the value of architecture

handbook for a successful design
The Value of Architecture

Handbook for a Successful Design

Candidate: Gabriele Pitacco

Tutor: Professor Giovanni Fraziano
       University of Trieste

Co-Tutor: Professor Arjo Klamer
          Erasmus University Rotterdam
UNIVERSITÀ DEGLI STUDI DI TRIESTE

XXIV CICLO DELLA SCUOLA DI DOTTORATO DI RICERCA IN SCIENZE INTEGRATE PER LA SOSTENIBILITÀ TERRITORIALE

THE VALUE OF ARCHITECTURE
Handbook for a Successful City
Settore scientifico disciplinare: ICAR/14

DOTTORANDO
GABRIELE PITACCO

COORDINATORE
CHIAR.MO PROF. ROMEO DANIELIS

SUPERVISORE DI TESI
CHIAR.MO PROF. GIOVANNI FRAZIANO

CO-SUPERVISORE DI TESI
CHIAR.MO PROF. ARJO KlamER

ANNO ACCADEMICO 2011/12
This research has a meaning only because of the conversations I had with some people. These acknowledgements give credits to these people that really influenced this work, being conversation partners over time.

I have to acknowledge Irene Valle, my partner in life, for her trust and support in discussing and evaluating every choice (even if they were leading one on us to the other side of the world).

I have to acknowledge Giovanni Fraziano, for his intellectual support and trust in intelligence and architecture, and Giovanni Damiani, for the inspiration and the sharp approach to the relational features of architecture.

The conversations with Gianfranco Guaragna, Vittorio Alberto Torbianelli, Sasa Dobricic, Ole Schereen, Rem Koolhaas, Paolo Brescia, Tommaso Principi, Frits van Dongen, Giampaolo Bartoli, Marcello De Marchi and Sandro Titton helped me understand how important architecture is and what architecture is beyond drawings and buildings.

If awarding authorship to contribution is by means of citation, the amount and relevance of quotations of Arjo Klamer shows how influential he has been.

Many people have been important and have being quoted, but many more have been part of the conversation.

I owe them a lot, but the responsibility for any error or fault is mine.

Gabriele Pitacco
Once upon a time a famous scholar was invited to a seminar of a different discipline and started the lecture with this story: a young man comes back home at night, after an evening of revelry, tipsy, or let me say, almost drunk. He lost his keys in front of the door and looks for them. But not where he lost them, but indeed on the other side of the street, under the street lamp. Suddenly the beautiful neighbour next door arrives. “What are you doing?”, she asks worried, “I lost the keys over there, just in front of my door”, he explains. “So why do you look for them in another place?”, dubiously. “I can look for them only where the light is” he replies.

We do not know if the man ever got back home, if he waited until the dawn or if they find a better solution for the night, but this research is trying a different path: instead of looking for the keys where they are not, it chooses to face the dark and tries to find the keys of a trans-disciplinary issue on the border line between architecture and economy under the dim light of a glass moon.

Of course this approach is risky. As it already happened with the draft version of this research, a curious

---

1. I owe this definition of the built environment that surrounds us all to Joseph Rykwert’s book The seduction of Place. The History ad Future of the City, Pantheon, NYC, 2000, italian edition La seduzione del luogo. Storia e futuro della città. Einaudi, Torino, 2003

2. I owe this story to professor Gianfranco Guaragna and to the always interesting conversations with him.
reader will find it hard to classify the field of research. Architecture scholars, architects and student of architecture will find themselves confronting with examples they know, but analysed with tools that they are not used to. At the same time economics scholars or students will find it strange to confront with the features of a discipline that doesn’t like to be analysed with the traditional disciplinary tools and will probably will not be completely satisfied with the used methods. But both of them, as it already happened, will find interesting insights on both disciplines and a cross border fertilization able to produce deep outcomes on our understanding of how the built environment around us is made and affects our lives. The curious reader will hopefully get to the end of it, after understanding the presented topics, even more curious than before.

0.2 The city is a collective artwork

According to Joseph Rijkwert\(^3\) the city is an intentional artefact, an human construction. To understand it and be able to work with it, we must consider it

as a constellation of artefacts wanted, designed and made by men. Artefacts that represent, embody or mediate individual and collective ambitions, feelings and expectations. They convey a metaphoric and symbolic desire and, at the same time, are consciously manipulated by individuals representing authorities or powers (politicians, developers, real estate CEO, bankers, citizens’ associations, urban planners, architects, etc...). Evidence and main token of this process is the physical structure of the city: Manhattan’s skyline and skyscrapers for instance not only express and embody the power and success of their builders, but they gather the energy and initiative spirit that fed the American dream⁴.

Each city is a collective production and, at the same time, an aggregate of individual, financial, social and societal decisions. The city’s appearance and the way it works are neither totally imposed by economical and political directives given from above, nor they are completely determined from below or by obscure forces impossible to identify and control. Apparently impersonal historical and economical forces have always been the organic outcome of individual choices. They can be represented as the resulting vector of the action taken by an undefined number of forces moving in different directions: any variation of

their alignment produces a deviation (although as relevant as its force is) in the vector’s trajectory.

Even if no city will ever be exactly how we desire it, nevertheless the way it appears, the way it works and the way we can or cannot live it are determined by people like you and me: no matter how small and irrelevant our actions can appear — adding a fence to my garden or choosing what to vote on the administrative level — all of them add up to the mosaic of forces that compose the physical form of the city. What can seem to be an impersonal force is often a vector like those described above, the outcome of all of our decisions: its trajectory and its impact point are inevitably modified, even imperceptibly, by our daily activities.

The places of our cities are made of buildings, streets and parks, commissioned and chosen by individuals to whom has been recognized a certain degree of authority. Authority can come from the popular vote, professional prestige, or from the ability to buy it. This means, that all these individuals can be approached and can be influenced. To shape our cities and make them our own expression it’s necessary the constant participation to the community and a constant involvement.

The intentions of whom manipulate the urban texture — developers, administrators, politicians — even
when they look rational and premeditated, they reveal themselves often obscure, sometimes even whimsical: a shrewd, equilibrated and rational revenue expectation can be balanced by the less economically rational desires to acquire status and prestige, at the same time tempered by social responsibility sense and maybe by a genuine and disinterested generosity. At the same time it is known that even the more meticulously weighted actions can reveal to trigger unexpected outcomes.

Each of us has a certain space of freedom to confront our own reasons with the others – and is thus free to act in a certain way, but even to act differently. Is because of these reasons that irrationality and judgement errors are inevitable factors in the history of urban development: financial events, industrial economy transformations and, in a more explicit way, the stock exchange commerce can affect in an unpredictable way our living environment. Despite the far-sightedness or the absurdity of the outlook, the consequences of any action can correspond or not to the desires and the expectations, but can also drive to completely different direction from what could have been presumed by anyone.

To understand the physical structure of the city in its tri-dimensional dynamism, it is necessary to understand how the human experience transforms the built form into images people can identify with.
The success of a city cannot be measured in terms of financial growth only or according of the market shares it was able to gain, neither it can be according to the role it assumed within the globalization process. It depends indeed on the intrinsic force of its urban texture and on the power of this texture to let the social forces shape the life of their inhabitants.

A city cannot be completely passive: there is a constant interaction between society and urban texture. We can’t affect on our cities without intervening on the related society and the other way around. Every change in the former implies a change in the latter. The urban texture and the generated image are a desired outcome, although as fitting or unsatisfying as they can be.

The built environment cannot be reduced to a simple sum of functional and aesthetic features, but has to be considered a representation – and therefore even an evaluation – of the values of a society and its functioning system. The metaphoric force of the city is its social representation.

In spite of aesthetics, and even of design quality, the metaphor can constitute the argument for a
rational discussion. Representation refers to reflection, to the intention and, in this contest, to a design: a project.

The metaphoric faculty is a fundamental feature of our way to inhabit the world: if the metaphors works so perfectly in the language is exactly because they are part of our inborn conceptual heritage. Only the metaphor can provide us the keys of our transaction with the built environment.

According to Joseph Rijkwert it is architecture’s duty, and to a certain extent even of the other arts, engaging and involving this faculty. Not all creations are able to achieve it with equal mastery, but it’s right when the popular interpretation and understanding of a building coincide with the metaphorical desire of its creator that the architect really achieved it’s goal. Neglecting or complicating this form of metaphorical interpretation means reducing into the popular imagination the discredit reserved for developers and professional designers.

The main duty of the architect, its true art, consists in “shaping” the way the building and the city work. Often making it work is not that difficult, but the secret of the knowledge and ability of the architect is to infuse this functioning with a readable shape and being able to manipulate and control the metaphorical
intensity of these shapes, thus to make the spectator able to recuperate part of the resource that the artist or architect invested in it.
INDEX

27  01. The value of architecture

51  02. Architecture and the cities. Case studies

69  03. Barcelona: the deep roots of urban transformation

135  04. Berlin: the IBA experimentation, the post-war reconstruction

167  05. Tangible values

189  06. Intangible values

212  07. The Cultural Economics perspective

237  08. Conversation on architecture
the value of architecture
1.1 **The value of architecture**

Architecture has a great impact on our life defining and affecting the environment around us. The design of the office building where we work\(^1\), the urban layout of the neighbourhood where we come back afterwards\(^2\), the project of the spaces inside our house and the view we have from it, the landscape design\(^3\) of the park where our kids run on Sundays can make us free to act and move or neglect it, inspire us\(^4\) or oppress us\(^5\), influence our mood, stimulate our sense of belonging or not.

On a wider perspective the design of the city, its land policies, the definition of the public spaces, infrastructures and development areas can affect on larger scale the way we live. The way our city is planned and what these spaces and buildings look like, the way we can or cannot move or act inside them, where they are, what they inspire or recall to us, are important choices that we (our parents or grandparents before us have) made in order to change – and hopefully increase - our wellness and the quality of our life.\(^6\)

As a collectivity, as a group or as individuals we can - directly or indirectly - chose what surround us: the places we live in, where we work, stay, relax. Archi-

---

1. A literature review can be found in Heerwagen, Design, Productivity and Wellbeing, The American Institute of Architects, Cincinnati, Ohio, 1998
5. OMA/Rem Koolhaas, Content, Tashen, 2001
6. “We know that well-designed buildings and places have the power to inspire us, to make us feel good about who we are, what we do and where we live, and importantly, they motivate us to achieve more - for ourselves and for our communities.” In Morris Hargreaves McIntyre, A Literature Review of the Social, Economic and Environmental Impact of Architecture and Design, Scottish Executive Social Research, Edinburgh 2006
The Value of Architecture

Architecture turns the world of the infinite possibilities into a concrete, unique choice. A single choice that will last for years, decades and, sometimes, for centuries. The cities we all live in are the physical witnesses of the layering of these multiple (successful or not) choices. Rem Koolhaas would say that “Where there is nothing, everything is possible. Where there is architecture, nothing (else) is possible.”

Imagine spending your time in an oppressive, dark space or instead enjoying the amazing light of an luxurious open space, what would you do? But every choice requires a trade-off. A choice that involves losing one aspect in return for gaining another one. It implies a decision to be made with full comprehension of both the upside and downside of a particular choice. Resources have to be invested in one solution instead of another. Resources are scarce and therefore they require to evaluate priorities and options in order to chose the most suitable solution.

Working with architectural projects, it is clear that the evaluation of a design solution (both realized or proposed) involves many fields and many people. Architecture operates on different fields. It has been used as a tool for cultural, economical, political and sociological purposes (to mention only a few). It involves different stakeholders. Different people that
strife for different objectives: clients, users, architects, experts from different fields, politicians, tourists may desire completely different things according to their values.

The value attached to an architectural solutions changes drastically according to whom is interrogated about it, its desires and expectations and when it happens. Design solution carefully tailored for a specific user or time can be perceived negatively only a decade later. Take the mega-structures so popular in the 70ies, Forte Quezzi in Genoa, Corviale in Rome, Rozzol-Melara in Trieste staying in Italy, or Bijlmermeer in Amsterdam, Candilis Josic and Woods projects in Paris and so on have turned from vanguard solution to the background for riots in the newspapers. On the other way around deeply criticized projects, like Piano and Rogers Beaubourg, have turned to be the most interesting and discussed ones only few years later. The buildings have not changed but the societal, monetary, environmental, social, artistic values have clashed, aligned, found a balance or, simply, changed.

Different stakeholders give a different weight to a design solution according to their ideas and values. Each of the stakeholders is affected and at the same time contributes to the success of a design solution giving attention to it, talking about it, criticizing it,
persuading people about it, giving feedback. Each of them contributes to the success of a design if it responds and relate to his/her values. The correct understanding of each of these values, the fine balance between them and their specific contribution is crucial to understand and evaluate a design solution.

The contribution and the co-creation of a debate on architecture that lasts and evolves in time is what we consider the conversation on architecture. A conversation that requires the involvement of the different stakeholders and their values in the design solution. Not only the explicit and measurable targets but also the intangible ones and the hidden agenda.

The conversation on architecture can be imagined as an acrobat looking for balance between different values. It has to give the right weight to the different expectations and it has to be able to keep on walking in order to keep it balanced. Understanding the targets of the various actors, individuals, institutions and companies involved in an architectural project, stakeholders and shareholders, the values attached to the different choices, their weight and their contribution can help architects, planners, designers and politicians create successful projects and can help users make the right choice about them.
1.2 Architecture is a good. Is it good for everyone?

In order to better understand the value creation in architecture the research started focussing on the economic features of design, the research started analysing architecture as an economic asset and how it relates with the different stakeholder’s values.

Architectural assets are economic goods. The term “economic good” applies to anything that generates flows of human well-being, for anyone and for whatever reason. Architecture generates flows of well-being in several fields, from the financial to the social to the intellectual. It generates an income as a good traded on the real estate market, it can affect the quality of life with its design and, as a cultural product it stimulates the intellectual debate.

In economic terms architecture has been long considered a private and a legitimate public good. According to Mason, architecture (private buildings included) is both public and private and has both monetary and non-monetary purposes. It can be a private good, in that it offers a range of goods and services consumed by individuals and traded in markets (such as real estate).

The ownership of a building reduces the avail-

---

9. A public good is a good that is hypothetically non-rival and non-excludable. Non-rival means that consumption of the good by one individual does not reduce its availability for others. Non-excludable means that no one can be effectively excluded from using the good.
ability of it only to the legitimate owner and his/her guests and excludes all the others from its use. On the other hand, it can be intrinsically a public good, with benefits deriving collectively and provided not by markets. The relation of the building with the urban layout, the visual relationship it generates with the contexts and its contribution to the context itself, the facades it shows are available and not excludable for anyone who is interested in them.

1.3 Stakeholders and values

To understand how values work in architecture and how they can differ it helps to look at another field.

Take music. Alessandro Baricco in “L’anima di Hegel e le Mucche del Winsconsin” (Hegel’s soul and Wisconsin’s cows) explored how the value of the classical music is perceived and expressed by different actors involved in it.

In Barrico’s analysis, symphonic music aims to connect with the highest levels of knowledge, the “Soul”. Quoting Hegel in fact, classical music elevate the soul upon itself or, in other words, it refers to (and finds meaning into) “the highest values” and deepest

11. Alessandro Barricco, L’anima di Hegel e le mucche del Wisconsin, Una riflessione su musica colta e modernità Feltrinelli, Milano, 1992
feeling it can triggers in all the human beings. At the same time researchers from the University of Wisconsin developed a more prosaic idea of the role of the music: they discovered that the milk production in the cows listening to symphonic music grows of the 7.5%.

Both educated listeners and people involved in the milk production can be considered stakeholders in the classical music production. Both of them are interested and contribute to the conversation on classical music according to the way it relates to their values. The values of both of them are understandable and, with very different tools, comparable within them. But they cannot be easily combined in order to give a full picture of the overall value of a symphonic play.

Applying the framework of research developed by Theodor W. Adorno in Aesthetic Theory12 to the artistic field, Barricco sees in this contradictory perception of value the the dialectic relationship between aesthetics and modernity. The expanded critical capacity and increased formal autonomy of art from society on one side triggers the development of research, on the other side it sets the distance that this path towards autonomy creates with society and fosters a molecular perception. More than a symphony of voices we can foreseen a vivid clash of the different voices showing the (possibly) irreconcilable distance between the

---

12. Ästhetische Theorie, Suhrkamp, Frankfurt am Main 1970; Italian translation E. de Angelis Teoria Estetica, Einaudi, Torino 1975
In the music example the dialectic between these two points of view shows the tip of an iceberg of a much more articulated complexity that can be found in Architecture. While music's effects affect some of us, architecture generates impacts in different fields. It has a wider impact involving an even bigger number of stakeholders and shareholders. Architecture, as much as any other artistic production involves many actors, from the creator\designer to the critics\experts and the consumers\users but, due to its functional features and social role, and its possibility to modify the spaces we live in, the numbers of actors involved by architecture widens exponentially to include politicians, public and private investors, developers, householders, tenants and people living the cities, the suburbs and the countryside. All of these actors speak a different language when it comes to define their targets and values according to their scale and order of priorities. Each field to be judged and evaluated by different stakeholders, defending and promoting different values or giving a different weight to a combination of more values. A clash of voice that the fragmentation of modernity and the current distance between popular culture and vanguard architectures depict as not to be unifiable.
A play that perhaps cannot be harmonized but that can find a common ground of interaction understanding the targets of different actors involved, their values and the way in which different people attach different values to what they see and how can these be translated within different languages.

Each of us living in a built environment, it can be said that architecture makes all of us stakeholders and all of us contributors to the conversation on architecture.

1.4 **Face the music**

Mirroring Alessandro Baricco work on classical music and adapting it to the architectural field an empirical research identified the dirty raw numbers, the basic figures able to show the base monetary and accounting value of the investment in architecture beyond the relevance of the intangible and relational features of architecture. In a parallel with the already mentioned example in music the increase of the milk production has been translated into the effect
that architecture had on the real estate market, while Hegel's soul turned into the relational and communicational feature of architecture.

The case study methodology has been used to provide the empirical data necessary to measure the different aspects of value in architecture. The urban scale and a defined range of time have been used as the dimensional framing. Running through a wider selection of world relevant cities involved in significant urban transformations, few case studies were chosen according to the preliminary findings and deeply explored.

The following chapter illustrates how on one side in Barcelona, during the Olympic season, architecture affected considerably the numbers and figures related to the real estate market while at the same time the success of the Catalan city appears to be deeply related with relational and intangible features and on the other side the second case study depicts the reconstruction of the city of Berlin under the IBA and how the convergence of different elements, both economical and historical created such a big-bang that it obliterated the accounting features of the post-war reconstruction.
1.5 Value’s measurement

The finding emerging from the previous chapter required an investigation on the most advanced and refined economical, financial and mathematical tools able to measure the values of architecture: analytical and descriptive models, cost-benefits analysis, impact studies, linear regressions, hedonic prices, contingent evaluation and case studies.

At the same time the literature review presented the limitations of these tools in capturing the relational features of architecture and its intangible values. The review of the measurement of intangible aspects of architecture has been analysed from the examples from 60ies, starting with the Joint studies of Harvard University and MIT, going thought the Yale Cowles Foundation to the recent studies on the regional scale showing the multi-dimensionality of the concept of value, where the individual parameters are not univocal.

The multidimensional methodology, while allowing the inclusion of not univocal features, showed to be not able to clarify costs and benefits when referred to the cultural and social features translated in monetary terms.
1.6 Architecture in (Cultural Economics) perspective

The previous chapter’s findings required a new framing able to consider the cultural, social, societal and personal features in different terms. The cultural economic perspective provided the tools able to identify a strategy in value’s measurement.

Under the cultural economic framing\textsuperscript{14} preferences involve values, that architecture requires valuation and that values can change in a process of persuasion and seduction\textsuperscript{15}, shifting the attention on the constraints under which people make their choices. Thus the focus shifts away from the moment of choice to the evaluation of the values implied in the choice. Values that define a common ground of understanding between the different stakeholder and their different ambitions and allows us to function in a community. The evaluation thus depends on stakeholders goals and targets, where both tangible and intangible feature are inputs, contributions to the stakeholders values.

The design refers to the stakeholders involved in it. It conveys a meaning (is it a critique to the economic system, a faithful description of the economic relations involved, an internal debate or a snapshot...}

\textsuperscript{14} Framing, is intended here as a rhetoric construction of a process of selective influence over the perception of the meanings in such a way as to encourage a certain interpretation.

\textsuperscript{15} Arjo Klamer (ed.), The Value of Culture. On the relationship between economics and arts, Amsterdam University Press, Amsterdam, 1996
of the current advancement of technology) it communicates, incorporates and co-creates values that shift the public discourse, that force the changes, being an active agent in the change of the cultural perception or a tool of the power to shape the world. 

Design can thus be seen as a form of currency that we exchange for social acceptance or in other words, to create social networks. It is a shared construction of identity and consensus, a co-creation of value where everyone is involved in its creation, critics and experts together with users and everyone who is (even partially) interested in it. “Like any currency, the greater the accumulated capital, the greater the potential for exchange. Unlike economic capital though, it does not depreciate with use, but rather increases in value.”

1.7 The voluntary prisoners of (the conversation on) architecture

The value of architecture gets realized only when the different stakeholders values are involved into the design. Their involvement contributes to promote the design into the architectural debate.

Paraphrasing Arjo Klamer “architecture is a conversation.” “Architecture is a conversation” is a meta-


17. Arjo Klamer, Art as Economic Good, unpublished, 2004

1. The Value of Architecture

It highlights the phenomenon that Architecture exists as Architecture and not only as a mere construction. It takes part in the conversation on architecture, on the contemporary debate, on the architectural discourse, and its main themes involving stakeholders and their values. As much as people can play music or paint in their own way, in order to qualify their works as Art they need to be (somehow) within the artistic conversation.

A conversation that is multifaceted and relies on different fields. Different conversations convey the different values. Architecture is realized in different conversations, and gets different qualities according to the perspectives under which it becomes part of the debate. A conversation that requires the involvement of the various actors to take part to the conversation, it sets up a shared good and more often than not, it increases its value both in intangible and monetary terms as it will be shown.
1.8 The measure of the possible

Design can then become a tool for evaluating other design solutions, confronting not only numbers and figures but including expectations, ambitions and desires that Architecture incorporates. Architecture is therefore a tool for evaluation of other present or past architectures.

Quoting Ignasi de Solà-Morales the likeness and contrast between the actual architectural object and the memory that can lie in us of the original prototypes -those who have the epistemologic status of natural architectural reference- constitute the foundation of the aesthetic function, although the architectural language is able to attribute this meaning using metalinguistic languages, figurative and specifically metaphoric.

A comparison through the analogical tool allows to discover new relations, suggests solution and defines scenarios and visions. Confronting an intervention with passages of known and relevant urban and architectural solutions allows to catch not only the measurable features between the considered objects but more and more the quality of the space, both the space that could be and the expectation that the intervention may rise and create successful design solutions.
Dimensional framing

The urban scale and a defined range of time have been used as dimensional framing. The city is the physical and conceptual space where different actors are part of a network of connections and relationships that contribute to the value of architecture. An empirical data-set has been built using a case study methodology. The chosen framing shows the domain and the effects of the different values that come to place with architecture and design. The scale of which appeared immediately to make not only the architectural artifact.
architecture and the cities
Massimo Cacciari proposes the notion of conjecture as a modality for the representation of the world: “all representations and all dogmas of different faiths are conjectures”. Each conjecture presents itself not as an unveiling of the ineffable but rather as an argument’s force, which through the logos asserts, although in negative terms, the unattainably of the last cause. This does not mean that such conjectures do not aim at the truth, but since the ineffable does not have a name, “the conjecture” is in itself true, precisely because it means that it is ignoring the unattainable.

Each conjecture is a trace of the unattainable that in itself implies the existence of other traces that also aim at what is unattainable. This idea of conjecture does not in any way imply a relative condition of its own. It instead implies its being cum (with), “in sympathy, as co-bearers of an identical science (to know that every knowledge is conjectural). It is exactly in this sense that each conjecture must be understood as an absolute representation of the distinct that, at the same time, cannot exist if not as a part of a whole.

