The design of Relation

coexistence of differences in Berlin’s Tiergarten

Davide Broggio
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Master degree final project in
Architettura Costruzione Città
Politecnico di Torino

Candidate
Davide Broggio

Tutor
Antonio di Campli
Abstract

Human relations are part of our everyday. They manifest in a plurality of forms, movements, institutions and spaces. Thus if they have a reality, they can be studied as such. This thesis explores the so-called “design of relation”, arguing that in certain contexts - such as that of metropolitan cities in countries with evolved economies - the most intense forms of social interaction are exchanged within opaque contexts, where different social categories can find their own niches or insides to gather. In this framework, specific relational phenomena can be related to as spatial local thoughts, perceived as objects that could be extracted from their own contexts, broken down and re-assembled basing on different conditions and according to other spatial local thoughts.

This work describes an analysis on Tiergarten in Berlin, identified as a specific spatial thought of the German capital. Here is reported a survey on its spatial conditions, characters, communities, practices, spontaneous uses and multiple practices. The survey is conducted along with the activation of three key-concepts to talk about the matter of relation: “agonistic public space” by Chantal Mouffe, “opacity” by Édouard Glissant and “membrane” by Richard Sennett.

The result is a study of Tiergarten's functioning as a device - term borrowed from Foucault - that generates a great degree of coexistence within a multitude of social diversities, tackling matters of socio-spatial inclusion, tolerance and equality. In addition, a design experiment around such device, its functional mechanisms and its logics, taken apart and set up in different environments.

In conclusion, the analysis on Tiergarten leads to a reflection on the matter of relation and how it involves different contemporary issues, in particular that of spatial, cultural and environmental proximity, further identifying new innovative strategies for the design of relation.
# Table of contents

## 0 // Preface .............................................. 8

## 1 // The matter of relation ......................... 12

### 1.1 Arguments .............................................. 14

#### 1.1.1 Chantal Mouffe. Agonistic public space

#### 1.1.2 Édouard Glissant. Opacity

#### 1.1.3 Richard Sennett. The membrane

### 1.2 Devices .............................................. 30

#### 1.2.1 Horizontal. OMA and Estudio Teddy Cruz

#### 1.2.2 Vertical. U-TT and Studio Muoto

### 1.3 Conclusions .......................................... 46

## 2 // The place, the individuals. ................. 48

### Der Großer Tiergarten

#### 2.1 Tiergarten. Formation and location .......... 56

#### 2.2 Processes. Willy Alverdes and the BioTopemap: tabula rasa

#### 2.3 Practices, individuals, characters. .......... 72

### Relations

#### 2.4 The place. Eight Tiergarten moments ........ 80

#### 2.4.1 Straße des 17. Juni

#### 2.4.2 Alleys

#### 2.4.3 Woodland

#### 2.4.4 Clear

#### 2.4.5 Paths

#### 2.4.6 Riverbanks

#### 2.4.7 Zoo

#### 2.4.8 Haus der Kulturen der Welt

#### 2.5 Maintenance and recent transformations .... 106

#### 2.5.1 Military axes

#### 2.5.2 Venus basin

#### 2.6 Tiergarten as a model of alveolar space .... 118

## 3 // Tiergarten reloaded. Designing spaces for relation .............................................. 124

#### 3.1 Defining “insides” .................................... 126

#### 3.2 Three multi-purpose kits-of-parts ............. 138

##### 3.2.1 Nested Bubbles

##### 3.2.2 Branched Bubbles

##### 3.2.3 XL Bubble

## 4 // Conclusions ............................................. 154

## 5 // Sources .................................................. 160

### 5.1 Chapter 1

### 5.2 Chapter 2

### 5.3 Chapter 3
A relation that has/includes a story carries under its fabric, more or less explicit, a series of exposures, variously related and connected. The term “relation” relates to the extent that many architects and urban planners, more or less consciously, connect, use or develop relations, both as ideas and as emotive states. Relations, as such, are not necessarily spatial in their manifestation or physicality but as such, they have the potential to provide a lens through which relations are understood, experienced and sometimes can be developed. This thesis is a study of the relational potential that conditions the design of urban spaces.

