese industrial plants, such as: TIBB, Pirelli, Breda, Marelli, Falck, Montedison, Redaelli, Alfa Romeo, Richard Ginori, located in the northeast outskirts; Bovisa, located between Viale Certosa and Via Varesina; the Portello area in a more central location; and the large sector of Rogoredo in the southwest outskirts of the city.

Beginning with the eighties, the public authorities have turned their attention to those areas of the city, and since then, instruments and urban planning schemes, such as the General Master Plan, the "Documento Direttore del Progetto Passante"[19] and related "Progetti d'area"[20], have focused on them. Therefore, in order to have a better understanding of this case study, it would be helpful to insert the Bicocca in its

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18 Figures extrapolated from the volume edited by Pirelli S.p.A., Progetto Bicocca: An Invitation to Architects and Urban Planners to Present their Proposals for an Integrated Technological Center. Milan, 1985, p.70

19 A General Guidelines Document at the district level. Here it refers to a project still underway which involves the current organization of the railway system of the city by creating a "loop" to connect the railroad stations of Milan. It is here important mentioning that many projects of the Bicocca Competition (as we will see) proposed solution to complete the "passante" rail loop.

20 Program and plan of development involving an area

planning context by getting a quick, but comprehensive glance on the general policies and instruments of planning in Milan.[21]

The Master Plan adopted in 1980 is characterized by its "indicatory" nature. But it has also incorporated legislation in order to overcome the rigidity of the "Zoning" and enter into the implementation phases the exact specifications of the urbanistic and architectonic design of the city. To this extent, the invention of the P.I.O.[22] as an integrative document of territorial specification within the "Programma Pluriennale di Attuazione"[23] for the most complex development operations, introduces in a very original way, an extensive interpretation of the P.P.A.. The result is that it tends to solicit a unitary evaluation of the urban phenomenon and to coordinate costs in the different sectors of intervention. In terms of general strategy, the Master Plan has prevalently focused on the reorganization and integration of the road systems and public transportation systems through the aimed individuation of intermodal and interconnection zones. In addition it focuses on a full valorization of the "already built" city and therefore on a resolute limitation of the residential and "tertiary" developments. It promotes the productive use as both a "defensive" attitude in regards to the decline of the manufacturing industry and as a contrast to eventual phenomena of speculation, but opens with a special legislation based on discretionary decision procedures allowing for the possibility to redevelop outside the above parameters.

In 1983, substantial reduction of the "tertiary", that was more a result of redevelopment and investment previsions than a real decrement of demand, facilitated a sporadic and often casual growth of offices in industrial spaces, besides the relocation to other nearby towns according to operations not always in compliance with the District Plan guidelines. Therefore, the "Documento Direttore"[24] of 1983 reflects on the planning implications driven by the "Passante Ferroviario"[25], by the third subway line to be

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21 The following information are extrapolated from the volume edited by:
Comune di Milano, Milano.le Decisioni Prese, Milano: Gruppo Editoriale Fabbri, 1990, p.14-18.

22 "Piano di Inquadramento Organizzationale"; Organizational Plan

23 "Programma Pluriennale di Attuazione" (P.P.A.); Implementation program for a period of several years.

24 A General Guidelines Document at the district level

25 See footnote # 19

added, on the political direction to take in order to govern the developments of those urban sectors more directly connected with the new infrastructures.

Through the "Progetti d'Area"[26] and the "Studi d'Inquadramento"[27] of 1985, the "Documento Direttore"[28]:

- analyzes and selects the emerging questions promoting as a strategy to overcome the traditional conditions of underdevelopment of the metropolitan area, the adoption of economical roles non in competition, but integrated to other regional poles.
- focuses the territorial potentialities of consistent unresolved urban "voids" made available from the precess of dismissal of large industrial areas and the underutilization of urban installations connected to them, highlighting the scenario from a management of a "capillary" reordering to projects of reinterpretation of extensive parts of the urban "artifact".
- starts, by availing itself with strategic territorial resources, significant processes for the redesign, re-balance, and decongestion of the urban area, pointing to the concrete potentialities of mobile intermodalities and to the creation of new "centralities" in order to break the traditional centrality and the exclusive concentration of values in the most central places of the city.

The increase of the phenomena of dismission of large industrial areas and installations, the opportunity to give perspective again to the debate of urban planning over the reuse of built spaces, the demand of a different relationship between people and environment (beginning with the urban environment), which would translate into a comprehensive design for the city, are the most important objectives proposed through the "Documento Direttore"[29] on the dismissed industrial areas. Its aim was to define an overall strategy in order to avoid tackling those transformations one by one, by proposing clarity of objective, times and quality of intervention and specification of the different phases.

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26 Program and plan of development involving an area
27 Organizational programs and study for development involving a part of the territory
28 See footnote # 24
29 Ibid

Milan places itself in a "barycentric way, spatially and economically, inside a south-European system whose vertices are Barcelona to the west, Frankfurt and Munich to the North, and Trieste to the east."[30] The great potentialities of this system, in terms of innovation and development, are bound to the constitution of a system of related interventions supported by a financial program integrated in a more strategic plan of interventions at a broader scale.

The new technologies generate important occasions for growth of the job market, especially in the sectors of service related to telecommunication and artificial intelligence; "in those activities Milan already confirms itself as a emerging pole in the Italian scenario, even though it is penalized by the weakness and uncertainty of the overall economic-cultural picture."[31] In addition, design problems are contextually set by the need to utilize the "historical" resources represented by the dismissed areas, in order to solve several specific questions for the city about qualitative and environmental issues.

In accordance with the design themes that emerged, the Documento Direttore[32] assumes as general objectives:

- the requalification of the urban environment with the creation of public parks and services and the relocation of some "great functions".
- the recovery of social needs such as housing, services, culture, sport, leisure.
- the development of those functions, activities and services already existing or to potentiate, which give Milan a role of leadership at the national and European level.

The territorial strategy has pivoted on the definition of "vocations" for those large areas most effected by the phenomena of dismission on the basis of a very careful evaluation of the characterizing elements, such as: accessibility, environmental quality, historical

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30 Comune di Milano, Milano, le Decisioni Prese, Milan: Gruppo Editoriale Fabbri, 1990, p.16.
31 Ibid, p. 17.
32 See footnote # 24

tradition, eventual symbolical preexistence. Therefore, the "Documento Direttore"[33] reconfirms many of the "territorial orientations" already in place, among them the technological pole of Bicocca-Sesto S. Giovanni, "to complete with infrastructural systems connected to the cycle of the new communication technologies."[34] All those interventions, "recognized of strategic values in the process of transformation, constitute the "skeleton" of a new multipolar and multi-functional city."[35] The new normative translates into actions the objectives of the urban requalification, the increase of green spaces, the reduction of the urban density; by providing more restrictive planning parameters than those of the standards in force and allotting at least 50% of dismissed areas to public green and services.

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33 Ibid

34 Comune di Milano, Milano, le Decisioni Prese, Milan: Gruppo Editoriale Fabbri, 1990, p. 17.

35 Ibid, p.18.

Chapter II - The Context: Pirelli-Bicocca and the City of Milan

Chapter III: A Chronology of Events

A. THE UNFOLDING OF THE EVENT

Underutilized from the second half of the seventies and subsequently dismissed, the plant underwent a process of reconversion at the beginning of the eighties. In the beginning, the process, moving along the traditional planning paths, didn't show the enormous significance of the entire operation which became more explicit later, especially in 1984 with a series of agreements between Pirelli and the labor unions and Pirelli and the public entities, followed by the unfolding of the competition and intensification of the debate about the dismissed areas. The entire event, rather short considering the slowness of the enormous bureaucratic machine of the planning process in Italy, is characterized by the alternation of phases identifiable by "ordinary" and "anomalous". Those phases sometimes "specify", other times "contextualize" the various phases of the process of revitalization of the Pirelli area.[1]

For a better understanding of the case, and especially of the relationships between the private operator (Pirelli), and the public administrator (Comune, Provincia, and Regione), it seems necessary to reconstruct through the numerous documents produced a sort of chronology of events which marked the most important stages of this process of urban transformation.[2]

The unfolding is largely characterized by three phases. The first one, identified as a phase of "contextualization" of the problem, goes from the Lotting Plan to the Protocol Agreement. The second of "specification"[3] includes all phases of the competition from the competition announcement to the jury report. Finally, the "recontextualization" phase that includes all the events from the competition to the Variant of the Master Plan. Concluding this chapter it will be analyzed the interaction of the winning project and the planning instruments of the Master plan during the phase of implementation, which is not yet concluded.

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1 Livia Piperno, Questioni di interpretazione e descrizione di un' area territoriale: la vicenda del Concorso Pirelli-Bicocca a Milano, Venice, Italy, IUAV doctorate thesis, 1986-'87.

2 The chronology was reconstructed with the help of Marco Prusicky's article:"Cronologia del 'Progetto Bicocca'", Domus No. 698, October 1988, p.73

3 See in this thesis Chapter IV - The Competition, p.35

B. FROM THE "ORDINARY" LOTTING PLAN TO THE PROTOCOL OF AGREEMENT

In 1983 Pirelli and the "Comune" of Milan elaborated a rough draft of an agreement of "lottizzazione convenzionata"[4] which was already provided in the "Ppa" (Programma Pluriennale di Attuazione)[5] of 1983-'86 , involving the lots Albania, Campi Sportivi and a part of Corpo Centrale. The agreement provided to maintain the activities of production in the sector nearby the railroad tracks, and to line up some special functions along Viale Fulvio Testi e viale Sarca. Particularly, it was provided to preserve those building considered still suitable for production activities for at least another decade in the Corpo Centrale and those having special architectural value. The ownership of the lot Campi Sportivi was to be granted to the Comune to become a public space. Finally, the old industrial building on the lot Albania was to be replaced with new constructions housing activities of research, administration, and high-tech.[6]

On the basis of that agreement, Pirelli set up the revitalization process and the negotiation to market the new buildings to companies operating in the fields of chemistry, electronics (such as Philips), and research institutions.

The following year, the Comune and Provincia of Milan, and the Regione Lombardia reached the initial agreement to "define the form of transformation to adopt for the areas (the Bicocca and other dismissed industrial sites) just outside those included in the "Documento Direttore"[7] of the "Progetto Passante"[8] of November 1983". In December 1984, that agreement led to a rough draft of a document by the Industry Council of the

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4 Special program involving the private and the public sectors. It provides the subdivision plan and the land-use changes of a property in relation to a development program for that property.

5 A development program at the municipal level for the period 1983-'86.

6 Assessorato all' Industria della Regione Lombardia, "Piano di Lottizzazione Conventionata per le Aree Pirelli..." first draft of the document, Milan, December 1984.

7 A General Guidelines Document at the district level.

8 A project still underway which involves the current organization of the railway system of the city by creating a "loop" to connect the railroad stations of Milan. It is here important mentioning that many projects of the Bicocca Competition (as we will see) proposed solution to complete the "passante" rail loop.

Lombardy Region[9], whose aims were "to reflect the objectives and the elements of a general strategy for the evolution of economic and production activities of the city of Milan during the coming years; with specific reference to the potential of the Pirelli-Bicocca area in relation to the metropolitan and regional context"[10]. That document was presented as the result of "a phase of collegiate work performed by a team specifically constituted in which were represented the Lombardy Region, the Province, and the City of Milan, and the Pirelli Company"[11].

Meanwhile, in spite of those good premises, the labor unions reached an agreement with Pirelli (formalized in March 1985), after a tough battle , to reduce the workforce by 3,500 employees instead of 6,500 as initially proposed.[12]

Already taking shape in November 1984, was the idea promoted by Pirelli of an architectural competition for the design of a "Integrated Multi-functional Technological Pole."[13] Begun as a simple operation of land redevelopment, the Bicocca case soon revealed its intent to cultivate development ideas of a larger significance. In fact, in the same month of November, the City Council produced another document "suggesting" to Pirelli an outline for the draft of the Competition Announcement.[14]

During the same year, Pirelli involved prof. Bernardo Secchi and the Department of Territorial Science of the "Politecnico di Milano", stipulating a contract, to develop a preliminary analytical study, to prepare reference material, and subsequently to organize the various stages of the competition. After involving the public sector, Pirelli needed only to involve the "academic world", perhaps in an attempt to give more legitimacy and credibility to the entire operation.

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9 Lombardy Region, Document: "Schema di protocollo di intesa tra Regione Lombardia, Provincia di Milano, Comune di Milano, Pirelli, per la restrutturazione dell' area Bicocca e relativi processi di rilocalizzazione e di nuovo insediamento", rough draft, Milan, December 1984

10 Ibid, p.2

11 Ibid, p.1

12 Purisiol, Lucia " Corriere della sera", Milan, 3/28/'84 , 9/10/'84

13 Comune of Milan. Planning Office, Document: Elementi per una proposta di inserimento dele Aree Pirelli di Viale Sarca-F. Testi, First Draft, Milan, March 1985.

14 Comune of Milan. Planning Office, Document: Elementi per la definizione di un bando di concorso sul riutilizzo delle aree Pirelli di Viale Sarca-Testi. Draft, November 1984

January 1985 represents the official starting date of this case study: Pirelli officially proposed the final version of the "Lotting Plan for the Albania Site"[15] which was subsequently approved by the City Council of Milan in June of the same year. The program provided the construction of new buildings for administrative functions and research laboratories for a total of 96,000 s.m. (1,032,960 s.f.) gross paved area; and the transfer of ownership to the City of Milan of the Campi Sportivi lot (48,000 s.m.), which was to become a public space.

In the spring of the same year, Pirelli reached an agreement with the labor unions for the transfer of the tire production to the new Bollate plant (near Milan); and defined a preliminary agreement which consolidates with the public entities (Region, Province, and City), the process of setting up the criteria and objectives for a comprehensive revitalization of its property. Thus, the draft of the document produced by the City Planning Office: "Elements for a proposal of reintegration of the Pirelli areas of Viale Sarca-F. Testi"[16], traced a first hypothesis of urban transformation for the Bicocca. Moreover, there it specified:

> *...the proposal to foresee the formation of a new 'Integrated Multi-functional Technological Center' is held consistent with the physical-functional evolution taking place in the city... which illustrate: singular strengthening of the public transportation and road system infrastructures; a sensible increment of residential units; the reactivation of industrial areas in ample measures to consent and facilitate the processes in place both in the city and in the metropolitan area; the prevision of spaces of various support services for production and economic activities; in local terms consistent with the needs of reducing the concentration in the central areas of the city and promoting requalification and consolidation of the periphery, even though in contrast with the inadequacy of the public transportation system; the prevision and completion of a urban and metropolitan park system as a significant start point of the requalification process for that part of the city and for the city as a whole. This involves, at the government level, a strong promotional action in order to activate interventions in strategic sectors, such as information and communication, professional training, research and development, public and private economic development; without inhibiting the improvement of the environment and quality of life; with the opportunity to begin the process of*

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15 City Council of Milan, City Planning Office : "Piano di Lottizzazione Convenzionata per il lotto Albania" approved 6/4/1985 with deliberation # 562

16 City of Milan, City Planning Office, Document: "Elementi per una proposta di reinserimento delle aree Pirelli di Viale Sarca-F. Testi".(draft, March 1985).

reconversion and requalification of the manufacturing sector in the northeast fringe of Milan, with the Pirelli-Bicocca at its south border which is inserted in a residential context on one side and an industrial on the other. Concrete limitations to the above described reuse proposal are inherent in the context of relations between the Pirelli area and the mobility system of the city, which favors the automobile circulation model and will render more complex the integration of the various parts of the city; and still more in the decaying urban quality in the gravitational sectors of the city.[17]

On the above premisses, the Pirelli Industries, with the Lombardy Region, the Province and City of Milan, stipulates a "Protocol of Agreement" which states the common intention to transform the "Bicocca" area into a "Integrated Multi-functional Technological Pole".[18] The document "constitutes the first step to render feasible a plan of collaboration between public entities and private operators, aimed at an important intervention, productive revitalization, occupational balancing, and territorial reordering in the Milan metropolitan area."[19]

Therefore, in May 1985 the first phase of the events could be considered closed. Pirelli dialogued with the public institutions raising questions dealing with the deindustrialization and the planning tools of the metropolitan area of Milan. Thus, the Bicocca became a context in which to recognize the emerging issues at various and broader levels. The questions raised, as well as the urban analyses of the area, are placed within parameters of a more general breath.

In other words, the necessary and initial conditions to set up the proposal of productive and territorial reordering of the Bicocca, appear delineated through relatively "normal" operations of the planning procedure of Milan. Also, the parameters of reference, seem to be constructed by the different actors in its important characters. In fact, during this initial phase, Pirelli sees the intervention as a solution to the progressive underutilization as well as a possibility of economic valorization of its property; where an intervention spreading out of the Bicocca boundary, involving and benefiting a

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17 Ibid, p.6

18 Lombardy Region, Document: "Schema di protocollo di intesa tra Regione Lombardia, Provincia di Milano, Comune di Milano, Pirelli, per la restrutturazione dell' area Bicocca e relativi processi di rilocalizzazione e di nuovo insediamento", (4/26/185).

19 Ibid, p.2

larger context, represents a "prestigious operation, and "good reputation". For the public administration, the revitalization represents a significant moment to reconfigure the city according to the idea of "Milan of the year 2,000).[20]

Management flexibility and guarantees of short construction times by the private operator and capability of control by the public sector become the most important issues of the debate. The start of the design competition will interrupt this first phase.

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20 Ibid, second draft, p.4

C. THE "NOVELTY " OF THE COMPETITION

On the basis of the above mentioned series of agreements, finalized with the "Protocol Agreement", Pirelli announced a two-phase "architectural-urban design competition for an <Integrated Multi-functional Technological Pole>" sending a "letter of invitation" to twenty of the most prominent architects/urban designers in the world[21], asking them to come up with "schemes developing the future urban and architectonic order of the Pirelli-Bicocca area..."[22] The competition announcement suggested various "project themes" implied by the rich set of problems of the Bicocca area. The most important themes are connected at different levels to its foreseen land use changes from a 'traditional' industrial area to an 'innovative' integrated technological pole: from mass production of tires, electrical cables and other rubber products, to the production of high-technology research and development, and the creation of prototypic installations, products and processes; from the handling of vast quantities of raw and semi-processed material transformed by large machinery housed in buildings whose form and function are limited and determined by the type and size of the machinery itself (run by large quantities of workmen coming from a vast metropolitan and regional interland), to the quick distribution of messages, information and ideas, to the concentration of high-qualified workers and technicians of research laboratories set up by public and private institutions, company and universities.[23] These changes modify the nature of the area and its surroundings, at least in part. In a problematic way it becomes a condition to reconfigure the position of the Bicocca "within a broader territorial, economical, social, and symbolic context...", putting back into play the character of the built space and its dimension, the role of the infrastructures, and the role of the various operators/actors involved. In this transformation the relation between the existing and what is to be maintained becomes important:

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21 The architects to enter the competition were: Tadao Ando, Japan - Gae Aulenti, Italy - Carlo Aymonino, Italy - Mario Botta, Switzerland - Henry Ciriani, France - Giancarlo De Carlo, Italy - Roberto Gabetti and Aimaro Isola, Italy - Frank O. Gehry, U.S.A. - Vittorio Gregotti, Italy - Joaquim Guedes, Brazil - Herman Hertzberger, The Netherlands - Richard Meier, U.S.A. - Rafael Moneo, Spain Gustav Peichl, Austria - Renzo Piano, Italy - Aldo Rossi, Italy - Justo Solsona, Argentina - James Stirling, U.K. - O.Mathias Ungers, Germany - Gino Valle, Italy.

22 Industrie Pirelli, S.p.A., "Competition invitation letter", Milan September 18, 1985, p. 2.

23 Pirelli S.p.A. Progetto Bicocca. An invitation to architects and town planners to present their proposal for an integrated technological center, Milan: Tipografie Pirelli, 1985

> *because of the buildings not immediately abandoned, those for which the relevance of their structures and the cost of demolition become candidates for possible adaptive reuse; and because of the infrastructural fabric, with its large street and railway structure around which is organized the system of the industrial activities of Milan, with the barriers and partitions which they have created, within the urban fabric, whit the built spaces and those remaining open, with the still traceable fabric of historic path.*[24]

Thus emerged the importance of:

> *a fundamental ordering project... which would be adaptable to questions, restrictions, and sets of relations not completely predictable, especially in their quantitative dimensions, ...which could be implemented in successive phases by operators working for various users whose program time-scale couldn't be totally defined at that time... A project which would, above all, look upon the recommendations of current planning standards a non-binding guidelines, but without distorting them. It should have drawn up a realistic and intelligent scheme for the transformation of a broader urban surrounding. In other words, a project which could become of indication, a fertile guideline, a rich methodological base for other cases of transformation for industrial areas.*[25]

In March 1986, the Jury composed by Leopoldo Pirelli, President of Pirelli S.p.A. - Gavino Manca, Delegate Administrator of Pirelli S.p.A. - Carlo Tognoli, Mayor of Milan - Ezio Riva, President of the Province of Milan - Giuseppe Guzzetti, President of the Regione Lombardia - Reyner Banham, Professor of Art History at U.C. - Oriol Bohigas, Professor of Architectural Design at the University of Barcellona - Giuseppe Dematteis, Professor of Geography at the Politecnico of Turin - Giuseppe De Rita, Director of the Censis - Mario Monti, Professor of Economics at the "Bocconi" University of Milan - Bernardo Secchi, Professor of Urban Planning at the IUAV - Manfredo Tafuri, Professor of History of Architecture at the IUAV, closed the first phase of the competition choosing among the eighteen projects presented, the design schemes of Gabetti & Isola, Gregotti Associati, and Gino Valle.[26]

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24 Ibid, p. 11

25 Ibid, p. 11

26 Admitting three schemes (all three by Italian architects) to the second phase of the competition instead of two as initially specified if the competition announcement, later provoked a legitimate polemic about the selection criteria adopted by the jury.

Therefore, it concluded a second and shorter phase of the entire operation, a sort of "event inside the event". A phase in which the intentions, subtended to the schemes produced by subjects which are not institutional, but by those delegated because possessors of a specialistic knowledge, become more explicit. A phase which gives useful information, suggests themes, advances proposals, gives judgements. The attention became concentrated on the character of the area. The general themes as well as the planning tools often remain in the background or only partially, those rich of implications at a more specific level of the history of the area are extrapolated and used as reference. With the Bicocca area the documents produced in this second phase of the operation, the competition from the announcement to the Jury report, entertain a very close, not mediated relationship. The event clearly shows that the modification of a part of the city is its final goal.

That was the second time a consensus was reached - after the "Protocol of Agreement" closing of an "ordinary" phase - the verdict of the jury closed a second phase, in a sense "anomalous", or at least unusual in the planning procedure of Milan. The latter is thus called to operate according to "new" condition yet to be set, which seemed to be now dictated by the competition results.

The competition, also in virtue of the results' significance, seems in other words, to be interrupting the "normality" of the procedure by introducing new subjects in the divulging of the event also to those non directly involved. Infusing new criteria of analysis, description and interpretation of the territory, it influenced the successive dialogs which would usually belong to a more traditional planning practice, even though still open to methodological experimentations.