Pier Vittorio Aureli. *The Project of Autonomy*
2.1 **Hypothesis and methodology: a landscape of knowledge.**

Architecture is as complex, multidimensional process. It lives and develops in a social, political, economical and technological environment. Within this articulated landscape of knowledge architecture operates on a range different and sometimes contrasting fields where different words, vocabularies and related meanings are used.

The value of architecture is thus a complex, layered and articulated concept that can be analysed and discussed under different disciplinary aspects noted by the coexistence of irreconcilable understandings of its features. Quoting Bernardo Secchi's "the fundamental characteristics that distinguishes our era from preceding ones is the diffuse nature of knowledge: a multiplicity of specialized disciplines, the result of an increasingly marked division of labour and a multiplicity of subjects, each endowed with its own experience, identity and irreducible autonomy, and very specific body of knowledge." The contemporary constellation of different scientific disciplines triggered the specialization of bodies of knowledge and disciplinary internal self referentiality.

This fragmentation of the knowledge and contem-
porary disciplinary deepening creates almost irreconcilable fields of research. The various features are so deeply investigated and analysed relying on specific vocabularies, concepts and literatures to the point of requiring an entire body of knowledge in order to be understood. In line with Massimo Cacciari you cannot understand the relevant aspect of the contemporary architecture unless you studied Plato, Plotino, Aristotle, and so on. Moreover at the same time the concept is so articulated that not one single expert can claim to master the concept of value applied to the built environment.

According to the Journal Citation Report of the Institute for Scientific Information each year 165,000 serials are issued by 80,000 publishers, covering 969 subjects from anthropology to zoology. These numbers make it impossible for any Renaissance man to fulfil his ambition of keeping up with all disciplines². In other words, using a sport example: Michael Jordan cannot leave the NBA and start playing baseball without running into the known problems.

As long as the knowledge itself became more and more specialized and divided into scientific fields, the concept of value followed the same path to become more and more multifaceted and defined within contrasting disciplines. The coexistence of such differ-

² Arjo Klamer, Speaking of Economics. How to get in the conversation, Routledge, NYC, 2007
ent aspects on the same topic triggers a research that incorporates the balance between the absoluteness and the rigour of scientific research and the necessity of a distance in order to include the most different parameters involved. A survey able to consider, on one side, the clues from each disciplinary field able to give a meaning to this artistic expressions inside the contemporary society and, on the other, the absoluteness of the linguistic research and the supermarket of the goods consumption.

The structure of the research is not aiming to bridge different bodies of knowledge to a synthetic solution\ reduction, but, keeping a critical distance and relying on disciplinary experts to provide a more precise insight, it aims to define the common objectives and connect the detailed and specific aspect. It can be read as a catalogue, a survey that presents the main results on each field only, in order not to lose a wider view on the different factors of the concept of value. Moreover the research adapts its tools of investigation to the different actors involved ranging from the most different of them, from the case studies to the literature review, from the data crunching to the philosophic speculation fitting the structure to the content, adapting to the different topic presented. Different measurements able to catch the impact of the differ-
ent values, valuing the different objectives implied, from the return on investment, the dominating values fostered by the power to give a new perspective on this topic.

The goal is to identify multiplicity, continuity and cracks between the different fields in order to understand the modalities, the results and to explore the feedback given to the architectural ontological statute. The research focuses on the global appraisal of the architectural good, verifying the figures related with the different features able to contribute to the value of the architecture and capable to substance it by defining a shared set of conditions. A conversation able to consider the contrasting position coming from different studies.

2.2 **Dimensional framing: the urban scale**

The empirical data-set has been built using a case study methodology applied to a scale able to show the domain and the effects of the different values that come to place with architecture and design. The scale of which appeared immediately to involve not only the building or the designed spaces but its surround-
ing on a wider scale influencing the whole city where it is designed. The urban scale, not only referred to the administrative boundaries but enlarged to the include the wider metropolitan area and a defined range of time have been used as dimensional framing. It can be said that the city is therefore the physical and conceptual space where different actors are part of a network of connections and relationships that contribute to the creation and definition of the value of architecture.

2.3 The city is dead. Long live the city (of networks)

The urban spaces, and the relationships they incorporate to constitute the city, both as a built body and a relational space, have been deeply modified by the globalization processes.

According to Roemer van Toorn the city as handed down to us in history no longer exists. The medieval city consisted of a hierarchy of specific sites, holy and profane spaces, protected places and open ones, urban and rural conditions, life on heaven, life on earth. The modern city too that revolved around work, career and family is as good as dead. The present-day city is a network of information flows. This undefined metrop-
olis consists of a diffuse field of events in active flux; these may be individual or collective, transnational or economic. They may involve service industries or the media. At first sight this city seems extremely chaotic, because we do not dispose of any concepts for grasping this highly complex urban order.3

According to Pier Vittorio Aureli4, in 1963, the Greek architect and urban planner Costantinos Doxiadis and other scholars from different fields (among them Marshal McLuhan and Buckminster Fuller) gathered in a meeting aboard a small cruise ship that travelled for eight days through the Greek archipelago. The meeting was held in order to discuss how the phenomenon of networks, meaning the visible and invisible nets through which communication and movement between different systems of individuals and objects, was re-modeling the entire planet into a sort of “Global Village”, using the famous definition by McLuhan.

Saskia Sassen5 identifies the current phase of the world economy for the ascendance of information technologies, the associated increase in the mobility and liquidity of capital and the cross-border economic processes/flows of capital, labor, goods, raw materials, tourists. Network formations have been explored in depth based on indicators such as office

---

3. The Risk of Illustration, Article by Roemer van Toorn. Discussing Competition in Thessaloniki. Editor Yorgos Simeoforidis
locations of transnational corporations, stock market size, communication and transportation connectivity and media representation of places. According to Pier Luigi Sacco and Giorgio Tavano Blessi, globalization triggered enormous changes on cities worldwide in the last few decades. From the beginning of the 1970s, these areas, characterized by an advanced level of socio-economic development, have experienced a massive re-shaping of their economic sectors and of the entire society. The economy, infrastructures and natural areas have undergone a renovation process to respond to the new needs arising from the society, which has also been subjected to changes itself. Works on urban life-cycle models offer a helpful analytical framework for the elements that are concerned with bringing cities from one stage of urbanization to another, and thus for urban transformation. Privatization, deregulation and the associated strengthening of globalization fostered the concentration of infrastructures and resources on strategic sites able to attract human and material capital.

Saskia Sassen’s thesis of a triad of global cities, the presence of large concentrations of producer services firms and headquarters of transnational companies have been used to rank cities on a global scale. Surborg identifies an economic process that is the


result of the expansion of market economy and a sub-category of globalization in the emergence of world cities. In order to capture the role of urban areas in the global economy, certain cities have been defined as the organizing nodes through which international economic activity operates\textsuperscript{10} or according to Hill and Fujita\textsuperscript{11} cities are “embedded in multilevel spatial and institutional configurations”. Markets appear to transcend the borders and interests of nation states to the point that Castells\textsuperscript{12} believes that the more national states fade in their role, the more cities will emerge as a driving force in the making of new society becoming “a community of cities”\textsuperscript{13} turning the urban spaces into a financial key factor.

2.4 Cities in competition

According to Michael C. Ewers\textsuperscript{14} urban areas compete with one another for people, goods, capital, ideas and other inputs of economic activity. Cities must compete to become world cities and to raise their position in the international hierarchy of cities\textsuperscript{15}. More recent approaches go beyond a focus on eco-

\textsuperscript{10} Friedmann, J., The world city hypothesis. Development and Change, 1986
\textsuperscript{12} Castells, M., European cities, the informational society, and the global economy, Journal of Economic and Social Geography, 84, 1993
\textsuperscript{14} Michael C. Ewer, Migrants, markets and multinationals, GeoJournal, 68, 2007
nomic processes and include political networks and those related to engaging in a global civil society. Increased economic interdependence has set the stage for the increased mobility of highly-skilled labor in the global economy as an international flow of economic activity. Highly-skilled labor migration is a key global-urban process which creates, maintains and transforms urban areas and, therefore, provides an alternative interpretation of global cities. The presence of skilled human capital fosters innovation and generates greater economic activity. Agglomerations of firms take advantage of the face-to-face contact and ‘buzz’ provided by agglomeration economies in urban areas. Accordingly, just as places compete for other economic inputs, places compete to attract and retain international human capital as a strategy for economic and social development. Creating a world-class knowledge base has become vital for achieving global economic success and a comparative advantage to other places. Urban competitiveness is a result of both asset creation within a city and the connection flows of global economic activity.

Crivello underlines how the concept of competitiveness can be ambiguous if applied to a territory. Critics on this use have been raised by Krugman that argued that states and cities can not completely assimi-

22. Crivello, S., La città competitiva e sostenibile: alcune riflessioni sul rapporto fra i due discorsi, Atti della Conferenza Annuale dell’Associazione Italiana di Sociologia, 2010
late all the economic behaviour of the enterprises. Still competitiveness rhetoric can be used as a “framing” that precede the construction of strategic choices, or related to the capability to attract investments\textsuperscript{24}.

Boyle and Rogerson\textsuperscript{25} argue, the task of urban governance has increasingly become the creation of urban conditions sufficiently attractive to lure prospective firms. Planning has to face the challenge given by the time necessary to realize long term transformation with the growing volatility of capital and the flexibility of demands\textsuperscript{26}. Harvey\textsuperscript{27} goes as far as to argue that in the post-modern condition, there is no ‘planning’, only ‘designing’. To play right with volatility of capital by means of design Harvey suggests that there are two options: either being highly adaptable to the market shifts; or masterminding them. Jane Jacobs brings in the concepts of location, community, human scale and the need to feel at home, shifting the perspective toward values and common goods as it will be presented in the following chapter.

\textsuperscript{23} Krugman P. R., Competitiveness: a dangerous obsession, Foreign Affairs, 74, 1994

\textsuperscript{24} Kresl P. K. e Singh B., Competitiveness and the urban economy: twenty-four large US metropolitan areas, Urban Studies, 36,1999


\textsuperscript{26} Ibidem

\textsuperscript{27} Harvey, D., The Postmodern Condition, Oxford, Blackwell, 1989
2.5 Case studies and conjectures

Running through a wider selection of world relevant cities involved in significant urban transformations, few case studies were chosen according to the preliminary findings and deeply explored in order to identify the different values, from the financial ones to the relational ones.

Massimo Cacciari proposes the notion of conjecture as a modality for the representation of the world: “all representations and all dogmas of different faiths are conjectures”. Each conjecture presents itself not as an unveiling of the ineffable but rather as an argument’s force, which through the logos asserts, although in negative terms, the unattainably of the last cause. This does not mean that such conjectures do not aim at the truth, but since the ineffable does not have a name, “the conjecture” is in itself true, precisely because it means that it is ignoring the unattainable. Each conjecture is a trace of the unattainable that in itself implies the existence of other traces that also aim at what is unattainable. This idea of conjecture does not in any way imply a relative condition of its own. It instead implies its being cum (with), in sympathy, as co-bearers of an identical science (to know
that every knowledge is conjectural). It is exactly in this sense that each conjecture must be understood as an absolute representation of the distinct that, at the same time, cannot exist if not as a part of a whole.28

The first approach has been to explore a conjecture able to develop a further horizon of meaning to the practice of architecture: beyond the linguistic research for the possibility of an absolute architecture, beyond the desire of superfluous and of artistic nourishment, beyond the superstructures, architecture is, by itself, a tool of value creation able to foster growth and development.

Looking at the measurable data of architecture to understand if architecture, deprived of its kunstwollen and communication scope, can still works as a brilliant devices of seduction or, in the worse case scenario, consumer good. If seen as a mere but brilliant device of perceptive seduction, architecture works as a trigger of economic benefits and a necessary need, able to give a better quality of living both in tangible and intangible aspects.

The following chapters present the quantitative and qualitative analysis of the urban transformations: on one side in Barcelona, during the Olympic season, and how architecture affected the numbers and figures related to the real estate market and on the other

side the second case study depicts the reconstruction of the city of Berlin under the IBA and how the convergence of different elements, both economical and historical created such a big-bang that it obliterated the accounting features of the post-war reconstruction.
Case study #1: Barcelona

The first case study illustrates how in Barcelona during the Olympic season, architecture affected considerably the numbers and figures related to the real estate market, while at the same time the success of the Catalan city appears to be deeply related with relational and intangible features.
barcelona
the deep roots of urban transformation
This chapter analyses the metropolitan area of Barcelona from the late 19th century to the present day, focusing on the major changes from the first half of the 1990s together with the Olympic games.

3.1 The deep roots of urban transformation of the Barcelona metropolitan area

According to Cobi, the expansion, transformation and international promotion of the city of Barcelona is tied to its ensanche (widening) and can be traced back to the driving forces of the Universal Expositions of 1888 and 1929.

Barcelona enters into the 19th century with the same dimensions that it had in the 14th. The disappearance of the walls – which had turned against the city ever since the Castillan military occupation of 1714 – became a pressing priority for an impatient and internationalist bourgeoisie hoping to develop the enormous financial capital it had created. The policy focuses on the idea of building an ideal city with ordered neighborhoods and great monuments.

2. Jorge Luis Marzo, Barcelona and the Paradox of Baroque, 2000
In 1903 Barcelona Town Council organizes an urban design competition for a great “Plan de Enlaces” (Plan of Connections) and the French Architect Leon Jaussely wins approval to create the blueprint for the Barcelona Urban Policy. In Jaussely’s plan, the aim is to introduce the “zoning” concept in order to establish a clear functional structure in the urban area. Moreover, the plan emphasizes urban forms and architecture, which also reflects the “Beautiful City” project in Europe at the time. Besides Jaussely’s plan, there are other suggestions providing important guidelines for city improvements that happens later: the restoration of the historical center and several urban projects which reflect the specific intention of monumentality in various urban spaces.

The marketing of the city towards international tourists starts in 1908. Along with several other European cities, the “Society for the attraction of foreigners” is created in Barcelona, and it shows a new image of “Cosmopolitan Barcelona” in order to lure tourists into

the city. Some projects are undertaken at this period: the modern monuments such as the Sagrada Familia Church designed by Antonio Gaudí; the representative city center Plaza de Cataluna and Paseo de Gracia and the modern high rise buildings in the Gothic quarter. According to Espuche and Navas the historical buildings and modern monuments are well-blended and showed the appreciation of Barcelona’s glory in the past, as well as a modern image of the city4.

A new physical landmark sets the representation of a city that wants to internationalize itself and configures a new axis with the industrialized neighborhood of Sants and the outlet to the south. If the Exposition of 1888 had eradicated the old army Citadel and had returned control of urban symbols to the people of Barcelona, the newly configured mountain erases the presence of the military caste from the urban imaginary and legitimates the effort of the city’s rising classes in maintaining the political push of the affair. The urbanization of the Montjuic Mountain gives the highest profile to the western face of the mountain, emphasizing the character of the only facade opened to the city and is completed with the opening of Universal Exposition 1929 in Barcelona5 presenting to the world the masterpiece of modern architecture, the


pavilion designed by Mies van der Rohe.

In 1959 a new stage of economic growth and urban growth begins. The Spanish political transition to democracy initiated in 1975 coincides with the general economic crisis. Barcelona enters a stage of difficulties, aggravated by the transfer of industry outside of the city, the stagnation of the population, and decreased political activity. The city’s traditional economic base, engineering and other forms of manufacturing are seriously damaged during the 1970s and early 1980s by periods of world economic recession, restructuring and the effects of global competition.

In 1979, following 40 years of dictatorship, the first municipal elections provides the city with a democratically-elected Council showing a clear change in direction both in politics and urban planning. According to Infusino new attention arises toward the central areas neglected by the economic downturn and the dynamics of peripheral expansion of the urban areas of Franco’s period.

The General Metropolitan Plan (PGM) is the starting point and becomes Barcelona’s urban planning framework since 1976. One of the main objectives of the PGM is to reduce existing excessive population densities and to prevent the creation of new

---


ones. Further, it proposes a significant amount of land has to be reserved for green areas, therefore reducing the amount of land available for the housing market. In this framework the Ajuntament led by Oriol Bohigas fosters urban punctual transformations (mainly of small scale operating on compounds) orchestrated with a specific urbanism’s tool, the Plan Especial de Reforma Interior (PERI). The aim of these plans is to better define on the urban scale the generic directions given in the Plan General Metropolità (PGM)\(^8\).

In 1986 Spain enters in the EEU and Barcelona wins the bid for the Olympic Games. The Barcelona Games of 1992 is probably the best example of the use of Olympic games as a tool to foster urban change and renewal. The “acupuncture” of the PERI can be now integrated with bigger interventions under a global idea of development for the city. Plans were made according to territorial criteria, with an urban planning strategy based on two key factors: the recovery of the sea front\(^9\) and a metropolitan vision (Barcelona’s Metropolitan Corporation)\(^10\). The city council of Barcelona claims that Olympic Games played a huge role in setting off some regeneration plans. The change of scale in the interventions means a change in the actors of the transformation of the city, reaching new (pri-

---


\(^9\) known as Sea Front Directive Plan

vate) operators interested in the operation and able to fulfill the scale and time requirements of the process. Major urban improvement programs are undertaken in order to underline the city’s claim for a place on the ‘global cities’ network’.

The city goes through a transformation and eventually changes its image from a typical industrial city to a flexible city. As the capital of Catalonia, Barcelona is keen to promote Catalan identity and to assert its importance relative to Madrid, the Spanish national capital.

3.2 **Quantitative aspects of the RMB transformation**

This paragraph focuses on the period between 1986 and 1992, from the bid assignment to the closing of the Olympic event in Barcelona.

This time lapse is used in the majority of the ex-ante and ex-post studies and in the official documents produced by the Olympic committee. The original studies ex-ante and ex-post on the Olympic economic effects are done using pesetas and later converted to

---

Euro, while all the studies coming from the United States are done in US dollars. A specific monetary unit has been chosen in order to compare the different studies coming from different countries of the world that the literature on this topic offers. The chosen unit is the US dollar/$ at the year 2000 rate. The chosen rate is given by the exchange rate at 1:1 between US Dollar and Euro that happened at the beginning of year 2000. The conversion rates and inflation are assumed using the World Bank data.

Between 1986 and 1992 the total allocated resources are $9.064 million USD (at the rate of year 2000 – from now on indicated with mUS$\textsubscript{2000}). According with Brunet\textsuperscript{12} “there was considerable sensitivity to questions of “cost”, the necessary resources, and the “financing” of a social event of the importance of the Olympic Games. Thus a distinction was made between organizational expenditures (those for aspects not usable after the event) and project expenditures (those usable after the event).

The expenditures in projects were made up of direct investments (or those necessary for the development of the event), indirect investments, and investments induced by the event. The organizational expenditures were the true “cost”, the net cost, of which nothing

---

\textsuperscript{12} Ferran Brunet, An economic analysis of the Barcelona ‘92 Olympic Games: resources, financing and impact” in Miguel de Moragas & Miguel Botella, The key to success: the social, sporting, economic and communications impact of Barcelona ‘92. Barcelona, Servei de Publicacions de la UAB.
RESOURCES ALLOCATED IN THE PERIOD 1986-1992
9.604 million of US $ (at 2000 rates)*

ORGANIZATIONAL COSTS vs BLDGS & INFRASTRUCTURES SYSTEM
Organizational costs (14.5%) = 1.393 mUS$*
Bldgs & Infrastructures (85.5%) = 8.211 mUS$*

INVESTMENTS IN TELECOMUNICATIONS vs BLDGS & INFRASTRUCTURES
Telecommunications (20.0%) = 1.642 mUS$*
Bldgs & Infrastructures (72.5%) = 6.569 mUS$*

GEOGRAPHY OF INVESTMENTS
Outside Barcelona (34.8%) = 3.161 mUS$*
RMB Barcelona Metropolitan Area (55.7%) = 5.050 mUS$*

5.050 mUS$*

1.813 mUS$* 35.9% -- Roads and infrastructures
1.121 mUS$* 22.2% -- Main Olympic area (Poble Nou)
621 mUS$* 12.3% -- Other Olympic areas (Montjuic, Vall d'Ebron, Diagonal)
965 mUS$* 19.1% -- Other projects in RMB
369 mUS$* 7.3% -- Olympic sub-sites
157 mUS$* 3.1% -- Other sport infrastructure projects

RESOURCES ALLOCATED IN ARCHITECTURE & PLANNING
Other resources (71.8%) = 6.897 mUS$*
Architecture & planning in RMB (28.2%) = 2.707 mUS$*
would remain afterward. For this reason effort was made to minimize them. On the other hand, the investment expenditures are the legacy, what remains. For this reason the effort was made to maximize them.”

The first distinction made is between organizational cost, the “true” costs of the event, and the cost for building and infrastructures that creates, according to the term used in the literature, the “heritage” of the event. The total resources allocated in organizational costs is 1.393 mUS$2000 (14.5% of the total resources), while the investment in infrastructures and buildings system is 8.211 mUS$2000 (the 85.5% of the total resources). In Olympic games history Barcelona is still considered by the critics the best example of optimization of the expenses on “heritage”.

The following subdivision underlines the important role of the telecommunication structure. In fact a less visible, but although very significant effect of the Games is the upgrading of the urban technology and telecommunications systems necessary to host the world’s media. These improvements will have major implications for the further development of the city as an administrative center. The telecommunication structures were improved not only in the Barcelona metropolitan area but all over the region updating


the system of a region to the latest technologies of the time. The role of this part of the investment is fundamental from economic point of view. The investment in the field of telecommunication is 1.642 mUS$\textsubscript{2000} (20.0\% of the total resources), while the investment on concrete buildings and infrastructures is 6.569 mUS$\textsubscript{2000} (72.5\% of the total resources).

An interesting aspect is the geography of the investments. According with Brunet “the Barcelona Games are characterized by geographical decentralization into a number of towns that were Olympic sub-sites in the regions of Catalonia, Valencia and Aragon. Only 38.5\% of the Olympic investments are made in Barcelona. 61.5\% of the Olympic projects were carried out in the metropolitan area (29\%), the rest of Catalonia (16\%)”\textsuperscript{15}. The investments done outside the Barcelona Metropolitan Area are divided from the ones done inside the area of study. The delimitation of the area follows the physical and urban transformation of the larger Barcelona instead of being constrained into administrative boundaries.

The investment outside Barcelona is 3.161mUS$\textsubscript{2000} (34.8\% of the total resources), while the investment in the Barcelona Metropolitan Area (RMB) is 5.050 mUS$\textsubscript{2000} (34.8\% of the total resources).

The figure that arises, the net investment in concrete and visible buildings and infrastructures in the metropolitan area of Barcelona, equals to 5.050 mUS$\textsubscript{2000} of the total investment (34.8\% of the total allocated resources). The investment in infrastructure and building has been further subdivided into different areas of investments. Of the total amount of 5.050 mUS$\textsubscript{2000} the main part is used to build roads and infrastructures. 1.813 mUS$\textsubscript{2000} (35.9\% of the investment on infrastructures and building) are spent in to build the new connection system of the “rondas”.

As the top priority of the city upgrading plan, the construction of the ring roads of Barcelona, rondes, aims to improve its existing road system so to facilitate the increase traffic flow during the Games and the key roads to move around the circumference of Barcelona\textsuperscript{16}. According with Brunet, an aspect where the extraordinarily synthetic mode of Barcelona’s urban transformation is reflected, as generated by “Olympic” investments is the circulation of motor vehicles. The change in the urban model can be seen immediately by comparing the density of traffic in 1990 before the ring roads are built, with the density of 1993, after the opening of the Dalt and Litoral ring roads. The changes in traffic due to the effect of these roads is one

\textsuperscript{16} Ferran Brunet, An economic analysis of the Barcelona ‘92 Olympic Games: resources, financing and impact” in Miguel de Moragas & Miguel Botella, The key to success: the social, sporting, economic and communications impact of Barcelona ’92. Barcelona, Servei de Publicacions de la UAB.
of the most synthetic expressions of the impact of the Olympic Games on the city\textsuperscript{17}.