1. Conceptually, the notion of porosity recalls and renovates that of compactness and density. Such definition is borrowed from physics and literature – that is from Walter Benjamin in his descriptives of Naples – it is as analytic as a designing tool and refers to the percentage of open spaces in relation to the built environment and the eventuality of having differentiated flows (of people, public transport, water, activities, practices, differences and vegetation). Porosity does not only comprehend green areas and agricultural lands, but also bodies of water, empty or unused plots; instead, it does implicate the possibility to give new meaning to unbuilt areas as an ensemble, particularly to redefining forms of social exchange processes as well as individual or group subjectivities.

This thesis tackles a discourse, in an explorative tone, around the so-called “design of relation”. In the disciplinary field of urban studies and architecture, the term “relation” is in constant use, more or less explicitly, to redefine characters of spatial proximity; here urban space and the environment are ambivalent to the role of redefining forms of relating and dwelling at the praxis scale through a complex strategy of ecological and formal densification. Thus socio-diversity is a concept associated with that of “right distance” (between buildings, people, functions, imaginations).

Starting from such considerations, two hypotheses are supported:

1. That in certain contemporary contexts, as that of metropolitan cities in countries with evolved economies, most intense forms of relation and social exchange happen within open spaces, dense and permeable, as “insides” where different social groups and individuals can shape their niches and spaces.
The design of Relation // Chapter 0
Preface

2. That, in certain conditions, spaces or “devices” (term coined by Foucault) are configured for relation and could be intended as specific “local spatial thoughts”. Such spaces and devices could be intended as “objects” and exported or assembled in other places and with other “local spatial thoughts”.

An investigation of the Tiergarten in Berlin is presented to support these hypotheses. The Tiergarten, for the way it developed in particular after the second World War, could be considered as an example of a specific Berlin “local thought” about the discourse on relation. It is a device that defines specific forms of connection between individuals, collectives, imaginaries, desires.

The Tiergarten is a 210 ha park located at the centre of the German capital, integrated within the urban fabric as a wide green lung. Its appearance is similar to that of a forest, characterized with a bushy and thick vegetation, as a wide green lung. Its spaciality is similar to that of a forest, characterized with a bushy and thick vegetation, a tangled layout of alleys, paths, channels and otherwise dense bushes and trees. As a consequence, the Tiergarten is analyzed sometimes with the eye of the architect, sometimes with the eye of the anthropologist.

In order to identify characters and mechanisms of relation in the Tiergarten a series of top-down and bottom-up surveys are produced: spatial, environmental and historical analyses are tangled with observations around the life manners of local actors and individuals. Contemporarily, three concepts are activated: “agonistic public space” by Chantal Mouffe, “opaque space” by Édouard Glissant and “membrane” by Richard Sennett.

The interest in studying the Tiergarten started during an academic design studio – held at the Technische Universität Berlin during an Erasmus mobility – titled Political Spaces: Urban Frictions and organized by professor Charlotte Malterre-Barthes, who also tutored this thesis in its first steps as an Erasmus advisor during the period abroad. The subject matter of the studio dealt with the consideration of architectural spaces as “devices” (as defined by Foucault), i.e. considering particular buildings and urban spaces not only as architectural forms but as ensembles of decisional processes, as well as homeless who find a temporary sheltered refuge within dense bushes and trees. As a consequence, the Tiergarten is analyzed sometimes with the eye of the architect, sometimes with the eye of the anthropologist.

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The matter of relation
This chapter, as the very starting point of the thesis, is aimed at creating a solid terrain composed of theoretical notions in order to talk about the characters and problems of socio-spatial relations and its design and its design. The purpose is accomplished starting from a research of what has already been written about the topic, *la stessa dell'arte*.

In particular, this discourse focuses on the activation of three fundamental concepts in order to describe a public sphere that is characterized by conflicts, debates and hegemonies within different political and the processes that govern it, which according to Mouffe are ruled by a strongly hegemonic relation without the possibility of a final reconciliation. According to this model public space is the terrain where forms of social exchange and interaction are made possible through systems termed as “membranes”.