D. FROM THE COMPETITION TO THE VARIANT OF THE MASTER PLAN

During the summer of 1986, the Municipal Council begins the procedures for the predisposition of a Variant to the Master Plan[27] of the area, an action which was in a sense expected since the beginning, because of the land use change of the area from an industrial to a technological center. Therefore, on July 31, the Municipal Administration produced a document[28] indicating the two fundamental points which would have to define the new planning discipline:

> *...on one side, an assiduous public control must be assured through the mechanisms which allow the city administration to verify beforehand, approve and eventually orient the general organization of the intervention and its two implementation phases; on the other, the discipline of the zone must present elevated characters of elasticity and flexibility, in order to allow the constant conformity of the plan to the functions of the Technological Center.*[29]

The Bicocca area is thus indicated as a "Special Zone"[30] for which must be "defined the total admissible quantities, the obligatory and the admissible functions, leaving the more ample fluctuation spaces within the functions and the total quantity considered invariant."[31] Clear definition of the infrastructural system, the minimum standards and forms of intervention -through "piani di inquadramento"[32], would program the interventions in successive periods, verify the state of implementation, control the function and set up eventual modifications - were further elements for the definition of the Variant. Finally, there was proposed the institution of "a Management Committee for the control of the quality of the intervention and the observance of the aims proposed for the creation of the Technological Center.[33]

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27 The Variant prescribes regulations and standards for the land-use changes of that portion of territory
28 City of Milan, document: "Act of the City of Milan, n. 225355/2015 P.R. 1986, July 31, 1986.
29 Ibid, p.2
30 Ibid, p.3
31 Ibid
32 "Piano di Inquadramento Organizzationale"; Organizational Plan
33 Ibid,

Meanwhile, between June and September 1986, the City Planning office in collaboration with Pirelli, conducted a comparative reading analysis of the eighteen projects. The formulation of the Variant to the Master Plan[34] on the basis of the Competition through the results of which it defined quantities and directions, seemed to represent a moment of "legitimation" of the competition itself. In other words, the competition was thus officially justified by the adoption of a Variant, which also found in the competition occasions for increasing its own compatibility with the intervention.

Between March and May 1987 the City Planning Office further developed the Variant producing a lengthy illustrative document,[35] which defined the area as "Special Zone Z4 - Bicocca", disciplined by a tailored legislation and having the characteristics of "area of urban recovery".[36] The Variant has the job of clearly stabilizing a convincing first scenario suited to guide the realization of the new center for which Pirelli and the City are responsible, and to furnish precise and well coordinated inputs for the three chosen designers in the successive development of the competition and then for the implementation of the final project.[37]

The following month, Pirelli started, on the basis of the Variant recommendations, the second stage of the competition inviting the three selected groups to develop their proposals "incorporating the indications furnished - in their complexity - by the Public Administration, and the prerequisites of schedule, market, and technical realization flexibility, which Pirelli holds necessary to insure the correct realization of the project". The deadline was set for February 15 1988. Then, the chosen project would be presented to the City administration, requesting it to prepare the operative planning instruments of the Master Plan and its specific Variant for the area, necessary for the concrete start of the final design and implementation of the intervention.

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34 See footnote # 27

35 City of Milan, City Planning Office, Variant to the current Master Plan concerning the industrial site denominated "Bicocca"... , (Z.D. 9 -DIS. n. 1209) Illustrative Report, May 1987.

36 Ibid, p. 3

37 Ibid, p. 5

Simultaneously, Pirelli constitutes a scientific committee and a team denominated "Gruppo Tecnologia"[38] to "research in the technology field, individuating, cataloging, and confronting the applicable technological possibilities and potentialities of the Bicocca Technological Center".[39] Pirelli's new initiative was to tackle in an organic way the issues of what the new Bicocca was to mean. The international experts were to map-out in a technological scenario report[40] those world prospects and trends which would have to be taken into account to bring the Bicocca Project to a successful conclusion. The intention was to give an overview of tomorrow's world, not just a description of the state of the art in all field of scientific and technological endeavor, but also an assessment of current innovation in terms of implication for the environment. However, the results of the study did not met the expectations of its premises. It sorted out some of its original tasks, but in a very generic and general way, and on a very broad scale, failing to focus on the specifics of the area. In order to be successful, the study should have been more specific. It should have given clear indications on the meaning of "technological pole" in the functioning of the economical, cultural and political situation of the Milan metropolitan area.

In July 1987, after a series of discussions, the City Council approved the adoption of the Variant to the Master Plan with some amendments to the original text.[41] The lengthy debate amongst the political forces regarding the infrastructural system, in particular the controversial question of the definition of the role and physical characteristics of "Gronda Nord", a major artery designed to pass just outside the Bicocca, contested mostly by citizen organizations and committees because of its character and its form as an "urban highway". However, since the problem involved a street system external to the "Z4-Bicocca Special Zone", the problem was postponed for further definition in a more comprehensive transportation plan. Other consents

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38 The Scientific Committee and the "Gruppo Tecnologia" was constituted by various scientists including: Umberto Colombo, ENEA - Carlo Rubbia, professor of Physics, 1987 Physics Nobel Price - Tomaso Poggio, MIT - Keichi Oshima, University of Tokyo -

39 Industrie Pirelli, Programmatic document for the organization and management of the "Gruppo Tecnologia" work, p. 1.

40 Pirelli S.p.A., Scientific Committee Report, "Science and Technology Toward the 21st. Century and Their Impact Upon Society,"Milan July 1987

41 City of Milan, document n. 183781: Special Session of the City Council, Reg. Deliberation n. 1258, July 23, 1987

reached within the Variant, contemplated the possibility of increasing the residential use, to connect the Greco railway station and the "Passante Ferroviario", and create other lines of public transportation, which would potentiate the infrastructural system of the northeast sector of the city.

From the methodological point of view, the Variant was compiled on the basis of a series of "invariant elements", corresponding to themes and subjects agreed in their individuation and treatment in most of the projects presented. The Variant presented itself as a critical synthesis, supported by "choices exogenous to the projects, which refer to hypotheses of interpretation of the city and the area."

The process which dictated the compilation of the Variant seems to belong again to a phase that again "recontextualizes" the problem of the Bicocca area. The discourse expanded again to include themes of general breadth, involving the whole metropolitan area, and finding intersections and dialectic exchanges with the instruments of a more usual planning procedure. The Variant established a new consensus and constructed the necessary scenario for the continuation of the "itinerary" and new hypotheses that were very intimate with the Bicocca area.

E. THE MANAGEMENT BY GREGOTTI ASSOCIATI AND THE P.I.O.

July 1988 closed the second stage of the competition with the victory of the Gregotti's proposal. The general attention to the perspectives of transformation within a global evaluation of the potentialities of the northern sector of Milan, the "meaning" assignable to an urban Technological Center, the necessity to construct a morphological control global and testable overtime, remained the focus of the intervention that was eager to define the Bicocca as a "recognizable" part of the city. The second proposal of the Gregotti Associati thus conforms to a phase of "specification". However, at the same time, its strong "regulating" character and its configuration as an instrument of "planning management", put itself in a very close relation with the most traditional planning tools: the Variant and the P.I.O.[42] The actions taken by the various actors - Pirelli, Public Administration, several enterprises, and Gregotti Associati - find new intersections. The interventions contemplated in the Variant, whose contents were adopted by the Gregotti proposal, are in fact subordinate to the approval of a P.I.O.

Compiled in July 1989, the P.I.O. has the function to operatively coordinate the various interventions. The Gregotti proposal was then "absorbed" and its management and implementation aspects were developed according to the P.I.O. In particular, specified are the infrastructural interventions, the standards, the functions, and modality and times of realization according to specific interactions between new constructions and "requalification" of the existing. The general objective was to maintain a balanced relation between the economies of the city and economies of the future technological center.

The various interventions proposed into the individuated "compartments" became the subject of verification by Detailed Plans[43], Lotting Plans[44] and building permits; on the basis of which Pirelli has started the negotiation process with the involved

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42 "Piano d'Inquadramento Operativo", which is Operative Organizational Plan prescribes implementation programs

43 refered to a particular parcel of land

44 a plan of sub-division and land-use change regulations

enterprises. The realization of each single building had to occur according to projects - elaborated by different designers - responding to the overall rules and regulation fixed by the Gregotti project. The predominant role of Pirelli has allowed the Gregotti Associati to assume the rule of interlocutor in this phase of realization as well.

On the other front, the relations between Pirelli and the local administration, concerning the realization of the public interventions, are the subject of a "Convenzione Quadro" (a section of the P.I.O.) which regulates the successive building permits inside the units of interventions. This is an important document according to which Pirelli commited itself to give up parcels of lands to the municipality in exchange for the construction of primary and secondary urbanization systems or the issuance of building permits.

Construction was supposed to start at the beginning of 1989, which instead marked the start of a long phase of stagnation. The "Convenzione Quadro" closed the endless series of the planning instruments adopted, highlighting roles and obligations assumed by the private operator. Meanwhile, the various subjects interested in settling down in the area entered more directly into play.

Today, not much has changed form three years ago. The operation seems to have reached a critical phase of stall. The future of Bicocca is uncertain and both Pirelli and the public administration of Milan have to be held responsible. Pirelli, for naively setting up an extremely undefined program and a fragile economical system of support. In addition, the latest unfortunate events: the deal with Continental in Germany, where the company lost more than a third of its capital, and the consequent restructuring of the company leadership after the resignation of Leopoldo Pirelli, have deepened the crisis even further. The public administration of Milan was responsible for the political stagnation in which it has been navigating in the past couple years. Both public and private operators, the main actors in this event, must act quickly to avoid that the companies interested to move in, will soon start to look elsewhere for space. This will transform the present uncertainty into certain death for such an important and interesting project.

Chapter IV: The Competition

A. THE THEME: AN "INTEGRATED MULTIFUNCTIONAL TECHNOLOGICAL POLE". WHAT IS IT AND WHY ?[1]

In the last few years, no part of the western world has been unaffected by the extensive changes in aggregation of research and production activity connected with technological innovation. Some of the more established and better-known cases, like Silicon Valley in northern California, or Route 128 in Boston, have become prototypes, subsequently interpreted and copied in other contexts. Other, less well-known and less well-structured examples have also provided new opportunities for experimental aggregation; or were centers for research and development simply related to technological innovation, without resorting to the stereotyped formulas of the "technological pole".

The existing cases show considerable variety. It is hardly surprising therefore that the names coined for them are often somewhat vague: science parks, innovative areas, technological poles, cities of science, research and development centers, and so on. Moreover, it is interesting that those areas are described in this type of high-flown language. On the other hand, it is significant that such an exhaustive nomenclature is the available taxonomy of the physical and typological characteristics of the main examples of high-tech areas.
This variety of names arising from generic situations are often too inflexible to cover the wide spatial differences of those installations. Besides, a closer look at the most significant examples of high-tech "innovation" - Silicon Valley, Route 128, the science parks in England, etc. show that there is little room for generalizations. However, as far as activity type is concerned, most researchers recognize the basic features which characterize the "innovative" areas, and agree that at least three functions must be present simultaneously:

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1 Facts included in this section come primarily from:
-Pirelli S.p.A., Progetto Bicocca:an invitation to architects and town planners to present their proposals for a "Integrated Multi-functional Technological Center". Milan: Pirelli S.p.A., 1985, p.76.
-"Cittá' della Scienza", Urbanistica 80, October 1985, p.6

- research activities applied to the use of new technology in the production of goods.
- production in rapidly developing sectors, oriented towards using a highly-qualified labor force.
- personnel training and up-dating centers able to guarantee a high level of specialization and to train a basic work-force for the simpler, more repetitive task.

These activities are usually found in association with universities and special training activities, or with research and development centers within the university sphere, or private industry and private companies. There are cases in which the installations are considerably dispersed, and others where they are densely grouped together. The geographical concentration of innovative activities actually seems to be more beneficial than the same activities scattered across the territory because of their great synergic effects. In addition, it generates considerable external economic advantages, a sound network of specialized services and the presence of a specialized labor marked of technical/scientific personnel.

In order to effectively invite and attract innovative activities, studies have shown that the development area must:[2]

- be located within or at least close to a medium or large urban center, capable of offering adequate infrastructures and services;
- have a university center within the metropolitan area
- include technical/scientific research institute associated with the university
- guarantee a market for housing in the surrounding area
- offer the best infrastructure conditions for quick access to communication networks
- take advantage of a greater area of resources, by placing the technological pole in a mature production context

2 Ibid, p. 76

Finally, on the subject of promotional procedures and development methods used for technological poles, the main studies[3] carried out have narrowed the possible scenarios down to these four:

- the spontaneous generation of aggregations around university and research centers
- the development of an area with good facilities situated in already heavily industrialized districts, usually in peripheral and suburban areas
- recovery and reconversion of a district in which the original settlement functions have been exhausted
- the enlargement and exploitation of existing research and development areas by means of the process of company relocation

All the above reliable location factors mentioned seem to fit the situation of the Bicocca area. Some, those related to the relationship between urban area and local industry, were already a potential part of the site's resources since the time of the competition announcement. Others, concerning access to communication networks and the integration of research and development activity, were to be developed through planning and project schemes, of which the competition was an integral and essential part. It is worth pointing out that the location of Bicocca and its internal characteristics practically synthesize the development modalities referred to above. This underlines its great potentiality to be revitalized into a high-tech pole.

3 Ibid, p. 78

B. THE ANNOUNCEMENT AND THE PROGRAM

Generally, when a competition is held, it is publicized through the projects, especially the winning ones, and sometimes one is familiar with the announcement and the report of the jury. Less frequently one considers that these documents are only a part of a long and complex series of actions that form an event. "They are actions related to each other, question and answers, assertions and objections. They are evaluations, judgements, and decisions that take on their full significance when seen as actions that have a particular communicative value amongst themselves: moments of a dialogue, from a conversation between different characters, for the role they take on and the kinds of knowledge of which they are the bearer."[4] It is through this sort of multifaceted dialogue that the parties involved explore the possible lines of change and their implications within the variety of all possible transformations.

However, the above is true only in part for the Bicocca. In fact, this event, far from reaching its completion, is characterized from the beginning by a high degree of uncertainty which will at the end jeopardize the whole operation. The announcement did not propose an image of the new technological city in total opposition to the existing industrial one, nor did it set the theme of a reflection of advanced technologies in the form of the new city for which a representation had to be found. If anything at all, it was a symbolic picture of the uncertainty about the identity of those involved, about the particular nature of the function to be installed, about the type of processes to be set up, and about the procedures and types of assembly of the operations to be put into effect to obtain an objective that is still vague today.

Earlier, the competition was defined as a phase of "specification" of the operation. This can be explained as follows. The "dialogue" characterizing this phase of specification moves from general issues of the metropolitan territory, as seen in the first phase of "contextualization", to more specific characteristics of the Bicocca itself. In addition, from the documents belonging to this phase, it clearly emerges that they give rough indications, advance some propositions, suggest themes (even though very vaguely),

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4 Pirelli S.p.A., Progetto Bicocca, Milano: Edizioni Electa S.p.A., 1987, p.20

and give judgements on the "physical" aspects of the area. Moreover, the general contents of the planning instruments are not re-proposed here; of those instead, only the elements in close relationships with the area are highlighted. The urban character of the area and the fact that it is the outcome of planning extended over a long period of time, were put forward as values in the announcement. In addition, the description of the area presented, was organized around a series of elements that built up an interpretative picture. This must have, in different ways, influenced the work of the designers, causing them to assume the importance of the place's history and the existing structures of the site.

Refereeing back to the announcement, the "opening move"[5] of this "event in the event" was started by the "Letter of invitation" to the architects. The "Letter" participates in this phase of "specification" because it contains specific references to the area. It refers to the documents of the previous phase in order to explain to the addressee, the architect, the situation of departure.[6] The Letter describes the design themes and redefines the area through the support material enclosed in the package sent to the architects and the "Lotting Plan". Finally, it lists the support material provided, the material requested by the deadline, the phases of the competition and the Jury. The Letter sets up "rules and regulations" and the necessary premises for the start of the competition. It represents the moment in which everything discussed in the previous phase takes a precise direction through a design competition.

The announcement was conceived as "an action capable to provoke reactions, lays down time limits and procedures for the dialogue, and defines the fields of possible worlds."[7] In the Bicocca case however, in contrast with other similar experiences (the International Consultation for the Lingotto of Turin, for example), the announcement underlines the open nature of the competition itself. In addition, it highlights the consequences of a cultural choice, but also a number of conditions that preceded its

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5 Ibid, p.20

6 Industrie Pirelli S.p.A., "Lettera di Invito", Milano, September 18, 1985, p.1-4. Here the architects are "reminded" of the itinerary of the event up to that point. The letter is a sort of "up to date" report in which are highlighted the most salient points .

7 Pirelli S.p.A., Progetto Bicocca, Milano: Edizioni Electa S.p.A., 1987, p.20

actual drafting, that is: the specific nature of the case, the promoters themselves, the actors yet to be identified and involved, and therefore the complex decision-making procedures into which it has to fit.

The first stage of the competition doesn't call for a precise definition of planning objectives in terms of quantity of functions to be located in the Technological Pole. Neither does it define clearly the exact delimitation of the area or the construction times. It rather sets out a close set of problems that arise from the process of transformation. Most importantly, it does not impose a precise problem to be solved, but it organizes the case as a dense problematic matter. Therefore, the projects have been conceived as a process of inquiry which attempt both to piece together the vast problematic of the site and overcome the indeterminacy of the thematic. While this way of proceeding does not set rigid thematic constraints, it does suggests the "sphere of the possible", as it is mentioned in the competition announcement, marking a distinction between the probable aspects, possible ones, and desirable ones. This already constitutes a first level of selection carried out in a situation crowded with problems. This selection has made a particular thematic available to the participants. It has contributed to form part of the image connected with each of the projects; but also it has resulted in other elements, such as the result of further selection and interpretation by the planners.

As I will further explain in the sections to follow, the competition participants have broadened and deepened the original thematic and in a number of cases have introduced shifts into some of its peripheries. This shows, as it has been previously explained, that contrary to a normal competition procedure, for Pirelli Bicocca there is no straightforward connection between the thematic of the announcement and the projects. In fact, the announcement and the proposals do not stand in a fully clear relationship of "request and response". Usually, to a request is assigned the task of furnishing the data for a problem and pointing out the context of solution, while the response is supposed to make the best use of the material supplied by the request and employ a theory of interpretation that is able to utilize the data in a homogeneous way.

However, the competition announcement, generically asked the projects a "functional specification and a definition of the characteristics of new use of the area, today partly

disused and destined to a total abandonment."[8] The reason of this vagueness in the formulation of the theme lies in the fact that it was not clear at that stage what was intended by the term "technological pole". Moreover, this may have been one of the many reasons for setting up the competition in the first place. In fact, as stated earlier, the most important outcome of the competition was not intended to be the physical design of the technological pole, but rather a catalogue of conceptual ideas about the way to create, or better recreate, a piece of urbanity in the city of Milan. The preliminary agreement between Pirelli and the public authorities, which is partially incorporated in the competition announcement, lays down in general terms what the characteristics of the Technological Pole should be:

> *...public and private laboratories and centers for research and development, industrial activities with a high technological content; centers for information processing and telecommunications and to provide services and technical assistance to the laboratories; centers for professional training, administrative offices, meeting-places and general facilities capable of guaranteeing the efficient functioning of the activities installed in the area and high standards of quality of life of those who work here.*[9]

This vague definition of the new place's functions is in the fact that behind the definition of Technological Pole, Science Park, etc., lie a varied range of functions and activities.[10] But it is not only on these aspects that the schemes are asked to answer to in this first phase of the competition. In addition, they should produce a clarification on a number of specific problems relating to a phase of negotiation amongst all parties involved, yet to be concluded. Therefore, the architects are called on to make a decisive contribution by exploring the problem, and coming up with a tentative solution.

The competition announcement indicates in this way the transformation or reconstruction of a part of "city within the city"[11], the change from the old to the new. The old is represented by the area, object of the competition, which while it has lost is original function still conserves a form of its own. A form characterized by a heavy

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8 Industrie Pirelli S.p.A., "Lettera di Invito", Milano, September 18, 1985, p. 4

9 Ibid, p. 2

10 See also Chapter IV, Section A. The Theme: A "Integrated Multi-functional Technological Pole" What is it and Why.

11 Pirelli S.p.A., Progetto Bicocca, Milano: Edizioni Electa S.p.A., 1987, Introductory remarks

presence of infrastructures which has influenced its surrounding. On the other hand, the new has the need to be expressed by an architecture, in the same way as industrial architecture has translated the old organization of labor into images of its own. Of course the problem arises when the proposals are asked explicitly to maintain some of the buildings " for which demolition costs could be so high to impose revitalization rather than demolition."[12] So that the problem becomes one of combining the old with the new, establishing a relationship with this part of city without considering it as immutable or changing it radically. At the same time the designers were implicitly invited to look at this project as an opportunity for a change not just in terms of the immediate surroundings, but involving the larger metropolitan area.

The problems concerning the relationship of the area with the city were presented as part of the outcome of the history of the urban sector. By describing them as the "results of an interrupted plan", the announcement was implicitly inviting the planners to try to complete it in order to attempt a sort of historical continuity and to satisfy needs of accessibility.

The last aspect of the problem examined here, arising from the announcement, deals with the multiplicity of operators involved in the operation. Some of the operators presumably involved, especially the companies supposed to be moving in, were at that stage still to be defined. Thus, the operation of revitalization had to be carried out in different stages. Therefore, given this situation, depending on a set of factors yet to be determined, the time foreseen for realization was relatively long. This meant that the solution had to take into consideration changing conditions in order to be successful. That is why the competition announcement called on for "a scheme that should have the fundamental character of being flexible (...) introducing order into the urban and architectural environment (...) without imposing a well defined solution."[13] Unfortunately that was not enough since, as I will explain later, other factors have delayed the project's "take off" stretching the estimated completion time indefinitely, and making the future of "Technocity" uncertain. Today, the destiny of the

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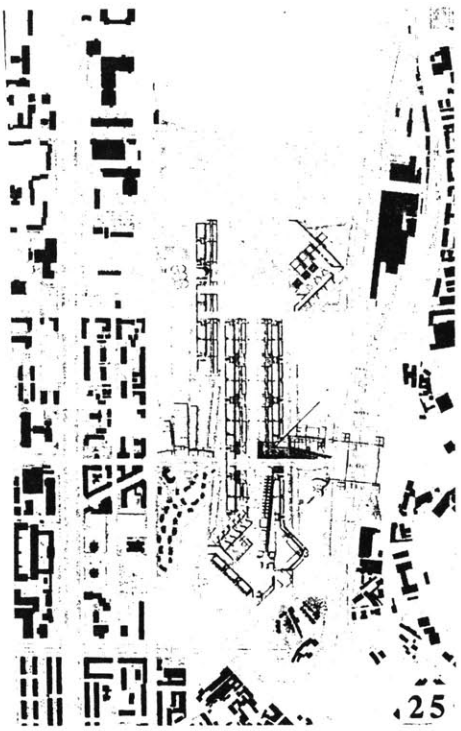
12 Industrie Pirelli S.p.A., "Lettera di Invito", Milano, September 18, 1985, p. 6

13 Ibid

technological pole is in a critical situation due to political stagnation, and it risks seriously sinking for ever.