78 new kilometers of roads are built to move around the circumference of Barcelona, with new sewage system and illumination with an increase of 15% over those existing in 1986. The infrastructural artworks includes several new ring roads, the main one Ronda Litoral and Nus Trinitat (including land, services and facilities) and Ronda de Dalt and Nus Llobregat (including land, services and facilities) accounted respectively for the 8.1% and 7.2% of the investment. Furthermore comparably smaller intervention are also done on the first ring road called Ronda del Mig and other projects of internal connections in Barcelona. Metropolitan connections constitute the 9.3% of the investment, while parking (outside the Olympic areas) and computerized traffic control system constitute a little more than 1%. Other investments are done in order to improve the airports and the connections to them through regional connections: the figures are 5.4% for the Girona airport and 2.9% for the Barcelona airport.

The projects in the Olympic sub-sites constitute 7.3% while other sports infrastructure projects like the COOB’92 infrastructures the minor sports centers

in Barcelona and the other minor sports infrastructures add up to 3.1%. The remaining figure constitutes the direct investment on the Olympians’ accommodations, cultural, new residential and hotels. It has been subdivided in order to explicit the geography and the hierarchy of the allocated resources in the Barcelona Metropolitan Area.

The main area is Poble Nou, also known as Villa Olimpica, housing the Olympic Village for athletes and the Parc de Mar. The investment in this area is 1.121 mUS$2000 ($22.2% of the investment in infrastructures and buildings). The other Olympic areas like Montjuic (where the Stadium, the Swimming pool, and the Telecommunication tower are set), the Diagonal and Vall d’Ebron (the Media Village) add up to 621 mUS$2000 ($12.3% of the investment in infrastructures and buildings). The other metropolitan projects, including the metropolitan squares and punctual interventions constitute the remaining 965 mUS$2000 ($19.1% of the investment in infrastructures and buildings).

Of the total resources allocated for the Olympic games of 9.604 mUS$2000, the quota used for architecture and urban planning is 2.707 mUS$2000 ($18.8% of the total investment).

These figures allow us to some preliminary con-
sideration of the communication role of architecture. Although the amount invested on architecture is comparable to the one on infrastructures, the marketing and communication role of the first is enormous compared to the latter. From the images of the stadium to the telecommunication tower the promotion of the city of Barcelona has been completely focused on the architectural artworks completely ignoring the infrastructural works.

The City of Barcelona has always been proud of its heritage and tends to emphasize this feature as part of the promotion plan. For the new Olympic structures it is decided to concentrate the facilities within the city’s Olympic areas. Areas close to the main intersections, which are well serviced by public transport, are chosen.

The area of Montjuïc already includes public sports facilities, mostly from Barcelona’s previous candidatures for the Olympic Games. The new key piece in this area is the “Olympic Ring” which includes the renovation of the Stadium, rebuilt acclimatisation garden (which was used for the Universal Exposition 1929), the renovation and extension of the Picornell swimming pools and facade built in 1969 to meet modern guidelines, the construction of brand-new
buildings, the Sant Jordi Sports Hall by Arata Isozaki, and the National Institute of Physical Education of Catalonia. The area of Diagonal already had a large number of sports facilities, mostly private, which are supplemented by the building of the Municipal Sports Centre in l’Hospitalet, Pubilla Casas. This area also includes one of the hotels proposed for the lodging of the IOC members.

The area of Vall d’Hebron already has a velodrome, built in 1984. El Parque de la Valle, a project financed by the Council, completes the sports facilities in this area adding a Sports Centre and two playing fields. The International Youth Camp is located in this area, as well as residences for the referees, judges and media.

The main feature of the area of Parc de Mar is the Olympic Village, housing most of the athletes and a large number of training facilities at the disposal of the “new” neighborhood after the Olympic Games. The development of facilities in the areas of Vall d’Hebron and Parc de Mar shows how the sports facilities adapt to the urban framework, fostering development and urban renovation.
The following part analyzes the investment and projects of every built work in detail in the area.

3.3 **The Olympic Village in Poblenou (Villa Olímpica)**

The development of this site requires the construction of 1,841 houses through agreements between the City Council and VOSA (Vila Olympic, SA), NISA (Nova Icària, SA), OMSA (Olympic Moll, SA), Eurocity, SA, MAPFRE, Generalitat de Catalunya- Institut Català de la Salut, and the Archidiócesis de Barcelona.

VOSA is a state owned company controlled by HOLSA (Barcelona Olympic Holding SA). HOLSA was created, in 1989, with the participation of the State (51% of the shares) and the City Council (49% of the shares). VOSA, Sociedad Privada Municipal Vila Olímpica is a publicly owned company, controlled by the City Council (100% of the shares), born on the June 1986, before the Olympic bid (assigned on October of the same year). It is intended as a specific organ able to manage the potentials of Plan Especial with the flexibility of a private company, to fully exploit and concretely realize all the urban proposals intended in the master-plan. At the end of the same year it converted to an autonomous company with the mission to
manage to the reconstruction of the new compound on the sea-side. VOSA is also a shareholder in NISA (40%) and OMSA (51%), controlling the majority of the companies, but leaving part of the shares to private investors.

The area of more than 130,000 square meter is already partially public (the City Council has already acquired 75,000 square meters) and the remaining is taken with forced evictions in 1987. It is proposed to place the main Olympic Village, with an area of 43 hectares, in the zone of Poble Nou, between the Parque de la Ciudadela and the cemetery. After the Olympic Games, it becomes in a new high quality residential neighborhood.

In the candidature, this neighborhood is described as an old city district that took part in the first wave of Catalan industrialization in the nineteenth century, and that requires a residential renovation. Before the games, the land is occupied as industrial land and declining industries. Poble Nou’s garlic sausage factories are demolished in 1987 as the first step in the Olympic clearance program. The two chorizo businesses, according to Andy Robinson19 epitomize the state of urban degradation into which the city’s oldest industrial district had sunk. The area was filled with

---

19. Andy Robinson, Olympic Village with its Face to the Sea, Olympic Review 271/272, 1993
clothing factories, small workshop emptied by the economic crisis and the city morgue. It is separated from the rest of the city and from the coast by two railway lines connecting the site to the city primary for shipping use.  

The Olympics provide an opportunity to redevelop the area which involves reconstructing the railway network, building a coastal ring road, developing the Olympic village, a new marina called Olympic Harbour, reconstructing the sewage system and the regeneration of the coastline.  

The district is opened up to Barcelona inhabitants with an easy access to its 5.2 km coastline. Here the new beaches and waterfront facilities transformed the landscape and will potentially alter shape of the city’s future growth. The whole series of regenerating the coastline in the early 90’s not only sufficiently provided the necessary infrastructures for the Olympic Games, but also created a continuing force to redefine the city in a larger content.  

The Plan Especial de Ordenacion Urbana de la Fechada de Mar de Barcelona (Plan of Urban Arrangement of the Sea Front) in the area of the Paseo de Carlos I and Avenida Icaria includes the transformation of the neighborhood, designed by a team of architects, MBM (Martorell, Bohigas, Mackay

20. “A maze of abandoned streets, only partially incorporated into Barcelona’s street grid plan, the Plan Cerdá, invariably led to a dead end. Or, if not, to the morgue” in Andy Robinson, Olympic Village with its Face to the Sea, Olympic Review 271/272, 1993  
22. Ferran Brunet, An economic analysis of the Barcelona ‘92 Olympic Games: resources, financing and impact” in Miguel de Moragas & Miguel Botella, The key to success: the social, sporting, economic and communications impact of Barcelona ’92. Barcelona, Servei de Publicacions de la UAB.
The infrastructural implications in the transformation are very complicated. The railway has to be rerouted and the entire drainage system in the district overhauled. Spanish coastal legislation is reduced from five to one in order to accommodate hotel’s requirements. To overcome all of this situation the City Council applies an urban strategy of ‘punctual intervention’, according to the administration, by buying up land and providing infrastructure, provides a stimulus to the private sector.

Nova Icaria (the name is chosen for the new district as a tribute to the French Utopian Etienne Cabet’s experimental libertarian communities in the nascent United States, which attracted considerable support in 19th century Poble Nou) overall scheme is designed by Oriol Bohigas. It accommodates flats, two skyscrapers, one a hotel, the other an office block, positioned opposite each other on the sea front, the Olympic yacht harbor with an island in the middle, housing a conference center, a section of the new ring road, tunnel where it traverses the Olympic Village, and several parks. A striking difference between the orientation of the new urbanization and the old arises: a barrier of factories and railway lines denied Poble Nou any
intimacy with a Mediterranean sea that defined its southern limit. When the factories fell and the Costa Brava railway is removed, the beach suddenly became accessible, fulfilling the dream expressed in the “leit-motif” of the new Barcelona “Tornem la cara al mar” (Turn our face to the sea).

The entrance to the Olympic Village is flanked by two towers standing at a height of 138 metres. One is Hotel Arts, which opened temporarily during the Games to provide accommodation for part of the Olympic family before building work was officially completed. Now it is one of the city’s leading luxury hotels, managed by the Ritz-Carlton chain, and enjoys extremely high occupation rates for its 500 plus rooms. Adjoining the hotel’s ground floor are a range of restaurants and shops. The second tower is the Mapfre Tower, owned by the Mapfre insurance company. The ground floor of this building housed the reception, accreditation and other services for the main Olympic village entrance. The tower’s 80,000 m² surface area now houses 92 companies, and a total of 3,000 employees. Of the six office buildings in the largely residential area, one immediately became a technical base for Telefónica, another has become the corporate headquarters of Mútua Intercomarcal, a
third is the Property Registry and the remainder have been bought by mainly insurance sector bodies, which rent office spaces to other companies. These buildings, along with the ground floors of the residential buildings, house 214 shopping and service facilities.

The residential part of the Olympic Village consists predominately of six-storey blocks containing two- and three-bedroom flats. At ground floor level, 28,000 square meters of floor space are dedicated to offices and another 28,000 below them will provide underground parking. In the so-called ‘general block’ are collected a range of services, including ceremonial organization, information, transport and security. The projects are designed by recent prize-winners in competitions staged by Spain’s Architecture and Design Foundation (FAD). Unlike residents of the old ‘Ensanche’, where the external facade hides corridor-like interiors with cell-like rooms, the new housing fulfills contemporary requirements of fresh air and light with ‘super-manzanas’, 200 meters long blocks which adhere to the urban norms of the Plan Cerdá, hiding modern living behind their facades: modern homes, from terraced and detached houses to low-rise complexes, contained within the ‘manzana’ giving the new district the urban form of the 19th century and the

---

comfort and light of the 20th.

Private sector involvement in the development of Nova Icaria is crucial. The authorities allow the market to randomly shape the new district avoiding property speculation. Norms for building height and public space are applied. With these controls the new Olympic Village combines formal unity with architectural diversity. During the Olympic Games the athletes resides here. This site has a maximum capacity of 14,000 residents and the maximum number of residents received at any one time is 13,994 but during the games 14,406 people in total are housed in the village. According to COHRE, the houses were promoted through a public-private partnership for sale to middle/upper class families free market price, with prices ranging between 200,000 and 300,000 pesetas per square meter. According to Carbonell the figures are slightly different: 2,048 apartments built to accommodate the athletes are constructed by the two development companies: Nova Icària, S.A. built 1,834 apartments and Olimpic Moll, S.A. Built 214. The apartments are placed on the market at an average price of 1,444 €/m², ranging from a minimum of 1,157 €/m² to a maximum of 1,852 €/m², depending on location. These prices changes very little between 1990

---


and 1996. In 1993, the average price of a house in Barcelona is 1,409 €/m² and the average in the Sant Martí district is 1,177 €/m². Average prices throughout the city range from 2,150 €/m² in Sarrià-Sant Gervasi to a minimum of 1,075 in Ciutat Vella and Sant Andreu. The Olympic Village apartments are offered for sale at a price which is slightly higher than the city average, clearly higher than average prices in the immediately surrounding area (Sant Martí) and in certain locations (the seafront) at a price which is comparable with Barcelona’s most expensive districts.

Ten years later, the average price of a flat in the Olympic Village has multiplied by 2.5 or 3. The apartments on the seafront are now selling at five times the original price. High prices are directly related to the architectural quality of the buildings, the urban layout and setting, and proximity to the sea.

In the Olympic Village in Poblenou (Parc de Mar) 205 houses are built through an agreement between the Council and Mediterrània de Promocions, SA for judges and referees to reside during the Games. The maximum capacity of the village is 1,600 residents, with 1,425 housed at any time but 1,518 in total during the Olympics. An urban agreement is signed according to which two-thirds of the houses are directly com-
mercialized by the private promoter sale at free market prices, while the remaining one-third is managed by the Patronat Municipal de l’Habitatge (housing department of the City Council), which diversifies the houses as follows: one part is managed directly by the Patronat Municipal de l’Habitatge for sale at a moderate price to low income families on the basis of a draw (called the llars system), another part is agreed with the Generalidad to be used for the promotion of social renting and another part is made available to housing co-operatives in order to enable them to award the houses to their co-operative members at cost price.  

Sale prices for apartments in Barcelona city (1993-2001)

<table>
<thead>
<tr>
<th></th>
<th></th>
<th></th>
<th></th>
<th></th>
<th></th>
<th></th>
<th></th>
<th></th>
<th></th>
</tr>
</thead>
<tbody>
<tr>
<td>Sarrià-St Gervasi</td>
<td>2,150</td>
<td>2,220</td>
<td>2,236</td>
<td>2,243</td>
<td>2,374</td>
<td>2,378</td>
<td>2,590</td>
<td>2,957</td>
<td>3,200</td>
</tr>
<tr>
<td>Sant Martí</td>
<td>1,177</td>
<td>1,203</td>
<td>1,245</td>
<td>1,296</td>
<td>1,287</td>
<td>1,360</td>
<td>1,729</td>
<td>1,845</td>
<td>2,184</td>
</tr>
<tr>
<td>Olympic Village</td>
<td>1,444</td>
<td>1,319</td>
<td>1,214</td>
<td>1,387</td>
<td>1,512</td>
<td>1,806</td>
<td>2,349</td>
<td>2,581</td>
<td>3,375</td>
</tr>
<tr>
<td>Barcelona</td>
<td>1,409</td>
<td>1,430</td>
<td>1,477</td>
<td>1,436</td>
<td>1,461</td>
<td>1,572</td>
<td>1,918</td>
<td>2,170</td>
<td>2,567</td>
</tr>
</tbody>
</table>

Source: Nova Icària, S.A., Anuari estadístic de la ciutat de Barcelona, Barcelona City Hall, Municipal Tax Institute, and Carbonell.

3.4 Montjuic Olympic Ring (Anella Olímpica)

The area of Montjuïc already included public sports facilities, mostly from Barcelona’s previous candidatures for the Olympic Games.

The Olympic Ring is the area where the main sport events of the 1992 Olympic Games are held. The key elements in the complex are the Olympic Stadium and the Sport Palace. The Olympic Swimming Pool, the Physical Education Center, the Pau Negre Hockey field and the indoor Hockey Pavilion constitute the reminder of the area facilities. According with Correa, the master-plan is intended to gather the historical threads of other projects for the Montjuic and in particular the one from Puig I Cadafalch. The size of the ring is given by the traffic. Avinguida Montjuic on the north and the new road on the south (the service road during the Games) define the area. Inside the Ring, the Olympic Esplanade slopes down with three main levels that allow access to the Ring’s structures.

The Esplanades is dominated by the Olympic Stadium. The original facades are kept as trace of Barcelona history while the interior is totally rebuilt to meet the modern need and seating capacity. The lower step gives entrance to the swimming pool while the third
constitute the main pedestrian access from the main entrance in the Placa d’Espanya. From this square a monumental archway lead to the Physical Education Institute while a curved staircase leads down along the perimeter of the Pau Negre Hockey Stadium to the adjacent Indoor Hockey Pavilion.

The project creates a big built-up platform, following the same guideline as in the project of Puig i Cadafalch from 1917, having the four big sports buildings. The platform pivots above the stadium which is placed in the main axis of Plaça d’Espanya, and therefore colonizes a great part of the mountain. This main axis is provided with escalators that make the access very easy from Plaça Espanya station, and it has stops at the middle at the Magical Fountain and the Catalan Art Museum.

This connection between the new interventions and the classical structure of 1929, improved with the fountain and garden restoration, is promoted by the restoration of the Mies van der Rohe masterpiece pavilion, with the restoration of La Fira and the Plaça de l’Univers and, lately, with the opening of the Caixaforum at the factory Casarramona by Puig i Cadafalch.
<table>
<thead>
<tr>
<th>Area</th>
<th>mUS$2000</th>
<th>Housing</th>
<th></th>
<th>Income</th>
</tr>
</thead>
<tbody>
<tr>
<td><strong>Poble Nou Area</strong></td>
<td>1,121</td>
<td>Apartments</td>
<td>2,048</td>
<td>243</td>
</tr>
<tr>
<td>Olympic village private development</td>
<td>535</td>
<td>Average price</td>
<td>1,450 mUS$/m²</td>
<td></td>
</tr>
<tr>
<td>Olympic area public development</td>
<td>394</td>
<td>Income</td>
<td>2,43 mUS$/m²</td>
<td></td>
</tr>
<tr>
<td>Other projects</td>
<td>192</td>
<td></td>
<td></td>
<td></td>
</tr>
<tr>
<td><strong>Vall d’Ebron</strong></td>
<td>162</td>
<td></td>
<td></td>
<td></td>
</tr>
<tr>
<td><strong>Montigalà Area</strong></td>
<td>-</td>
<td></td>
<td></td>
<td></td>
</tr>
<tr>
<td><strong>Vila de Cerdanyola Area</strong></td>
<td>-</td>
<td></td>
<td></td>
<td></td>
</tr>
</tbody>
</table>
3.5 Vall d’Hebron

In this area 488 houses are built through the agreement between the Council and UTE Coisa-Conycon. During the Olympic Games the area houses the media’s members. The site has a maximum capacity of 2,200 residents and 1,750 people live here after Games.

The management system consists of an exchange of municipal land in return for houses built by private promoters. 150 houses are commercialized by the Municipal de Sòl for sale at moderate prices (less than 150,000 pesetas per m²) for families with limited resources and houses are commercialized by the building company, UTE Coisa-Coycon sale at free market price (between 145,000-200,000 pesetas per m²). The quality level in this area is slightly higher than in the Olympic Village (for example AC system are included in this area) but are sold at lower price because of the positional value of the area and the initial goal to be directly sold on the market.
Montigalà

842 multi-family houses and 56 single-family houses are built in the town of Badalona (RMB) through agreements between the Council and Montigalà, SA and Levitt Bosch-Aymerich, SA for the members of the media here. This village has a maximum capacity of 5,366 residents.

The village residences are part of the first phase of construction of houses in the area of Montigalà-Batlòria, and are promoted through public-private agreements with private promoters that commercializes the houses sale at moderate prices (between 100,000 and 125,000 pesetas per m2).

The Council of Badalona subsequently carries out a second phase of construction, building 900 houses in the same area, through agreements with, respectively, union co-operatives CCOO (200 houses) and the Unió General de Treballadors (UGT) (206 houses), the public company REGESA (150 houses) and the IMPSOL (50 houses), with 100 houses being retained by the Council for direct public sale.
3.7 **Vila de Cerdanyola**

600 apartments are built in the town of Cerdanyola del Vallès for promotion directly through the City Council’s Housing department (Patronat Municipal de l’Habitatge). Members of the police are housed here during the Olympic Games. The apartments are subsequently handed over to the Universidad Autónoma de Barcelona (UAB) and currently house university students at a moderate rent.

3.8 **Punctual interventions**

The creation or rehabilitation of public spaces is the base used to re-balance and strengthen the various parts of the city, the urban role of which is highly heterogeneous. The goal is to foster the social and physical identity of each neighborhood and reintegrate the fragmented parts of the city. The public space acts as a condenser of social life and a re-generator of the overall urban context. Thus the reconstruction of the city is conceived piece after piece within the framework
of the general plan, taking into account the variety of the urban fabric of each fragment, its proper activities and social atmosphere. The broad range of open space typologies is used to respond to the local and social needs.

In the traditional neighborhoods around the urban center of the 19th Century, such as Gracia, Sarria, Sant Andreu, several existing small squares are rebuilt. According with Sokoloff, small squares are created in the dense old fabric of some neighborhoods. Plaga de las Navas, substitutes to an old intersection of little streets formerly used as parking lot with a system on three levels, including a promenade, a triangular esplanade and a sunken space for children’s play. Plaga de la Merci is created on the site of an old block, torn down to make room for a square facing the facade of the church. Plaga de la Sedeta is created in the semi-open interior of a block, the corner of which has been refurbished while the school building becomes and urban center for the neighborhood.

In the recently built peripheries, larger squares “dignifying” and giving a new sense of urbanity to modern compounds. Plaga de la Palmera, divided by a wall-sculpture by Serra, creates various types of spaces for relax, contemplation and active games.
Plaga Soller combines a “place-salon”, an elevated promenade defined with threes and a garden including alleys a water basin and modem sculptures. The design of the square creates its own unity and formal coherence, that offers to the users diversified open space. On a larger urban scale Placa de los Paysos Catalans use high modern metallic structures to “sculpt” a self-sustaining space to turn a cul-de-sac, bordered by traffic roads and very disparate buildings to what is largely recognized as one of the strongest and most innovative proposals carried out in Barcelona.

3.9 The real estate market outside the Olympic framework

This part aims to better understand the effects to the real estate market of the Metropolitan Area of Barcelona produced by the project of transformation of the city, developed for the Olympic Games.

The literature deeply studied the effects of the injections of investments in the city in the fields of retail, tourism and architectural and infrastructural heritage of the big event. It is thus interesting to verify what happened to the quantitative aspects of the pri-
vate entrepreneurship involved in the transformation of the city and understand the effects of the Olympic investment on the housing condition.

The fragmentation and the peculiar conditions of each project developed outside the Olympic framework, determined by specific different reasons varying in each case and sometimes coincidences between the economic and political momentum and desires, investments and need of the various clients, shifted the attention from the case-to-case analysis to a quantitative approach.

The data panel that has been used is taken from the Spanish National Statistic Institute. The data, from 1990 to nowadays draw a precise picture of the real estate in the metropolitan area of Barcelona and allows some preliminary considerations. According with INE (population and houses censuses – definitive results 2001) the market of the new constructions in Barcelona in the defined time lapse is constantly growing all over the considered period, although with different rhythms and different numbers. The real estate market is mainly defined by the construction of new dwellings, so that the housing constitute almost the 90% of the total new constructions in the area. This leads to focus on housing market as a correct indicator.
<table>
<thead>
<tr>
<th>Year of construction</th>
<th>Annual variation</th>
<th>Total variation</th>
<th>Nº of dwellings per bldg</th>
</tr>
</thead>
<tbody>
<tr>
<td>1991</td>
<td>10.087 100.00%</td>
<td>10.087 100.00%</td>
<td>747 7.4% 261 2.6% 261 2.6% 787 7.8% 988 9.8% 123 1.2% 19 0.2%</td>
</tr>
<tr>
<td>1992</td>
<td>10.226 100.34%</td>
<td>20.313 150.34%</td>
<td>106 2.6% 261 2.6% 261 2.6% 787 7.8% 988 9.8% 123 1.2% 19 0.2%</td>
</tr>
<tr>
<td>1993</td>
<td>8.193 100.74%</td>
<td>28.506 219.74%</td>
<td>277 3.4% 261 2.6% 261 2.6% 787 7.8% 988 9.8% 123 1.2% 19 0.2%</td>
</tr>
<tr>
<td>1994</td>
<td>8.408 100.22%</td>
<td>36.914 202.22%</td>
<td>390 4.7% 261 2.6% 261 2.6% 787 7.8% 988 9.8% 123 1.2% 19 0.2%</td>
</tr>
<tr>
<td>1995</td>
<td>6.062 100.14%</td>
<td>42.976 216.14%</td>
<td>845 10.6% 261 2.6% 261 2.6% 787 7.8% 988 9.8% 123 1.2% 19 0.2%</td>
</tr>
<tr>
<td>1996</td>
<td>9.193 100.17%</td>
<td>52.169 234.17%</td>
<td>1194 14.8% 261 2.6% 261 2.6% 787 7.8% 988 9.8% 123 1.2% 19 0.2%</td>
</tr>
<tr>
<td>1997</td>
<td>8.831 100.14%</td>
<td>61.000 248.14%</td>
<td>1389 17.5% 261 2.6% 261 2.6% 787 7.8% 988 9.8% 123 1.2% 19 0.2%</td>
</tr>
<tr>
<td>1998</td>
<td>10.213 100.14%</td>
<td>71.213 262.14%</td>
<td>1658 20.5% 261 2.6% 261 2.6% 787 7.8% 988 9.8% 123 1.2% 19 0.2%</td>
</tr>
<tr>
<td>1999</td>
<td>10.067 100.12%</td>
<td>81.280 275.12%</td>
<td>1934 24.1% 261 2.6% 261 2.6% 787 7.8% 988 9.8% 123 1.2% 19 0.2%</td>
</tr>
<tr>
<td>2000</td>
<td>9.900 100.11%</td>
<td>91.180 286.11%</td>
<td>2210 27.7% 261 2.6% 261 2.6% 787 7.8% 988 9.8% 123 1.2% 19 0.2%</td>
</tr>
<tr>
<td>2001</td>
<td>10.054 100.09%</td>
<td>101.234 296.09%</td>
<td>2486 30.4% 261 2.6% 261 2.6% 787 7.8% 988 9.8% 123 1.2% 19 0.2%</td>
</tr>
<tr>
<td>TOTAL</td>
<td>596.981</td>
<td>402.624 67.4%</td>
<td>50.075 8.4% 18.770 3.1% 14.142 2.4% 44.028 7.4% 42.073 7.0% 21.377 3.6% 3.892 0.7%</td>
</tr>
</tbody>
</table>
of the market trends. The housing market is mainly defined by single family houses on the peripheral areas of the city with figures ranging from the 67% to 82% of the new constructions. The data from the beginning of the last century to the 90’s are less defined, but still draw a growth process in the city. The interpolation of the numbers allowed is used to compare the different detail of the figures.