Moreover, in order to fully understand what Mouffe means in her conception of the “public”, it is also necessary to reflect on the meaning that she attributes to the terms “politics” and “political”. There is a kind of segmentation between various thinkers, such as Chantal

1 Those three different forms of Öffentlichkeit have variated and shifted through the years, starting from the Greek *poleis*, where the meanings of common, visible and open would all be included in the word “public”, until the construction of the State which established a new type of separation between the public and the private.

1.1 Arguments

The first conclusion obtained from this chapter is that of “membrane” as explained by Richard Sennett. Communities who live within opacity must not be imagined like isolated clusters, but on the contrary for inhabitants. Opacity is conceived as the condition that allows different groups to dwell within the same agonistic space, which is generated and characterized by the very identities of the ones who inhabit it. Thus the appropriation of different places by various communities derives from exclamations, confrontations and frictions.

The definition that the author gives to this word is similar to that of the German correspondent Öffentlichkeit, which generally means “public” as opposed to “private”. More specifically, it is possible to trace three different contexts within which this opposition is inscribed. In the first place, public as “common” or “general”, as opposed to “individual”; secondly the meaning of Öffentlichkeit refers to something that is manifested and visible, distaining the concept of “privacy” or “secret”; lastly, “public” is intended as “open” or “accessible” rather than “closed”. Those three different meaning of the term Öffentlichkeit are correlated with each other, but they do not overlap something could be “public” in the sense of just two of these senses.

Chantal Mouffe is a Belgian professor and political theorist, best known for co-authoring with Ernest Laclau the volume *Hegemony and Socialist Strategy* (Verso, 1985). Her writings mainly focus on the dimension of the political and the processes that govern it, which according to Mouffe are ruled by a strongly hegemonic relation without the possibility of a final reconciliation. According to this model public space is the terrain where forms of social exchange happen, it is “agonistic” as it is intended as the dimension where hegemonic forms of relation confront each other. In order to understand Mouffe’s discourse, it is necessary to understand first what she means by “public”. The definition that the author gives to this word is similar to that of the German correspondent Öffentlichkeit, which generally means “public” as opposed to “private”. More specifically, it is possible to trace three different contexts within which this opposition is inscribed. In the first place, public as “common” or “general”, as opposed to “individual”; secondly the meaning of Öffentlichkeit refers to something that is manifested and visible, distaining the concept of “privacy” or “secret”; lastly, “public” is intended as “open” or “accessible” rather than “closed”. Those three different meaning of the term Öffentlichkeit are correlated with each other, but they do not overlap something could be “public” in the sense of just two of these senses.

The third and last concept introduced in this first chapter is that of “membrane” as explained by Richard Sennett. Communities who live within opacity must not be imagined like isolated clusters, but on the contrary for inhabitants. Opacity is conceived as the condition that allows different groups to dwell within the same agonistic space, which is generated and characterized by the very identities of the ones who inhabit it. Thus the appropriation of different places by various communities derives from exclamations, confrontations and frictions.

1.1.2 Chantal Mouffe. Agonistic public space

Chantal Mouffe is a Belgian professor and political theorist, best known for co-authoring with Ernest Laclau the volume *Hegemony and Socialist Strategy* (Verso, 1985). Her writings mainly focus on the dimension of the political and the processes that govern it, which according to Mouffe are ruled by a strongly hegemonic relation without the possibility of a final reconciliation. According to this model public space is the terrain where forms of social exchange happen, it is “agonistic” as it is intended as the dimension where hegemonic forms of relation confront each other. In order to understand Mouffe’s discourse, it is necessary to understand first what she means by “public”. The definition that the author gives to this word is similar to that of the German correspondent Öffentlichkeit, which generally means “public” as opposed to “private”. More specifically, it is possible to trace three different contexts within which this opposition is inscribed. In the first place, public as “common” or “general”, as opposed to “individual”; secondly the meaning of Öffentlichkeit refers to something that is manifested and visible, distaining the concept of “privacy” or “secret”; lastly, “public” is intended as “open” or “accessible” rather than “closed”. Those three different meaning of the term Öffentlichkeit are correlated with each other, but they do not overlap something could be “public” in the sense of just two of these senses.