C. FIRST ROUND: A SYNOPTICAL VIEW OF THE EIGHTEEN ENTRIES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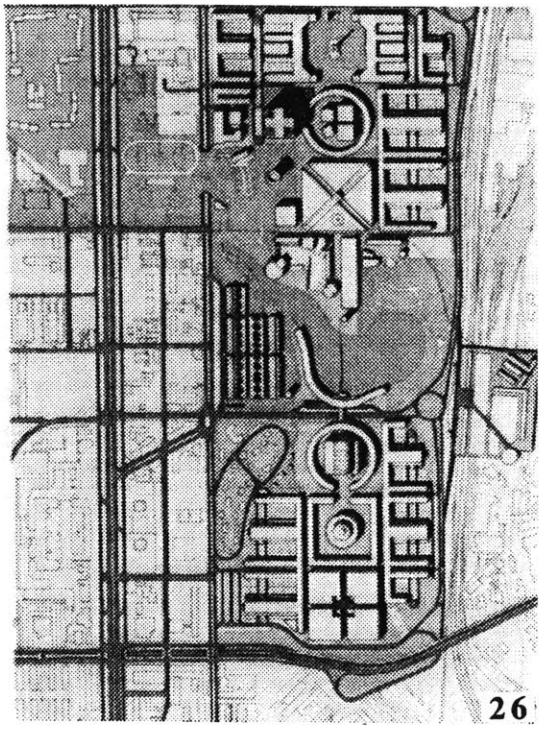
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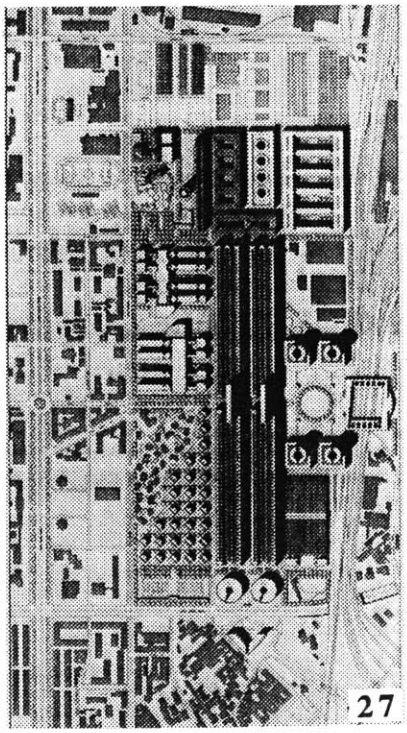
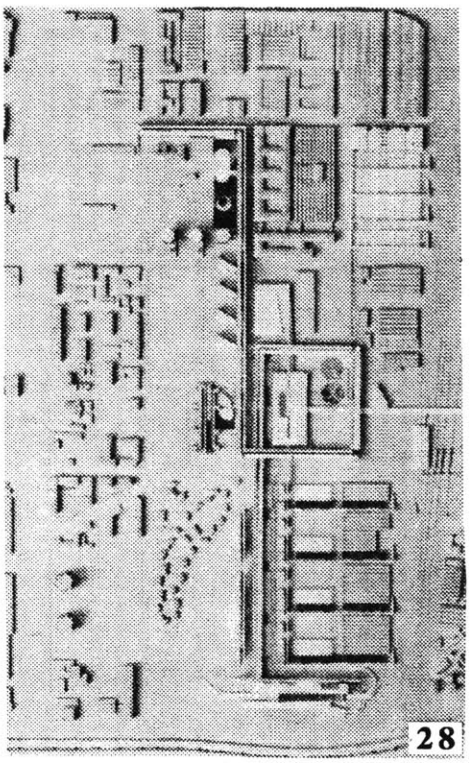

27

25.Aulenti: The project defines a central structure composed by two allignments which open up to include some special buildings

26.Aymonino: Some buildings defining large spaces stand as architectural "objects" in the green.

27. Botta: The area is organized by three bands: the external one includes the pre-existent pieces, in the central one are, on different floors, the functions connoting the technological pole and much of the residential accomodation.



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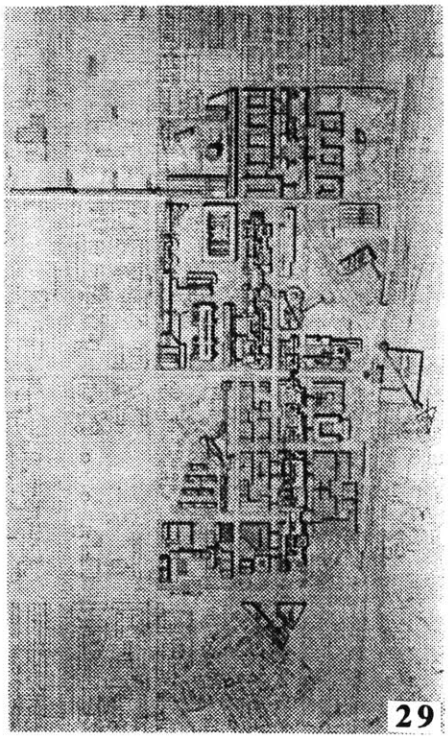

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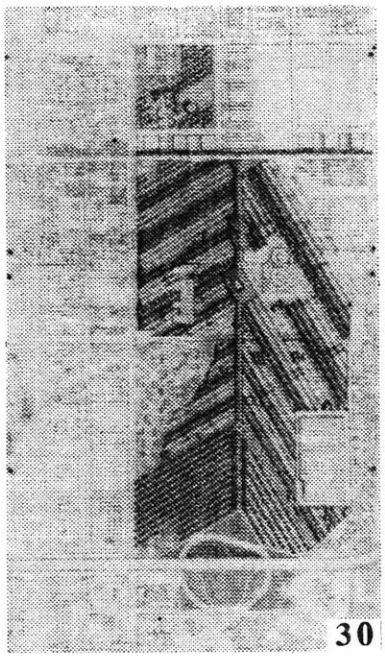

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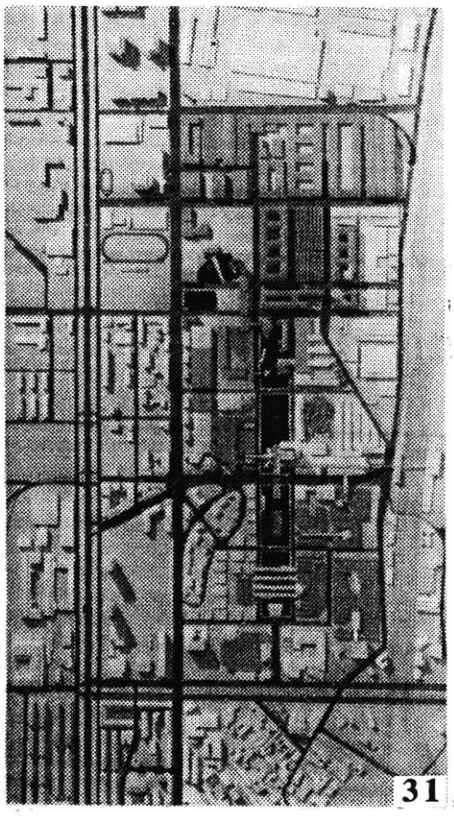
28. Ciriani: A large and dense linear structure holds together the different parts of the techological pole.

29. De Carlo: In the center of the area is the "dorsal tissue"; the area around it connects Bicocca to the surrounds.

30. Gabetti: The ancient geometry of the agricultural land and the modern one of the industrial fabric are reconciled in the spine of the central arcade, but are separated by a wall.



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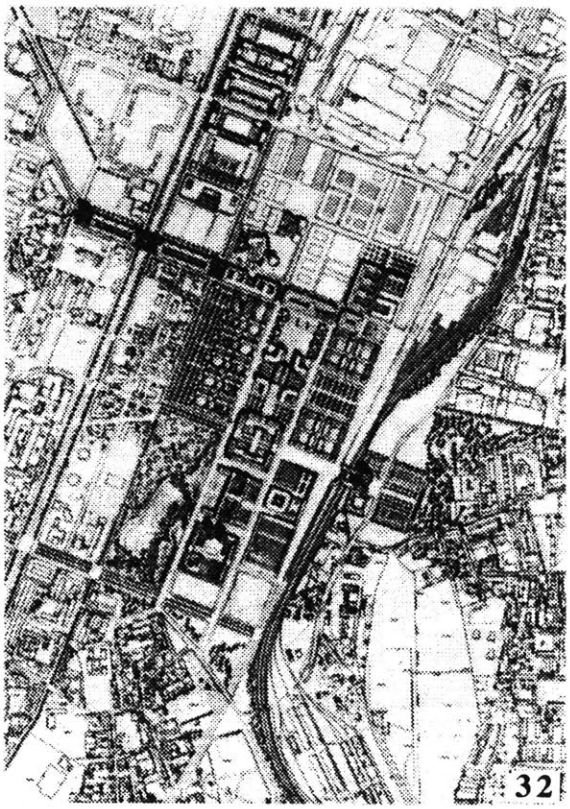

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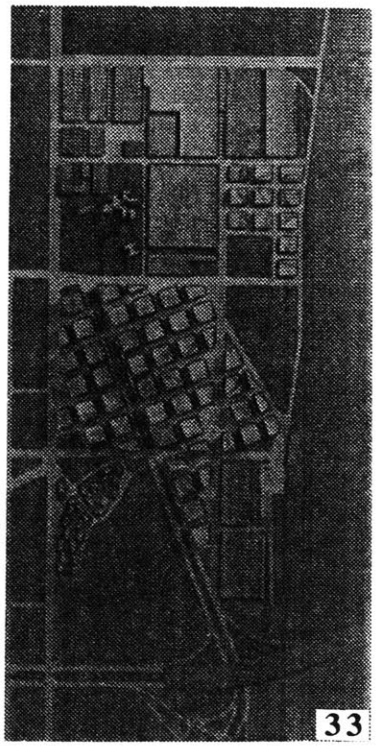
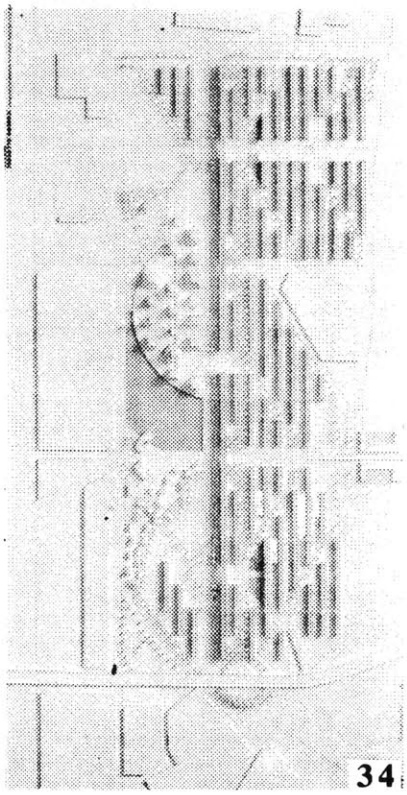


33

31. Gehry: The new buildings creep in the interstices of what exists, turning the present structure progressively obsolete.

32.Gregotti: The articulated "Central Blocks", with their huge scale, contrast with the surroundings fabric.

33. Guedes: Building density is concentrated in a limited area; the new grid orientation negates the existing one.



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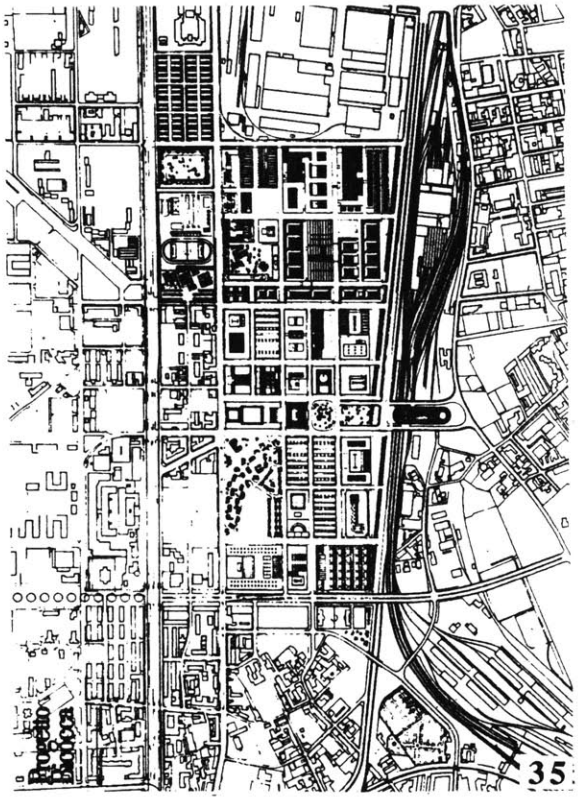

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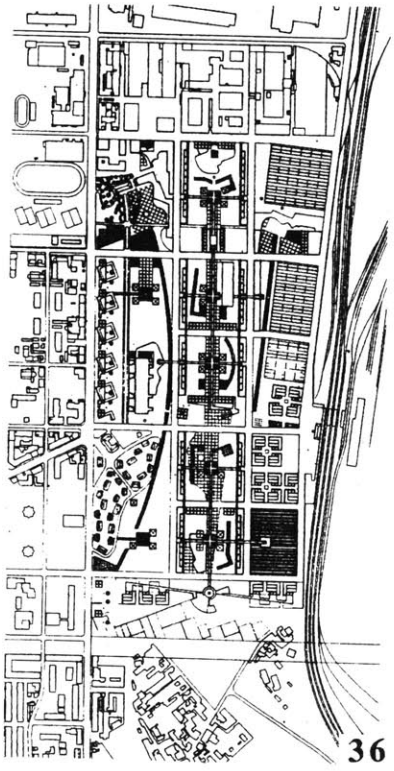

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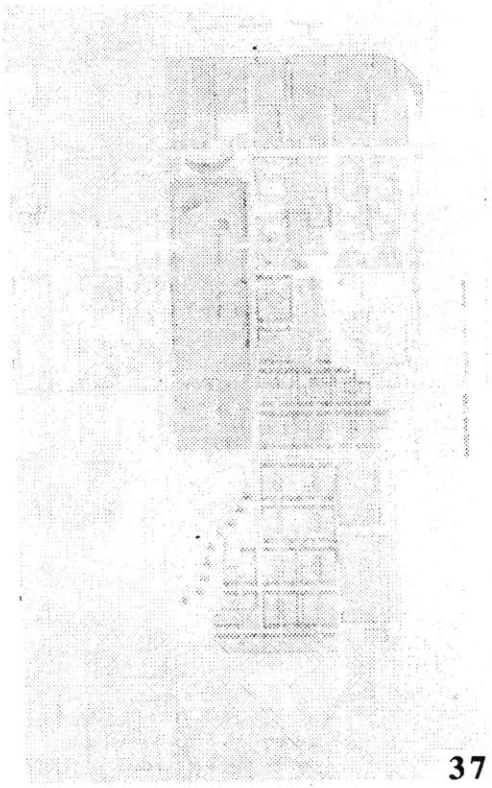
34. Hertzberger: Buildings and routes define a regular and repeatable pattern.

35. Moneo: The extreme care for the definition of the layout rather than of the architecture is made evident by the orthogonal grid which organizes the project.

36. Meier: The project is characterized by the presence of a main building containing a series of courts animated in different ways.



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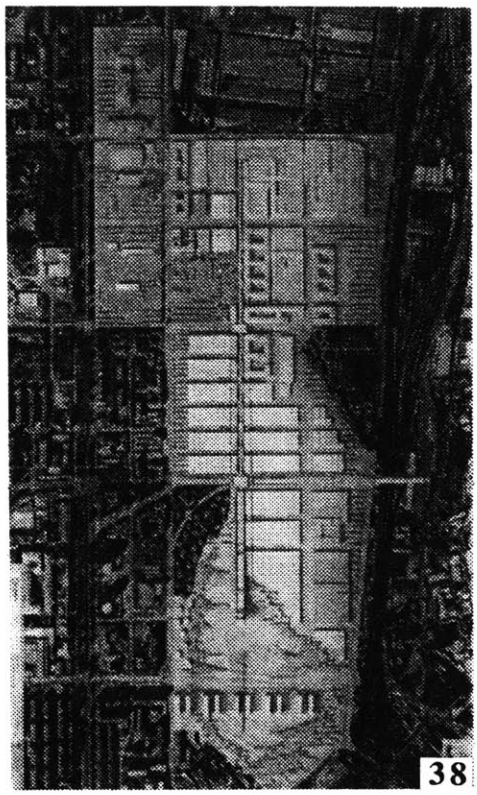

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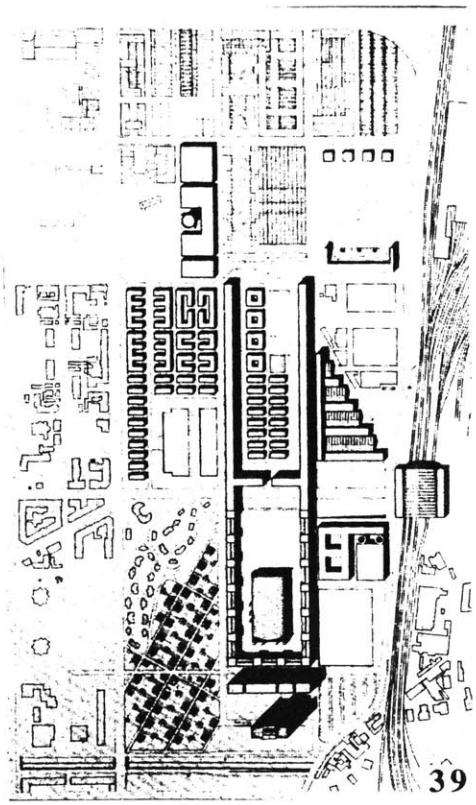
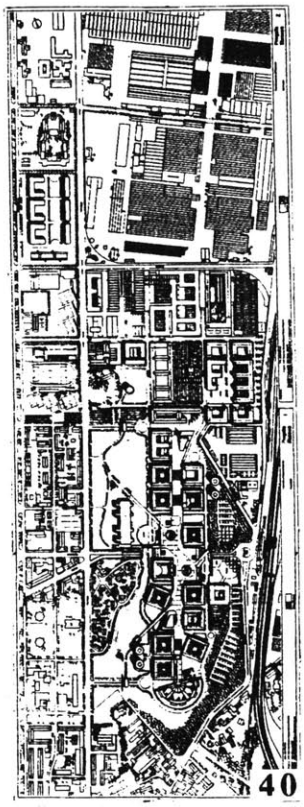


39

37. Peichl: A huge rectangular court encloses the "central park" differentiating itself from the rest of the fabric.

38. Piano: The proposal is characterized by the central "strip" which crosses the area and organizes the complex.

39. Rossi: The large building enclosing the Broletto and the piazza is counterposed by the articulation of the building units.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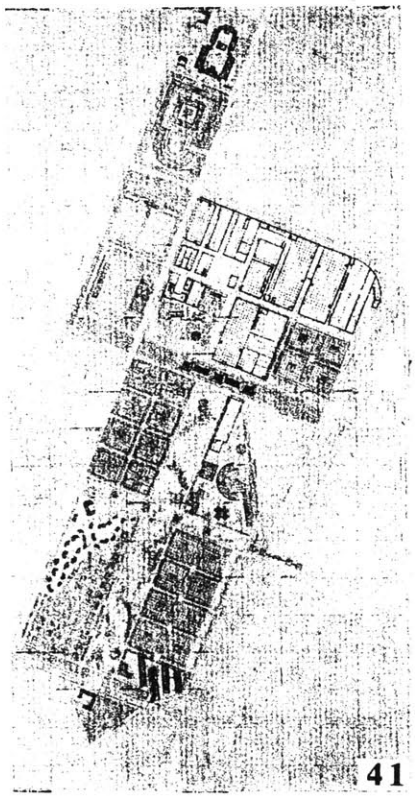
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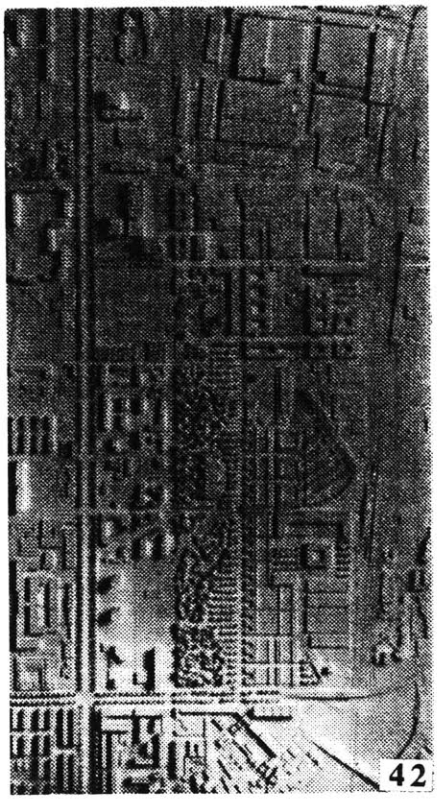
42

40. Solsona: A sequence of buildings composes a sector of a linear city.

41. Ungers: The project proposes a nineteenth century grid, which can accomodate the many combinations of bulding units.

42. Valle: A central street organizes the passage from the park to the modular tissue of the technological pole.

1. Towards a Theory of Urban Modification

In general, this second phase of the entire "operation of modification" for the Bicocca is characterized by a series of "devices". From the previous section, it appears clearly that the eighteen projects for the "Progetto-Bicocca" competition are first of all the direct outcome of the announcement. The announcement was an "ignition device" capable of "starting" the design process, the formulation of conceptual ideas, and of generating a second device: the proposals. Subsequently, the Jury laid over them a net of interpretative arguments, and evaluated them. This is another "device". In this section I will start by analyzing those three devices from a critical point of view, in order to show how they relate to each other, and especially to identify the debate they are capable to entertain. Obviously, this can be done in many different ways. First of all, by analyzing their strategic functions, then, by analyzing the relationship amongst the three devices, in order to sort out the reinterpretation and subsequent modification of the theme initially proposed; exploring the possibilities to redefine it and expressing it by architectonic forms. Finally, by examining the relation between the proposals and categories of analysis, of interpretative arguments, through evaluation, and through various theoretical positions.

Let's begin here by identifying some points of a theory of urban modification which seems to emerge from the proposals, the competition announcement, and the Jury report.

- The knowledge of the functional character of every part of the city does not seem today to carry the constructive architectural and urbanistic role it used to carry in the past. "New technologies," together with many other "innovative" uses of the territory, do not seem able to represent themselves with specific architectural forms. Thus, the gap between the first machine age and the future of the new technologies appears in this sense the most important issue for the new thinking of the city. To put this issue in Bernardo Secchi's words:

  > *...No doubt this ambiguous divorce between the functional asset of the territory, with the city and its parts, and its morphology is largely connected to our incapacity to predict, to the shrinking of the temporal and spatial horizon inside which the productive, managerial, financial programs are defined, inside which the social policies are drawn. This is largely associated with to the loss of a unique organizing center of the probable*

world. In the last few years all this has been accompanied by an intense rethinking around the permanence, memory, and slowness with which the collective imaginary moves, together with its capacity to build or modify symbols and metaphors, establishing connections of meaning between the different levels of realities. This is the reason why we are witnessing, throughout Europe and the western world, the construction of projects of urban architecture which are based on out-of-focus images. This modifies and reverses the traditional relationships between different branches of our knowledge; it does not exclude them, but it orders them in a different way.[14]

- Urban modification is typically a reflexive operation of interpretation and elaboration of the rules governing the functional and morphological asset of a specific part of the city in relation with its large metropolitan area. This operation also involves the economical and social role of that part of city being transformed. The majority of architects, and not just on the occasion of the "Progetto-Bicocca", seem to be looking for continuity, welding and re-sewing the existing city; as we will see, this is expressed in different ways.