These numbers can suggest the known and studied phenomenon of the urban sprawl that constituted the main feature of growth of the 90’s. It’s noticeable how, in a market that was slowing its growth after the big numbers of the Olympic period, the numbers of the sprawl become higher.

It interesting, in order to better understand the dynamics of the transformation of the city, to identify the features of the process of growth in term of densification, re-qualification, sprawl and big projects. While the Olympic projects develop building with a higher density in the central areas of the city the private market pushes for lower density with a higher consumption of ground on the outskirts and the peripheral areas. A geographic description of this phenomenon enables a more precise and immediate understanding of this process.
From the analysis the quantitative aspects it’s clear how in the considered period the number of new apartment and houses is of 55,905 units, more than the 10,8% of the total built apartments in the Barcelona metropolitan area.

The apartments built in the framework of the Olympic intervention reaches a number of 4,878 units. It constitutes the 0,95% of the total apartments stock and the 8,73% of the new apartments built in the considered period. With the average apartment size of 82 square meter it creates a total built surface of roughly 400,00 square meters. Considering the average price per square meter of 890 €/square meter (given by the average price pondered on the features of the different projects) it’s possible to identify the bigness of the total income of 434 mUS$2000 for the new projects related with the Olympic transformation of the city. Subtracting these numbers from the total figure the apartments and houses built outside the Olympic framework reaches the 51,027 units. With the same average apartment dimensions (given by INE studies) the total built surface is roughly of 4 millions of square meters (4,184,200 square meters). Considering the average market price per square meter it’s possible to obtain the total income of the private sector that
adds up to almost 6.000 mUS$2000 (5.857.899.600), the 93% of the total income (6.292 mUS$2000) of the new built apartments.

Looking back at the growth trends in the real estate it’s possible to quantify the added value produced by the transformation of the city. The metropolitan area of Barcelona has been growing, from the late 70’s and 80’s with almost 8.800 new apartments per year. From ‘86 to ‘92 this figure rises of to 4,7% reaching the 9.300 units. Subtracting the Olympic residential intervention, the growth of private real estate market is roughly of 4.500 extra units compared to the (growth) trends of the previous period.

In a time frame where the growth trend in population is basically constant as the market and public institution are building a considerable amount of new dwellings the private sector shows a growth of 50 mUS$2000.

These figures are only related to the new buildings and to not shows the picture that involves also the refurbishment and the new functions installed in the city center. The literature on this topic shows how during the growth processes there is shift towards function with an higher added value (for instance from agricultural to industrial, from industrial to resi-
<table>
<thead>
<tr>
<th>Apartments in the Olympic areas</th>
<th>Non-Olympic apartments</th>
</tr>
</thead>
<tbody>
<tr>
<td>4,878</td>
<td>51,027</td>
</tr>
<tr>
<td>Average apartment size</td>
<td>Average apartment size</td>
</tr>
<tr>
<td>82 mq</td>
<td>82 mq</td>
</tr>
<tr>
<td>Total built surface ‘86–’92</td>
<td>Total built surface ‘86–’92</td>
</tr>
<tr>
<td>4,878 x 82 mq = 400,000 mq</td>
<td>51,027 x 82 mq = 4,184,214 mq</td>
</tr>
<tr>
<td>Average price per square meter in ‘92</td>
<td>Average price per square meter in ‘92</td>
</tr>
<tr>
<td>890 €/mq</td>
<td>1,400 €/mq</td>
</tr>
<tr>
<td>Total income</td>
<td>Total income</td>
</tr>
<tr>
<td>434 mUS$* (434,504,308 euro)</td>
<td>5,858 mUS$* (5,857,899,600 euro)</td>
</tr>
</tbody>
</table>
dential, from residential to retail, from retail to directional and touristic) following the rise of the price per square meter related with the different programs. Another feature not shown by these number is added value of the urban heritage given by the transformation and re-qualification of the areas in terms of new functions, better and more updated living standard and quality of life, that the literature on econometric shows to increase the monetary value of the surrounding areas.

Some preliminary conclusions can be developed looking at the presented figures. The interventions on the city has combined a strategy of monumental and symbolic projects (also called flagship buildings) able to redefine specific areas and to foster the transformation of the surrounding with a new massive intervention on the housing stock, that has not been, left to the private market but has been controlled, in term of quality (architecturally and construction-wise) by the public administration. This mix worked as a lever to foster private investment both on the main projects and on the private market, producing beyond the known and studied effects in terms of city marketing, a densification of the urban areas and a growth in the real estate market together with a higher quality of the
living standards and the architectural quality. Looking closer at the type of new built houses it is interesting to notice how the growth trend shown a shift from the single house (ground consuming) intervention to more sustainable approach fostering density.

3.10 The choice of the architects

The architects role in the transformation of the city has to cope of course with aesthetics in a wider sense but also with the reality check of politics, economics, marketing and society stakeholders. Thus the dynamics of the choice of the architects involved in the projects are able to tell us a subtext that can give a wider perspective on the city.

The different models of choice can also give us a deeper view into the idea of the city that leads the transformation and possible models of city that are pursued. The possible techniques used for a design assignment give us some key elements of knowledge: 1) the design is assigned to the technical offices of city/region administration. It reduces the monetary
costs and the time needed for approval and gives a direct translation of the political/economical desires. The involvement of the world of research is reduced on the other side to a consultive role; 2) The design is appointed directly. It requires higher costs both in terms of time and money, but it leaves no parameter to better understand the reasons of choice that can range from the personal relationship to the brand of the star-architect; 3) The design is chosen by competition. The competitions can open/anonymous, with technical parameters, on invitation. The different types of competition tell us a lot about the organizing committee and the competitor. A competition on invitation refers directly to a direct assignment but allows the organizing committee to widen the choices and, at the same time, to explicitly define the direction of the projects through the definition of the jury panel. The choice base on technical parameters identifies a world of big engineering and architectural firms of relevant dimensions, able to comply with the requested economical premises, thus excluding all the small and young offices or those more committed with research than with construction. The open competition shows a lower degree of attachment to a precise model of development of the city that can be further defined
with the choice of the jury members.

The Barcelona model is significant and really peculiar in this sense. Due to the unique socio-economic and political condition of the city during the Olympic bid all of the previous techniques have been mixed together under a unifying political-economical-aesthetic approach.

There different hint of choice can be divided (even geographically) into three main areas: the Olympic venues, the housing and the park competitions. The Olympic venues and master-plan for the Anella Olimpica comes from one restricted competition held in 1983 for the design of the master-plan for the Olympic Ring only. The invited firms are: Correa-Mila-Margarit-Buxadé (Spain); Coderch (Spain); Sainz de Oiza-Moneo (Spain), Bofill (Spain); Stirling (England); Isozaki (Japan); Gregotti (Italy); Weidel (Germany). The competition is organized by the delegate for urban affairs Oriol Bohigas, former dean of the school of architecture and the Urban Design Team that he personally created in Municipality with 13 of his post-graduated students.

In January 1884 the competition judges chose Correa-Mila-Margarit-Buxadé for the Master-plan of the area and decide to entrust the principal buildings
to the most of the other architects as follows: Isosaki for the Sport Palace, Bofill for the Physical Education Institute, Gallego for the Picornell swimming pool and Gregotti (in co-operation with Correa) for the Olympic Stadium.

The unusual link between the school of architecture and public and private practice in Barcelona traces back to the period of “opposition to the regime” that gathered and unified intellectuals and politics from different fields creating an extremely fertile and pragmatic academic activity, turning away from considering the city as an accumulation of separate functions to the city as a whole and recovering its formal identities. The unusual link between the school of architecture and public and private practice in Barcelona traces back to the period of “opposition to the regime” that gathered and unified intellectuals and politics from different fields creating an extremely fertile and pragmatic academic activity, turning away from considering the city as an accumulation of separate functions to the city as a whole and recovering its formal identities.  

In Barcelona the mayor Narcis Serra calls in the director of the school of architecture Oriol Bohigas as delegate for urban affairs. Bohigas immediately set up an urban design team in 1980 (fruit of the links between civic and academic life) with J. A. Acebillo and 13 post-graduated students. This Urban Design team incorporates other relevant departments: planning (Albert Puigdomènech), licenses (Carme Vallvé) and the property and heritage dept. The architect, Oriol Bohigas, leaves the city administration and returns to private practice but is immediately asked

---

27. David Mackay, Modern Architecture in Barcelona (1854 - 1939), The Anglo-Catalan Society, University of Sheffield, Sheffield, 1999

28. David Mackay, The recovery of the urban seafront, Barcelona, Model Barcelona, Quaderns de gestió Management Booklets, 1999
by the Mayor in March 1984 to lead a team of professionals to undertake design the Olympic Plan. Albert Puigdoménech is asked to join Josep Martorell, Oriol Bohigas and David Mackay (MBM) to deal with the planning. He is part-author of the idea to use the Olympic Village as a motor to recover the sea front for the city.

For the choice for the architects for the housing avoids the competitions for lack of time. The proposal approved by the Mayor is to invite all the architects awarded the annual prize for the best building built every year since 1959 by the local independent Arts and Crafts Society “Foment de les Arts Decoratives” – FAD. The architectural price of the FAD is created by Oriol Bohigas after joining the Society Counsel in 1958. Architects with more than one award can only have one commission bringing the number to 30 firms with proved and consolidated experience in construction. This choice collects architects from various generations (from under 30 to over 70), assuring the request variety but also a certain unity certified by FAD.

The architects of the various buildings formed 4 super urban blocks:

“Clos del Mig” (super-unit 5) with 8 project units:
Manuel Ribas Piera and Francesc Mitjans; Josep Urgell, Sergi Godia and Pilar de la Villa; Lluís Cantallops; Pere Mora; Jaume Sanmartí; Guillermo Giràldez, Pedro Lopez Inigo and Xavier Subias; Ricardo Bofill; Antoni Bonet.

“Xemeneia de Can Folch” (superunit 6) with 1 project unit: Josep Martorell, Oriol Bohigas, David Mackay with Albert Puigdomènech.

“Voltes d’en Rogent” (superunit 7) with 6 project units: Xavier Ruiz Valles and Pere Llimina; Federico Correa and Alfonso Milà; Josep M. Puig Torner; Lluís Clotet and Ignacio Paricio; Josep Benedito, Ramon Valls and Agusté Mateos; Oscar Tusquets, Carles Diaz and Associates.

“Drecera del Bogatell” (superunit 8) with 5 project units: - Esteve Bonell, Francesc Rius and Josep Maria Gil; Helio Pinon and Albert Viaplana; Jordi Bosch, Joan Tarres and Santiago Vives; Pep Alemany and Enric Poblet; José Antonio Martinez Lapena and Ellas Torres.

Exceptions in this scheme are the parks, defined by competitions and the twin towers in the Vila Olimpica. The areas are acquired from the city by to private companies. The Spanish insurance company Mapfre build here their headquarters designed
by direct commission by the Madrid architects Inigo Ortiz and Enrique Leon. The Travelstead Group build a mixed use building with apartments, a five star hotel and retail called Hotel de les Arts and designed by direct commission by one of the biggest engineering in the world, SOM (Skidmore, Owings and Merrill) and Frank O. Gehry.

According with Infusino the higher level in indeterminacy in the private projects makes it hardly sustainable for barely flexible times and resource turning them to bigger developers. This kind of developers more frequently then the other case refer to the world of the so called archi-star to guarantee a higher level of consensus in the local citizenship and a lower degree of opposition to the project \(^{29}\) shifting the discussion on an international level \(^{30}\).

\(^{29}\) Infusino, obiettivi sociali vs gentrification: trent’anni di progettazione urbanistica a barcellona, 2005.

\(^{30}\) Oriol Bohigas, Contra la incontinéncia urbana. Reconsideració moral de l’arquitectura i la citat, Diputació de Barcelona, 2004 Barcelona.
Case study #2: Berlin

The second case study depicts the reconstruction of the city of Berlin under the IBA and how the convergence of different elements, both economical and historical, created such a big-bang that it obliterated the accounting features of the post-war reconstruction.
berlin
the IBA
experimentation
and the post-war
reconstruction
“... the greatest creations of architecture are not so much the product of individual labour, rather the product of social endeavour, they are things simply cobbled together by working people, rather than inspired inventions of the creative genius, they are the traces a nation leaves behind, the strata deposited by the centuries, the lees of successive evaporations of human society, in short they are a kind of geological formation”.

Victor Hugo
This chapter considers the quantitative and qualitative aspects of the urban transformations of the city of Berlin from the late 19th century to the present day, focusing on the major changes from the late 70s to the fall of the Berlin wall.

4.1 The IBA exhibition in Berlin

In 1979, West Berlin commenced an international competition for reconstructing parts of the city, respecting the city’s original urban street plans – the foundation of Critical Reconstruction which was to become the basic principle for rebuilding post-wall Berlin. The Internationale Bauausstellung Berlin (IBA) programme, aiming to rehabilitate derelict residential quarters within the city, gradually launched a series of international design competitions in order to apply all different new trends of design in the reconstruction of urban space.
4.2 *Interbau Exhibition of 1957*

The initial proposal for the building exhibition referred to the 1957 Interbau (the Hansaviertel) exhibition, a one-off presentation of the latest in design at a single site.

A mix of blocks of flats and individual houses in the Hansaviertel (Hansa quarter), clusters of asymmetrical modernist buildings interspersed with green spaces with individual modernist houses giving way to taller blocks of flats, each set amongst trees and landscaping designed by a selection of modernist architects, constitutes the 1957 Interbau – an international housing exhibition. It includes designs by Arne Jacobsen, Walter Gropius, Max Taut, Alvar Aalto, Oscar Niemeyer, van den Broek en Bakema and Max Taut.

In a definite contrast to the Interbau Exhibition of 1957 the central theme was the rediscovery of the historic city centre of Berlin having been destroyed by far through war and the building of the Wall. For the first time in the history of building exhibitions the IBA Berlin focuses on the renovation of old housing stock and its chances of integrating new housing successfully – what actually means the repair of the city. Thirty years after the Interbau, the IBA Berlin
Berlin 139

87 opposes post war urban planning. The Building Exhibition Berlin GmbH is founded by the Senate of the City of Berlin in 1979. The original idea of a ‘building show’ survived, primarily in southern Tiergarten, but integrated the refurbishment and rebuilding of the existing grain of Berlin’s Kreuzberg quarter and other areas.

IBA (Internationale Bauaustellung) initially known as “the IBA 1984” delayed by political and logistical difficulties. The exhibition is eventually opened in 1987, as “the IBA 1987”, the year of the celebration of Berlin’s 750th anniversary. This event is celebrated by both East and West Berlin and crowned on both sides by competing urban reconstruction projects: the IBA in the West and the Nikolaiviertel and Platz der Akademie in the East². The programme is expanded into an ongoing 10 year research programme of new construction and refurbishment across the city, focusing on areas still completely empty since the war (for new buildings), but also on the “SO36” area of Kreuzberg, which was fast decaying into an urban slum area of squats and low rent, poor quality housing.

The IBA Berlin 1987 opens itself up from two approaches: IBA – new development and IBA – old building stock. The programme is divided into ‘IBA


4. Berlin 139
Neubau’ (new buildings), under Josef Paul Kleihues, and ‘IBA Altbau’ (mainly the refurbishment of existing blocks), under Hardt-Waltherr Hämer.

The organization is based on the 150 sites within the central project area. Within the central Berlin IBA chose sample areas, historically and typologically meaningful. The majority of the areas and existing buildings are city-owned. One hundred of these sites were vacant and designated for new buildings, while the remaining 50 were slotted for renovation³.

4.2 Altbau.

**Gentle Urban Redevelopment**

Altbau concentrates in Kreuzberg only. The Kreuzberg project approaches urban renewal with a large measure of social commitment, working towards renovating and modernizing an urban area by focusing on the expansion of facilities for children and educational institutions and by encouraging the active participation of the district’s population. It also includes new buildings, such as Alvaro Siza’s Bonjour Tristesse but the name is given to underline the integration of the new buildings into the existing street blocks.

In 1977 massive protests against deconstruction

---

3. Vishaan Chakrabarti, Rebuilding the urban margin and the modern ideal, Thesis, Master of City Planning, Department of Urban Studies and Planning, MIT, June 1993

4. Berlin 141
and housing shortage led to the competition “Strategies for Kreuzberg” and from 1979 on into the “illegal reconditioning/reoccupation” of many vacant houses in the quarter – starting point for the IBA – old building stock. Their foremost aims were the conservation, stabilization, and development of existing social and functional urban structures as well as the implantation of processes of self-help and modernisation led by the tenant. Berlin in particular became a ‘self-help city’, adopting the 1984-87 International Building Exhibitions approach to ‘carefully repairing the urban structure’ (und behutsame Stadterneuerung). The city decided to provide squatters public funds for repair and ecological modernisation, on condition that they contracted with the owner for at least 15 years, or leased or bought ‘their’ squat were required to supply labour (called a ‘muscle’) worth at least 20 per cent of the rehabilitation cost.

The Altbau deals with the programmatic infrastructure of the existing city. By 1987, approximately 5500 dwelling units were rehabilitated, 485 new units were constructed, 3 schools for 1500 children and day care centres for 1400 children were developed, 250 courtyards were renovated as semi-public green spaces, 20 public spaces have been refurbished, and
20 new institutional facilities have been constructed including a youth cultural centre and a senior citizen's home. 500 of the renovation projects were completed by the residents themselves. 95% of the residents remained in the area, and the 61% remained in their original homes.

4.3 Neubau. Critical Reconstruction

The Neubau projects are concentrated in four geographical areas: (1) Tegel Harbour, (2) Prager Platz, and the vast majority around (3) southern Tiergarten and (4) southern Friedrichstadt.

Between 1979 and 1987 IBA new development realizes a multitude of new building projects in the context of competitions with international architects. Key aspects are the southern part of Berlin-Friedrichstadt, the southern part of the Berlin quarter of Tiergarten and the Berlin inner harbour Tegel. The sites available for the IBA were the vacant lots and neglected but often inhabited buildings that rear from the South Tiergarten area through South Friedrichstadt and Luisenstadt to the neighborhood of Kreuzberg.

4. Vishaan Chakrabarti, Rebuilding the urban margin and the moder ideal, Thesis, Master of City Planning, Department of Urban Studies and Planning, MIT, June 1993

5. Vishaan Chakrabarti, Rebuilding the urban margin and the moder ideal, Thesis, Master of City Planning, Department of Urban Studies and Planning, MIT, June 1993
SO36. Although World War II destruction and the presence of the wall were partially responsible for the abandonment of West Berlin’s inner city, there were others, less exceptional, causes for this condition. As in many other inner cities at that time, the flight of wealthier residents from the inner city to the suburbs and the sacrifice of many small-scale neighborhoods for large-scale urban renewal projects left behind an atmosphere of chaos, neglect, and alienation to a poor and otherwise disenfranchised population.

The sites in Tegel, in the north, and at Preger Platz, slightly west of the centre, provided a counterpoint to the IBA inner-city sites: Tegel presented the architects with a historic village centre, forests and lakes often used for recreation, and an unused harbor; Prager Platz, emptied by the destruction of World War II, was filled with the memory of the nineteenth-century buildings for the middle-class neighbourhood that still surrounded it. An exhibition of inner-city redevelopment would bring a current topic of architectural discussion, a subject for “conceptual confrontation”, and a new image to West Berlin; the buildings would provide the space required for the new residents, attracted by this new image, and for the old residents, convinced by this image to stay.6

4.4 **IBA main actors**

The International Building Exhibition (IBA) Neubau, under the direction of Josef Paul Kleihues pursues the idea of reconstruction of the city layout of the 19th century in the Berlin of the nineteen-eighties. Perimeter block development and corridor streets form the central idea and their implementation lead to a removal of the evidence of destruction by war, the Cold War and the car-orientated town planning of the fifties.

Josef Paul Kleihues and Hans Stimmann, who is the Senate building director call for homogeneity of architecture and accomplishment of a so-called Berlin-Prussian style.

They uses the following criteria to define this so-called *Berlin style of architecture*:

- homogenous perimeter block development with eaves 22 metres high;
- division of the block - at least optically - into small individual house units;
- facades of stone with a tectonic structuring of facades, upright window and the use of natural stone for facings.

Buildings are intended to be monolithic and
embody solidity. These rules are elevated to become a universal principle and used in every conceivable situation, whether in the historical district of Mitte, at Potsdamer Platz or - in a slightly modified version - in the new housing estates on the outskirts of the city. These premises do not only apply to new buildings. The same recipe is also used to transform existing districts of the city and adapt them to fit into a homogeneous urban landscape as part of the 'Planwerk Innestadt' (master plan).

In contrast to the Altbau’s overwhelming success, the Neubau project completes only 27 of the 100 projects planned. Ultimately 1000 fewer units are constructed than originally planned. 27 new structures include 2500 subsidized dwelling units, a science centre, a Kulturforum, a pedestrian bridge as well as some new public spaces\(^7\).

4.5 **J.P. Kleihues. The Genesis of Critical Reconstruction**

In 1968, the anti-Modernist stance was taken up formally in Berlin by a group of young, left-leaning architects and architecture students at the Technische

---

7. Vishaan Chakrabarti, Rebuilding the urban margin and the moder ideal, Thesis, Master of City Planning, Department of Urban Studies and Planning, MIT, June 1993
Universität Berlin who called themselves “Campaign 507”. They organized an exhibition called *Diagnose zum Bauen in West-Berlin* (Diagnosis on Building in West Berlin) and published a manifesto along with it, demanding, among other things, that the government focus on “replanning the city center rather than creating reservations” for example secluded housing estates.

One of the signatories of Campaign 507 was Josef Paul Kleihues, who, after studying under well-known architect Hans Scharoun, had founded his own architectural practice in Berlin in 1962. The need for a new approach to architecture implied in the critique of Modernism that emerged in the late 1960s became of central importance to Kleihues during the 1970s, when he began to develop his own building concept and promote a return to traditional urbanism. During these years he organized a major series of exhibitions on new architecture through University of Dortmund, where he was chair of design and architectural theory. Then, along with Wolf Jobst Siedler, a prominent Berlin writer, Kleihues published a series of articles in the *Berliner Morgenpost* newspaper titled “Berlin: Modelle für eine Stadt” (Berlin: Models for a City) during late 1975 Siedler had already published several edi-

tions of a book called Die gemordete Stadt (The Murdered City), in which he bemoaned what Berlin had become in the hands of Modernist planners\textsuperscript{9}.

In 1977, before the creation of the IBA, he conceived and realized a new type of project, Block 270 in Wedding, based on a reinterpretation of the traditional perimeter block. In this project, "all stairways have access from the street (house entrances) and also from the courtyard (side entrances) and the underground car park; there is ample living space in the apartments. All apartments look out onto the street or the square and onto the communal courtyard"\textsuperscript{10}. The square mentioned by Kleihues is Vinetaplatz; together with the choice of the perimeter block, its presence became an important structuring element for the design of the project. The courtyard has openings on all sides and is thus in direct relationship to the street and to the square\textsuperscript{11}.

Kleihues admires Rossi’s ability to connect the social and political concerns of architecture with aesthetic ones. “The bridge that Rossi spans,” he wrote of the author’s critique of functionalism, “from the economic and political relationships to the, in a narrower sense, artistic forms, the emphasis on this double purpose of architecture, was historiographically and theoretically a meaningful new beginning.”\textsuperscript{12}

\textsuperscript{9} Naraelle Barrows, Reinventing Traditionalism: The Influence of Critical Reconstruction on the Shape of Berlin’s Friedrichstadt, Thesis in Art History, Comparative History of Ideas, University of Washington


\textsuperscript{11} Biatrice Sokoloff, Public Spaces and the Reconstruction of the City: Learning from Barcelona and Berlin, Arch. & Comport. /Arch. Behav., Vol. 6, no. 4, p. 339-356, 1990

\textsuperscript{12}
4.6 Numbers and figures

IBA's main goal is to give West Berlin a new image and a population increase at the city’s heart. The total construction is mainly constituted by housing blocks and villas for 35000 people mainly from the working and middle class. The total construction cost for the two divisions was 3 billions of Deutsche Mark, coming from private, semi-public and public sources\(^\text{13}\).

Planning work is executed by an autonomous non-profit IBA office that has a staff of 50 and a budget of DM 85 million ($27 million at that time), 75\% of which comes from the municipal funds and the remainder from the federal government. The construction and rehabilitation itself is funded by public, semi-public, or private investments. IBA has no money to develop buildings, and given its place in the structure of the city bureaucracy, it has no immediate contact with those who produced them. Such a structure keeps IBA proposals for entire buildings away from the practical exigencies of construction costs and unit standards\(^\text{14}\). The IBA office essentially acts as a planning consultant with no power to finance or authorize construction, which slowed the project administratively. IBA GmbH’s budget allowance shows precisely

\(^{12}\) Naraelle Barrows, Reinventing Traditionalism: The Influence of Critical Reconstruction on the Shape of Berlin’s Friedrichstadt, Thesis in Art History, Comparative History of Ideas, University of Washington

\(^{13}\) Vishaan Chakrabarti, Rebuilding the urban margin and the moder ideal, Thesis, Master of City Planning, Department of Urban Studies and Planning, MIT, June 1993

where its jurisdiction lay: in the generation of ideas and their presentation to the public.

### 4.7 Social housing in Berlin

A large proportion of the vacant areas in central locations to be developed belong to the state. The city has an enormous additional building requirement (per capita it only had one quarter of the office space of Frankfurt, only one third of that of Munich), and the relationship with the area surrounding it, which is still virtually unsettled as a result of the division of the city and the planned economy of the former German Democratic Republic, needs to be redefined.

In Berlin the state has tried to provide affordable housing for a great strata the population by building huge housing estates at the outskirts of the city in the 1960s 1970s. These housing estates are however often the social hotspots of cities areas social problems are increasing and destabilizing the neighbourhood\(^\text{15}\).

According to Ley, there is a severe housing shortage in the city but no appetite to repeat the insensi-
tive housing projects of the 1960s\textsuperscript{16}. Due to the need for cheap housing in the reconstruction period after the Second World War and the specific situation of Berlin during the Cold War, the provision of housing in the city of Berlin has been in the responsibility of the Land of Berlin. The term `Land' designates one of the states of the Federal Republic of Germany\textsuperscript{16}. The city of Berlin a Land of its own and is also termed city state (Stadtstaat). This means that the two scales, Commune and State, are integrated in Berlin\textsuperscript{17}.

Social housing in Germany has never been directly state managed but the state subsidizes a wide range of actors from private housing companies and non-profit housing cooperatives, to build housing with state grants and tax relief. The de jure concept of social housing relates to a methodology of funding (subsidy) that leads to social obligations for a limited period a minimum of 12 years, but between 20 and 35. Such housing has been provided by a wide range of providers, including co-operatives, municipal and state-owned housing companies\textsuperscript{18}.

For over a century, German social housing and its predecessors are a driving force in physical and social innovations in housing\textsuperscript{19}.


\textsuperscript{17} Sabina Uffer, Re-scaling of Ownership: How is the Internationalization of Berlin's Provision of Housing Creating an Uneven Spatial Development?, paper presented at 2009 ISA-RC21 Sao Paulo Conference Inequality, Inclusion and the Sense of Belonging

\textsuperscript{18} Scanlon, Kathleen and Whitehead, Christine M E, (eds.) Social housing in Europe II. London School of Economics, London, 2008

\textsuperscript{19} Scanlon, Kathleen and Whitehead, Christine M E, (eds.) Social housing in Europe II. London School of Economics, London, 2008
4.8 IBA social housing

According to Miller, for each subsidized housing project, the city commissions developers, determined unit types, oversees financing, and implemented zoning regulations and building codes, and IBA commissions the designs.

Through competitions, the direct hiring of architects, and tenant proposals, IBA generated a series of possible design solutions for specific sites from which it selected those recommend to the city. Those proposals that the city accepted are regarded as guidelines for development in city-owned sites; on parcel that are privately owned, the city only offers IBA proposals as non binding suggestions. In its own land, the city does not assume direct responsibility for housing development, but allocates its land on a leasehold basis to private firms, investments societies, or building cooperatives, who would then develop the project under the city’s control.

Although IBA’s recommendations in these cases are design-based, it makes one important procedural proposal that has both formal and social ramifications: the institution of a competition to select a developer for these projects. Earlier, the city first awards the sites
to developers and then approves their financial and physical plans for housing. The tender system severed this process. Developers have to respond to a project already defined by the city in terms of specific criteria concerning the building and its future tenants: IBA’s preliminary building design, cost estimates, and more than all subsidy level. Their response takes the form of financial proposals; a successful proposal offers the highest quality of construction and guarantees the lowest possible rent levels.

The fact that the subsidy level is determined for the developers protects social priorities from the demands of profit. As subsidy levels corresponded to the income levels of future tenants, they ultimately control social structure. Private developers and investment societies tend to select subsidy levels designed for the middle or upper range of eligible tenants as this is more profitable; consequently. At IBA’s suggestion, the city selects subsidy levels that favours those groups most in need of housing and respected the idea of a mixed-income community.

A serious criticism against the IBA Neubau was on the question of land use. The new IBA buildings experienced trouble in terms of leasing their ground-floor commercial spaces, which could not be publicly
subsidized. The dominance of the housing component of the IBA seems to be a direct descendant of the Weissenhof and the Interbau. While the physical design approach of the siedlung has been altered to interact with the city, the programmatic approach was not altered. However, it was not possible for the city to promise that IBA would create mixed-use neighbourhoods that would present functional as well as physical redevelopment alternatives as part of the exhibition. Jurisdiction over land use was in the hands of the city government. As such, plans had the force of law, changes to them had to be passed by West Berlin’s Parliament. The need to produce the exhibition in a relatively short amount of time (1978-1987) precluded such changes, limiting IBA’s area proposals to physical development plans (Bebauungspläne) within a land-use structure ratified in 1965.

When accepted by the district authorities, IBA’s physical development plans could generally regulate the site plans and massing of the buildings in a given area; IBA’s control over design of individual buildings was restricted to those buildings types that the city commissioned directly or regulated via financing programs. Commercial, industrial, and market housing projects remained private enterprises, restricting IBA’s

20. Vishaan Chakrabarti, Rebuilding the urban margin and the modern ideal, Thesis, Master of City Planning, Department of Urban Studies and Planning, MIT, June 1993
work to city infrastructure, and subsidized housing. Of these, it was primarily subsidized housing projects that carried IBA’s inner-city alternatives and West Berlin’s new image to the public.

4.9 The architects choice

The competitions require the design of an entire block despite the fact that the winning architect would only be responsible for the design of an individual building within the block\(^\text{21}\).

The selection of the architects for the IBA Neubau is among the more troublesome aspects of the project. Just as Mies maintained indirect design control of the Weissenhof results through the selection of Modernist architects, Kleihues undermined his own call for “increased differential” by primarily selecting Postmodern historicist such as Krier and Rossi, although the inclusion of Eisenmann and Hadid could be argued to be balancing the factor. Nonetheless most of the selected architects are would-famous Western architects\(^\text{22}\).

According to Barrows competitions are held for each individual building site, all coordinated, how-

---

\(^\text{21}\) Vishaan Chakrabarti, Rebuilding the urban margin and the moder ideal, Thesis, Master of City Planning, Department of Urban Studies and Planning, MIT, June 1993

\(^\text{22}\) Vishaan Chakrabarti, Rebuilding the urban margin and the moder ideal, Thesis, Master of City Planning, Department of Urban Studies and Planning, MIT, June 1993
ever, under a regional plan drawn up by Kleihues and city officials. Cooperation from the architects was partly by the fact that, as head of the exhibition, Kleihues also had considerable sway as to the choices of both the juries and the winners, a tactic that continued to be used in Berlin planning culture even after reunification\textsuperscript{23}. According to Chakrabarti individual architects for new buildings were chosen through limited competitions\textsuperscript{24}. Stimmann is also able to implement his ideas for a Berlin style of architecture owing to the dominant role he played in numerous competition juries, the influence he was able to exert on what building permits were issued and by intensive public relations.

According with Miller the New Building Section’s “critical reconstruction of the city” often began with an invited competition for the design of individual blocks and ended with the assignment of the block’s building project to the previously invited architects. Rated than being continuous, however, this process was a definite product of IBA’s dual personality. In this case, the architects’ competition proposals were the material for the exhibition – for books and symposia – and IBA’s ideas guided the development of the buildings on the block.

\textsuperscript{23} Naraelle Barrows, Reinventing Traditionalism: The Influence of Critical Reconstruction on the Shape of Berlin’s Friedrichstadt, Thesis in Art History, Comparative History of Ideas, University of Washington

\textsuperscript{24} Vishaan Chakrabarti, Rebuilding the urban margin and the moder ideal, Thesis, Master of City Planning, Department of Urban Studies and Planning, MIT, June 1993
Although IBA’s block plans were certainly influenced by the architects’ proposals, they were largely the products of its own conservative attitude toward the question of West Berlin’s reconstruction. According to Murray the IBA's architects are prominent figures belonging to two successive generations: those now in their late sixties to late seventies, and those now in their late forties to sixties.

For members of both generations, participation in the International Building Exhibition (IBA) marked an important point in their respective careers. For many in the younger generation, IBA was their first chance to build: among the architects figuring notably in the post-Wende boom but not appearing in the diagram above, we can include Walter Noebel, Klaus Theo Brenner, Benedict Tonon, Meinhard von Gerkan, Heinz Hilmer and Christoph Sattler (partners in Hilmer & Sattler), Johannes Nalbach and Gernot Nalbach (Nalbach & Nalbach), Christoph Langhof, and Cristoph Mackler; among those who do make an appearance, we might mention Hans Kollhoff, Max Dudler, Daniel Libeskind, and Rem Koolhaas (although some of these already had buildings to their credit).

For the older generation, IBA provided the chance

---

to forge important connections with internationally prominent peers who had been invited to participate (e.g., Aldo Rossi, Giorgio Grassi, Arata Isozaki); to secure and solidify positions of influence within the local architectural establishment; and (via their power to award IBA commissions, a form of patronage normally reserved for city bureaucrats within the Senate Building Administration) to win allies among the younger generation, many of whom, like Hans Kolhoff and his circle of neo-Modernist Young Turks (among them, Tonon and Brenner), had originally opposed the notions of urbanism espoused by the older generation those of Kleihues, in particular 26.

Chackrabati argues that many of the star architects of the 80s were in the clique (Eisenmann, Stirling, Hadid, Krier and Rossi to name but a few) though it has been pointed out that those chosen were “at the forefront of the architectural thinking” as opposed to “the mega-stars of corporate architecture like Johnson and Pei” (Peter Hoffman, “Report from West Berlin: an Ambitious Urban Renewal Plan is Creating Much Needed Housing and Considerable Controversy” in Architectural Record, February 1985) 27.

According to Schweitzer, Storm and Murray many more projects are commissioned directly without the


27. Vishaan Chakrabarti, Rebuilding the urban margin and the moder ideal, Thesis, Master of City Planning, Department of Urban Studies and Planning, MIT, June 1993
benefit of architectural competitions; thus, it has been noted that Kleihues, for example, as much as he benefited from the competitions, has received even more work outside of them. Many developers, it is said, would rather work with him and other establishment insiders than take a chance with a firm lacking the connections necessary to unravel the city’s red tape (or with a firm to which Stimmann would likely object; thus, Zaha Hadid and other avant-garde architects, it can be assumed, were not exactly in demand among investors\(^28\).

### 4.9 Effects on the market

The building boom in Berlin coincided with a restructuring of the real estate market, which became dominated by completely different kinds of investors in the wake of the globalisation of markets. Investors who built to meet their own needs - characteristic of the post-war economy in Germany - were replaced by international investors in the form of real estate funds, life insurance companies and developers who invested

in the real estate market for speculative reasons and had property to be let or sold built entirely on the basis of financial considerations.
Measuring the tangible

It is by agreement that certain assets are designated as means of exchange. The commercial transaction implies a contract. The deal is that both parties exchange equivalents, two goods of the same value. In architecture, the commercial value of an investment is a key requirement; the building as an asset has a value within a market of similar assets. The methods of determining the value of cultural parameters vary widely; different methods are used to assess value more and more objectively and rigorously, quantifying the effects of design.
tangible values
In this way one thinks that one is expressing the spirit of the times, whereas one is merely reflecting the spirit of the market. Sublimity is no longer in art, but in speculation on art.

5.1 Architects and value: paradigms shift in time

Oswald Mathias Ungers, in “Architecture's Right for an Autonomous Language” depicts the double matrix of architecture in relation to society\(^1\).

Architecture as a “function derived from economy, sociology and technology” is contrapuntal to an architecture intended to fulfil the deepest spiritual issues of its users.

To the primacy of profitableness and productivity is opposed the need of architecture to communicate experiences and ideas through the language of form. The topic is already in nuce in the V century with Vasari. In “Le Vite de più Eccellenti Architetti, Pittori e Scultori Italiani”\(^2\) architecture is part of the “belle arti”. Together with Painting and Sculpture it is born from the ability to represent forms and figures. Practice that finds it’s ontological reason of existence in the application of shared rules and tools opposed to activity whose results vary in relationship with the subject’s capacity and skills. The distinction between the two approaches become explicit in Kant’s Critique of Judgment\(^3\), where he defines free beauty (pulchritudo vaga) from dependent beauty (pulchritudo adherens) posing as extenuating circumstance the bond to

---

a precise function or purpose. Starting from the late 60's Architecture started walking through autonomous paths, leaving the rest of the world, choosing the smart madness of a golden exile from contemporaneity. The sudden acceleration of creative avant-guard, left the public conceptually somewhere else, but found other way to keep the dialogue with the world outside opened.

According to Rem Koolhaas a new starting point, in the history of architecture, can be set at the end of the 70ies. Not because of an international political groundbreaking event (the meeting between Deng Xiaoping and Nixon), neither because of a technological invention that changed the relationship between individuals and world (everything surrounds you with the Walkman) nor because of a new philosophical theory (Jean Fracoise Lyotard book “The Postmodern Condition”). The brand new start comes from a woman. A middle age lady that embodied a complete new shift in all the architectural paradigms: Margareth Hilda Roberts Thatcher becomes prime minister of UK and brings a brand new vision of the society (and politics and economics). Rem Koolhaas shifts the focus within the weight of the values bringing new attention to the stakeholders and their values
and objectives. Their values are considered dominant, compromising the existing balance to meet a brand new value equilibrium.

A new modernity begins. “It’s now clear that the 70’s marked the beginning of the new financial/political twin regimes, liberalism and globalization. Liberalization would, in the West, reduce the involvement of the state in favor of the Market as the overriding mechanism for assigning structure and value. For the architect, the market implies a definitive loss of identity and status. Since (s)he no longer works for a public entity, (s)he can no longer claim to work for the public good. All his/her work is at the service of the private. Globalization implies a new challenge: can you even know what the Other needs?”

Roemer van Toorn uses the city of Amsterdam to show the new approach: “Under pressure of neoliberalism – the celebration of the market and boundless individualism - the traditional idea of the city – that of Amsterdam’s canals and later Berlage’s plan for South Amsterdam, but also the modern idea of the city as manifested in the Bijlmermeer housing estate in South-East Amsterdam, for instance – no longer exists. Under pressure from the market economy, the idea that architecture can serve the public interest has been undermined.

4. OMA\Rem Koolhaas, Content, Taschen, 2004

5. Tangible Values  171
Economic and private interests are rated more highly than cultural and collective values. Not only does the economic logic of property developers and investors determine the city’s landscape, but the city council too acts as a property developer and investor. By acting in this way, the Dutch government follows the market regime, and the public task becomes a derivative of market-orientated thinking. While the Modern Movement sought to improve the world with its architecture primarily from a social functional perspective, what counts today are plans intended to give the city a better (bankable and touristic) competitive position vis-à-vis other cities in the world.”

The change is dramatically strong. Manfredo Tafuri will clearly paint it through its works shaping the deep roots and the inner conditions of this ontological crises. Architecture discovers itself naked and not related to the ethos. The architect is no longer bringing a shared knowledge that improves everybody’s life and solves the problems of the modern society. It is not giving shape to the symbolic identity of a collective narration using the language and the tools of the composition. Marco Biraghi will surf on these issues explaining how the fittest architects survived giving small quantities of this poison to a dying discipline.

5. Roemer van Toorn, towards a cosmopolitan praxis, in Holland-Italy 10 Works of Architecture, Electa, 2007


The 20th century mantras, the slogans able to present in few words a thick disciplinary statuta, lose more and more their deepness. The modern “form follows function” gives up to the postmodern condition that suddenly leaves room to the pragmatic “form follows finance”. Facing this dilemma, more and more architecture shifts toward the financial and economic features of design. According to BIG\Bjarke Ingels\footnote{Bjarke Ingels, Yes Is More: An Archicomic on Architectural Evolution, Taschen, 2011} Mies van der Rohe revolutionary words “less is more”, the American postmodern ironical provocation “to less is a bore” give way to contemporary opportunism “I am a whore”, the yes-man attitude of “yes is more” or to the “Say ¥€$ to everything”. This shift in the paradigms brings brand new opportunities to be considered. Opportunities able to give new possibilities to users and clients and new meaning to the architectural profession. More and more the “economic” approach is used to foster design choices, asking for the maximum FAR possible, maximizing square meters, envelopes, views or whatever could be monetized and quantified both in speculative and intangible terms.

Different implicit and explicit targets climb up to the top of priorities: to get the “maximum utility” for a project becomes crucial part of the design process. Not only in financial terms but including to all
its values, quality, aesthetics, perception, symbolic value and so on. Different values moves in the priority list of the design process and their evaluation and measurement becomes part of the arguments able to foster design solutions. The tools used to quantify these values are more and more refined referring to tangible data. Datascapes and automatic design based on defined parameters and models becomes more and more design tools. The gathering of data gives up to the relevance of the data to focus on the tools used to give a visual output to the mathematic model able to crunch the numbers. Crucial point becomes the evaluation of intangible and their role in this scheme.

Architecture relates to society developing it's symbolic function in new ways: a tool for marketing strategy, for construction of consensus, for the construction of durable images; a device able to fit quantifiable human relations; investment able to give a monetary yield; signal for the competitors; tool to communicate a financial position and to signal for companies to show a change in the nature of their business.

At this point the basic tools provided by the basic economics handled by professionals seemed to present some lacks. What architects (and clients second-guessed by architects) perceive as being eco-

---

nomics seems not to complete the full picture. Some relational features are missing in the overall appraisal of value of architecture.

5.2 Perception matters

In line with Einstein one could say that 'facts are just facts, it’s the perception that really matters'. More and more people are looking at contemporary architecture. Magazines, fashion shows and TV commercials are now using the latest building to communicate the coolness of the product\good\service.\textsuperscript{10}

Perception of a “generic” value of architecture is growing but it’s not completely clear where does the value lies. In 1936, in one of the earliest documented examples of a “world-wide famous” architect arguing the commercial benefits of his reputation, an exasperated Frank Lloyd Wright pointed out to a client, concerned about additional costs, that he was providing a “record of economic as well as creative achievement”. Wright drew their attention to the fact that the publicity alone generated by his reputation would have cost the client “thousands of thousands”\textsuperscript{11}.

\textsuperscript{10} Lo Ricco Gabriella; Micheli Silvia, Lo spettacolo dell’architettura. Profilo dell’archistar©, Mondadori, Milano, 2003

\textsuperscript{11} Frank Lloys Wright in Franz Fuerst, Patrick McAllister and Claudia B. Murray, Designer Buildings and the Economic Value Of Signature Architecture, Environment and Planning A 43(1) 166 - 184, 2011
Architectural professionals would say that value of design may only be determined by peer experts. According to Dutch architect Carel Weeber, a building’s architectural quality is determined not by the professionalism with which it was built, but by the part it plays in architectural debate. The fact that a building is well thought out professionally is not enough to make it a piece of architecture. The distinction between experts and lay persons can be a crucial variable. For instance, it is notable that surveys have found that there tend to be significant differences in the ratings of design quality between the public and design professionals.

5.3 Evaluating the tangible features of design value

It is by agreement that certain assets are designated as means of exchange. Our sobering wisdom dates back at least to Aristotle. After noting in the Nicomachean ethics that to allow for exchange the things exchanged must be comparable, he characterizes money as a mere convention. The commercial transaction implies a contract. The deal is that both parties exchange equivalents, that is, two goods of the

same value. The deal is possible only when the two goods can be measured. That's where money enters. It as a unit of account and facilitates the exchange.\textsuperscript{15}

Karl Marx, the most cited economist ever and still relevant, made a big issue of the mystifying effect that a measurement in money terms has on the thing measured. Use value, so he argues in \textit{Das Kapital}, is particular to the thing valued and depends on the need it meets. The imposition of an exchange value forces the thing to the straight jacket of the monetary form; the thing becomes a commodity to be compared with other commodities in order to make exchange possible. By commodity fetishism Marx means the preoccupation with the commodity form of a thing so that you turn a blind eye to its distinctive characteristics as well as the social relations that underlie is production.\textsuperscript{16}

According to Loe in architecture the commercial value of an investment is a key requirement both in the process of realizing a building and during its life as an asset to its owners. The building as an asset has a value within a market of similar assets. Its exchange value arises from its completion as a construction project. Value in this context is therefore linked to the singular utility, a project defined in time, space and cost in a

\textsuperscript{15} Arjo Klamer (ed.), The Value of Culture, Amsterdam University Press, Amsterdam, 1996

\textsuperscript{16} Arjo Klamer (ed.), The Value of Culture, Amsterdam University Press, Amsterdam, 1996
specific location.

The developer profits only when the value exceeds the cost of development and funders do not provide finance if they perceive the risk to be excessive, itself a product of the margin between cost and value.

5.4 Architecture and evaluation

The relationship between architecture and economics in the modern history is quite recent. The destruction by fire, of the old Palace of Westminster in 1834 and the subsequent need for replacement gave rise to an opportunity for the public building project of the age. A public design competition ensued, in which designs were not required to be produced with an attendant estimate of cost because: “it would have been productive of no public advantage, whilst the trouble and expense of producing estimates would have been a considerable bar to competition.”