A large number of designers, not just in this occasion, is researching a continuity with the eighteenth century city, and this is embarrassing. Certainly, there are many ambiguous reasons for this "nostalgia", amongst other the delusion for the results of consuming in those places an intense experimentation, a continuous confrontation among various "ideas of city". What is embarrassing is the fact that the disappointment for the existing city, the anxiety of rediscovering a rule of composition of urban space, is satisfied by a naïve and disenchanted return to the starting point of a story, that of the modern city. This could have followed other routes, but for many years we have got used to observe it without form of pity.[15]

- Urban modification is an operation which maintains with the project very different relationships from those of "construction", and typically from the construction of the modern city. It is an operation of continuous writing of an open text always partially unfinished. In fact, its sense, role, function, and formal definition will be completed progressively and integrated with other texts, with other parts of the city and of the territory. As Secchi concludes, urban modification is exploration, not demonstration.

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14 Bernardo Secchi, "Le occasioni del Progetto-Bicocca", Casabella, No.524, 1986, p. 5

15 Ibid

2. The Re-interpretation of the Theme

If one considers the eighteen proposals for the Bicocca to be representative of today's architectural debate, it becomes particularly difficult to recognize a flow of common references. Rather, it is easier to identify some analogies in the expressive techniques of the competition drawings than in their references to general assumptions and to common design experiences.

The competition announcement can be obviously held responsible for the complex outcome that it generated. Generally used as a tool capable of giving precise design directions and indications, in this competition the announcement did not pretend to offer nor to ask for a clear hierarchy of references. More vaguely, it proposed a sequence of themes and questions around a "territorial area", "the fading of its functional character", "the occasions and limits of its revitalization", "the fragility of design models". None of these themes was able to gain central importance. And perhaps this is the reason for the great variety, the complexity, and richness of the proposals.

Discussing the eighteen projects of the "Progetto-Bicocca", or even simply establishing an order, is not an easy task. We are not confronted with proposals which might be classified according to the way they have solved an identical and well-defined problem. The designers added something, selected and sometimes focused on a particular aspect of the problem they were confronted with. This emerges from the different languages of design used and the arguments presented in the drawings and in the written reports. By highlighting each one of the following words: -"pole", "industrial dismissed area", "urban sector", "projects"- the competition announcement proposed a thematic grid, without establishing any preferential link, nor fixing any starting point. It was up to the architects to decide both the setting of a thematic hierarchy and of the argument to support a viewpoint. Unable to align the projects along an axis, analyzing them one by one, nor within an order of merit, I will try to construct some relationships among them in order to identify groups.

First, I will attempt to clarify the specific way by which each plan endeavored in order to avoid the competition specification's ambiguity and to dismember its thematic

grid.[16] In many cases the architects worked by establishing a privileged relationship between some of the themes proposed by the regulation. Part of those plans could be grouped under a hypothetical title, such as: "The technological pole as an opportunity to transform Bicocca into a piece of the city". Very anxious to define the meaning of 'technological pole", those projects seem to build on the opportunity offered by the creation of the pole.

For Gae Aulenti, for example, a pole in Milan can only be "a concentration of central functions, research, advanced manufacturing and tertiary activities, capable of inducing future growth and expansion."[17] Bicocca might verify the hypothesis of relaunching Milan, and the reorganization of the territory through the formation of new poles.
For Botta, the density and the plurality of the functions, rather than their specific nature, become an opportunity for re-qualifying the area and turning it into a mending element between the sections of the city in which it is located. "This project has been drawn up in the belief that revamping an urban area such as this one, offers an important chance to refurbish an entire part of the city".[18] His great concern to give "animation" to that "dead" part of the city gets coherently translated into a "residential city" at the upper levels of the central blocks.[19] The attention in this case is limited to the immediate context, the one that according to De Carlo, is not to be considered peripheral and where Bicocca, already "central area", should be transformed into a "symbol and reference of urban quality for its surroundings."

The new land use was considered just such an opportunity, in the sense that it may encompass the plan with a different potential. Gregotti's plan is structured according to the conceptualization of the pole as complexity and dynamism and therefore "it consists (...) in delineating a program and an itinerary of a sequence of phases, so that they can be continuously verified, brought up to date and re-adjusted."[20] Thus, Bicocca

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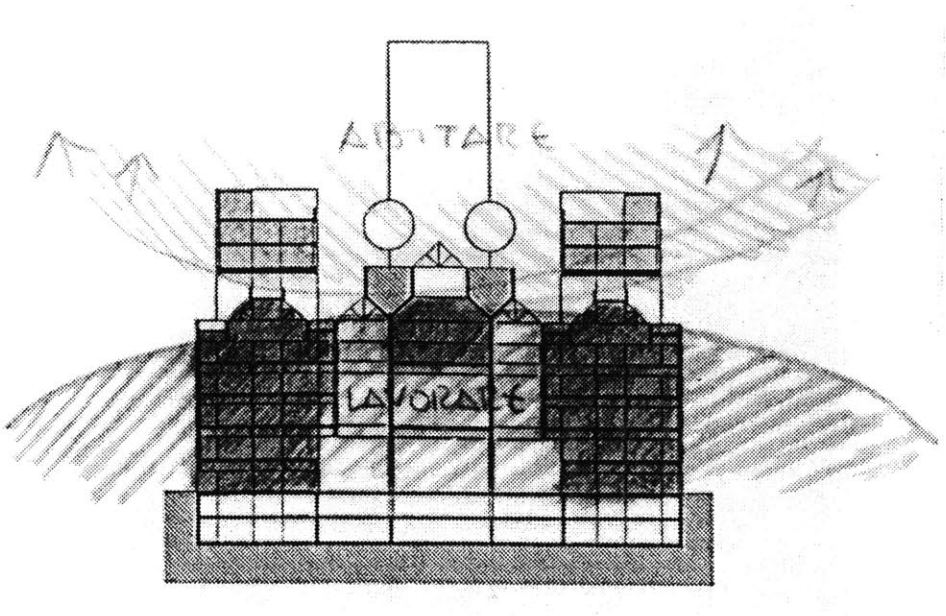
16 "Thematic grid" refers to the themes suggested by the competition announcement
17 Quotations relating to the projects are taken from the proposal reports in their original version, unless otherwise noted
18 Ibid
19 See fig. 43
20 Ibid

Figure 43: Conceptual sketch by Mario Botta

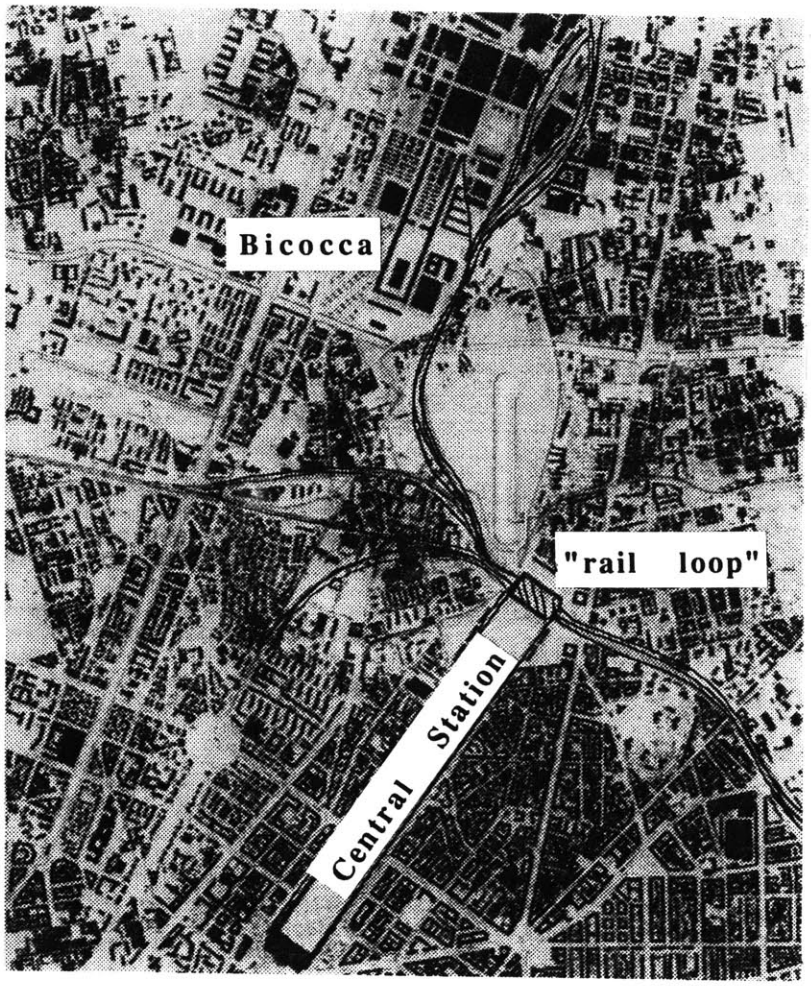


becomes a "place of high urbanity", for complex social interrelations. On the other hand, the concept of Pole is assumed by Rossi "simply" as a "place container" containing building and services qualified for technological research. His argument is as follows: "It is not possible that the concept of "technological pole" could be itself the element conforming the life and image of the area. In the construction of an autonomous and correlated part of city, of a component of the Milanese centrality system, functions are only hypotheses."[21]

The relationship between the construction of the Pole and the urban transformation of the Bicocca was treated as a secondary theme. This involved the opening up and integration of the area, as well as the settlement model suitable for the new use, which had yet to be identified. Once the Bicocca layout's heritage was recognized and accepted, all the planners worked on the hypothesis to turn their back on isolation, on monofunctionality, on the typological monotony and anonymity typical of all industrial areas. The emphasis shifted to issues of accessibility, with proposals which sometimes

21 Ibid

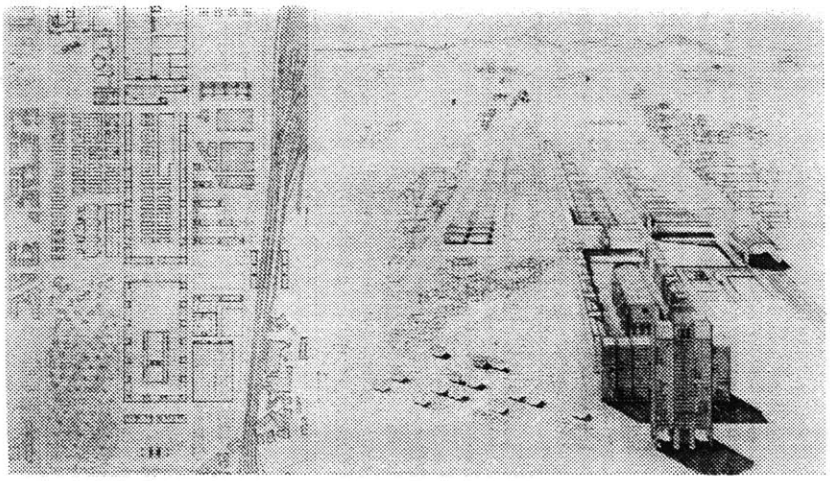
Figure 44: Rossi's proposal envisions a reodering of the Milanese railway system



envisioned the total reordering of the Milanese railway system (Rossi and Gregotti). Also, there was a shift to the juxtaposition of common and special functions, as a way to open the area towards the outside, as well as to coherent forms. Urban quality, a place of high urbanity, polarity, central place are some of the expressions used in order to synthesize a design direction which both diffused and homogenized the degree of urbanity, while being able at the same time, to signify the specificity of the Bicocca site. Therefore, the contradiction of Ciriani is apparent. He gives his plan a meaning by trying to combine the general with the particular, permanence with flexibility, and recognizing a useful analogy with the "model of the historical centers, where

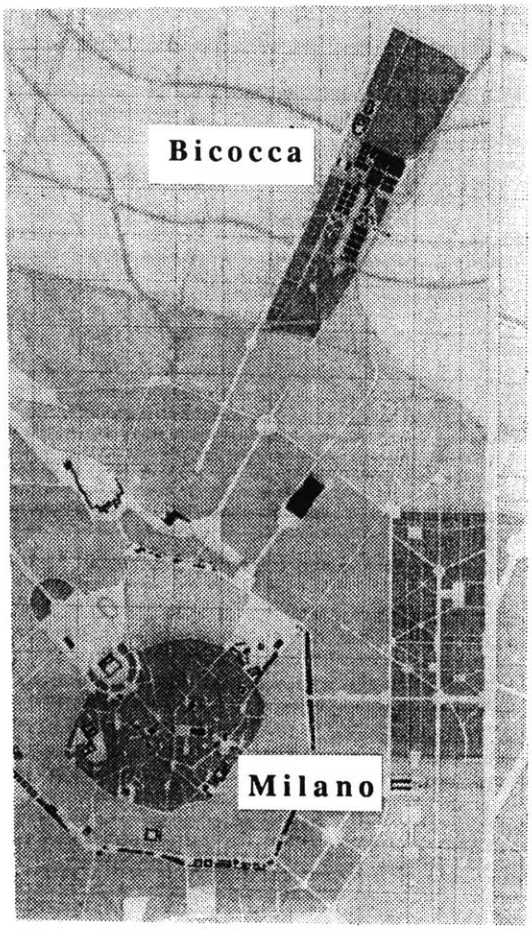
homogeneity co-exists with the identity of each single point". Such a sequence of associations has led to very similar conceptual proposals: a central structuring spine (Ciriani); a pattern of settlement which will work as a "bridge-head" (Aulenti); a very dense central strip (Botta); a ridge tissue (De Carlo); central blocks (Gregotti); a large continuous building (Rossi), where all the functions of the technological pole are concentrated and around which the rest is organized.

Figure 45: Aldo Rossi - Perspective view of the main building



In all the projects it appears that the occasion is the starting point of a much broader and more articulate operation. The planners didn't linger to define the concept of "technological center". In fact, the functional transformation of Bicocca seemed to lose importance. Rather, it becomes interesting for different reasons. For Piano "in order to exemplify a theory of urban modification, since it allows a reinterpretation of that area as a complementary settlement opened to the context of a city whose new technologies give new development". Instead, for Meier "a settlement typology which, by insisting on the site layout, could emphasize its characteristics and could integrate it to the rest". While for Moneo "the transformation of an industrial ground into an urban ground by linking the existing layout with the surrounding". "The restoration of a nineteenth century grid which is suitable to various different combinations of building compositions", (Ungers).

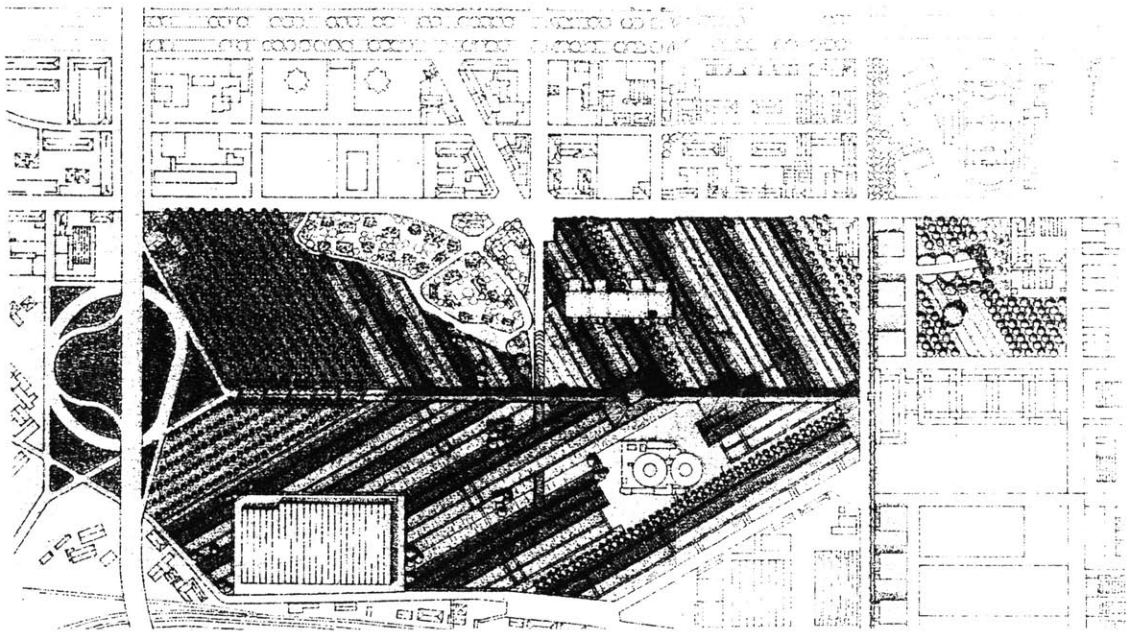
Fifure 46: Ungers - The nineteenth century grid reproposed for Bicocca



In all the above mentioned cases, the project finds its reason in the loss of the industrial identity of Bicocca, rather than in the acquisition of a new tertiary identity. Therefore, the problem was reduced to the simple existence in a "void" to be filled with new meanings. Perhaps, this is the reason why all the designers offer "containers" with "indifferent" characters, thus adaptable and flexible. Also for Valle the opportunity is a "void"; that is the neglected area "with its character of small piece of city that has already witnessed substantial mutations and needs no further upheavals. Instead, it needs a series of adjustments carried out in time and space, through interventions on single places at a precise scale easily recognizable and manageable, in a concrete way, which don't require undetermined times, or a sketchy future."

The realism and the respect for the existing in this plan, contrast with the global reconsideration of the rules of territorial organization proposed by Gabetti & Isola, which begins with a reflection on the cultures of technological innovation. The land subdivision and the building types imposed by the industrial revolution, reduced to a mere coherence with productive organization, were considered not suitable nor significant for expressing the new content. The progressive "technocity", which could be reconciled with nature, was associated with the geometry and architecture of both the "ancient" agricultural layout and the positive sign of the vegetation. The geometry of the modern industrial fabric remains as a memory, emphasized in the Central Gallery and in a ambiguous "wall" whose intentional transparency establishes distance and recollection of the industrial city.

Figure 47: Gabetti & Isola proposal

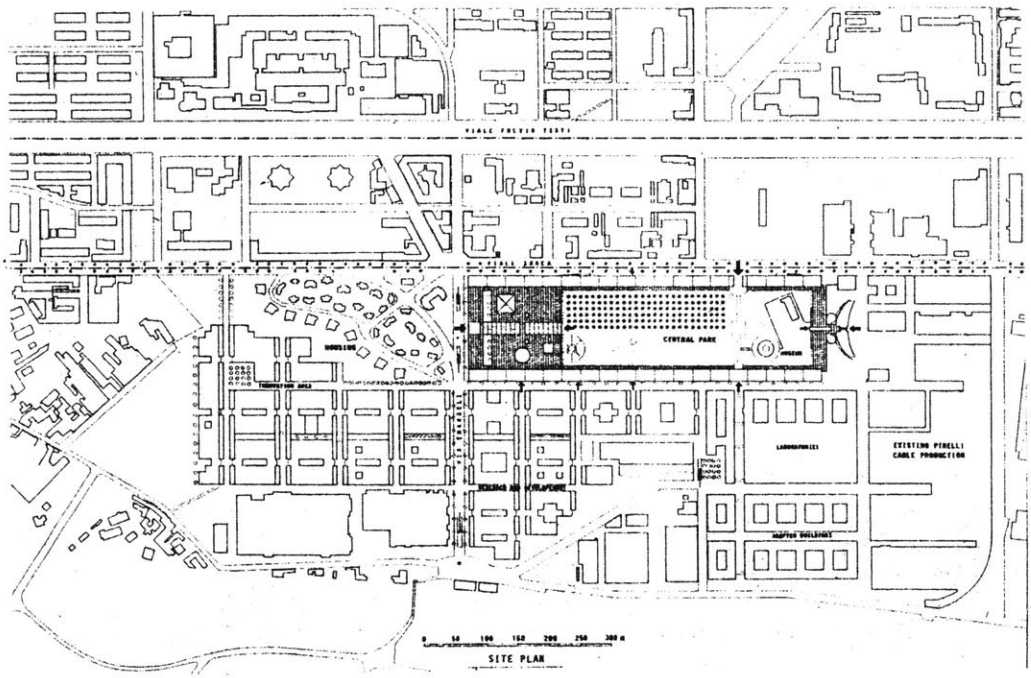


The task of designing a technological pole was interpreted by some architects mainly as a problem. The report by Aymonino considers the problem from several viewpoints, underlining the problematic aspects derived from the different levels of design it involves, as well as the unsolved implication of economical, technological and juridical order. " A complex scenario... the one in which the design of the Bicocca takes place,

very far from conditions of certainty in which the designer of architecture used to operate." The proposal is a sequence of buildings - "true architectural objects" - as an alternative to the unified structure considered theoretically and practically impossible. It attempts to restore and simplify the complexity and arrangement of the explored layers.

Peichl "exorcises" the problem of prefiguration with a very subtle irony when he presents "the rising of a technological future from the grave of the industrial past", synthesized in the incubator. On the contrary, he implies it when he spells out the initiatives for enhancing the value of the area in order to make it appealing for new activities.

Figure 48: Peichl - Project scheme (the incubator is indicated in dark)



Isolated from its context and scarcely considered problem-ridden, the technological pole "could become a data to be assumed and characterized". Hertzberger, while understanding its process, tries to control its "becoming" through "repetition", proposing a pattern which could substantially be extended indefinitely.

Solsona assimilates it both to a "university campus" and a "section of a linear city". In addition, he defines it as a "structured environment surrounding certain functional elements" of which he attempts an "analytical decomposition".
In the end, the plan, having lost the possibility of being anchored to a precise function, is reduced either to a composition of volumes meant to guarantee a high density, and therefore a good profit out of the whole operation, (Guedes). Or to a representation rather than the acceptance of the new means of production, with "forms maintaining a lateral and figurative connection with residues of the pre-existing architecture...slowly transforming the area", (Gehry).

3. History and Traces as Reference

History and traces of the site became a metaphor used by many designers to symbolize and justify their design choices. This metaphor seems to condense the relationship of architecture with the historical interpretation of the site. The planners' approach to the design problem, in relation to the site, is not anachronistic; nor does their idea of rationality of new production allow them to reduce the site to a mere *tabula rasa.* In fact, the site layout becomes the graphic substance of history and for many architects the basis of the architectural projects. Those traces become a "writing event"[22], an occasion to take an analytical approach in the design problem, and an occasion to verify on the field all the information given in the competition announcement. Thus, the lines of the historical and cartographic representations of the site become the true terrain of confrontation for the eighteen proposals. Interpreted as the result of a "writing process"[23] through time, the orthogonal roads network structure becomes the true reference diagram. Fully accepted, totally negated, or simply disturbed in its regularity, the tissue becomes the background, the cognitive map on which to overlay the design intentions. The implicit idea of "writing" over the background becomes a contextual

22 Urbanistica 83, Maggio 1986, p.58
23 Ibid

gesture. Proposing itself as a design assumption and an element of significance for the new architectural event, it attempts to give legitimacy to the project.

In the majority of projects (Meier, Ungers, Gregotti, Moneo, Gabetti & Isola), "history and trace of the site" became a metaphor so explicit that it is presented in the form of an abacus of "signs" and materials - a vocabulary to compose the new architectural language. But also in the projects not so interested to legitimize the historical events of the site, the emerging of the existing grid as reference for the new pattern, underlines its importance. In both cases, history appears as element of analogy in which to inscribe the project, not as simple occasion and terrain of contrast. Moreover, it is worth mentioning that none of the projects, each for different reasons, is indifferent to the existing trace of the site.

Being strongly polemical regarding the effect of the industrial revolution on the urban fabric, Gabetti & Isola cancel the extension of the nineteenth century grid of the "Bicocca city" and overlay a stratum of tissue which refers to the "pre-urban agricultural traces."[24] By interrupting and varying the existing tissue, Meier, Gregotti, De Carlo, and Aymonino, demonstrate a necessity to reinforce the value of the built elements over the flat drawing of the urban layout. Piano and Botta make reference to the historical traces in the single gesture of a large built strip with physical thickness, and volume. Moneo, Valle, and Gehry understand historical traces as a suggestion to which they should constantly refer during the process of the formulation of the "new regularity". But, at the same time, this reference should be flexible and open to variation during the design of typologies, buildings, and circulation systems. Aulenti and Solsona summarize in the center of the site the "various linearities of the historical traces"[25], transforming them into dissonant rules for aligning the buildings.