In Europe we turn first to the 19th century and a French economist Dupuit who in is attributed with originating in 1884, “cost benefit analysis” as a tool to

evaluate the wider utility of projects. The technique aims to set out those factors or ‘externals’ which require consideration when making an economic choice between options which have differing costs and benefits to the community. Building economics itself is a new discipline, fuelled by the Western post-war building boom across the spectrum of the economy.\textsuperscript{18}

With public and private expenditure soaring during the 1950s and 1960s, it was increasingly evident that simply measuring and valuing work done was an inadequate technique to justify continuing commitment to expenditure.\textsuperscript{19}

### 5.5 Measurement methods

The methods of determining the value of cultural parameters vary widely, and several challenges persist in applying economic methods to the field. The different methods are used to assess value more and more objectively and rigorously, quantifying the effects of design.

The dilemmas faced in assessing the value of design include the fact that architecture (private

---


buildings included) is both public and private and has both monetary and non-monetary purposes. It can be a private good in that it offers a range of goods and services consumed by individuals and traded in markets (such as real estate). On the other hand, it can be intrinsically a public good, with benefits deriving collectively and provided not by markets, but by government or nonprofit groups. According to Worpole we cannot avoid buildings, or the designs of the streets.

These differences lead to very different methods, and degrees of complexity, in assessing its value:

- Basic cost studies: including financial calculations, development pro formas, audits of existing examples, and cost-benefit analyses.
- Economic impact studies: they gauge the effect, in monetary terms, of a particular investment on a local (regional) economy.
- Regression analysis: hedonic, travel-cost, and property value studies. This statistical technique examines the relation between multiple variables and the market price of architecture. A regression analysis, for example, might predict the effect of landmark regulation on real estate property values. Hedonic methods measure the effect of a popular site on land values at various distances from the site. The travel-


cost method assesses the various costs people are willing to incur to travel to a place or site.

- Contingent valuation and choice modeling: These methods measure “non-use” values of public goods. They are based on surveyed consumer preferences (willingness to pay) rather than actual market data. These methods create hypothetical market situations to essentially assess how much the public values a good.

- Case studies: given the conceptual difficulties in quantifying values, case studies “involving narratives, descriptive statistics, and clear analytical frameworks” offer a sound option for assessing value.²²

5.6 Parameters

According to Fuesr, McAllister and Murray, given the extent of externalities and “internalities” generated by design, there has been a surprisingly limited body of research on the linkage between the design characteristics and their exchange values.²³

Measuring the quality of design poses conceptual and practical problems. Attributes can have physical parameters (such as the level of light in a room,
measured in lux), while others are on one side more perceptual and subjective and thus complexity in measurement can arise (such as the feeling of warmth emanating from a particular heat source) or difficult to describe if not related with the context.

In 1936, in one of the earliest documented examples of a “world-wide famous” architect arguing the commercial benefits of his reputation, an exasperated Frank Lloyd Wright pointed out to a client, concerned about additional costs, that he was providing a “record of economic as well as creative achievement”. Wright drew their attention to the fact that the publicity alone generated by his reputation would have cost the client “thousands of thousands”.  

As Frank Lloyd Wright testifies, designers have long been interested in the overall value added through their efforts and the legacy of design decisions on future generations of users. According to Gann, Salter and Whyte their ability to “prove the value of design” has been elusive. Next to various methods of historic designation, architecture and façades have been used to measure the value of cultural heritage.


The majority of the literature related to measuring economic effects of signature architecture, the most empirical relevant work related to this study focuses on specific cities.

Hough and Kratz examined award winning buildings in Chicago only. Their study investigated the way the office market of down-town Chicago values “good” architecture. They attempted to address the question of whether the positive externalities of “good” architecture could be internalized and reflected in higher rental rates. In total, they identified 139 buildings in Chicago awarded status of architectural importance. Interestingly, while the authors found that, in the case of newer offices awarded status of architectural importance, a rental premium was paid; for older buildings there was no significant evidence of a rental premium. They attributed this finding to the restrictions on owners’ and occupiers’ rights to alter older buildings that had been awarded status of architectural importance. Alternatively, it may have been simply due to changing tastes and preferences regarding architectural styles. Vandell and Lane use amenity data from a set of class A office buildings

---


in Boston and Cambridge to measure the contribution of architectural quality to the value of a building. The results of their study confirm a strong relation between design quality and rents but a weak relation between that quality and vacancy behaviour.

Murugappan and O’Young focus on the value of architecture design on the office building income. Interestingly the survey results shows that architect’s responses are not consistent and do not correlate with the net operating income of the buildings. On the other side consistent premiums are paid for specific architectural feature like high window to wall ratio or building core location.

Fuerst, McAllister and Murray focus on building design in terms of form, image, function and symbolism. From an economic point of view, a key distinction is between those aspects of design that are captured in the price and rent of a building and those aspects that generate externalities. Broadly, while owners and users obtain utility from positive aesthetic perceptions and may thus exhibit higher willingness to pay, an iconic building may generate positive externalities in that neighbouring properties might command higher rents and prices due to the proximity to that building.


In another study, regress the original purchase price as dependent variable on relevant architectural characteristics collected by Smith through visual inspections of houses which were built between 1850 and 1873. It is thus clear that economic valuation of cultural heritage assets poses many complicated question of both methodological and applied nature. According to Nijkamp and others, the evaluation of architecture and architectural quality is another way in which several hedonic studies try to estimate cultural heritage effects.

These studies focus on different measurable aspects of architecture or architectural quality in a city. Gann, Salter and Whyte developed a multi-dimensional tool of analysis to understand building quality and design. Post-occupancy evaluation tools, quality indicators and sustainability assessment tools were used.

For a detailed review of indicators, see Amin and others.

In particular:
- PROBE (The Post-Occupancy Review of Buildings and their Engineering): post-occupancy evaluation tool that provides commissioning clients, design and build teams, and the building’s occupiers with...
useful snapshots of users’ views and an assessment of technical and energy performance of a building.

- Housing Quality Indicator: developed by UK central government, it is a tool for assessing the quality of housing projects, focusing on the links of the project to the local environment.

- BREEAM (Building Research Establishment Environmental Assessment Method), UK Ecopoints and SPeAR: both BREEAM and UK Ecopoints systems provide measures of energy use in construction.

An alternative tool is the SPeAR (Sustainable Project Appraisal Routine) developed by ARUP which provides a range of sustainability indicators to explore the total environment contribution of a project.

5.8 **Critics to the methods**

In all the method reviewed by Mason several issues arise when confronted with the definition of the parameters involved in the multi-criteria analysis and in the hedonic prices regressions. Appraising the intrinsic value of design objects is a fascinating yet difficult endeavour due to various elements. Accord-
ing to the Fuerst, McAllister and Murray the most important is the high degree of subjectivity involved in assessing the aesthetic quality of the objects and more in general there are significant problems in attempting to convey qualitative features in quantitative terms considering design a multi-dimensional concept.  

Measuring the intangible

The review of the measurement of intangible aspects of architecture has been analyzed from the examples from 60ies, starting with the joint studies of Harvard University and MIT, going through the Yale Cowles Foundation to the recent studies on the regional scale showing the multidimensionality of the concept of value, where the individual parameters are not univocal. The multidimensional methodology, while allowing the inclusion of not universal features, showed to be unable to clarify issues and benefits when referred to the cultural and social features translated in monetary terms.
intangible values
“Although thirty rays convey in the middle \ it’s the void in the middle that moves the cart \ vases are made of clay \ but is on their inner void \ that relies their function \ the house is punctured by doors and windows \ but it’s the void again \ that we live \ Thus \ is the being towards attitudes \ that the non-being implies”

Lao Tse
6.1 Brief history of measuring the intangible

The relations between architecture and communication processes have been central to urban studies for many years and the key theoretical questions in today’s world-cities debates can be traced back to the earliest urban systems theories. The research on the measurement of the values related to networks and design begins in the early 60s.

Stating with the late 60s the research focused on economic features of design and planning, quantifying the values of social, communicational and tangible relations. The research focused on territorial and regional features. The researches of Lowdon Wingo Junior focus on the relationship between urban development and transportation with the regression of psychological, morphological and historical variables that might affect on the economic model. The research started with the Rotterdam School of Economics in the 60s giving the theoretical basis for the research program developed by the Balanced International Growth of the Economic Institute and the Cowles Foundation for Research in Economics of the University of Yale.

The Pittsburg model proposed by Ira Lowry

1. Lowdon Wingo Jr, Transportation and urban land, resources for the future, Washington DC, 1960
formulate a behavioural model\textsuperscript{2} where rules are set to understand quantitatively the associative life and define behavioural rules. These rules allow the elaboration descriptive, predictive and planning models. According with these model urban devices are planned in order to systematize a priori the activities generated by the associative life. The statistical analysis of the basic life situation enables the expression of formulas and mathematics functions able to translate these data into spacial solutions.

Communication theory is explicitly used in the fluxes model developed by Richard Meier in the Harvard and MIT Joint Research program\textsuperscript{3}. Developing the theories of J.R. Pierce\textsuperscript{4} under the design point of view the city becomes a system of interactions (Information fluxes) determined by the human need to keep in touch with his similar.

Similar studies are developed at the same time at the Cornell University as Gaming simulation. According to Carlo Santi\textsuperscript{5} these models propose an use of the management tools to understand and design the city. Interpreting the city as actor that produces goods and services allows to analyses and develop marketing strategies applied to the design object. Cities products as infrastructures, urbanization, instruction, informa-

\begin{enumerate}
\item Ira S. Lowry, A short course in model design, Journal of the A.I.P., Maggio 1965, vol XXI
\item Richard Meier, A communication theory of urban growth, MIT press, Cambridge, 1962
\item J.R. Pierce, Teoria dell'informazione, Mondadori, Milano, 1962
\item Carlo Santi, L'uso dei modelli matematici nel campo degli studi urbani, Tamburini editore, Milano, 1987
\end{enumerate}
tion and health are seen under the lens of production growth and higher wellness.

In the Italian panorama the studies on the city as fluxes phenomenon allowed the analysis of the regional uneven economic development\(^6\) giving answers and interpretative tools to the dualism of the development of the country in the post war period\(^7\).

### 6.2 Measuring design value creation

Nowadays appraisal is undertaken on the basis of qualitative/quantitative assessments and statistical/expert opinion.

While experts typically agree on what is valuable and what is a priority, there is a strong case for broadening the basis for such judgements to include the wider population in decision-making about architecture.

Architectural assets are economic goods. The term ‘economic good’ applies to anything that generates flows of human well-being, for anyone and for whatever reason. The general presumption is that those flows are positive. Economic goods may or may not have market prices. Even if they do, for example

---


---
through visitors paying entrance charges to visit a architectural asset, that market price may be a poor indicator of the economic value of the asset⁸.

Architectural assets can own use and non-use values. If the building is a landmark asset that confers prestige and attraction on the surrounding area, then the properties in that area might derive an amenity benefit from the site and this might show up in the value of their property. The element of the price of the property that is due to the quality reflects individuals will to pay to locate in that area because of the architecture. This element is elicited in practical studies using the hedonic (property) price method. Hedonic price analyses the property market to estimate the premium fetched by properties which are in clean and environments and are nearer to desirable features. For a comprehensive account of the HP method see Hidano⁹.

There is one other major category of economic value that needs to be considered. Apart from residents and visitors, the general public of the region or nation, or even the international community, may be willing to pay, regardless of the fact that they may not visit it or be near it. This form of value is known as non-use value. It can be substantial and may outweigh

---

⁸ Economics for the Environment Consultancy (EFTEC), Valuation of the Historic Environment, The scope for using results of valuation studies in the appraisal and assessment of heritage-related projects and programmes, Final Report, English Heritage, the Heritage Lottery Fund, the Department for Culture, Media and Sport and the Department for Transport, 2005

use value, especially where goods are unique\textsuperscript{10}.

What matters is that people may be willing to pay to have this building despite having no use value for it. These techniques function through the use of questionnaires. In one form of stated preference technique, contingent valuation, individuals are asked directly what they are willing to pay for the good, or what they are willing to pay for some change in the level of provision of the good. A huge literature has grown up regarding the reliability of the contingent valuation method – for an extensive discussion see Bateman et al.\textsuperscript{11}

Thus the notion of economic value has a very precise meaning and moreover that it is an anthropocentric notion. It relates to human well-being and changes in that well-being are revealed by people’s preferences.

In common with utilitarian philosophy, the notions of costs and benefits and asset values introduced previously relate to the these individual economic values. It is assumed therefore that it makes sense to add the value of an asset which individuals prefer to get some aggregate which defines the value of the asset. Also, an individual’s well-being is assumed to be measurable through notion of willingness to pay\textsuperscript{12}. These assumptions about social value being the sum of individuals’
values, and about measuring well-being refer to the extensive historical literature that can be found in Just.\footnote{13}{Just, R., Hueth, D and Schmitz, A., The Welfare Economics of Public Policy: A Practical Approach to Project and Policy Evaluation. Edward Elgar, Cheltenham, UK, 2004}

One reason for thinking that an architectural asset can deserve a different, ‘non-standard’ treatment is that it embodies other notions of value besides economic value. For example, this is the view taken by Throsby\footnote{14}{David Throsby, Economics and Culture, Cambridge University Press, UK, 2001} who argues that cultural assets, of which architectural assets are a subset, generate both economic value and cultural value. “[a project] does not involve a piece of ordinary economic capital for which an assessment of economic costs and benefits could be regarded as a sufficient appraisal. It is concerned with an item of cultural capital yielding both economic and cultural value. Thus an evaluation of net benefit streams in both economic and cultural terms will be required”

According to Throsby, then, financial and economic appraisal are necessary but not sufficient to measure the value of cultural assets. According to Eftek valuing cultural (and so architectural) assets might be classified in three approaches\footnote{15}{Economics for the Environment Consultancy (EFTEC), Valuation of the Historic Environment, The scope for using results of valuation studies in the appraisal and assessment of heritage-related projects and programmes, Final Report, English Heritage, the Heritage Lottery Fund, the Department for Culture, Media and Sport and the Department for Transport, 2005}:

(a) determining cultural value and ignoring economic value;
(b) determining economic value and ignoring cul-
cultural value; and

c) Throsby’s approach in which an effort is made to determine both economic and cultural values.

6.3 Cultural values

Throsby\textsuperscript{16} defines cultural value as a multiple set of attributes: aesthetic value, spiritual value, social (sense of identity and space), historical value, symbolic value and authenticity value. The understanding of these values is bind to the level of information necessary for people to express a valid preference. The definition of the information level when information provision is not costless becomes arguable\textsuperscript{17}. All decisions have costs and hence all decisions to incur that cost imply that benefits exceed costs. Economic valuation is always implicit or explicit, it cannot not exist at all. Stated preference and revealed preference techniques, which are grounded in the principles of economic theory and its perspective of ‘value’, may be used to estimate the monetary value of non-market goods.

The ‘standard’ economic approach would consider economic values and reject notions of cultural

\textsuperscript{16} David Throsby, Economics and Culture, Cambridge University Press, UK, 2001

\textsuperscript{17} Economics for the Environment Consultancy (EFTEC), Valuation of the Historic Environment, The scope for using results of valuation studies in the appraisal and assessment of heritage-related projects and programmes, Final Report, English Heritage, the Heritage Lottery Fund, the Department for Culture, Media and Sport and the Department for Transport, 2005
value that are different to economic value. The standard approach argues that all of Throsby’s cultural values are determinants of economic value, rather than values in themselves, they are motives value\textsuperscript{18}.

A possible approach supplements a conventional cost-benefits analysis by the expert assessment of the aesthetic and other values assigning weights (measures of relative) for the different values doing a “multi-attribute analysis” or “multi-criteria analysis”. The credibility of this approach depends on who assigns the scores and weights, time is treated and how the multi-criteria analysis and the cost-benefit analysis are combined\textsuperscript{19}.

6.4 Measuring the intangible: appraisal of the symbolic value

Architecture beyond the “merely functional” would seem to have no strictly financial value. According to McGoun the problem is quite simple in finance and economics terms: a cost incurred in a competitive environment for which there is no apparent benefit. There are five possible ways that finance theory might


\textbf{19.} Economics for the Environment Consultancy (EFTEC), Valuation of the Historic Environment, The scope for using results of valuation studies in the appraisal and assessment of heritage-related projects and programmes, Final Report, English Heritage, the Heritage Lottery Fund, the Department for Culture, Media and Sport and the Department for Transport, 2005
explain the phenomenon: (1) the cost is insignificant; (2) there is a conflict between owners and managers; (3) the architectures are signals; (4) the architectures restrict the use of assets; and (5) the architectures market the object to its users/customers. Most of the answers do not apply to the majority of the cases unless the symbolic and identity value can pay off and be measurable.

Zukin\textsuperscript{20}, studying the representational aspects, recognizes a bilateral relationship between visual artefacts, including architectural and urban design schemes, and social structure. Stretching Zukin’s thesis, it can be argued that avant-garde design schemes, often combined with large-scale interventions, are exactly through their innovative character as juxtaposed with either existing local morphologies of urban space or established local and/or international design trends – able to create strong images and, thereby, establish a strong place identity for the city as a whole and create new space for public culture.

An “advocacy” literature\textsuperscript{21} supporting ideological beliefs in the cultural need for design with economic analyses and rationales exists. Economic and cultural notions of value are involved because design trades on, and generates, both kinds of value. The value


of design can not be expressed and analysed only in quantitative terms. Qualitative expressions of the value of design often are dismissed because they are not susceptible to standard economic (mathematically driven) methods of analysis. But these cultural values (resisting easy quantification and mathematical treatment) are essential to the nature of architecture and there must somehow remain part of the discourse on decision-making and other economic discourses on design. In other words, applying standard quantitative, market-derived measures will not suffice a priori to express the full value of architecture as cultural expression and public good.22

Architecture and design value holds a wider number of dimensions that are not easily identifiable within a traditional industrial context. The architect cannot create design without incurring definitive cost which has an associated value.23 The term 'value' in an architectural context is sometimes referred to build quality embracing all the aspects by which a building is judged such as uniqueness, functionality or durability. It involves a relative and balanced consideration of tangible and intangible costs and benefits and a willingness to give up in order to gain.24

According to Lundequist the concept of quality


seems to have developed into a functional\technical matter whereas architecture and its qualities, as a cultural product, reach much further. Besides functional\technical issues architectural quality also embrace aesthetic and ethical aspects, - “how shall one live to live in a right way”\(^{25}\). As such the concept of architectural quality concern fundamental human existence (needs and aspirations) and its core values can be said to have existed unchanged\(^{26}\).

In the 1960s De Bruijn distinguished four different conceptual layers able to widen the concept of value in Architecture\(^{27}\):

- **Protective**: protection of people and property against harmful influences and dangers;
- **Domain or territorial**: defining a place of one’s own, in terms of privacy, safety and security;
- **Social**: creating spaces and places in which people can carry on their activities optimally referring not only to health and welfare but also to communication and groups quality of life.
- **Cultural**: form, identity and character of the spatial environment involving aesthetic, symbolic and environmental factors.

The architecture critics Hillier and Leaman also distinguish four main fields, but divide them up dif-
ferently:

- Spatial organization of activities: providing optimum support for the activities desired by properly arranging the available space
- Climate regulation: providing an interior climate for the user, his activities and his property, creating a protective ‘filter’, separating environment.
- Symbolism: a material embodiment of specific ideas and expectations not just of its designer but also of the client and the users. This makes it a cultural object, an object with social and symbolic significance and meaning.
- Economic function: architecture requires investment and gives added value to raw materials.

According to Sebastian the value, performance, and quality measure approach asserts that the most important mission of design is to produce objects that are able to meet the aesthetic and functional expectations in use, as well as the economical and technical requirements in production.

In 1991/92 DEGW and IT consultants Technibank undertook a major research project to assess the status of intelligent buildings in Europe. The project, Intelligent Buildings in Europe (IBE) led to defining four types of buildings that responded to differing

---


requirements

– Use value building; custom designed for the owner-occupier, maximizes the use value for the end user organization.

– Exchange value buildings, developed speculatively, and designed to maximize the building exchange value as a commodity to be traded.

– Image value building is designed to maximize the image value of the building often at the expense of efficiency or other qualities.

– Business value building is where use, exchange and image are synthesized into a building where technology is fully exploited to maximize the range of options for the end user.

According to Gann, Salter and Whyte design quality is hard to quantify as it consists of both objective and subjective components. Whilst some indicators of design can be measured objectively, others result in intangible assets, depending in part on the subjective views, experiences and preferences of the people asked. This only partially faces the issues related on measuring value. The activity of architectural design is a complex phenomenon. Many aspects can be distinguished: the process of designing is a cognitive proc-

ess in the sense that the architect is problem-solving, creating, learning, exploring, etc.; architectural design is a social process in the sense that the architect has contact with many design participants in a variety of relationships; it is a cultural and technical phenomenon situated in a specific cultural context; and it is a process of dealing with uncertainty and establishing useful artefacts.

It is the designer’s task to integrate and co-ordinate design constraints and to find a way to convert constraints into positive elements\(^{33}\), as designers need to balance qualitative and quantitative criteria in their decision-making processes.

From the other, more engineering, perspective, design is a process that transforms client requirements (input) into design objects (output). It is a process where values for the customers are created through the fulfilment of their requirements. It is also a flow of information, which has to be controlled and distributed effectively in time and space in order to eliminate waste or inefficiencies\(^{34}\).

All these processes have to be managed. Design is always a blend of different views. Designers and managers use different kinds of knowledge and experiences and managers perform different roles. It is the

---


intersection of different 'worlds' and speaks different “languages”\textsuperscript{35}.

According to Worpole the contribution that good architecture and design can make to:

1 the wider economic impact of attractive buildings and settings;
2 achieving greater value for money through technical and intellectual expertise;
3 enhanced individual and social well-being, and therefore quality of life;
4 greater adaptability, energy-efficiency, and environmental sustainability\textsuperscript{36}.

A more contemporary example of the marketing value of signature architects is from the urban regeneration literature. In this area there is growing interest in design-led urban renaissance driven in part by commissioning high profile architects to create flagship buildings\textsuperscript{37}.

According to Hargreaves McIntyre buildings with aesthetic appeal and a high-quality of design, which allow for exterior views, fresh air, sunlight, spaciousness, tailor-made design, layout which encourages interaction, use of colour and visual art:

- Increase property and land values; are important in business location decisions; increase rental income

\textsuperscript{35} Leentje Volker and Matthijs Prins, Exploring the Possibilities of Correlating Management with Value in Architectural Design, Journal of Environmental Planning and Management, Vol. 37, No. 3.


and improve the marketability of property.

- Can help staff recruitment; provide inspiration and stimulation; heighten staff morale and satisfaction; improve effectiveness; reduce absenteeism; aid staff retention.
- Enhance pupil and student motivation; reduce absenteeism and improve academic performance.
- Contribute to improved patient recovery rates in hospitals.
- Can provide less harmful environments for people to live, work and learn in by reducing exposure to harmful pollutants.

According to Hargreaves McIntyre visionary buildings, those with character or a “wow” factor create jobs; are important in business location decisions; help recruit and retain staff and increase land or property prices in surrounding areas. As much as the definition of insight given on the phenomenological level, it is “characterized by suddenness and obviousness. You may not be sure how you came up with the answer, but are relatively confident that it is correct without having to mentally check it.”

Brands have become an increasingly pervasive part of the imagery used daily in our mediated culture and design itself can be used as a branding strategy.

Allinson\textsuperscript{42} recognizes that the strategy of an architectural practice can create added value and distinguish the firm from others. He tries to encourage architects to focus on planning, monitoring, analysis and control as well as on team management and human resource management. Combining design and management will lead to better service delivery, both in design and in organizational culture\textsuperscript{43}.

The “Flagship Effect” can be considered the most widely known example of how architectural projects can be “designed” to have a clear economic impact on the towns and cities in which they are located.

The most well known recent example has been Frank Gehry’s spectacular design for the Guggenheim Museum in Bilbao, Spain, regenerating a run down part of a failing industrial riverside site, and already attracting some 3 million visitors a year\textsuperscript{44}. The spending power of these visitors not only supports the running of the museum but has helped revive the economy of the city as a whole. There is no doubt that people are coming to see the building as much as the artefacts it contains. It also proves, in the words of the architectural critic, Katherine Shonfield, that: “Architecture can break spells. Gehry’s museum and Foster’s underground have transformed Bilbao from a terrorised

\textsuperscript{42} Kenneth Allinson, Getting there by design: an architect’s guide to design and project management, Architectural Press, 1997

\textsuperscript{43} Leentje Volker and Matthijs Prins, Exploring the Possibilities of Correlating Management with Value in Architectural Design, Journal of Environmental Planning and Management, Vol. 37, No. 3.

city to a site of life and construction.”

On a different level, the architecture of the Tate Gallery at St Ives, designed by Eldred Evans and David Shalev and opened on 23 June 1993, has also exhibited a similar effect on the local economy. Within 2 years of opening, people who’s primary reason for visiting St Ives was to visit the Tate Gallery were contributing €16 million to the local economy. While generating tourist economies was not necessarily the declared main aim of the architects involved, nonetheless all parties have been confirmed that successfully articulated and functional buildings, are themselves visitor attractions in their own right. The Architectural Brief for the Tate Gallery at St Ives, was explicit about this from the start: ‘Apart from the obvious attraction of the exhibits, the Gallery should attract visitors in its own right in the way that the Pompidou Centre and the Lloyd’s Building do…the building should be stimulating, imaginative and excellent.”

The reference to the Pompidou Centre is interesting, for it was the design of the Pompidou Centre by Renzo Piano and Richard Rogers, opened in 1977, that provided a model as to how radical or provocative architecture could excite public interest and affection, as well as solving the conventional problems associ-
ated with housing artworks and managing visitor numbers efficiently and effectively.

The radical idea of the Pompidou Centre (now more usually called ‘the Beaubourg’) was to allow over half of the designated site to be used as public space – achieved by building upwards. The piazza has become one of the most dynamic meeting places in the city, indeed a focal point of the city of Paris. Putting the escalators and elevators on the outside of the building, in transparent shafts, also allowed all visitors access to some of the most stunning views of Paris as an added surplus. The original brief for the center anticipated some 5,000 visitors a day; today it often has in excess of 25,000. The Pompidou Centre revived the fortunes of the district in which it was located in a matter of months.

A similar story can be seen as a result of the success of James Stirling’s design for the Stuttgart Staatsgalerie, which opened in March 1984 to great acclaim. In the first seven months it had nearly a million visitors, and the gallery moved from 56th to 2nd place in the league table of attendance figures for German museums. 46

Anyhow, according to Loe, neither good design nor the “flagship” project can in themselves guarantee

market success. Good design in itself does not guarantee sustainability within an urban context unless over time, adaptability is inherent within the design, and matched in the surrounding environmental and social fabric.\textsuperscript{47} It is interesting then to understand when the economic success of architecture overcome any other paradigm.

Architecture in (Cultural Economics) perspective

The evaluation of architecture under the Cultural Economics perspective refers to the values implied. Values that define a common ground of understanding between the stakeholder and their ambitions and allow us to function in a community. Design can thus be seen as a form of currency that we exchange for social acceptance, to create social networks, a shared construction of identity, a co-creation of value where everyone is involved in its creation, critics and experts together with users and everyone who is interested in it.
the cultural economics perspective
The previous findings required a new framing able to consider the cultural, social, societal and personal features in different terms. Within the traditional framing design has a monetary value based on the price of the land it sits on, the size of the building, its age and other standardized unit of measurements but within a wider perspective its economic value impacts us very little and is not a major consideration to define its value. While accounting and financial aspects of architecture's value are well studied, benefits are unclear when it refers to the cultural and social features. There are, of course, many cultural values of art: aesthetic value, decorative value, spiritual value, social identity value, historical value, symbolic value, authenticity value, and so on.\(^1\)

Let's consider use values and non-use values.

Use value is the value that accrues to individuals, households, or firms through the direct consumption of design/architectural services. It may be experienced in different ways, for example through the ownership of a building, or through the enjoyment of the services it provides like living in a design house or working in a design building; such values are reflected in market processes, and can be observed, for example, in the actual or imputed rental value of heritage buildings

---

used as dwellings or commercial premises.

Direct use value of design also accrues to tourists visiting sites; in this case the relevant value can be measured by entrance fees, or, if appropriate data are available, by consumer surpluses estimated using methods such as travel cost analysis. In assessing the direct use value specifically attributable to the heritage qualities of, say, a historic building used for commercial purposes, it should be remembered that these value per se is actually a marginal value: the building would presumably have some rental value as commercial space in the absence of any design quality, and the question to be asked is whether the rent is higher or lower as a result of its heritage characteristics. The rental value of such buildings might be higher if people prefer to live in design houses or work in a design building, or it might be lower if, for example, the building were inconvenient because of its antiquated design or facilities. On the whole, the market seems to suggest that these sorts of direct use values are positive. This is not surprising since in general design properties are demanded by people who do value these services and so are prepared to bid up the purchase or rental prices of such properties.

The second aspect of individual valuation is the
non-use or passive use values which are experienced by individuals but are not reflected in market processes since they are derived from those attributes that are classifiable as non-rival and non-excludable public goods.

Apart from residents and visitors, the general public of the region or nation, or even the international community, may be willing to pay something towards the creation of the asset, regardless of the fact that they may not visit it or be near it.

In these cases the non-use value can be substantial and may outweigh the use value, especially where goods are unique. This willingness to pay arises from all kinds of motives. What matters is that people may be willing to pay to have design assets despite having no use value for it: existence value gets created when individuals value design simply because it exists; altruistic value derived from the knowledge that others may enjoy the asset whilst bequest value derived from the desire to create something for future generations. The non-use value can typically only be valued in economic terms using stated preference.

According to Van der Ploeg, economists try to be value free and treat value as a subjective concept: the amount people are willing to pay for it, which is not
necessarily the same as what they actually pay for it\textsuperscript{2}.

According to Scott, one of the more dramatic features of modern economy is the way in which the goods and services that it produces are increasingly infused with aesthetic and semiotic content\textsuperscript{3}.

The value assessment of a design choice has meant to measure and to quantify different items. The evaluation of design goes thought the analysis of the role of quantitative aspects and cultural aspects. Not only in terms of linear/square/cubic meters, time, opportunity cost\textbackslash benefits but also in terms of aesthetic, decorative, spiritual, social, identity, historical, symbolic, authenticity costs and benefits.

Reflecting on the ethics of economic valuation, Anderson\textsuperscript{4} concludes that we don’t respond to what we value merely with desire or pleasure, but with love, admiration, honor, respect, affection and awe as well. This allows us to see how goods can be plural, how they can differ in kind or quality: they differ not only in how much we should value them, but in how we should value them. To do this, we must govern our conduct by shared norms established in dialogue with others, norms that are constitutive of different spheres and roles of social life. This socially grounded view of value and rationality, in turn, provides the key to

\textsuperscript{2} Rick van der Ploeg, In Art We Trust, 150th anniversary conference of De Economist on Culture, Ethics and Economics, 8 February 2002, Amsterdam
understanding the ethical limitations of markets\textsuperscript{5}.

Cultural goods and services provided by cultural suppliers have distinct characteristics compared to other economic goods. They are mostly attributed as experience goods so different and interdisciplinary approaches need to be applied for coherent analysis\textsuperscript{6}.

A distinction therefore exists between the traditional economic field, where objects have instrumental value, and the cultural field where objects have symbolic value. Collectively, we can assess a cultural good such as a church or a museum and agree on its monetary value based on the price of the land it sits on, the size of the building, its age and other standardized unit of measurements. In the grand scheme of things, however, their economic value impacts us very little and is not a major consideration when we think of these buildings. It is the emotional value that we respond to. A site or a building may be important to some residents because they may have been married there or simply because these places have become familiar, and thus valued, only by dint of being part of an urban landscape for a long time.

According to Thorosby\textsuperscript{7} the market value does not capture the value of culture\textsuperscript{8}. Assessing the value of a cultural good is therefore complex, so we should not

\textsuperscript{5} Bernard Momer, Our city, Ourselves, A cultural landscape assessment of Kelowna, British Columbia, Research project, the University of British Columbia Okanagan, 2011


\textsuperscript{8} Like institutionalist scholars like John Kenneth Galbraith
limit ourselves to a single valuation method such as price, which is set by the market. Assessing a value not only implies the comparison in monetary terms between an identified element with a different one but it also implies an outlook to the future perspectives on what it's values will be when it will be realized. It measures an hypothetical instantaneous value that cannot be realized until\unless it is potentially realized. It implicitly defines the criteria used to define the value and the choice of possible criteria that will contribute to add\reduce its values. The outcome of an evaluation is therefore not only a definition of a quantity (or a price) but more deeply an evaluation of priorities; a vision of a shared construction of consensus.

In other words the action of measuring has to be able to explain and define the measured object as much as the measuring subject, its values, its priorities and its outlook. Values, priorities and perspectives that can be deeply bound to the times and spaces where the measuring subject/s is. Back to idea of comparing different item this defines several conceptual layers, some of them independent to the coordinates system, other strictly related to it.
7.1 Focussing on values

Standard economic theory focuses on the logic of choice. The basic assumption is that preferences are given. This leaves us free to concentrate on the constraints under which people make their choices, given their preferences. All economic analysis is about the effects of changes in the constraints. Rationality here means choosing the optimal option given the preferences and constraints. Shifting the attention away from the moment of choice to the evaluation of the values inherent in economic behavior would direct our thinking to people actively valuating the things and events of the world as they present themselves to them. Such an activity is fundamentally social and cultural.\footnote{The Value of Culture, A Dialogue between Barend van Heusden and Arjo Klamer in Arjo Klamer (ed.), the value of culture, Amsterdam University Press, Amsterdam, 1996}

To understand the role of value related to cultural asset an example can be useful. Let take for instance a painting: it can have value as an (aesthetic) experience, as a historical document, or as a psychological experiment. These are values in terms of the functions of the painting. Value can also be in the compositions or components as in the colors, dimensions, light-intensity of the painting. That is value in terms of formal relations. It can also be understood as the value
of the pieces in a chess game which they owe to their assigned moves. And then there is economic financial value, as presented previously.\textsuperscript{10}

Under the cultural economic perspective the values that architecture presents beyond the mere accounting are understandable and describable. The building stands for something beyond the function it accommodates and its design refers to the stakeholders involved in it including financial features, function, and role.

The cultural economic perspective provided the tools able to identify a strategy in value’s measurement. Under the cultural economic framing\textsuperscript{11} preferences are assumed as given\textsuperscript{12}, shifting the attention on the constraints under which people make their choices. Thus the focus shifts away from the moment of choice to the evaluation of the values implied in the choice.

The design choice convey a meaning (is it a critique to the economic system, a faithful description of the economic relations involved, an internal debate or a snapshot of the current advancement of technology) it communicate the values of the stakeholders involved, it can force the changes, being an active agent in the change of the cultural perception or a tool of the power to shape the world\textsuperscript{13}.

\textsuperscript{10} The Value of Culture, A Dialogue between Barend van Heusden and Arjo Klamer in Arjo Klamer (ed.), The Value of Culture, Amsterdam University Press, Amsterdam, 1996

\textsuperscript{11} Framing, is intended here as a rhetoric construction of a process of selective influence over the perception of the meanings in such a way as to encourage a certain interpretation.

\textsuperscript{12} Arjo Klamer (ed.), The Value of Culture. On the relationship between economics and arts, Amsterdam University Press, Amsterdam, 1996

\textsuperscript{13} Deyan Sudjic, The Edifice Complex: How the Rich and Powerful Shape the World. Published by Penguin, 2006
According to Arjo Klamer the term value can refer to value in a social, cultural, anthropological, ethnographic and monetary sense: hold on to culture as ‘the arts’ and the investigation turns to the other values that the arts can have apart from the economic ones. Something like a monument may evoke the value of national pride and identity, a Mondrian stands for the value of Dutchness and the Elgin Marbles for that of ancient Greece. Apart from such social values, they can have aesthetic, sacred and spiritual values. This line of inquiry may lead to an exploration of the phenomenon of value and its many manifestations. It may be anthropological, studying how values operate in particular settings, ethnographic, studying how artists, gallery owners, museum directors and actors understand their values and are guided by them in their actions, and conceptual, studying the various meanings of values, their mutual relations and so.  

The definition of the concept of value as given by Arjo Klamer shows the relationship between cultural assets and market value: “value” itself can refer to “economic value” investigating the return of investment in goods, the economics of (cultural) assets, the elasticity of the demand for (cultural) goods, the economic impact of government subsidies and so on. 

But it can also include value in a social and cultural sense.\textsuperscript{15}

7.2 Stakeholders, targets, values and design.

Different values may be involved at the same time and different stakeholder can attach different value to what they evaluate. Values that can be quantified but where the price cannot be but a signal of the full picture presented by the notion of value. The understanding of the concept of value implies the understanding of the different stakeholders perceptions. Perception that differs according to the (temporary and variable) goals and targets they want to achieve and their (sometimes hidden) agenda. The different qualities that stakeholders may find important can change according the goal of their process: richness, simplicity, decoration, avant-guardism, modernism, cheapness, classicism have been used to covey economical, political, idealogical and social (sometimes contradictory) messages.

Architects are not neutral into this play nor is their design. Design interacts with the perception of these values and goals. The project may aim to support them, to change, to criticize or to deny them.

\textsuperscript{15} Arjo Klamer, Speaking of Economics. How to get in the conversation, Routledge, NYC, 2007
Architecture may aim to impact on the people inhabiting the places (inspire them, their life, their sense of community, how they live or work there), may care about the cultural features, about the societal values (concerning what the design adds to the environment, the city, the context, the community), the political effects of the design, the social impact (and the people immediately involved), the relationship with the existing/new technologies, may want to sell well, optimize the return on investments, convey or criticize an ideology, but also achieve the architects' personal values, like showing design skills, inventiveness, feed the archi-star ego, getting the public's attention being published, obtaining an assignment with optimal return to investments, satisfying the private-public relationship, achieving a compromise between social issues and private yield. Different schools of architecture may rely and refer to different approaches to different values focussing more on tangible or intangible features.

The focus can be the mediation between the value of the different stakeholder involved or shifted towards clients, visitors, architectural debate, language, inventiveness, functionality, manageableness, costs and so on.
Not all of the targets have the same importance nor they can always be completely fulfilled or explicitly presented. What you see is never the full picture. Some values can be negotiable while other are absolute. Their realization may rely on numbers or on different judges (experts, critics, users, …).

The awareness of the possible values, the possibility to grasp all of them and the dynamics under which they are realized is crucial to understand the way architecture's impacts into reality.

7.3 Design as cultural capital

The notion of cultural capital was introduced by the sociologist Pierre Bourdieu\textsuperscript{16} to describe the knowledge, or the internalized code that allows us to decipher cultural relations and cultural artefacts and therefore conferring value to such things as education, art, music or beauty. Jane Jacobs in “The Death and Life of Great American Cities” uses it to refer to the interpersonal relationships necessary to guarantee the functioning of complex and highly organized societies.

The relationships between individuals that accrue

\textsuperscript{16} Pierre Bourdieu, Jean Claude Passeron, Reproduction in Education, Society and Culture, Sage, Londra, 1970
over time and space form the basis for social capital. Putnam\textsuperscript{17} defines it as the degree to which a community or society collaborates and cooperates – through such mechanisms as networks, shared trust, norms and values – to achieve mutual benefits. Gould\textsuperscript{18} states that when a community comes together to share a cultural life, through celebration, rites and inter-cultural dialogue, it is enhancing its relationships, partnerships and networks – in other words, developing social capital. Conversely, when a community’s heritage, culture and values are overlooked, social capital is eroded, since it is often within these roots that the inspiration for people to act together for a common purpose can be found.

Sociologist Hesmondhalgh\textsuperscript{19}, defines culture as "the signifying system" through which a social order is communicated, reproduced, experienced and explored. Thus cultural assets are directly involved in the production of social meaning in the form of texts and symbols.\textsuperscript{20}

Cultural capital can be described ad the totality of our accumulated knowledge, formal (education) and informal (gained through novels, music, hobbies, life experiences) that allows us to function in a community. A knowledge that allows us to hold conversa-

\textsuperscript{20} Ann Markusen, Gregory H. Wassall, Doug DeNatale, Randy Cohen, Defining the Cultural Economy: Industry and Occupational Approaches, November, 2006, North American Regional Science Council Meetings, Toronto,
tions about our favorite television show or the latest local performance of a band. Cultural capital can take the forms of tangible and intangible: tangible cultural capital assets such as buildings, structures, sites and locations endowed with cultural significance (commonly called “cultural heritage”) and artworks and artifacts existing as private goods, such as paintings, sculptures, and other objects. Intangible cultural capital, on the other hand, comprises the set of ideas, practices, beliefs, traditions and values which serve to identify and bind together a given group of people... together with the stock of artworks existing in the public domain as public goods, such as literature and music.\textsuperscript{21}

Thus, in broad terms something can be said to be of cultural value if it contributes to these shared elements of human experience. For example, a novel or a poem may express something of the human condition which readers recognize and relate to; a heritage building may embody something of the history or tradition that binds a community or a society together; a shared language provides the means by which cultural messages are represented and transmitted.\textsuperscript{22}

For Arjo Klamer, cultural capital is what lends us the ability to realize a meaningful life over and beyond
its mere economic dimensions. It derives that, under a cultural economic perspective, economic capital cannot be used to assess the importance of culture as it is a function of it, it has a value for what it allows us to achieve within the society in terms of acceptance, identity, inclusion\exclusiveness and so on. Many cultural goods offer a small elite the opportunity to distinguish themselves from the rest of the population - see Bourdieu\(^\text{23}\). In other words, some cultural goods have for some people snob appeal. As soon as the rest of the population starts appreciating these cultural products, the elite looses interest and moves on to other cultural products with snob appeal.

Social capital is therefore a benefit at both the individual and collective level. At the group level, it represents some aggregation of the resources (economic, cultural or political) valued by the members of a group interacting within a network or networks\(^\text{24}\). At the individual level, social capital provides a context within which one can benefit from the security of membership that will minimize potential risks associated with an enterprise. This membership can, via a feedback mechanism, become a benefit to the network as a whole. For example, a creative endeavor where one is encouraged and supported by other members


7. The Cultural Economics perspective 229
of a network, may not only result in a piece of art or a play that will benefit the author, but also to many that may transcend the network.25

In traditional economics we are accustomed to distinguishing between three principal forms of capital26. The first, physical capital, meaning the stock of real goods such as plant, machines, buildings, etc. which contribute to the production of further goods, has been known and discussed since the very beginning of economics27. More recently, a second type of capital, human capital, has been identified28, arising from the realization that the embodiment of skills and experience in people represented a capital stock that is every bit as important as physical capital in producing output in the economy. More recently still, following the increasing awareness of the effect of environmental problems on economic activity, economists have come to accept the phenomenon of natural capital, meaning the stock of renewable and nonrenewable resources provided by nature, and including the ecological processes governing their existence and use29.

The performing arts, together with the rationale for public intervention for the arts, have traditionally dominated economists’ approach to the arts and culture. Most of the books and articles published in

25. Bernard Momer, Our city, Ourselves, A cultural landscape assessment of Kelowna, British Columbia, Research project, the University of British Columbia Okanagan, 2011
the 1970’s and 1980’s focused on these issues, neglecting other topics such as the media industries which, as Mark Blaug\textsuperscript{30} observed, were also worthy of attention. Since its inception, the discipline has evolved to comprise the entire cultural spectrum: performing arts (opera, ballet, concerts, theatres), creative industries (editing, television, cinema, records), museums, art galleries, festivals, exhibitions, visual arts (painting, sculptures), and built cultural heritage. This list has even been enlarged and in a recent survey of the economics of the arts, Blaug\textsuperscript{31} welcomes the inclusion of taste and taste formation, demand and supply, the media industries, the art market, the economic history of the arts, labour markets for artists, non-profit arts organisations, and copyrights among the topics analysed within cultural economics.\textsuperscript{32}

Design can contribute to (1) cultural values (2) financial values (3) societal values (4) social values (personal and organizational). It contributes to communities to realize and define their own identity and perception of it, it impacts deeply on social environment changing uses and habits of the users, it attracts people defining new trends and can eventually shift the public discourse

\textsuperscript{30} Mark Blaug, The Methodology of Economics, or How Economists Explain, 1980, Cambridge University Press

\textsuperscript{31} Mark Blaug, No History of Ideas, Please, We’re Economists, Journal of Economic Perspectives, 15, 2001

\textsuperscript{32} For a critical overview of the present state of the economics of the arts, see David Throsby, Economics and Culture, 2001, Cambridge University Press
7.4 **Cultural currency**

Cultural capital can be thus seen as a form of currency that we exchange for social acceptance or in other words, to create social networks. Similarly, cultural capital can be accumulated at the community level in the forms of cultural assets developed, maintained and protected. Cultural capital generates cultural currency and enables its possessor to offer cultural currency.

Let us assume that cultural value can be measured according to a unit of account that plays a role comparable to a monetary scale in measuring economic value. Thus, an individual or group could assign a cultural valuation to a given item such as an artwork; such valuations would be expected to differ between individuals just as their economic valuations of any good (expressed as their demand price or willingness to pay) might differ. Although there may not be agreement between individuals on the cultural value of specific items, there may be sufficient consensus in particular cases to be able to speak of “society’s” cultural valuation of items of cultural significance for the purposes, for example, of ranking them according to a collective judgment.\(^\text{33}\)

Like any currency, the greater the accumulated cultural capital, the greater the potential for exchange. “Unlike economic capital though, cultural capital does not depreciate with use, but rather increases in value”\textsuperscript{34}

The design itself can be a social shared good whatever considering private or public properties in the sense that, quoting Arjo Klamer, “You can own a painting but you cannot own art” as much as “You can own a design, but you cannot own architecture”.

Architecture can be considered potentially as a social good as long as everyone is involved and can converse on it. But it can be considered a social / common good only as long as its valued is perceived by everyone. Otherwise it will be a shared good between some people, not all of them, according to the reference values considered.

As a social/common goods it can be shared between most of the people, but not everyone as long as people are excluded from it because of a lack of information or an imperfect diffusion of the information of a different adherence to the knowledge itself.

Architecture works as architecture only if people sees it as architecture, only if it is involved in the conversation on architecture. The conversation on architecture as different actors playing different roles

\textsuperscript{34} Arjo Klamer, Art as Economic Good, unpublished, 2004
with different weight. It is a shared construction of identity and consensus, a co-creation of value where everyone is involved in its creation, critics and experts together with users and everyone who is (even partially) involved in its rhetoric in a co-creation of value where everyone is involved in its conversation.

Quoting Van der Ploeg whatever the artistic products produced and consumed, the process of producing and consuming them can be seen not only as an individual artistic enterprise, but also as expressions of collective will which transcends that of the individual participants involved.\(^{35}\)
The voluntary prisoners of (the conversation on) architecture

The value of architecture gets realized only when the different stakeholders’ values are involved into the design. Their involvement contributes to promote the design into the architectural debate.

“Architecture is a conversation” is a metaphor that highlights the phenomenon that Architecture exists as Architecture only if takes part in the conversation on architecture, on the contemporary debate on the architectural dilemmas and its main themes involving stakeholders values.
the conversation on architecture
Eloquence without knowledge is hollow and empty; but knowledge without eloquence is mute and powerless, incapable of effects in men's lives.

Gianbattista Vico
8.1 **Conclusion:**
**interlaced conversations.**

The main question of this research is what is the value of architecture. The analysis of the case studies and the research on the stakeholders involved in architecture and their values and expectations led to the conclusion that the value of architecture can be realized under the cultural economics framing as the role that a design solution plays within the conversations.

Paraphrasing Arjo Klamer “architecture is a conversation” Architecture is a conversation is a metaphor and it highlights the phenomenon that Architecture exists as Architecture only if it takes part in the conversation, in the contemporary debate, in the architectural discourse and its main themes, involving stakeholders values.

But this is not enough. Architecture values gets realized when it plays a part in the different conversations in which the different stakeholder involved are part.

Architecture is not part of a single conversation but of the tangled interlace of various conversations. Architects are architects because they are in a conversation not only with other architects but with clients, politics, stakeholders and so on. As much as people

---

1. See chapter 2, 3 and 4
2. See chapter 5 and 6
3. See chapter 7
5. and not only as a mere construction
can play music or paint whatever they prefer, in order to qualify as artists and qualify their works as Art they need to be (somehow) within the artistic conversation. The architectural conversation is multifaceted and relies on different fields. Different conversations that contribute to the creation of the value of architecture: the conversation on design, on economy, on ethics, on aesthetics, on power, and so on.