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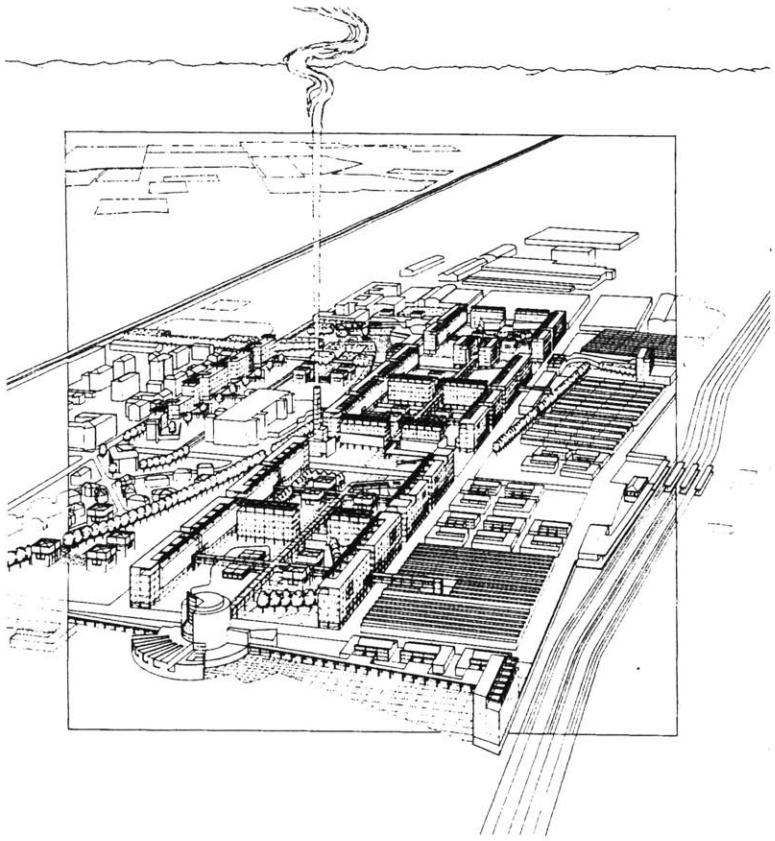
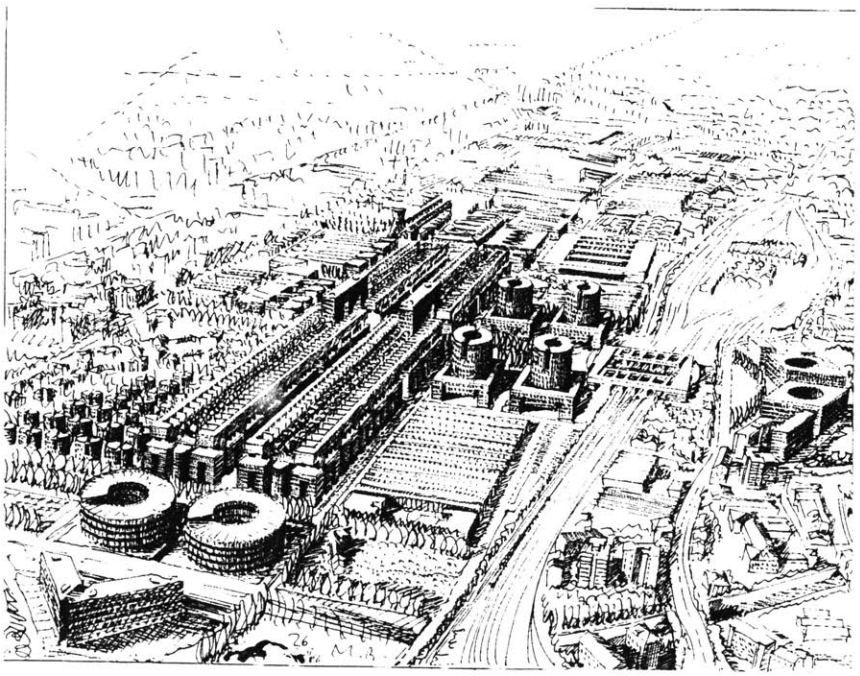
24 Project report by Gabetti & Isola, p.3

25 Urbanistica 83, Maggio 1986, p.59

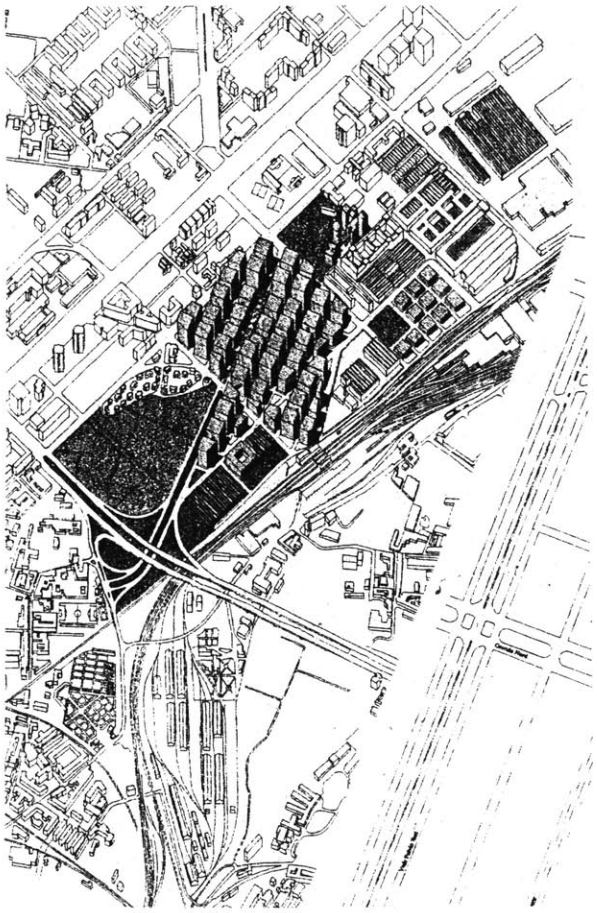
Figure 49-50: Meier - Bird view **Botta - Bird view**





In general, the different forms of reference to the historical traces suggested the selectivity and the different attitudes toward history by each competition participants. The results are images of city developed in the memory of each architect, identified in the urban text and reinscribed in the project. Those images transform the drawings in a real journey into the historical recollection of contemporary architecture, revealing a catalogue of reference -the nineteenth century city of Ungers, the Manhattan of Guedes, the *ciudad* linear of Solsona, etc.- not simply told, but rather intelligible by analogy, through the originality of each project.

Figure 51: Guedes proposal



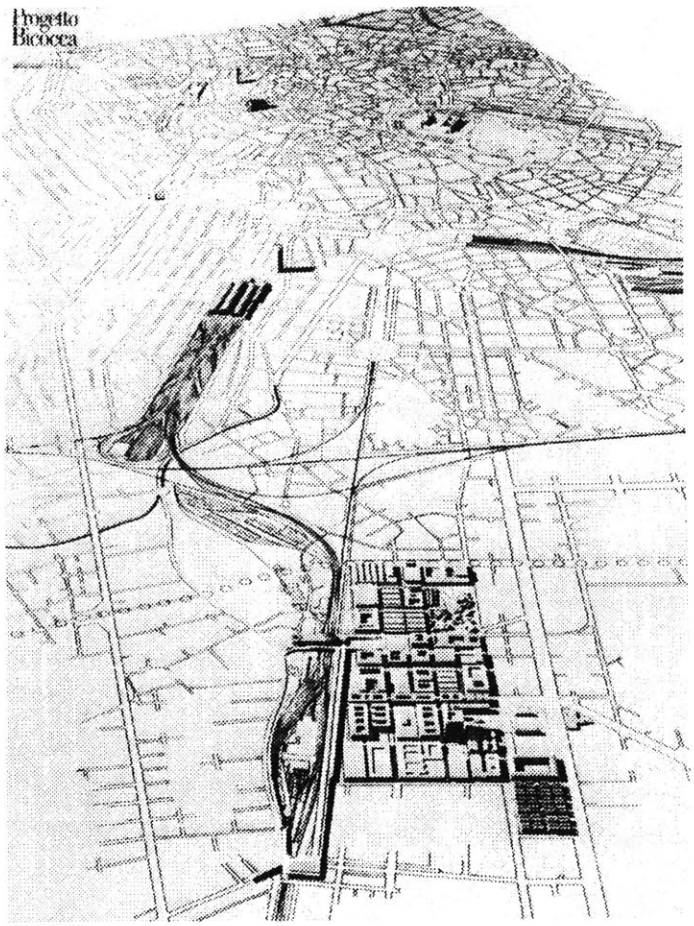
4. The Adoption of Regulations as Rules of Design

Since, as stated earlier, the projects were not the direct responses to the requirements of the competition announcement, many proposals adopted a set of regulations as a way to deal with the uncertain nature of the undertaking. That was seen as an effective, simple and realistic way to overlay a "grid of control" on an operation characterized by a great diversity of possible approaches. In addition, it was used for the control of events that were not immediately and totally predictable.In other words, it was a flexible tool capable of adapting itself to a variable situation. Adopting diverse types of regulations, the designers defined their division of the area, differentiating it in terms of functions, catalogue of building types, densities and open spaces. Thus, each of projects belonging to this group established a figure ground which abstained itself from the proposal of an architectural language and the exact solution of construction problems, postponing them for the right moment and appropriate setting.

In addition, the adoption of regulations emphasized the necessity of a highly ordered structure on which to base it -the roads system and the division into building lots. The choice to make use of the existing structures for the above purpose is common to many projects. However, the arguments to support this design decision are diverse.

For Gino Valle, the choice of assuming a set of regulations as principles of design and respect for the existing structures, was not taken as mere adaptation. These assumptions were "indispensable conditions for proceeding with a progressive delimitation of the theme of project", and they were seen as "guarantees not only of its feasibility, but also of its architectural quality." In fact, Bicocca is already "the outcome of an alternation and does not require other upheavals, but adjustments that can be proposed in time and in space by means of individual locations, on a precise scale that is immediately identifiable and manageable." In Herman Hertzberger's proposal, "respecting the site layout aids the transition from the old to the new, allowing an ordered sequence of abandonment and revitalization." Rafael Moneo, on the other hand, maintains the validity of the "old rationality of the roads network system, imposed by a desire to exploit the land". This was suited to sustain the new condition

Figure 52: Moneo - Linking Bicocca with the surroundings



as well, with its opening toward the outside, that provided for an internal continuity of its own with the urban setting.

Although placeable within the above group, since they assume regulations as mean of design, other projects advance objections and alternative solutions. Among them, Joaquim Guedes and Renzo Piano, for whom, differently from the above designers, a set of regulations had to be based on a new structural order, so to represent the new expected functions and contents. Thus Piano aligned the parts to be built along a privileged axis, where the new was illustrated by images belonging to a sort of futuristic recollection. On the other hand, Guedes proposed a new urban structure, which reinterpreted the shape of the city and reproduced one of its elements: the building density.

In the above mentioned group of schemes, other proposals can be placed that, while they do not adopt a clear body of regulations, seem to incorporate a rule of design derived from the characteristic of the area and the urbanization of Milan. Moving along this direction, Richard Meier found a partition of the area suggested by the roads system to be respected. In addition, he identified proportions and relations that could be further clarified and translated into architectural forms in a way which would articulate the original pattern through differentiated multiples. Taking a different position, Osvald Matthias Ungers believed that the existing pattern of division into lots should be redefined through a new "differentiated reticular structure" which should be more flexible than the present one, although not in contrast with it. In history, especially in the historical language of architecture, Ungers recognized a number of syntactic rules used as a guarantee for something that he reconsidered as a value again -the repetition of similar physical events and the return to a more controllable environment. That is why he re-proposed in the Bicocca the old pattern of Milan of the nineteenth century.

This attitude, which pervaded the regulatory schemes, was strongly criticized by Frank Gehry, who opposed the "hypostatic character" of uniform standards of the existing with a process of excavation and reconstruction that allows "the new functions to emerge, slowly and economically, out of the old industrial area." That is a process that can only be simplified metaphorically in the project, where "the forms were no more than phantoms of an architecture tailored on a society of which nothing could be said at the moment."[26] Nevertheless, this proposal assumes an important value since it placed itself in total disagreement with the rest of the proposals, enriching a great deal the debate around the "possible worlds" of solutions presented.

5. Metaphors as Representation of the New

In this section projects will be discussed based on their need to represent the new, translating this need into images, which consequently seek a functional characterization

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26 Pirelli S.p.A., Progetto Bicocca, Milano: Edizioni Electa SpA, 1987, p.23

of the 'technological-pole". This is generally done by means of metaphorical references together with facts that allude both to a content and a form.

The image that Carlo Aymonino projects with his proposal has some similarities with a large university campus. Of course, it differs from the latter in its institutional use and its architectural design. This scheme conceived a fine urban layout of distinct "objects" arranged within an extensive park. These were not intended as final and determinate solutions. Instead they were supposed to suggest "the consonant dimension, the recognizability of some work of architecture represented by a graphic range of citations."

For Justo Solsona the technological pole is a "urban manifestation of the advent of a post industrial society, that recognizes the generation of knowledge as the source of wealth." Similarly to the Aymonino proposal, it appears that the new place put forward by Solsona also appears to be allegorically associated to a university: a university in the original meaning of the word which, using Umberto Eco's definition, Solsona associates with "the monastery of medieval times", a university capable of expanding and embracing the economic side of its activity. This by-fold image, of the university/monastery, allows a figurative resolution of the transition from the generation of knowledge to the one of production. This is physically achieved through a highly integrated series of elements of a megastructure that is isolated in the middle of a large open space.

Gae Aulenti supports a similar thesis, although she uses it to convey a different image: "a pattern of settlement which will create a bridgehead between the revitalized and combined Pirelli-Breda-Falck areas and other focal point in the city center." She believes that starting from areas close to the historic center, the process of urban modification, in order to be successful, would have to involve adjoining areas threatened by a similar process of disuse.

Other architects, instead, worked in the direction of inserting a "sign" in the area, which would, at the same time, represent a theme capable of generating the new. The element that plays this role in Henry Ciriani's project is a sort of road-machine, "a structuring

backbone containing the main functions and services,...a permanent framework which reconnects to the existing and interacts with it." In Gustav Peichl's design, the "sign" is a huge monumental building, representing simultaneously a cemetery for the old and an incubator for the new, the place for originating the innovative activities. The "fabric of the spine" and the "condenser" are the emerging metaphorical signs emerging from Giancarlo De Carlo's scheme. They represent the physical, functional, and symbolic permanent elements of the new pole.
However, the new setting does not only have to be self-representative, it must also be capable of modifying the surrounding. The new has a concrete context of its own and it is in function of this that it places itself, becoming the reason of a modification at a larger scale. Therefore, for Mario Botta "the project has been elaborated with the conviction that the revitalization of the Bicocca constitutes an important occasion to re-qualify a whole part of the city." Thus, "the new part of the city has to except the challenge of a density capable of multiplying the opportunities of enlivening the urban context which by its nature is meeting place". This is achieved by opening up towards the outside, not just demolishing the barriers (the perimetric walls of the plant), but introducing new lines of force; such as selecting axes from the existing grid and re-proposing them as new guidelines, charged with energy capable of giving new inputs. Similarly, for Vittorio Gregotti the starting-point is also modification of the context. In this scheme the emphasis on urban values and the selection of elements from the existing grid, which becomes reference, physical extension and reintegration, are again the fundamental elements of transformation. But for Gregotti the modification process seems more problematic than for Botta. He conceives it as an "itinerary rather than a point of arrival". The planner can control it only in part by locating fixed points along it, so that the "continuing metamorphosis does not get out of hand." From the above, it appears that Gregotti's view on the problem of urban transformation is influenced by his perceiving it as a continuous process, by a history of the city which seems unstoppable.

However, if for some architects the use of the history of the city as a foundation for their intervention becomes problematic, for others it becomes the ground of even more perplexing reflections. In fact, they use history as an occasion to reconsider it, interpreting it and even bringing its conflict to the surface. So that for Aldo Rossi the

modification of the area could offer the opportunity to connect together in a unitary idea of city all those single and isolated phenomena which have emerged and imposed themselves over time. This idea is presented through a metaphor of the polycentric city, involving the regional scale, and defining a new system of centrality, of which Bicocca is called to take a prominent part.

Roberto Gabetti and Aimaro Isola, on a similar track, interpret the operation as an occasion to reconsider, reappraising it, the history of urbanization of those areas. Among those, the Bicocca plant was considered: "an emblematic urban phenomenon of the Milanese experience." For the two Turin based architects, the theoretical structure of their design is in the "need to indicate an inversion of tendency with respect to the orderly lines of the industrial decay of industrial areas." Thus, the project becomes a knowledgeable tale of the contradictory events of uses of the land, the relationship between man and nature, the negative implications that the process of industrial revolution has had on the territory. The marks left on the territory by the activities of man are recognized and judged in the report. Then in the project they find a synthesis that is anything but a reconciliation. Only a deliberate optimism detectable in the overall gesture of the proposal, allows one to catch a glimpse of a new "synergy between operative functionalities and quality of life." This is an attempt to overturn a hierarchy of values imposed during the industrial revolution.

D. SECOND ROUND: THE THREE PROPOSALS

Out of the eighteen proposals of the first phase, three groups were asked to submit their proposals for a second stage of the competition: Roberto Gabetti & Aimaro Isola, Vittorio Gregotti & Associati, and Gino Valle Associati. The main task of this second stage was to further specify the design intentions of the first phase, incorporating into them the indications given by the new Variant to the Master Plan. The Variant, as has been mentioned earlier, was drawn up on the basis of the results of the first phase of the competition and deliberately included the land use changes from industrial to mixed-use which was going to be part of the second round of the competition. It is important here to remember that this phase of the process is characterized by a series of actions aimed at "legitimizing" the entire operation, an anomalous one in the overall ordinary Milanese planning traditions[27].

The eighteen schemes were to individuate and suggest "all the possible worlds", and to clarify the problem of transforming the area. They were used as inquiry rather than design devices. They were not supposed to give clear design proposals, but to clarify the meaning of "technological pole" in the Milanese context. Consequently, the Variant, taking into consideration those suggestions, had the task of both verifying their feasibility and setting up the regulatory procedures in order to incorporate them into a more focused second stage of the competition. Thus, the Variant had the job of clearly stabilizing a convincing first scenario suited to the realization of the new center for which Pirelli and the City are responsible, as well as to furnish precise and well coordinated inputs for the three chosen designers in the development of the competition and later for the implementation of the winning scheme. Therefore, the substantial difference of the three proposals between the first and second stage, is that in the second they should "incorporate the indications furnished - in their complexity - by the Public Administration, and the prerequisites of schedule, market, and technical realization flexibility, which Pirelli holds necessary to insure the correct realization of

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27 See Chapter III, section D

the project"[28]. The deadline was set for February 15 1988. Then, the chosen project would be presented to the City administration, requesting it to prepare the operative planning instruments of the Master Plan and its specific Variant for the area, necessary for the concrete start of the final design and implementation phase. These are some of the most important keys to keep in mind while reading and interpreting the three proposals. Entering this more specific phase, the Bicocca project becomes exemplary of an approach that on one hand associates planners and scientists in speculation on the productive city, and on the other, contrasts and compares architectural projects.

Without going into detail of what the three teams represent in the Italian culture, it should be said that these three "masters" hold very different positions. Gregotti is a theoretician of architecture who confronts himself with the construction of urban institutions. Gino Valle is a great builder in Europe for the biggest private enterprises. Gabetti & Isola, adherents of "Neoliberty" (meaning ...) to which the rigor of the project confers an extremely radical character. However, even if everything suggests that they have different philosophies, in this situation they were bound together by the fact that they were dealing with the same problem: the relationship between plan and project; that is, the relationship between city and architecture. Moreover, they were all exploring the past with an apprehension of finding its future through a project.

Gabetti & Isola continued to astonish with their second stage project, like they did in the first phase. Their vision was still based on the strong reference to the Roman *centuriatio* traces of the territory. Like any vision, it should be appreciated as such; however, its big problem was that for the second stage it maintained its character of manifesto. It failed to transform itself from metaphor to architecture.

Gino Valle's project is striking for its clarity. It is based on the creation of a figure, a tracing that opens a context in which the architect can produce his effects of differentiation. The singular spaces fit in the overall picture created by the figure. Valle established his project working in tune with the natural conditions of the site and the existing built environment. The image created from this proposal is one of permanence,

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28 Pirelli S.p.A., Letter-program for the second phase of the competition, Milan 1987, p.2

a gesture formally complete, despite that the competition called for a form to be defined and molded over an indeterminate period of time. This, perhaps, penalized his scheme.

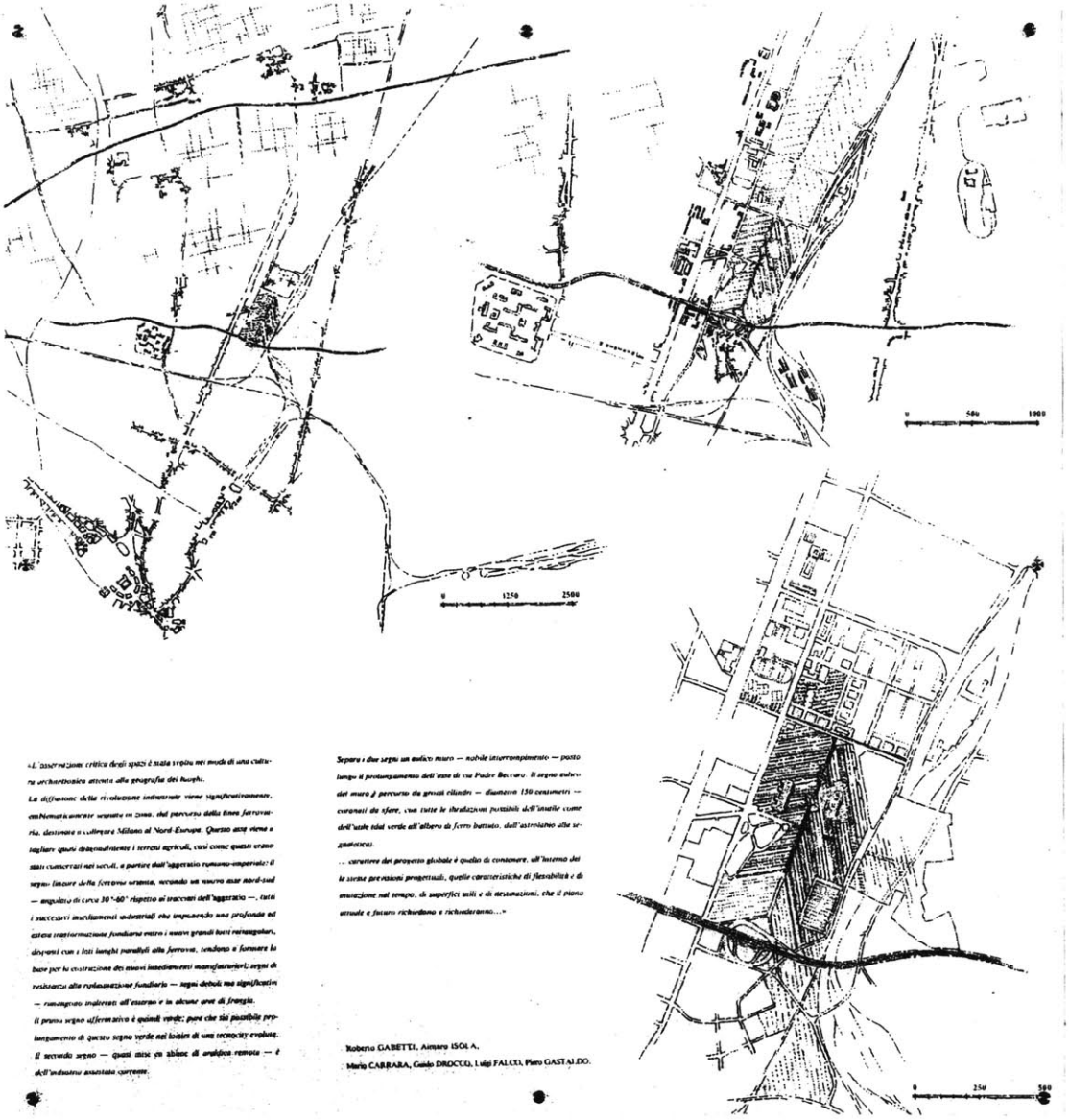
In contrast, Gregotti's proposal takes its reference from a horizontal and vertical grid. The strength of the grid is immediately evident. It is capable of integrating block figures; it shifts, but at the same time continues the existing fabric. It bases the division of the space into modules in response to the desired flexibility. Among the three finalists, this scheme was the most capable of translating the program expressed by the planning instruments and incorporating it. Today Gregotti thinks that his proposal was the most realistic of the three finalists, creating the capacity to open a dialogue within the given situation. That was the strength of his proposal, together with the great flexibility due to the indeterminateness of program he was dealing with. The program was to be realized by successive phases and to be further determined along the way.