Architecture gets realized in different conversations, and gets different qualities according to the different perspectives under which it becomes part of the debate. Each and every conversation relies on its own rules, sometimes irreconcilable, but all of them important to the value creation.

According to Jeep Lieshout, just like art, architecture does not need to be sold to have value. It can also acquire value when people write about it or when museums exhibit it. The problem is only to get that attention.\(^6\)

8.2 **The value of architecture within the conversations.**

The design choice conveys several meanings. It communicates, incorporates and co-creates the values of the different stakeholders involved in it. Different

---

\(^6\) Jeep Lieshout, The Value of Making Art: A Conversation with the Artists Ronald Glasbergen, Liesbeth Bik and jeep Lieshout in Arjo Klamer (ed.), the value of culture, Amsterdam University Press, Amsterdam, 1996
stakeholders give a different weight to a design solution according to their ideas and values. Each of the stakeholders is affected and at the same time contributes to the success of a design solution contributing to it, giving attention to it, talking about it, criticizing it, persuading people about it. A design becomes architecture only when it is discussed. The value of architecture gets realized only when the different stakeholders values are involved into the design.

The value of architecture can be imagined as an acrobat looking for balance between different conversations. It has to incorporate and give the right weight to the different expectations. It has to be able to keep on walking in order to keep it balanced while the conversations are changing and evolving. Understanding the targets of the various actors, individuals, institutions and companies involved in an architectural project, stakeholders and shareholders, the values attached to the different choices, their conversations, their weight and their contribution can help architects, planners, designers and politicians create successful projects and can help users make the right choice about them. Different interests are at stake, different metaphors and stories apply and different values rule. Various stories, topics and fields of research
interlace in the conversation of architecture. A variety of conversations going on at the same time, each of them changing and evolving over time. To keep the balance, the conversation has to be sustained with frequent new impulses.

Architects themselves are involved in a conversation that differs from the conversations non-architects are involved in. A conversation with its own rules and logic. A conversation generates something in common. A conversation to which we all contribute and in which we share our research, theories, design, concepts and stories.

8.3 The architectural conversation.

The contribution and the co-creation of a debate on architecture that lasts and evolves in time is what we consider the conversation on architecture. Students, academicians, journalists, practising professionals, politicians, investors, architecture clients and interested outsiders are the actor of the conversation on architecture. Not everyone who engages in the conversation of architecture has embrace the idea but the
involvement of them all contributes to promote the design into the architectural debate.

Examples from other fields can help understanding its features. Take theatre. A theatre company that stages Hamlet of Shakespeare contributes to the ongoing conversation about theatre in general and Shakespeare’s Hamlet in particular. Its play has no meaning in isolation and the company will take into account other readings of the play, especially if it wants to be recognized in the conversation. Visitors of the play also benefit from the conversation about Shakespeare and contribute to it as well by giving it their attention and helping to finance it. Or take the producers of funky music. There music will only have a play when there is a setting appreciating it. Just like architects actor and musicians derive status and respect from sharing the conversation about their art. The way most of these conversations work is that you have to make sacrifices, put in time, do the work, in order to be recognized.

Contributing and giving to the community is what Richard Sennett identifies as the most effective way of earning respect. And because the artistic community is especially designed that way, a serious competition takes place among artists.

7. Arjo Klamer, Art as a common good, paper presented at the bi-annual conference of the Association of Cultural Economics, Chicago, June 2004
Participants contribute to the conversation when they participate in it somehow. They “produce” the conversation jointly with other participants. “Consuming” the conversation, in the sense of drawing on, can also signify a production of, or contribution of the conversation. The conversation is owned by those who participate in it, but ownership does not imply economic rights. To participants the conversation is a good from which they benefit. Whenever a design solution becomes part of the conversation, it sets up as shared good and moreover it increases its value both in intangible and monetary terms as it will be shown.

The conversation on architecture revolves around people, groups and communities. Being in a conversation implies clustering, being involved with a certain group of people. It is a social activity. The hearth of it is to be in a conversation, and that means socializing, getting to know the right people, developing a network and so on. The community is the often international network of those who partake in his particular conversation, an “invisible network”. A community that shares a particular area of expertise where individuals support what they have in common with others. Being in a community, sharing values and disposi-
tions, implies that the individual architect has a great deal in common with fellow architects. Conversation stresses the cooperative, the sharing of ideas, the identification with others. At the same time, it points to the cause of difference, tension and conflict because the conversation is not necessary the conversation of the others. Conversation evokes the social aspects of doing science.

The actors of the conversation are in a conversation with others and their buildings, drawings, competition’s entries, research, articles and papers make sense only because of that conversation. Their target is to be part of the network by means of being noted by the important people in their field creating outstanding design, innovative concept or cutting edge research.

The architectural conversation revolves around a subject made of buildings, design solution, drawings, detailing, researches (both technical and theoretical), writing and reading books, articles, papers, press releases, and discussing about them during conferences and meetings, formal and informal conversations. It includes the research that leads to them and that they create and the flows of talk around it and the small talks and gossips that convey opinions on

---

what is relevant and who is involved in it. Measurement of intangible assets such as knowledge has been described as an invitation to dialogue.\footnote{Sveiby, K.E. (1997) The New Organizational Wealth: Managing and Measuring Knowledge-based Assets, Berrett Koehler, San Francisco.}

The foundations of the conversation are the shared literature, knowledge, communications in various forms as well as the company of people that do sharing. The conversation refers not only to architects designing, building and talking but also to their reading drawings, buildings, books and articles. Architects are in the conversation while reading articles and looking at projects even if they are not saying anything to anyone. Conversation takes place not only with people, but also with tradition and literature. Reading Vitruvio or Palladio enters into the conversation with their ideas. Ideas that need company to make sense and develop.

Being architects requires being involved in the conversation of architecture. When participants do not contribute, they risk losing status, respect and ultimately membership. To share an insight with others requires being part of the conversation. Interacting within the conversation and contributing to it is necessary in order to make others part of the idea, and give it a chance to become real. Seeking conversational commonalities is an attempt to find the expressions
for an idea to be heard. The conversation is open but it requires skills and knowledge to be entered.

8.4 The features of the architectural conversation.

The conversation is a source. The conversation as option value. It also have bequest value has our children can go back to the literature to see how current people made sense of the discipline. The conversation has its own social structure, culture, and way of evaluating arguments.

It has specific characteristics and its own requirements: the knowledge about architecture and its literature is shared, and has to be shared in order to be useful. The conversation has to relate to this body of knowledge being meaningful, interesting and relevant, offering an advancement of the discipline. It has to have internal consistency and coherence. Soundness or a reasonable argument that stands the test of criticism are required. For instance it can sustain the conversation by suggesting new research and further argument, offering new heuristics or solving a (theoretical) problem that stood in the way of progress, it can have consequences for other conversations.

The knowledge is alive and active only if it is sus-
tained in a conversation, the conversation is limited in the sense it is generated within a limited, but usually not very well defined, group of people. The conversation itself constrains what can be said and how it is said. Like any coherent conversation the architectural conversation requires legitimization and justification towards critics and sceptics. It is impossible to participate without mastering the pertinent techniques, knowing the arguments, being familiar with the relevant literature and knowing what the others are doing. Arguments are evaluated based not only on their measurable feature but on rhetoric, the social structure and cultural aspects. It implies a great deal of work, much of it relational. Partaking in a conversation requires understanding and judging all of these features.

Within the conversation itself, the focus is on the language (drawings, images and words) with which architects cast theories, propose rhetorical devices, reconstruct facts and promote their research. It has its own language, let’s say an archi-speak made of images and words. Conversation implies the combination of rhetoric (the art of speaking and producing images or drawings) with hermeneutics (the art of listening and reading). According to Jeep van Lieshout where eco-
nomics, policy, and the arts meet, language matters\textsuperscript{12}. The metaphors and narratives frame the thinking, designing and talking of architects.

According to Arjo Klamer topoi are the common places to go in discussions. There are lots of them and since they are, by definition, well known, they must be known to sustain in the conversation. They are shortcuts, things to say to move on\textsuperscript{13}. When talking about design driven by statistical model the topos to go is MvRdV data-scapes with no need to elaborate more.

Conversation constrains what we are able to say. There are criteria to meet and rules to comply with to be pertinent in the conversation. Most of the standards are implicit. Knowledge, a systematic approach and innovation are necessary but not sufficient. According to Arjo Klamer nebulous criteria like knowing the right names, solutions, design or books, choosing the right field and being interesting can matters more than the intellectual consistency. Once in a conversation its needed to recognize other people involved in the conversation\textsuperscript{14}.

A conversation is fluid and if it is bounded the boundaries tend to be fuzzy. A controversial solution may shift the borders of the discipline. Border scrimmage are an essential part of the conversation process.

\textsuperscript{12} Jeep Lieshout, The Value of Making Art: A Conversation with the Artists Ronald Glasbergen, Liesbeth Bik and jeep Lieshout in Arjo Klamer (ed.), the value of culture, Amsterdam University Press, Amsterdam, 1996

\textsuperscript{13} Arjo Klamer, Speaking of Economics. How to get in the conversation, Routledge, NYC, 2007

\textsuperscript{14} Arjo Klamer, Speaking of Economics. How to get in the conversation, Routledge, NYC, 2007
When people challenge the status quo they research, or try to change the topic, or even the entire conversation, they are trying to alter the border. Borders matter, even if they are not clearly marked and different conversations implies different boundaries.

Within the scientific and academic fields the conversations are particularly constrained because they are disciplined. The conversation takes place into Universities, offices, newspapers and other media, meeting with clients and many other places.

8.5 Attention, please.

As it has already been mentioned architecture like art does not need to be sold to have value. It can acquire value when people write about it or when museums exhibit it. The problem is only to get that attention.

According to Roemer van Toorn, Benjamin already speaks about the fact that criticism must change and the model for this change is the advertisement or, simply, anything that creates a “perceived contact with things”. Like advertising, or in other words the space of the street, this new approach beyond critique must

touch and fascinate readers: because they are touched by it, blown away by it, or simply “warmed by the subject”, people desire it. In a more theoretical sense, Benjamin tells us that the new approach, like advertising, should affect the reader with visceral projections of “fragmented” intensity, which circumvent any form of contemplation. This intensity is something like a “burst of energy”, which affects the very life of the subject. 

Attention is what really matters. Ideas have attention only if they are in the conversation. Conversations are thus attention spaces. The ideas dies out when people stop talking about it. It has left the conversation’s attention space. Without attention architecture do not exist as architecture. Attention is the lifeline, the conditio sine qua non for existence. Attention is the main input in knowledge production and attention income is the factor that motivates the architectural research the most. Attention is the choice between the available informations.

Every architect is looking for attention and reciprocates that attention to other architects whom he believes are interesting. When attention is paid to Peter Eisenman’s book on Terragni its existence is re-affirmed. When a book is written about it, more hap-

---

The Conversation on Architecture

The giving and receiving of the attention is the mechanism by which the conversation lives and grows.

The actual attention space is finite and attention is not distributed evenly between architects: most of the attention is directed to a few people in the field, the superstars. Resources are scarce and the space for attention is limited. A field cannot accommodate all possible conversations. Some will be deemed more critical, more prestigious or more interesting than others. The distribution of attention is highly skewed. In the attention game the winner takes virtually all. A few people get a great deal of attention and most get hardly any attention at all. The hourglass metaphor illustrate the attention dynamics. All the architects grouped on top are in the enormous and ever busy space of “attention seek”; those below are in the equally enormous space of “attention-give”. The actual attention exchange is limited to the width of the funnel. Those who make it through the funnel are rewarded with exposure to a whole attention-give space. A winner takes it all scenario.

8.6 **Conversations and Archi-stars.**

Stars emerge when there are lots of people who want to pay attention and they in turn inflate that attention by sharing it with others in conversations. Stars, therefore, are phenomena of larger spaces of attention. The stars badly need the conversation themselves: their existence would have a little meaning without it. They need the resources of the conversation and to know what others are doing.\(^{18}\) The archistar is a star thanks to all those who contributed to the conversation that made him/her a star. They give the stars the attention they need without asking anything in return.

Architects with any stature spend much of their time communicating and socializing with other architects or relevant people involved in it. Architects who cannot do this will be able to stay in the conversation only if they compensate with outstanding artworks. According to Arjo Klamer socially clever people may do well even if their skills are less remarkable in terms of quantity and quality.\(^{19}\) Its real value is determined by the amount of attention others are willing to pay to it. The larger the market, the more super-stars. Stardom has less to do with talent than with the size of

---

\(^{18}\) Lo Ricco Gabriella; Micheli Silvia, *Lo spettacolo dell’architettura. Profilo dell’archistar*, Mondadori, Milano, 2003

\(^{19}\) Arjo Klamer, *Speaking of Economics. How to get in the conversation*, Routledge, NYC, 2007
They more famous they are the more they produce in terms of quality. This activity constitutes the demand for attention. The very same people provides the supply for attention. They have incentive to offer attention to contributions that will help make their own work better and increase their own chance of getting attention. Within the conversation authority counts: when Rem Koolhaas speaks, architects listen. He may be rude, he may even make mistakes, but people pay attention.

8.7 Meanings and analogies.

It is by means of conversations that architects negotiate the gap from reality and the rhetorical gap from each other. To be meaningful the metaphor of conversation has to make practical sense. It has make sense of what it takes to get into the conversation including or excluding people into the topic. The metaphor of conversations has meaning insofar as it can make sense of daily practice, especially it goes beyond
the mere chatter and allow for the values, rhetoric and culture that bolster and sustain a conversation.

According to Roemer van Toorn what is good about the projective is that it through its engagement with the real, wants to be popular, hopes to communicate with the public at large. A ‘projective practice’ does not want to stand at the sideline but right in the midst of mass culture, where we locate and negotiate our live possibilities. Instead of looking for truth in architecture or running the risk that it paralyses itself the more she knows about how corrupt society is, practicing a kind of pityscience, the projective experiments with reality.21

Instead of assailing reality with a priori positions, total utopias or resistance as critical architecture does, projective practices analyse the facts and, in the process of creation, take micro decisions capable of transforming a project in very concrete and specific ways. The touchstone here is not a vision of, but a passion for reality. The intelligence a project is able to embody in negotiation with reality is what matters.22

Projective architecture also stands for a return to the discipline, for a pragmatic and technical approach that takes account of the interdisciplinary influences that play a role in the realization of a project.23


The narratives and metaphors help us to think about the world in particular ways and change the metaphor from a body of accumulated knowledge turns into a conversation based on the shared understanding based on them.

A contribution generates a meaning all around. Association constitute meanings. A contribution has to be meaningful to get the attention and to become part of it. A contribution has to serve certain interests, or to inspire one or more actions. It has to perform in certain ways. For insiders the notions are packed with meanings. As Jervon argues in the Principles of Science, “analogy denotes not a resemblance between things. But between the relation of things”24. The conversation in fed by a certain imagination, it is kept alive and fluid with all kinds of meanings that the participants attribute to it. The resultant collaborative meanings find expression in the form of metaphors and narratives. To be in a conversation it requires to connect with its metaphors and knowledge on how to apply its narrative.

The architectural project must be rendered capable of functioning interactively. It thereby undermines representation. Representation is by definition monological, it is the fixed creation of a subject. Presenta-

---

tion, like play, is dia-logical, it opens up and involves the playing off of one another of playmates. Emancipation does not come about through an ideal dialogue but through an aesthetic creation – as in jazz improvisation, for example. It does not happen through any transcendental aesthetic subjectivity, not again by representation as in criticality, but by presentation, to be understood as “performance”25.

8.8 Architecture as a tool for evaluation.

Design can then become a tool for evaluating other design solutions, confronting not only numbers and figures but including expectations, ambitions and desires that Architecture incorporates. Architecture is therefore a tool for evaluation of other present or past architectures.

Quoting Ignasi de Solà-Morales the likeness and contrast between the actual architectural object and the memory that can lie in us of the original prototypes – those who have the epistemologic status of natural

architectural reference - constitute the foundation of the aesthetic function, although the architectural language is able to attribute this meaning using meta-linguistic languages, figurative and specifically metaphoric.

A comparison through the analogical tool allows to discovers new relations, suggests solution and defines scenarios and visions. Confronting an intervention with passages of known and relevant urban and architectural solutions allows to catch not only the measurable features between the considered objects but more and more the quality of the space, both the space that could be and the expectation that the intervention may rise and create successful design solutions.

The comparison between design solution implies therefore the action of measuring, intending not just as a numerical confrontation, but as a comparison between model with different qualities, architectural, spatial, relational, and so on. Measuring possible transformation scenarios cannot avoid confronting with the boundaries of the measurement, intended in terms of permeability, accesses and the idea of limit itself. Limit in the etymology of the term defines the edges and makes what is included within its boundaries comprehensible, defining an identity and a

26. G. Damiani, G. Fraziano, G. Guraziu, G. Pitacco, La Misura del Possibile, Fresco editore, 2013. The topic of this chapter is not the concept of limit in architecture, but its features related to the use of architecture as a measurement tool.

27. Define, from the Latin *de finis* (verb); to limit, determine, explain. Conceptually it refers to act of identifying a limit, an edge, drive a wedge in order to frame and comprehend what’s inside: “Recount Varrone, Plutarco and other authors that the elders of the city, tracing the city walls, used to follow a religious ceremony: they yoke up an oxen and a cow, and, after consulting the haruspices, they drove a wedge with a copper plough, defining the city walls. [...] For this the walls and the land inside them was considered sacred” in Leon Battista Alberti (J.Rykwert, N. Leach, ed.), On the Art of Building in Ten Beeks, MIT press, Boston, 1991

28. Referring to the origin of measures both the Greek and the Latin tradition propose a divine origin: “The seas were separated from the land; but Jupiter, claiming the Etrurian lands, established the countryside to be measured and the fields to be delimited” in Kula Witold, Le misure e gli uomini: dall’antichità ad oggi, Laterza, Roma, 1999
The matrix of features that makes the area different from the context defining an inside and an outside; the limits define what’s inside as cognizable and dividable\(^{28}\) it creates the spaces for the men\(^ {29}\), for its needs, relations and values, it makes explicit a hierarchy between the centre\(^ {30}\) or the centres and the periphery, gives a positional values connected to them and related to them it declines and multiplies itself\(^ {31}\). The limit, as architectural act by definition\(^ {32}\), becomes the first step in the process of confronting the infinite possible design solution for the area and understand the future of it.

Making quantitative an extension or a distance allows to confront it and, through the confrontation, attribute different values to things or ideas. Vitruvio, within the Ten Books of Architecture, mentions the action of measuring with the hand, the finger, the palm, the feet and the cubit. Discreet and repeatable units of measures\(^ {33}\) through which the act of measuring implies the confrontation between the actor of measuring and the object of the measure itself. Within the numerical abstraction not all the parameters for which the measurement act is done have the same weight and of many of them there is no trace left. What the numbers are not able to convey are the

\(^{29}\) Inside the Capitolium Temple Terminus, god of boundaries, was publicly celebrated, while individual land owners venerated the God on the stones setting the edge of their fields” in Joseph Rykwert, L’idea di città, Adelphi, Milano, 2002

\(^{30}\) According to Rykwert the original sign expressing the city was the Egyptian hieroglyph “nywt”. A circle with two lines crossing it. From the union of them emerges the centre, identifying the hierarchy, ibidem.

\(^{31}\) “Polesello synthesizes the duplicity of the concept of limit in “inner limit” (within the urban texture) connented with the idea of “place-space” and “given limit” that man creates to define a possible relationship between nature and artifice” in M. R. Santangelo, Il luogo-porto in Progettazione Urbana 4/96, Didattica e ricerca.

\(^{32}\) “The group settling down had to define the indefinite space surrounding them [...]. The group tried to exclude the natural realm to have its own space, defined by geometrical limits [...]” in G. Samonà, L’unità architettura urbanistica, Franco Angeli, 1978
spatial qualities that the design choices are conveying. That’s why it becomes necessary to relate to different tools, able to describe the spatial relationships, the visual relationships, the quality of life and the way of use the design that the mere numeric data are not able to provide.

According to Purini describing means laying down any prejudice in order the make the structural features of the built environment emerge in their full identity. Describing through not only numbers and indexes, able to return a precise image but even through forms and figures. According to Costantino Dardi “in the history of the cities the supremacy of the monument or of the architecturally emerging element is not, by need, a matter of measure, but always, even, indissolubly, a matter of form and figure.” These reflections refer both to the architecturally emerging elements and monuments and the built spaces of the contemporaneity, whose perception of scale and measure is indissolubly bound with the relationship with the other architectures and context.

What is only apparently an object trouvé is assumed as a mean for new meanings according to the spatial relationship it institutes, by means of an approach similar to the one of Adolf Loos whom, in

---

33. “Of the many features exhibited by every object in a variety of contexts, we abstract one, and consequently, objects as qualitatively diverse [...] acquire a commensurably in our eyes, for we view them from but a single perspective, that of their length.” in W. Kula, Measures and Men, Princeton University Press, 1986

34. Franco Purini quoted in S. Cantalini, Luoghi comuni, Meltemi, 2002

35. “the expressive intensity, the spatial complexity and the volumetric richness of a Gothic palace, a Romanesque mausoleum or a Baroque chapel assign them a monumental role despite their dimensions, sometimes programmatically smaller: indeed that inverted out-of-scale, that insufficient measure consolidate a primacy that is already intrinsic in the features of the form” in Costantino Dardi, All’ombra della main ouverte in Architetture in forma di parole, Quodlibet, 2009

36. “The gigantism is not in their dimensions but indeed in the lack of urban relations, in their extraneousness: hospitals, business malls, factories, discotheques seem to float in the urbanized territory” in Rosario Pavia, Figure e luoghi della città diffusa, in Mosè Ricci (ed.), Figure della trasformazione, Ed’A, 1996
front of a mound in the wood; if in a wood we find a mound six feet long and three feet wide, arranged with the shovel in a pyramidal form, we turn serious and something inside us says: here a man is buried. This, is architecture. Aldo Rossi attributes to Loos the insight of the meaning, of the possibility of the description in architecture: Adolf Loos made this great discovery in architecture, identifying ourselves with the object through observation and description. It becomes clear that the description, the first tool of the archaeologist, meant to classify the fragments of those he ignores the destination, turns, in the hands of the architects beyond the role of inventory the existing. The duty of the description is to catch and discover architecture, turning the research, the visibility of forms into architecture.

The introduction of these new parameters within the measurements operations implies the adoption of new tools and methods able to catch the impact. Instead of the classificatory mechanism, applicable with higher degree of success where reality assumes more homogeneous boundaries, the analogy proposes a “catalogue” able not to inventory, but to propose mnemonic figures able to evoke a project or a design solution not yet defined. Is though the analogy there-

40. “The atlas holds this quality: it reveals the form of the cities that do not have a form or a name yet. [...] The catalogue of the forms is immense: until each form will not find its city, new cities will born. Where the forms drain their variations begins the end of the city” in Italo Calvino, le città invisibili, 1972.
fore that reading the existing conditions turn visible the qualities of objects still part of the place we are reading and immediately part of the design that can be.\footnote{Sviscione, La teorica del frammento, tesi di dottorato (unpublished) archivio dell’università degli studi Federico II di Napoli}
8.9 Conclusions

At a theoretical level, the incorporation of cultural economics into the evaluation of architecture seems to offer prospects for further research and poses interesting challenges. In particular, theoretical work is needed in the area of the outcomes of the new framing related to the architectural statuta and is suggestive of different lines of development, but much remains to be done to refine the concepts involved.

The literature review clearly suggests that while design can impact significantly on individual end-users, quality of life and economically, well-designed, well-connected buildings and places clearly attract investment and create jobs and working in buildings and places that offer a variety of spaces, provide inspiring, comfortable and controllable environments, enhances the recruitment, retention, satisfaction, motivation, productivity and performance of staff more research is certainly needed on how these parameters can be developed within the conversation on architecture in order to foster better design solutions.