1. Gabetti & Isola[29]

The architectural design for this second phase is still based on a critical observation of the geography of the territory in order to came up with a whole, constituted by functions, services and housing, which should be environmentally meaningful, with absolute priority being given to parks and gardens. The project scheme was driven by an historical and critical look at the urban fabric in the northern areas of Milan. According to Gabetti & Isola, this analysis involved an in-depth look at the layout which the buildings have assumed over the course of time, starting from the first period of industrial development up to the present times. The effects of industrial revolution on the territory become very evident in the railroad line, which was intended to link Milan and central Europe. This sever cut is oriented almost diagonally across the farmland which had kept its original pattern since Roman times. Traces of the ancient Roman *centuriatio* are still visible on the site. However, the line on the railway drawn across

29 The information contained in this section comes from the analysis of the design drawings and the project report in its original version , unless otherwise noted

Figure 53: Conceptual sketches - from the agricoltural traces to the proposal



the territory, creating a new north-south axis at a 30-60 degrees angle with the original layout, determined the orientation of all successive developments. These developments, among which the industrial plants, brought about a deep and wide spread transformation in the territory with their huge rectangular lots set lengthwise to the railroad line. Gabetti & Isola say that "a few signs of resistance to this later re-molding of the land's layout still persist in the areas surrounding Bicocca. They are weak but

significant traces; important traces to value and preserve."[30] And apparently they are so valuable that they become the foundation of the project.

Gabetti & Isola' s design decisions result from the hypothesis that a certain amount of synergy exists between operative functions and the quality of life in the work-place. The outline of the project was drawn up, based on the results of the analyses carried out, and then discussed in relation to its possible implication for innovation. "Our work, as intellectual technicians unfamiliar with that particular field of industry, led us to make a critical observation based on a set of carefully chosen local criteria, enabling us to came up with ideas for feasible future structures."[31] From the accumulation of historical events, two elements influenced this team. These "two themes were not imposed by us, but were by us recognized because of their persistence throughout the schemes we drew up while working on the project. We repeatedly set aside before taking them up once more with renewed energy at the end."[32] These recurring themes, as has been already mentioned, were the pattern of the ancient agricultural layout, and the contrasting pattern of the industrial one including Bicocca. Thus the first "positive sign" incorporated into the new project was the green area from ancient traces. "It looked as if it was possible to extend this green sign from the ancient age into 'technocity'. This time though, the sign had to be strong enough in order to absorb the technological innovation effect, exorcising the danger of an upsetting of nature by the new transformation, as it happened in the mid-nineteenth century with industrial revolution." The second sign envisaged in the proposal was the existing "more modern industrial installations". The two signs are separated by a fine dividing wall. It takes the character and the form of what Isola & Gabetti call a "noble shield" built along the extension of Via Padre Beccaro. This break is articulated by a series of large cylinder of 1.5 mt, crowned with spheres of greenery (laurels), or of hard materials (marble or concrete), or with sign-boards for the companies moving in.

> *Those elements become a blend of the useless and the useful, from vegetation to wrought-iron trees, and from the astrolabe to the road sign. They can be spread to adorn the complex here and there, in the style of a "miliarum aureum" of the*

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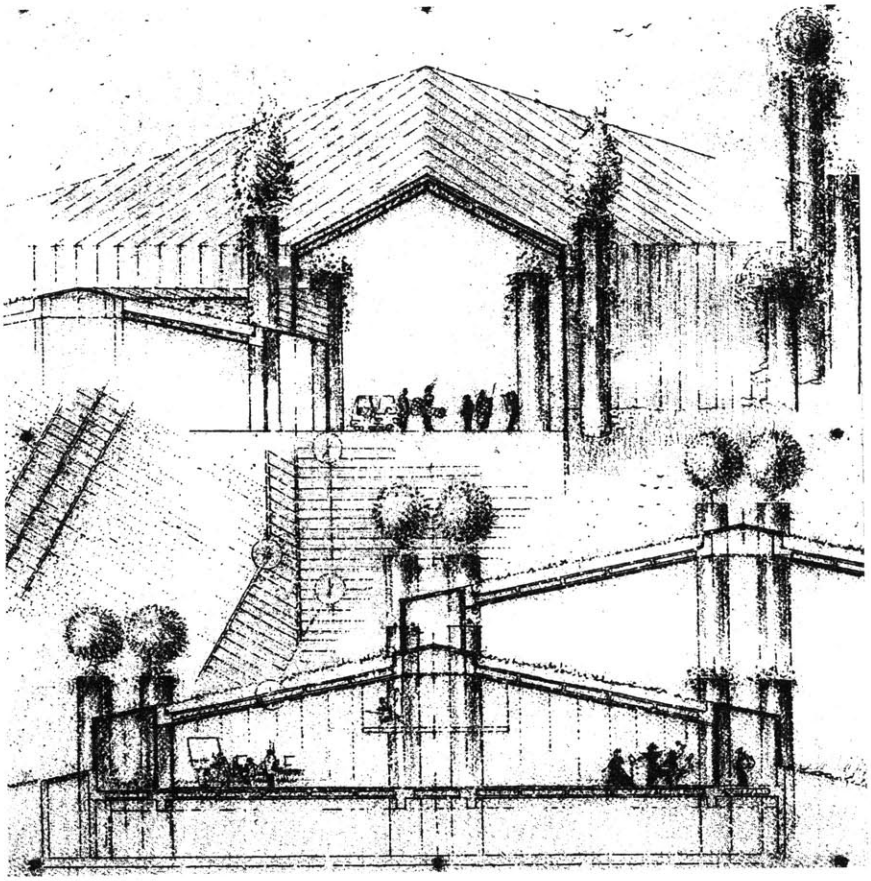
30 Interview to Roberto Gabetti & Aimaro Isola, Gabetti & Isola office, Turin, December 13, 1991
31 Ibid
32 Ibid

"umbilicus urbis" here neoclassically re-proposed -from memory rather than discovered in the course of archaeological excavation on the site.[33]

Figure 54: Sections



The above design justification sounds somewhat stretched. From a direct reading of the drawings, however, it appears that the static usefulness of the cylinders is evident when they are used as pillars or when they are used as containers from the mechanical systems of the buildings.

Vegetation is extensively used, as in the green stretches of the Roman traces, not only to show the paths of previous routes across the area, but to extend their routes ideally, along linear gardens set between buildings. The green becomes the predominant gesture of this proposal becoming roof-gardens of the buildings.

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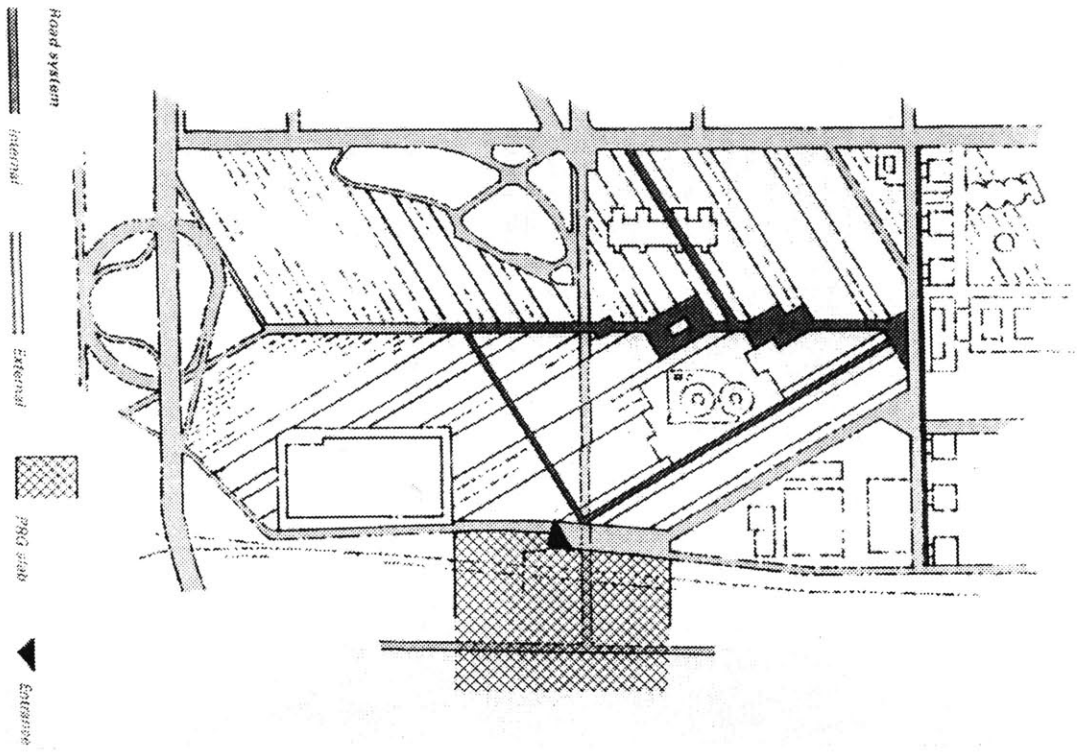
33 Ibid

The industrial element is emphasized along the axis of the tele-port, marked by what Gabetti & Isola call the "noble wall", running along Via Padre Beccaro. Perpendicularly to the wall and starting from the tele-port, there is a long glass-roofed gallery which represents the synthesis between the two signs, the old and the new. Forming a sort of zipper for the diagonal lines of the ancient farmlands, and acting as an axis for the industrial development , this gallery becomes the functional and visual pivot of the new complex. It becomes at once a meeting place, a "stretched piazza", the core of the circulation system, opening up to the green space or to the laboratory fronts.

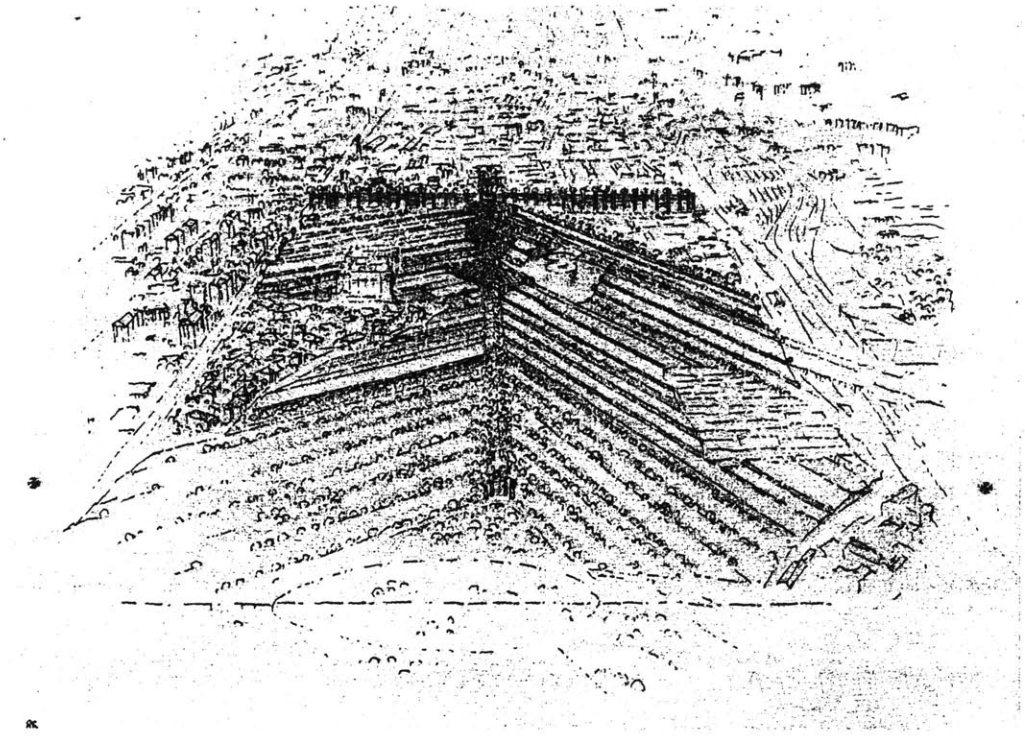
Figure 55 -56: Planimetry and road system



The Gabetti & Isola project becomes extremely interesting for the language of materials used. Glass and steel curtain walls for the Pirelli office building to the north of the dividing urban wall. For the "noble wall", exposed reinforced concrete with brick infills, its access ramps and terraces are made of reinforced concrete. For the long gallery glass and iron are used. Finally, the diagonal longitudinal blocks are basically

made of earth and grass, "in order to increase the thermic insulation capacity". Glass and iron are used for the long corridors or enclosed porticos between the blocks; these secondary galleries act as secondary circulation elements connected to the main central gallery. Trees and green are used extensively. Parking is camouflaged with green and trees, since the automobile is in antithesis with nature.

Figure 56 - 57: Bird view sketch and site plan

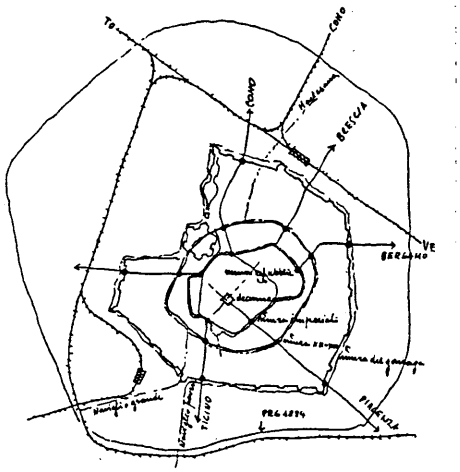


2. Gino Valle Architetti Associati

Similar to the other teams, Valle's second scheme is a further refinement of observations and design intentions presented in the first scheme. Thus, it is here important to repeat some of its most salient points.

In the 1986 project the theoretical basis for the project was constructed through a dense historical analysis of the chronological growth of Milan. It was observed that a simple way to represent the permanent structure of the city, was to draw the concentric ring-walls dating from the times of the Roman Republic. The new Milan is simply an expanded version of the traditional center, but on a different scale. The predominant sign of the city is the wall, the element of protection and defence, even though it suffered changes during the various expansions of the city. As analogy, the wall of protection built around Bicocca, for different reasons than those above, assumed a fundamental importance and became the metaphor of the project.

Figure 58: Urban structure of Milan



The wall running around Bicocca encases a solid pattern of installations and the activities carried out in them. The wall could not be removed because it "suddenly becomes substantial, and its removal would jeopardize what had been a place inside the

wall." Therefore, the solution was to restore the Bicocca's wall, so that "it can go on recounting the history of what is there, of what still exists, and of what will be there in the future." Of course, the new wall around Bicocca changed its characteristic. From a barrier of separation, it became a screen; capable of giving privacy and at the same time allowing permeability and a physical relation with the rest of the city. In the first project then, the wall was provided by one of the edges of a large park measuring 860 mt. by 165 mt., which assumes a character of an urban wood.

In summary, the first project did the following:

1- It 'found' a large area lying between viale Zara and Corso Buenos Aires, with Bicocca inside it, a piece of Milan ensconced in its permanent structure.
2- It saw the necessity to guard a certain identity and physical form of the Bicocca: "...Its character of a little piece of city that has already told the story of a change, that requires not further upheavals, but adjustments...".[34]
3- It assigned this sort of custody to the restoration of the wall along Viale Sarca. For the above mentioned reason, the wall by metaphor, became the large park, the urban wood.

The first scheme then also proposed cadences, intervals, streets, distances, consistencies and crossing of the Zara-Testi axis, and of what remains of Pirelli, the historic core of the plant. Although not trying to sew up or mend, the scheme in a way accepted a role of mediation of the existing structure with the structure of the new pole. It also established a sort of hierarchy of relations: with the Zara-Testi axis and with the Segnanino neighborhood, entrusted by the rehabilitation of a part of the residences; and with the railroad lines and with the industrial plants to the north simply because of its physical relation with them.

> *The second scheme is very much related to the first one. It is structured by a diversity of places precisely shaped by different types of architectures. Going so often and in different ways to Bicocca, as if it were already a destination, a place to go for some reason, we continued to survey that pattern of relations. The elements in proximity of Bicocca gradually revealed a way of their own in articulating the space, which becomes physically noticeable and*

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34 Pirelli S.p.A., Progetto Bicocca, Milano: Edizioni Electa SpA, 1987, p. 271

> *mysteriously vital, precisely in the moment of contact-contrast with the surroundings and the Bicocca wall, its closed and hard parts, its openings, its letting to glimpse through it, and its role as a stage set. Now we can go beyond the mediation, and use the surroundings for something more interesting: to maintain the vitality of the contrast; and this is the existing which interests us.*[35]

From the above it appears clear that the theme of the wall is still very strong in the second stage of the competition. But now it is no longer only a park, nor is it conceived as an element to cover or to protect; rather, it becomes something more complicated, winding all around and entertaining a dialogue with everything it gets into relation with. The large park, conceived in the 1986 scheme, was "taken apart" and "rebuilt" in order to specify the relationships between itself and the elements inclosed, and the elements by which it was inclosed, emphasizing its value of wall and its character of green.Thus, it was maintained, but subdivided into three parts. The first part, delimited by the southern boundary and Via Emanueli, has a residential character. It is surrounded by the existing Villaggio Pirelli and the new housing complexes. The second is crossed by a pedestrian path which starts from viale Sarca and enters in a special enclosed garden, ending in the courtyard of Pirelli new headquarters. Finally, the third part, includes the Bicocca degli Arcimboldi and surrounds the new management offices connected with the preserved cooling tower.

Inside the wall the existing is readily reduced to elementary pieces. This conceptual manipulation makes a direct reference to the traces left on the ground, cleaned up and reused. The open spaces also, together with the parking lots, the gardens, and the streets, become man-made matter, "manicured ground", which is not simply connective tissue between buildings.

It must be clear at this point that the scheme presented by Valle is structured around the park. Everything else just gravitates around it, and is located as a function of it. The building pieces which entertain an intimate relationship with the park are: the front of the houses bounding it, building 157 and the Pirelli offices with the cooling tower.

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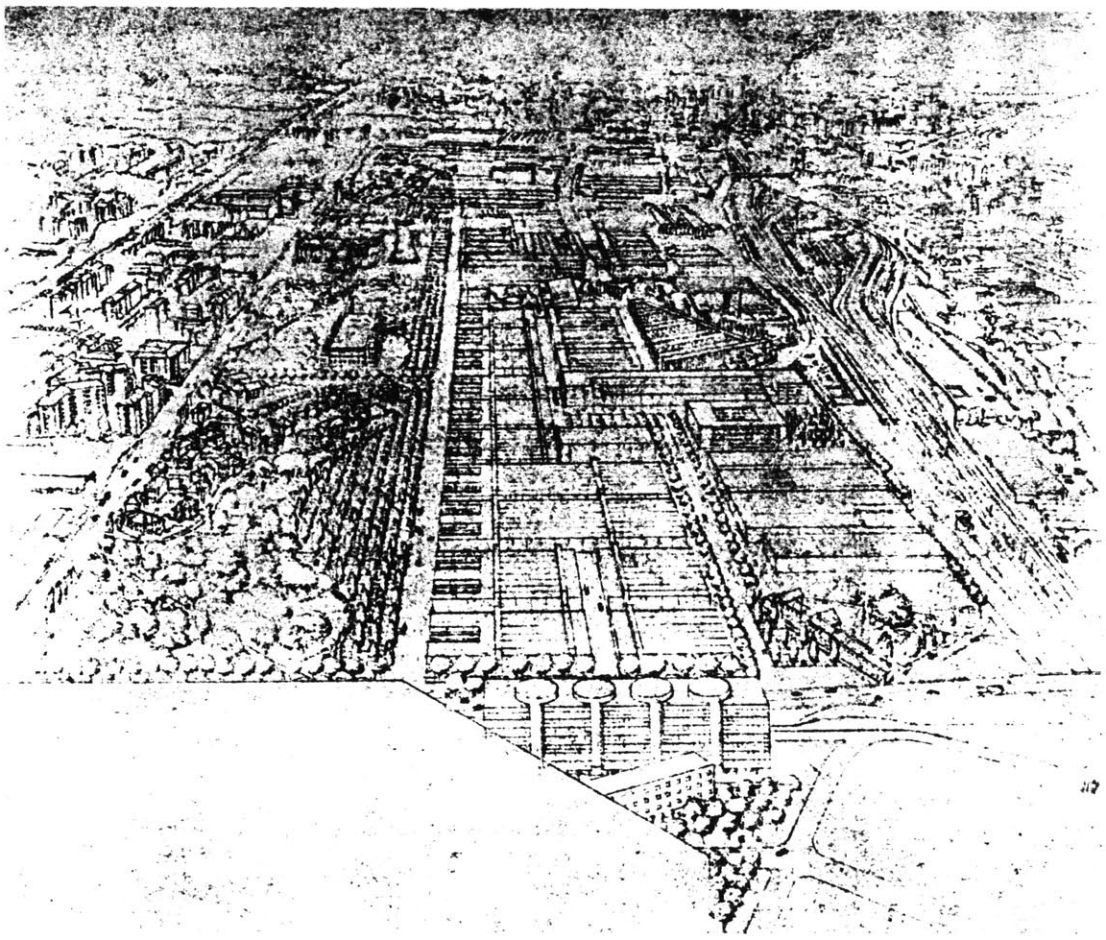
35 Pirelli S.p.A., Progetto Bicocca, Second Phase Valle's Project report, Milano: Tipografia Pirelli , 1988, p. 5

Building 157, an existing piece, which for its value and location is worthwhile restructuring, is suitable for use as laboratories or offices.

Figure 59: Bird view



The new Pirelli headquarters, located at the end of the diagonal crossing the "garden of the Wall."[36] Twenty storeys, very visible, it marks the fact that Pirelli remains, and will be the most evident entity on the Bicocca site. "It is not important if the high-rise will be built shortly or in teen years from now, because thereby rises the cooling tower,

36 "garden of the Wall" refers to the name given to the central part of the park

and its standing there as a complete object, annunciates the coming project."[37] Inside the skin of the cooling tower, left intact, without openings which would make it false and compromise its stability, is envisioned a series of horizontal partitions with a system of stairways and elevators. This would make it accessible and useable as a museums or something similar. The construction of the five office buildings is conceived in phases, since each building functions by itself. The central area is occupied by the short one-floor buildings for the research laboratories. They are of different sizes and articulated with their own green and parking spaces.

In the proximity of via Cozzi, a university complex is provided with Building 184 to be restructured for laboratory uses. In front of the Greco railway station rises the mix-use building, with cinemas and housing. At the end of the road the cafeteria designed by Gio Ponti will be revitalized as library. Between Viale Cozzi and the new Pirelli headquarter will be located some research and production laboratories, organized on five levels.

Although Valle gives some indications as to the structure of the new fabric, from the lengthy proposal report it seems that all his effort is put into dealing with the park/wall element, failing to define other important issues concerning the buildings and the program. The project is based on the creation of a figure, a tracing (the wall) that opens a context, in which the architect can produce his effects of differentiation. The singular spaces fit into the overall picture created by the figure. Valle established his project working in tune with the natural conditions of the site and the existing built environment. The image created by this proposal is one of permanence, a gesture formally complete, despite the competition calling for a form to be defined and molded over a indeterminate period of time. The park/wall, the element that regulates the scheme may become a constraint. It does not allow for flexibility; it is a formally complete gesture. That perhaps, penalized this scheme. Moreover, it never becomes a project of architecture (even though it provides drawings of spaces) because it seems too attached to its character of manifesto, of metaphor.

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37 Ibid, p. 8

3. Vittorio Gregotti & Associati

Gregotti's feelings about the second stage of the competition are even more problematic than those of the first one. As he explains, the design of a second competition entry undoubtedly posed a sizeable number of problems for the architect. It was not a matter of responding more realistically to conditions that have grown tighter and more specific, but it became a matter of reckoning with the principles already enunciated in the previous project. They had to contend with their evolution and to establish areas of feasibility which had to ensure a certainty of image, by gauging the long and indeterminate path towards completion.

> *Thus the principal task was to transform into materials for the architectural project, the new elements introduced by the Variant, the requests dictated by the real estate market, the procedures, the mechanism of implementation, and the possible evolution of elements external but indispensable to the Bicocca project. By those elements I mean the transformation and evolution of infrastructures and services, changes within the site territory, and transformation of the Pirelli plant itself. This complex assemblage of materials was then projected onto the highly changeable screen of an economic and social reality in rapid motion, though in absolutely no clear direction.*[38]

These were the three principal components of the first phase project, and since they are the generating design elements also for the second phase, it is important to re-propose their most significant points here .

The first was intimately connected with the nature and the perspective of transforming Bicocca in relation to the urban system of Milan. From this it was possible to deduce a trend and recognize the potentiality of giving a new centrality to the area both in relation to its accessibility[39] and to the realistic transformation of other disused industrial plants[40] in the surroundings. This idea was suggested by the proposed expansion of the regional railway network system, presented by the municipality, which envisions the transfer of the Central Station to the rail belt. All this will permit a new and

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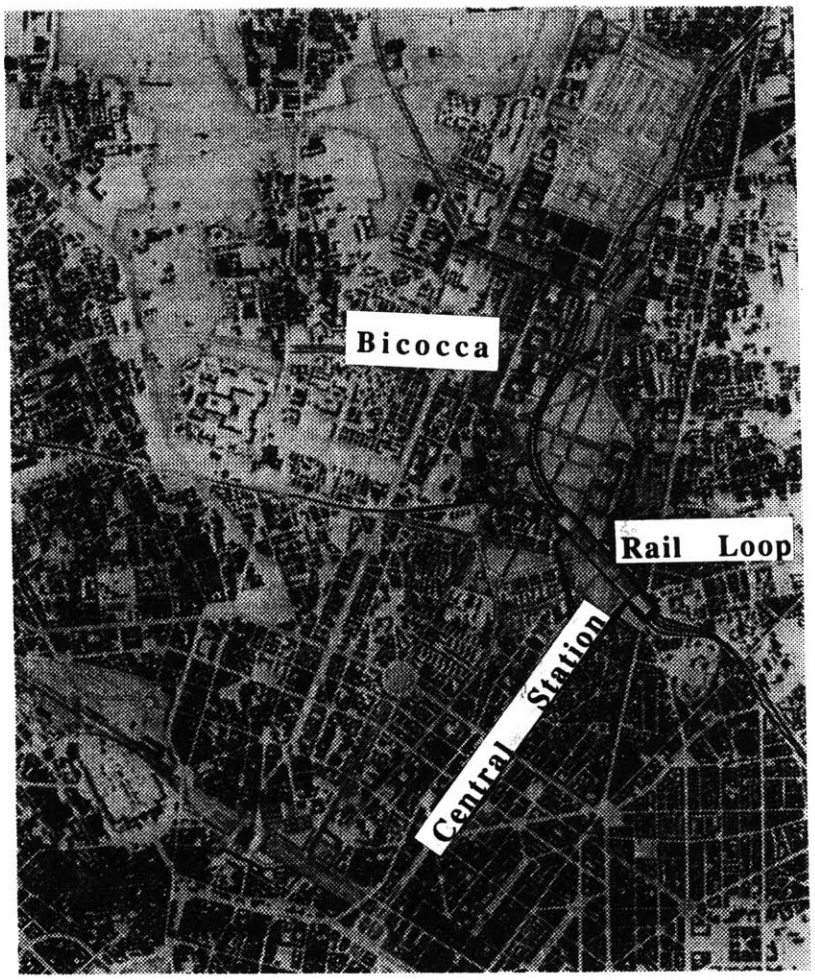
38 Interview to Vittorio Gregotti, Grègotti Associati office, Milano, December 6, 1991

39 Gronda Nord, regional railway lines to be connected to the Loop, the Testi axis, etc.

40 Breda, Marelli, Falck

important shift of attention to the northern sector of Milan, within the framework of the Milanese urban development plans.

Figure 59: General scheme of the new railroad system

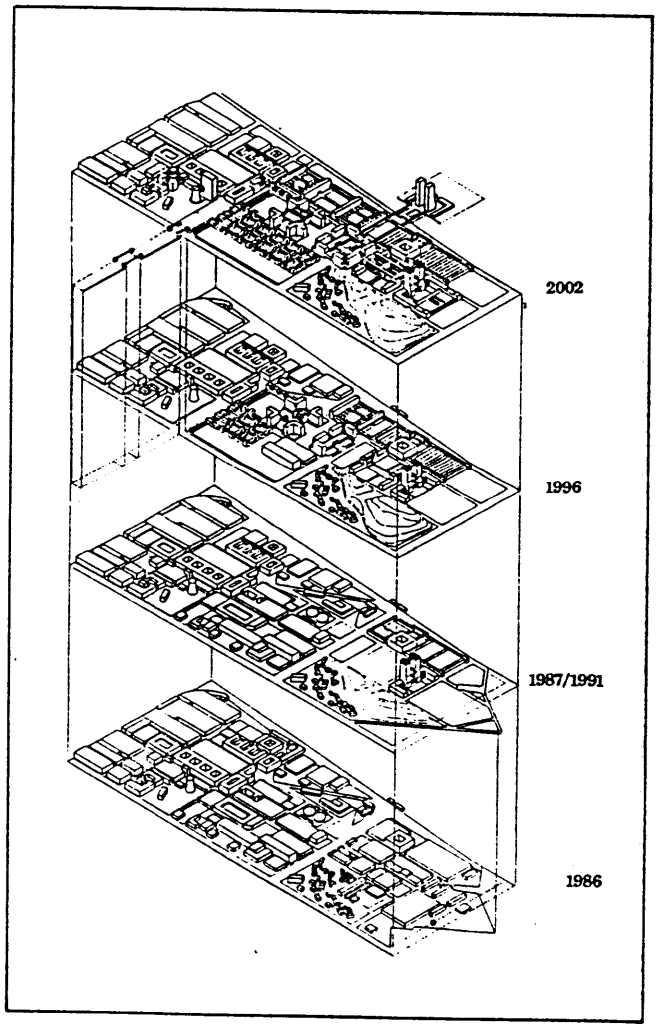


The second factor concerns the interpretation of the meaning of "technological pole". Gregotti's notion of the meaning deals primarily with the location of Bicocca, which is quite different from the experiences in Japan, Britain or North America. For the new Bicocca, in Gregotti's view, an essential role in its functioning is played by the synergy of all its components. This means a great variety of scale, typology and the nature of the various interventions. On the basis of the above consideration, the team envisaged the presence of public and private sectors, facilities for sophisticated manufacturing

companies, spaces for study of prototypes, nursery, centers for services, information centers, facilities for higher education, and public services structures.

Finally, the third question involves the elements capable of exercising a closer influence on the morphological nature of the project. Among others: the need to re-establish links between the area and the surroundings urban fabric; the acceptance of the existing layout of roads with the idea of setting up a hierarchy between the various parts; the development of a strategy for morphological control over a long period of time (since the project has been divided up into four different stages).

Figure 60: The project's phases

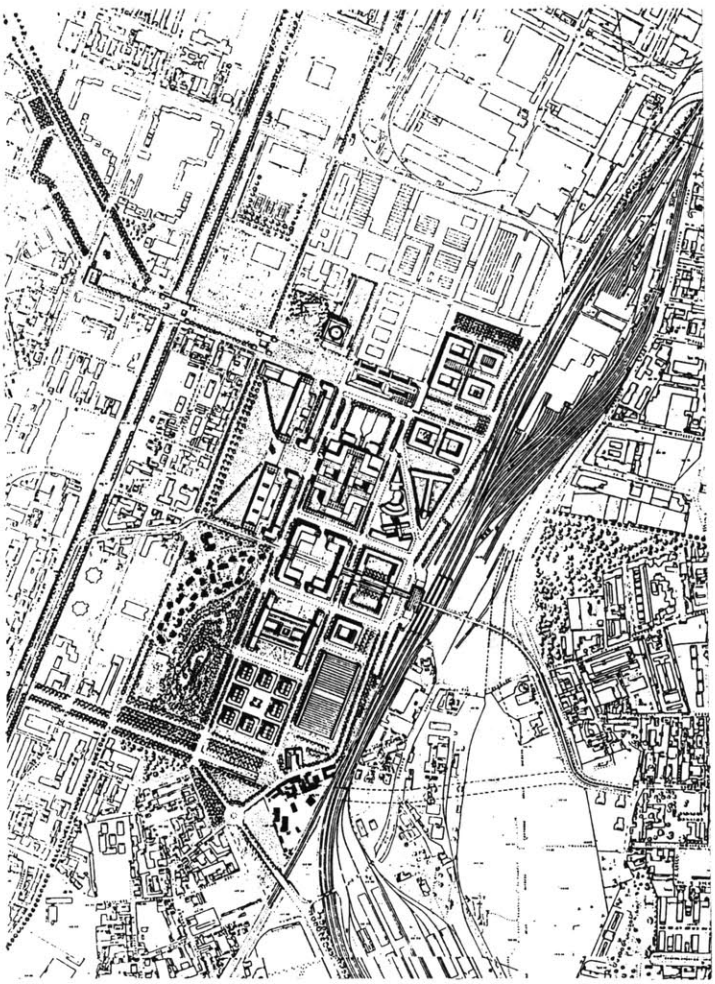


From the above assumptions and what they involve, it appears that the transformed Bicocca will play a primary role in reference to the large northern sector of Milan. At this point of the inquiry it has to pointed out that the operation of Bicocca, originally publicized as "an occasion to change the face of Milan", in reality has been reduced and should more honestly be interpreted as an occasion for intervening only in a part of the city. This appears both from the design intentions and the theoretical positions of the competitors. This issue will be discussed more fully in the conclusion of this paper.

In the second phase the idea of Bicocca as an open and articulated part of the city was restated. The new technological pole has been divided into compartments which correspond to the various phases of construction and of the development program. The skeleton of the first phase proposal has been substantially maintained and emphasized by the constant building heights and the location of the most specific technological functions (such as research, university, collective services, and business centers) in the top floors of the buildings. This central structure, constituted by a group of four central blocks, is framed by the existing circulation grid; in this way the overall system allows the reuse of the underground infrastructure. To this central sequence are welded the lateral bands, whose functional and residential character have the role of integrating and relating the pole to its surroundings. Along the strip towards Viale Sarca, at the back of the Pirelli Village, the low profile hill originally proposed in the 1986 design is maintained. Also, from there, the green expands towards the south and the north, where a tilted plan delimited by Viale Sarca opens up the area to the outside. A pedestrian distribution system, articulated by squares and open spaces, crosses the four central blocks from north to south, giving public continuity and access to the different compartments and sectors.

Gregotti's proposal takes its reference from the horizontal and vertical grid. The complexity of the role of this three-dimensional grid is immediately evident, as are the benefits deriving from it. The "already there" effect produced by this design assumption allows the integration of the block figures, a connection with the existing fabric, and, above all, the modular division of space in response to the desired flexibility.

Figure 61: figure ground



As has been stated earlier, among the three finalists, this scheme was the most capable of translating the program expressed by the planning instruments and incorporating it into its design. Using Gregotti's own words:

> *...I think that my proposal was the most realistic among the three finalists...and by realistic I mean the capacity to open a dialogue within the given situation. ...That is the strength of my proposal, together with a great flexibility and indeterminateness of program ...A program to be realized by successive phases is to be further determined along the way.*[41]

41 Interview to Vittorio Gregotti, Gregotti Associati office, Milan, December 6, 1991

E. Implementation of the Winning Project: The Gregotti Proposal in the Recent Planning Strategy of Milan

July 1988 closes the second stage of the competition with the victory of the Gregotti proposal. The general attention to the transformation, within a global evaluation of the potentialities, of the northern sector of Milan, the "meaning" assignable to an urban Technological Center, the necessity to construct a morphological control which would be global and testable overtime, are still the focus of the intervention. It is eager to define the Bicocca as a "recognizable" part of the city. The objective, now further defined by Gregotti, is:

> *...to envision not just a site plan, but a project whose architectural characteristics would be typologically and morphologically defined. It should have both remarkable degrees of functional flexibility and express a clear and precise configuration in order to allow the different parties involved to maintain a global image of the intervention, to construct architectures according to the meaning and perspectives even though not to specific forms. According to the above, we have came up with some elements for of building regulation, addressing each single compartment inside the new Bicocca... That was necessary in order to guide the single intervention which anyhow have to be in tune with the spirit of the whole project.*[42]

Therefore, implementation by successive phases and flexibility, become the fundamental aspects of the operation. For the first aspect, a set of guidelines calls for a progressive abandonment of the industrial activities still carried out in the area, the rationalization of the investments involving infrastructures and services, the construction by parts as "complete environments" as opposed to construction of the whole by successive phases. For the flexibility aspect, a certain rigidity is maintained on the basis of the indications given by the Variant to the Master Plan, especially in the distribution of land uses. For the building configuration, as well as for the sub-division of the blocks into rentable spaces, maximum flexibility was provided.

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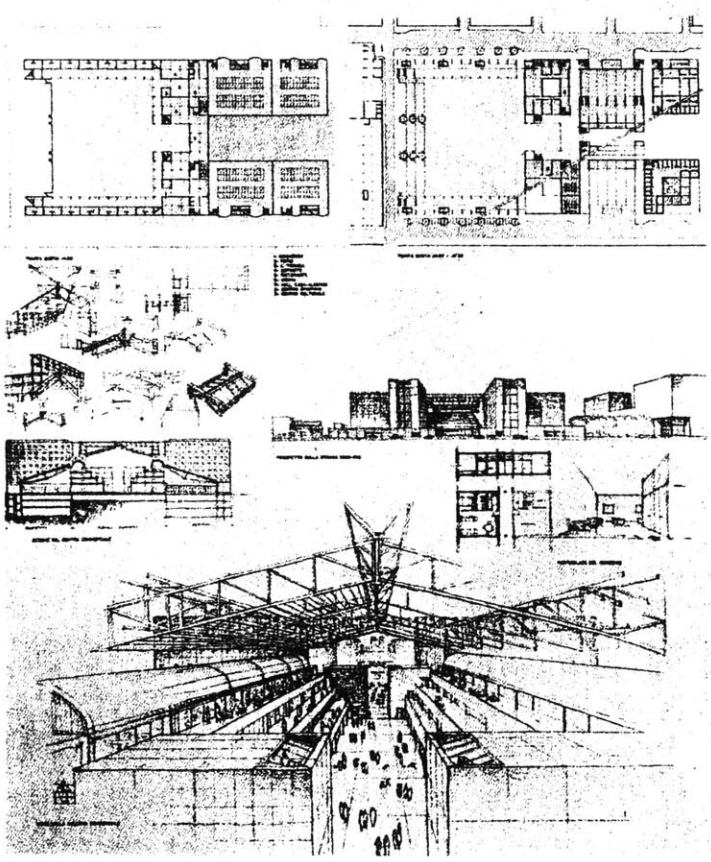
42 Pirelli S.p.A., Progetto Bicocca, Second Phase, Gregotti's Project report, Milano: Tipografia Pirelli , 1988, p. 8

Figure 62: Scketches



Thus, the second proposal of Gregotti & Associati conforms to a phase of "specification". However, at the same time, its strong "regulating" character and its configuration as an instrument of "planning management", put itself in a very close relation with the most traditional planning tools: the Variant and the P.I.O.[43] The actions taken by the various actors - Pirelli, Public Administration, several enterprises, and Gregotti Associati - find new intersections. The interventions contemplated in the Variant, whose contents are now adopted by the Gregotti proposal, are in fact subordinate to the approval of a P.I.O.

43 "Piano d'Inquadramento Operativo", in the Italian planning system it is an instrument to coordinate the overall development of an area included in the Master Plan of a city.

Compiled in July 1989, the P.I.O. has the function to operatively coordinate the various interventions involving the area. The Gregotti proposal is then "absorbed" and its management and implementation aspects are then developed according to the P.I.O. In particular, the infrastructural interventions, the standards, the functions, and modality and times of realization are specified according to specific interactions between new constructions and the "requalification" of the existing. The general objective was to maintain a balanced relation between the economics of the city and the economics of the future technological center.

That is, perhaps, one of the many possible explanations of the fact that the final version of the scheme produced by Gregotti Associati, "simplified and undressed of its most dramatic elements, has become a spare, austere composition of measured sobriety. The spatial understatement of the building is offset only by the elaborate articulation of the exterior areas which, penetrating the spaces between the blocks, menage to subtly enhance their visual quality."[44]

The various interventions proposed into the individuated "compartments" became subject to verification by Detailed Plans, Lotting Plans, building permits as the basis for which Pirelli has started the negotiation process with the involved enterprises. The realization of each single building has to occur according to projects - elaborated by different designers - responding to the overall rules and regulations fixed by the Gregotti project. The predominant role of Pirelli has allowed the Gregotti Associati to assume the rule of interlocutor also in this phase of realization.

On the other hand, the relations between Pirelli and the local administration, concerning the realization of the public interventions, are the subject of a "Convenzione Quadro"[45] which regulates the successive building permits concerning the various interventions. This is an important document of negotiation, according to which Pirelli has committed itself to giving up parcels of lands to the municipality in exchange for the construction of primary and secondary urbanization systems or the issuance of building permits.

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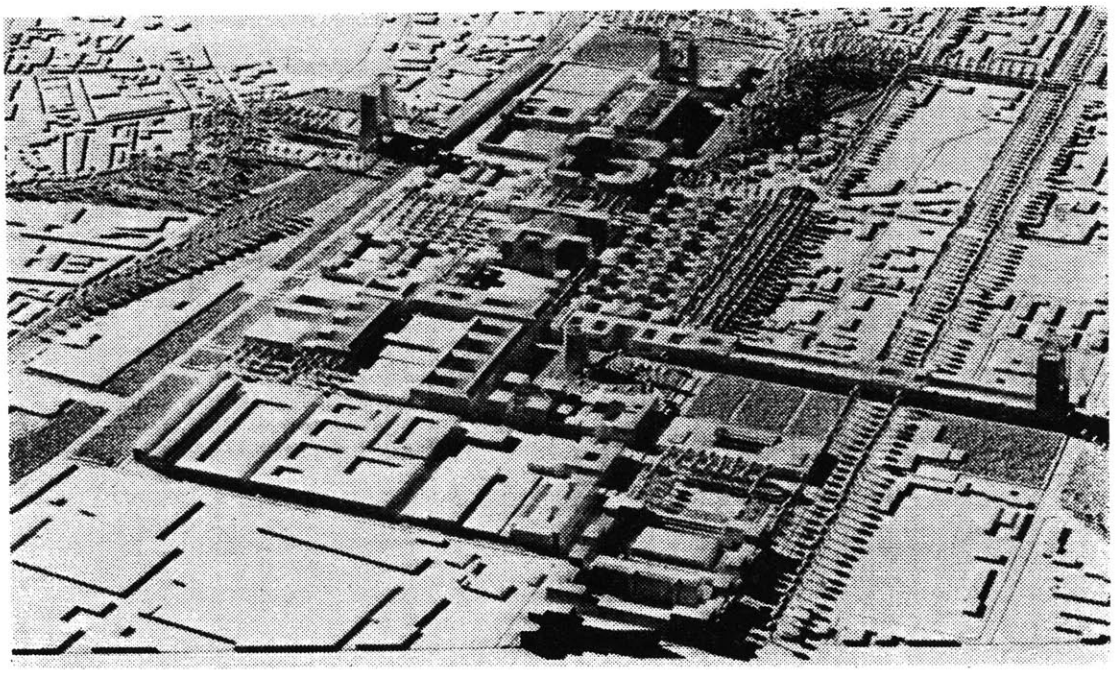
44 Luigi Moiraghi, "Il Polo Tecnologico Milanese", l'ARCA 40, July - August 1990, p. 36

45 This is an instrument section of the P.I.O. which deals only with one particular issue included in the P.I.O.

Figure 63: Model



Another important content of the P.I.O. concerns aspects related to the management of the technological pole. Thus, the various public institutions involved, were asked to clarify their roles: such as the University of Milan, for which the transformation of Bicocca has always represented an occasion of internal renewal, especially towards research and interdisciplinary activities. The university has put together a program to introduce new departments in the pole, an interdepartmental center of science and technology of materials, and to move to the pole some departments of the existing Polytechnic. In addition, the recent integration of education, research and production provided by new reforms in the Italian education system, could find its momentum through the installation in the pole of the academic components and the private research.

The winning project, the Variant and the P.I.O., groundbreaking in 1989 would seem to announce the beginning of the construction phase. However, the final seal of approval by the city council never arrived. The planning activity of Milan has been in a long phase of stagnation since 1989. "...Six months waisted, for the lack of agreement on decisions involving the planning activity of Milan, in the last city council meeting

before last summer. Many more to be waisted for other decisions on other issues which will add up for next meeting. Delays adding up to other delays; waiting months which add up to years."[46] Political weakness of the majority party, obstructionism by the opposition, and slowness of the public apparatus are some explanations for this situation. Many of the most important projects capable of "launching Milan into Europe"[47] take decades to become realities. The last failed attempt of the city council to deliberate for some final approvals has slowed down several projects which are of interest to the dismissed industrial areas of Milan. Administrators and politicians continue discussions while the city is losing important opportunities for its development. The most famous victim of the present situation of stagnation is Bicocca. As Gavino Manca, president of the 'Societá Progetto Bicocca' has observed: "...the greatest concern is that in this total uncertainty the companies waiting to move in will soon end up changing idea. Only to give an example, if Siemens decides to take its offices elsewhere, a 200 million dollars deal will vanish in a second."[48]

Today the area is worth between $ 200 and $ 250 million. If the project moves ahead its value will grow, if stagnation continues it will depreciate. In addition, the enormous sum of money already invested is accrueing enormous interest that at the moment has no return. The billion dollars initially estimated to complete the entire project, today have to be multiplied by one and a half. Moreover, Pirelli after the failure of the "operation Continental" and the consequent resignation of Leopoldo Pirelli, finds itself in a restructuring process which will not be short nor painless.[49]

Gregotti complains: "It is not only the interests of Pirelli and other companies are in jeopardy here, but above all those of the city. What we are trying to develop at Bicocca is one of the most important pole in Europe. Unfortunately, the problem in Italy is that

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46 Alessandro Sallusti, "Technocity, il Futuro Puó Attendere", Corriere della Sera, Milano, August 7, 1991

47 Ibid

48 Giancarlo Radice, "Bicocca Lentocity", Corriere della Sera, March 11, 1992

49 Ibid

this type of operations go very slowly. Hopefully, Bicocca will not become another of those projects remaining on paper."[50]

50 Ibid

Chapter V: Summary and Concluding Observations

A. SUMMARY

The problem dealt with in this thesis is represented by an industrial area undergoing a process of dismissal for the reasons previously stated. Consequently, the owner of the plant, Pirelli, aimed of revitalizing the property, but not possessing those elements needed to set up a clear program nor a process of reuse, organizes an "urban design and architectural competition" on the theme of an "integrated multi-functional technological pole," leaving the designers the task of inventing a program and setting up a process of revitalization. Subsequently, the operation undergoes a dense series of events until 1989, which would mark the groundbreaking, but which instead marked the start of a long phase of stagnation. Today, three years later, not much has changed. The operation seems to have reached a critical phase of stall.

Initially primed only by the legitimate concerns of Pirelli for the progressive under utilization of its plant, very soon the event assumed a fundamental importance, especially considering the great potential offered by this revitalization, in relation to the scenario of land-use transformation in the territory of Milan. One of the most relevant and relatively new elements emerging since the beginning, is the synergy between public and private operators. This relatively new procedure, or at least unusual in the Italian planning scenario, has generated a long series of successive events; and consequently, a new plot of relations among the various traditional planning instruments. Bicocca has contributed to many lessons, though to much remains to be learned since the event has not come to its end yet.

The Bicocca operation has evolved in an "anomalous" way if compared with the ordinary procedures of land exploitation usually engaged by the private operator. Very rarely, the latter has become, at least in the context of Milan, a promoter of high quality real estate operations, engaging instead in normal procedures of land speculation. Although the Pirelli event has been a subject of debate involving many parties, especially those connected to the political and cultural world, not only in Milan, the actors who have guided the decision-making process are primarily the Pirelli Industry and the Comune of Milan.

Considered by many as " occasion for the city", it becomes necessary to ask whether and in which sense the operation has represented an "occasion" for Pirelli, since the case has been polemically considered by others, a simple attempt of land speculation masked behind the prestigious facade of the international competition. But Pirelli has always denied this charge declaring that the pursuit of economical objectives would have been easier by using a more "traditional" operation , one less complicated than the one undertaken, and able to produce profits (perhaps more) in the long run. Not properly constituting an instrument for the achievement of immediate economical results, the operation Bicocca seems to have become a mean to secure political and cultural prestige to Pirelli (perhaps in a similar way to what Lingotto has done, in terms of image for Fiat). In addition, it appears that, especially at the start, the operation required cultural legitimation. This will later occur by projecting Milan into the future using the "advanced technologies" theme.

Another important issue has been the indeterminateness in the content of the "technological pole" which perhaps negatively characterizes the entire unfolding of events. The meaning that "technological pole" is going to assume, was to be hopefully specified in time; meanwhile, the image to convey, preceded the definition of the functions to be installed and found in the competition an important moment of reflection on the symbolic meanings by which the traditional industrial artifacts were addressed and in some ways asked to be replaced. Giving back "sense" to the place of production, transforming it from traditional to "innovating", became one of the objectives of the project. Erroneously perhaps, the competition was given the task of defining a program and setting up a process meeting these objectives, which was too great a task for a competition. The current status of the operation reflects, among other factors, the unsuitability of the competition to achieve those goals by itself.

Already in 1987, Pirelli set up the Societá Progetto Bicocca S.p.A., headed by Gavino Manca, which has taken care of the administrative matters, the design, and the marketing of the properties. Also during the initial phases, the company stipulated an agreement with the builders consortium "Milano Sviluppo" for the construction of the

pole. The consortium, which includes some prominent enterprises[1], belongs to a group named Italia Sviluppo. The group associates some of the major construction companies which play a leading role in important development operations involving some of the largest cities in Italy.

Meanwhile, between the first and second stages of the competition, Pirelli tryed to define a possible scenario of evolution for the technological pole, by setting up a scientific committee. Presiding over this committee of nine world prestigious scientists is Umberto Colombo, president of ENEA.[2] The international experts were to map-out in a technological scenario report[3] world prospects and trends which were to bring the Bicocca Project to a successful conclusion. The intention was to give an overview of the future - not just a description of the state-of-the-art in all fields of scientific and technological endeavors, but also an assessment of current innovations in terms of environmental implication. As said earlier, the results of the study did not meet the expectations of its premise. The study was able to achieve some of its original goals, but in a very generic and general way, it was too broad, it failed to focus on the specifics of the area. In order to be successful, the study should have been more specific. It should have given clear indications of the meaning of "technological pole" in relation to the economical, cultural and political situations of the Milan metropolitan area. Its failure is noticeable because the study didn't aid much the three finalists of the competition, since the differences between first and second stage proposals were only minimal and regarded just as a further refinement of architectural issues.

As a symbol of a changing Milan, the Bicocca also becomes for the public operator a significant opportunity. The City was to benefit enormously from the image being created by the new place and later by the new concentration of activities to be installed in the pole. This was going to make Milan more competitive in the European Common Market, and produce new revenue taxes, new jobs, etc. In addition, it has to be

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1 such as Grassetto Costruzioni belonging to Ligresti, Lodigiani, Castelli, Marcora, Mbm Maregaglia. If you were Italian these names would mean something.

2 ENEA stands for: National Committee for Nuclear and Alternative Energy

3 Pirelli S.p.A., Scientific Committee Report: Science and Technology Toward the 21st. Century and Their Impact Upon Society. Milan July 1987

considered the enormous benefits coming from the revitalization of a large piece of urban patrimony otherwise exposed to further deterioration. Moreover, such large planning operations usually have huge political implications, often becoming instruments used to establish and consolidate political power. The image of the new technological pole, together with the one of "Milan of the year 2000," has often produced enormous benefits for the socialist party governing the city at the time of stipulation of the Protocol of Agreement. The City received all these benefits at a minimum cost, because the operation has been economically supported only by Pirelli. The Comune alone could never have been able to fund such an expensive project considering the public deficit of the city of Milan.

The relationship between Pirelli and the public operator seems to have engaged at two different levels. On one hand it had to show capacity to manage and efficiency; on the other, it was necessary to make sure that the intervention would be really an occasion for a much larger process of revitalization, in order to avoid the operation being reduced to a simple benefit for the private. Obviously, the revitalization of Bicocca involves elevated costs (all borne by Pirelli), and a capacity to conceive programs of a more general breadth (by the City), in order to enhance the overall urban quality of the city. The necessity of involving the public operator arose, apart from other factors, from the enormous improvements of the transportation system required by the project. In Italy, these kind of improvements, are generally considered responsibility of the government because supposedly benefit the entire community, and are funded with public money. However, the slowness of the decision making process relative to those issues shows, perhaps, the ambiguity in the intention of the public operator (Comune , Provincia, Regione) to really converge resources on the operation. Nevertheless, the operation was, from the public side, prevalently managed by the municipality, especially in the phase of compilation of the initial agreements, the Variant and the P.I.O.; the Lombardy Region played an important role, and the Provincia a marginal one. Globally then, having analyzed the various phases of the event, it is possible to understand why only a few actors are involved in the decision-making process. The issues get redefined at each phase of the event, without producing a substantial variation in the body of actors involved.

In Milan, the conflict over the large abandoned industrial areas for the location of special functions and the debate generating from it, redefined, although very vaguely, the meaning given to "innovating" functions. Subsequently, during the evolving of the Bicocca event, a progressive specification of the characteristics and meaning of the term "Integrated Multi-functional Technological Pole" became noticeable, even though the meaning is still very flexible and never completely agreed upon. Even the design competition, a device erroneously delegated to sort out meanings and essences of the new functions, failed to do so, as it will be further discussed in the following pages.

Going back again on the issue of the actors involved, two more elements should to be pointed out. First, the presence of a planner, Bernardo Secchi, became relevant: he didn't just coordinate the entire competition, but seem to go beyond, extending his consultation service until the phase of construction. Never interrupted, the services of Secchi should be actually seen as a part of the job of a committee appointed by the municipality to control and protect the synergy between public and private. However, the program of this committee was never defined. Secondly, the compilation of the Variant of the Master Plan turned out to be a terrain of interesting interlacements, revolutionizing even further the normality, or it should be said the correctness, of the planning procedures. The Variant, institutionally a planning instrument compiled by the municipality, was in this case compiled through an unusual lengthy negotiation, and in the end turned out to be the result of the collaboration of a group, in which the planners of Pirelli and the planners of the City of Milan worked together. Later, on these bases, the outcome of the competition and its successive elaborations, constituted a significant opportunity of articulating relationships both between the knowledge of plan and the knowledge of the project, and between the planners delegated by the different actors. Similarly, the P.I.O. was elaborated within a continuous dialogue which sets up constrains and opened up possibilities without revolutionizing the points already fixed by the previous initiatives.

Perhaps the implications of the Progetto Bicocca should be researched at different levels and directions. In the surrounding area, as an example. Bicocca becomes important if viewed as a part of a general plan of revitalization (yet to be compiled) involving the other abandoned industrial plants of the northern sector of Milan and vicinities. For

instance, the underway revitalization of Falk, an abandoned industrial site in the city of Sesto San Giovanni, just outside Milan, would make more sense if carried out according to that general plan of revitalization. But the compilation of such a plan involves hard to reach elements: enormous energy, resources, and political willingness. However, some sensitivity on the part of the public operator is being shown lately since the compilation of a new Master Plan for Sesto San Giovanni, which borders the northern sector of Milan including Bicocca, has been commissioned to Gregotti. The public operator is, perhaps, becoming aware of the benefits of coordinating the planning efforts of contiguous areas.

Two important issues are still open: one involves the possibility to assure quality for the new development and protect its architectural design until it actually gets built; the other involves the effective possibility to realize a technological pole as opposed to proceed with a more traditional and maybe more profitable operation of land speculation. In this regards, the high densities foreseen and other constraints involving functional aspects of the pole become the elements around which the parties involved still have to find a balance.

Nevertheless, it is important to note that the political awareness of the Public Administration seems to suffer a progressive loosening up. Present from the starting phase until the realization of the P.I.O., the public operator today seems to delegate much to others. Started as a great operation to create an image both for Milan and for Pirelli, today the realization of the technological pole seems to rely prevalently on the willingness of Pirelli to pursue its initial idea. In addition, the slowness and decreasing interest of the Polytechnic of Milan and the Ferrovie dello Stato (Italian Railroad Company) seem to have further tested the effective feasibility of Bicocca. The operation actually seems to be deliberately slowing down, perhaps waiting for a more favorable real estate market or perhaps hoping to involve institutions and companies capable of being strong attractions, thus increasing the complex process of property appreciation and providing financial support.

The Progetto Bicocca's groundbreaking took place in 1989, but construction never began. The planning activity of Milan is in a deep phase of stagnation since 1989

because of a political crisis of the public administration. Bicocca is one of the many projects needing final approval in order to "take off". In addition, the future of Bicocca is uncertain because of the present financial situation of Pirelli. Last summer, the company lost over a third of its assets in a deal with Continental, in Germany. Subsequently, Leopoldo Pirelli's resignation and the consequent chaos in the leaderships of the company have resulted in additional problems for Bicocca. Pirelli does not seem financially capable to support the operation undertaken, by itself. In the present situation the project is likely to be further delayed. The risk at this point is that the companies interested in moving in will soon have to look elsewhere for availability of space. If this happens, the results will be obviously a disaster for the future of Bicocca.

B. CONCLUDING OBSERVATIONS

Among the issues raised in this research, those deserving further attention deal with the particular approach to industrial transformation used in this case study. Primarily, they spring from the competition, "the event in the event", and they can be grouped into two main sets of issues. They represent the lessons to be learned from the Bicocca case. The first set of issues deals with the competition's purposes. In fact, because this device was used as a method of solving the problem of revitalizing an industrial plant such as Bicocca, it is legitimate to ask how well this has been done, if it has been done at all. This involves looking into the adequacy, or inadequacy, of the program and the uncertainty of the process which characterizes this planning operation; and finally, assessing the overall effectiveness of the method. The second set sorts out the issues designers responded to, with their design solutions, and it tries to establish which of the themes emerging from this analysis can better represent the current thinking in urban design practice in Europe at the moment.

1. A Critical Examination of the Competition as an Instrument of Urban Design

The first and most important set of questions deals with the method of using a competition as a vehicle for addressing and solving the revitalization of an old industrial plant such as Bicocca. It is here important to clarify which purposes the competition served, highlighting its positive and negative sides. Pirelli, as seen previously, organized the competition around the theme of a "technological pole" without having a clear idea of what that meant. Although some preliminary research was conducted, together with a study aimed to find the actual demand and feasibility for that kind of space, Pirelli did not have a clear program nor a sensible process to set up. Thus, from the start, the revitalization of the plant is characterized on one side by a great desire to give new life to that dead piece of city; while on the other, by lacking the right "recipe" to do so. Thus, the competition is called into play and is employed as a tool to give not

only formal answers and solutions; but also, program and process related ones. More ordinarily in fact, competitions are used to find only formal solutions and provide design ideas to a given problem. On these premises, it is easier to understand the role that the competition played: it assumed anomalous characteristics on its own, since it became a mean to publicize an event and to gain political and economical support.

Moreover, the following must be taken into account . In Italy, generally, two types of developments are carried out successfully. Those large or small operations managed by the public sector and financed with public money, get implemented and built with no problems. Small operations managed and financed by the private sector also get built with no problems. Very rarely public and private sectors come together, and in the Bicocca Project this seems to have made things over-complicated. Perhaps, many of the problems affecting Bicocca today, developed from the synergy between public and private operators. The problems which emerge might be in fact, the result of the ambiguity of roles and responsibilities between the two main actors. In addition, it must be remembered that at the start of the event, Pirelli was in desperate need of support in order to prime interests around the reuse of Bicocca. First, the company needed the Comune to politically support and push the project along the slow Italian planning apparatus. At the same time it was in need of financial support from whoever was willing to give it. Thus, it becomes clear how the competition finds a concrete meaning. In these circumstances, it was the only tool capable to publicize the intervention, giving it legitimacy and at the same time credibility. However, if on one hand the competition was suitable to center some of its objectives: in fact it gave legitimacy to the operation and with it, political support from the public administration; on the other hand, it failed in getting credibility and financial support. Pirelli has in fact, entirely supported the project from the start.[4]

It becomes important to question why Pirelli proposed in the first place to convert Bicocca into a technological pole. It becomes legitimate to question the good faith of Pirelli whose concerns seem to exclusively focus on the effects that the transformation would have on the city rather than its economical benefits. People sustain that, very

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4 Conversation with Prof. Paolo Ceccarelli, Cambridge, MA, April 1, 1992

intelligently, Pirelli knew about possible difficulties in promoting a traditional operation of land speculation, and it didn't even try it. Instead, it masked its true intentions, behind the cultural facade of an architectural competition. A cultural event like an international competition would have in fact gained high cultural dimensions, thus legitimacy, to the operation. In addition, it has been said that the competition has to be seen as an intimidatory action promoted in order to make the operation look grandiose, so that no one would have questioned its legitimacy and correctness. The same people sustain that the original intentions of Pirelli might have been to revitalize Bicocca, transforming it into a mixed uses development, but this would have appeared an obvious speculation and it would have been rejected by the authorities. Transforming Bicocca into a high-tech structure would instead, have given prestige, credibility and support to the operation.[5]

The inadequacy of the program used to carry out such an operation of urban transformation is then evident. In fact, there was not a program, and furthermore, it was not specified what industrial transformation process was going to be implemented. It was left to designers to invent a program, to invent a process. Thus, it becomes here necessary to raise the question: are designers the right people to be doing this? Certainly not. The outcome of the competition was of great value, both for the ideas it was capable of generating and for the debate it was able to prime. However, the transformation of an old industrial place cannot just be driven by building a set of site generated notions about how the process should take place. Moreover, the issue of how to transform a place like Bicocca cannot be centered just on the making of an urban form, but it has to be structured by the creation of the institution that is going to stimulate technological advance in that area, job training, etc. For Bicocca, a lot of things belonging to the traditional development realm should have happened, but instead didn't take place. Erroneously much was left up to the designers. Of course, designers could make the process easier or more difficult, but certainly they are not the substitute for a solid and tested traditional planning procedure.

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5 Ibid

The inadequacy of the method in centering the process of revitalization of Bicocca on a competition is detectable in the fact that the competition itself didn't help much in further defining the meaning of "technological pole". This is clear from the scarce contribution of the first phase proposals to the second. If the first phase of the competition shows deficiencies, not much was done about finding remedies for the second round. In fact, the contents of the new functions to be installed were not really further specified even in the second round schemes. Thus, it is doubtful that the competition brought any benefits to the event other than excellent design ideas and a rich set of arguments for a fertile debate. The success of the promotion of this site having the advantage of that prime location, must have been based on a clear program from the start, on incentives, and on all those devices belonging to a more traditional planning realm. In addition, among the many mistakes Pirelli made, is the wrong assumption of thinking that it alone would have been able to support the entire operation.

Therefore, inadequacy and fragility of the method used together with the recent economical crisis of the company, which has recently lost a third of its capital in the Continental deal[6], have contributed to the present stagnation of the project. Finally, the Council of Administration of Milan is contributing negatively, not being able to set up a strong political constituency in order to hold its regular meetings and deliberate for the start of the construction phase of "Compartment 1".

2. Emerging Theme as a Current Thinking in Urban Design Practice

Although, if on one hand the competition failed in its effort to sort out contents and meanings of the new technological pole, revealing its inadequacy in setting up by itself a program and a process of land transformation; on the other, it was able to produce a tremendous amount of interesting ideas and to prime a rich set of arguments around the

6 Giancarlo Radice, "Bicocca Lentocity", Corriere della Sera, 3/11/92

contemporary debate about cities. The competition reveals itself a very useful and fertile instrument in its traditional role of formally and conceptually generating urban design and architectural ideas. From the analysis presented in the previous chapter, it is clear that the results of the competition are difficult to map out in a systematic manner. Each project is very complex, is a sort of "multi-variant entity"[7] which includes all the identified themes, each coming out of different combinations of assumptions and theoretical positions. Nevertheless, within such a multidimensional scenario, it is important to make a qualitative judgement on which of the themes previously identified, seems to be the most interesting. The theme representing a sort of state-of-the-art in urban design at the moment. The one that seems to better comprehend the Bicocca area even though only from a morphological point of view.

Although it has not been possible to clearly identify the presence of a common idea of "city as a whole" among the eighteen proposals, it has been possible to identify a series of general and common hypotheses refereeing to the large scale project of architecture. The common pattern associating the eighteen proposals is represented by the belief that today it is not possible to design a piece of a city without considering its integration with the city and its territory. In different ways and degrees, all the proposals seem to promote the connection of Bicocca with the city. Many proposals interpreted such integration from the physical point of view, proposing therefore, a system based on the morpho-typological characteristics of the Bicocca's urban sector. Other designers have looked mostly at the coherence with the historical city, with its nineteenth century urban tissues and those belonging to the Berutian Plan,[8] to the different morphological systems which compose it and to its emerging monuments in order to create a strong continuity between Bicocca and the rest of the metropolitan territory. Finally, some other designers have interpreted the theme of integration prevalently from the point of view of the infrastructural connection, creating a new grid of connection between the area and the rest of the city, reorganizing the railroad system of Milan or even redesigning new elements in order to ease the accessibility to the area.

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7 Meeting with Julian Beinart, professor of architecture, MIT, 4/24/'92

8 The Beruto Plan refers to the Master Plan of Milan compiled in 1884 by Beruto

It has to be emphasized that, although those two elements, the reference to the nineteenth century city and the importance given to the infrastructural system, were not particularly highlighted in the competition announcement, they assumed a strong character in each of the proposals. That is because, contrarily to what seems to appear at first glance, the announcement played a fundamental role in orienting, implicitly perhaps, the designers attitude towards the area and the territory. In fact, the competition announcement, which at the beginning presented itself as a "non-prescriptive" document, at the end revealed to have exercised a heavy impact on the way designers have interpreted the city. This aspect stresses how important the issue of reference to the existing city seems to become for the various actors involved in the Bicocca event.

The designers understood the suggestions of the competition announcement in different ways. A first group took the analysis proposed in the announcement even further. A second group considered that analysis exhaustive enough to be taken as a basis on which to establish their own proposals. Finally in contrast, a third group explicitly opposed a kind of interpretation based on other values instead of on the physical-morphological characteristics of the city.

On the whole, the above considerations seem to show the absence of a common framework of theoretical positions and a global idea on the contemporary city, which was seen in the past. This aspect seems to validate the hypothesis that although the Progetto Bicocca has been presented as an occasion to address and solve the problems affecting the whole metropolitan area of Milan, we cannot still think of cities as whole "organic" entities, since they have became so complex and diversified. Instead, we can try to tackle each single episode of the city considering it a self-sufficient part, while connected with the whole metropolitan area. Putting this issue in Gregotti's own words:

> *I think that at the moment everybody, and for everybody I intend the architectonic culture as a whole, is working not according to a global and organic idea of transformation of the city any more, but according to an idea of transformation by sections, by parts of it. Nobody believes in the utopia that it is really possible to transform the city as a whole and at once. However, it is possible to recognize in the city some differences.*

> *So that, establishing hierarchies among the different parts of the city, it becomes possible to carry out some sensible work. Bicocca for example, fits in a global idea of a city constituted by a series of urban poles on which to distribute the various functions of the city, connected by the infrastructural system. One of the task of the project was to further define the hierarchy among the various parts of the city, reinserting the new Bicocca in it, and restructuring the whole infrastructural system. The idea of transforming the whole city of Milan only through this project would be unreal .*[9]

In addition it is possible to hypothesize that this absence of a common city model, if we exclude the fragments relative to the theme of site layout and the infrastructure, gives back in a way some credit to the competition announcement which, if nothing else, was able to articulate rich debates. Because of the absence of cultural references, of common models and a general idea of city, the instruments belonging to the planning realm and the one belonging to the architectural realm, generate ties and new possibilities, moments of agreement or even aperture towards new phases of dialogue. This assumes a fundamental role for the construction of a decision making process in urban planning.

Nevertheless, the outcome of the competition constitutes an invaluable contribution of Pirelli to the city. In addition it represents a serious contribution to the body of knowledge of architecture, especially in regard to the theory of reuse and urban modification. To some extents, Bicocca becomes important even though it will never be built. The powerful ideas and the theoretical debate it has been able to generate, remain.

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9 Interview to Vittorio Gregotti, Gregotti Associati office, Milano, December 6, 1991

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