Those three different forms of Öffentlichkeit have variated and shifted through the years, starting from the Greek *poleis*, where the meanings of common, visible and open would all be included in the word “public”, until the construction of the State which established a new type of separation between the public and the private.
The contemporary liberal thought developed two main paradigms describing societies: the first is called "aggregative", which envisons societies and their politi-
cs as capable of establishing some sort of compromi-
ses between competing parties. Society is portrayed as
composed by rational human beings, whose acts aim at
maximizing one's own interests, according to an instru-
cional model. As a reaction, the second paradigm, the
"deliberative" one, links morality and politics: it argues
that politics is a specific field of application of morality
and that it could be possible to reach a final and ge-
cneral consensus through means of free debate. In this
first case politics are concerned within matters of eco-
y in the second one they are apprehended
within the field of ethics. Mouffe, who criticises both
paradigms describing societies: the first is called "ag-
gregative", which conveys the idea of identity,
which characterizes societies.

"Once we have understood that
politics is concerned with the constitu-
tion of collective identities, within which
is comprehended political identification as well. This
is a crucial conception in Mouffe's thinking, as she be-
lieves that a political identity is always collective and
the liberalistic approach, with its individualism, could
be traced back to the
rationalist solution, derives the antagonistic dimension
that characterizes societies.

The contemporary liberal understanding of pluralism is that
we live in a world in which there are, indeed, many
perspectives and values and that, due to empirical li-
mitations, we will never be able to adopt them all, but
that, when put together, they constitute a harmonious
non-conflicting ensemble. This is why this type of li-
beralism must negate the political in its antagonistic
dimension.

This means that the "lodge" conceives the regulative practices of conventional politics, whereas the ontological concerns the actual
manner in which society is symbolically instituted

as could be that between "friend/enemy", although
the relation "we/them" is necessarily antagonistic,
we can understand why politics is concerned with the constitu-
tion of a "we" which can only exist by the demarcation of a "they"
(Mouffe, 2015, p. 155). Democracy's task is not
about how to solve this conflict, but rather overcome
the different paths according to which this opposition is
established. This line of reasoning does not imply
that the relation "we/them" is necessarily antagonistic,
as could be that between "friend/enemy", although
it could become such in certain conditions: the possi-
bility of antagonism can never be eliminated, it is an
ever-present condition and must be taken in account as
such when dealing with matters of politics. This even-
the other. Here we have understood that
every identity is relational and that the affirmation of a dif-
fERENCE is a precondition for the existence of any identity (…)
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the liberalistic approach, with its individualism, could
never be able to grasp such specificity that constitutes
the political.
The matter of Relation

...the social could not exist without the power relation through which it is given shape (Mouffe, 2005, p. 156). What might be considered as a "natural" order is... 

aggressive practice include that a counter-hegemonic force could always rise, i.e. a practice that would... 

Once that the chance of a final reconciliation within a political context is acknowledged, it is easier to un...

Another fundamental characteristic of every hegemonic structure, without any centre or unity principle within this variety of conflictual situations. Every form of hegemonization is an antagonistic one in the sense that, in the former, the two parties "we/them" do not see each other as... 

What are the consequences of the previously delineated conditions in the perception of the public space? The most important is that... 

Spaces that are envisioned as lacking conflicts and excessively peaceful – as it is really common in the design practice of commercial places – are not agonistic public spaces. Also, Mouffe points out that a public space to be "agonistic" does not require a geographical location, but could also be virtual too. Internet as a platform for discussions is an agonistic public space. 

Thus, the "public sphere", the place where deliberation is aimed at reaching a final agreement within the different parties involved in the political. The difference here lies in what is termed by the author as "regulative sites". Although Habermas recognizes the impossibility of a common consensus, he still perceives communi... 

Secondly, to introduce the notion of "agonistic public space"... 

The very meaning of a hegemonic practice include that a counter-hegemonic force could always rise, i.e. a practice that would... 

Similarly to Mouffe, Habermas theorizes what he calls the "public sphere"... 

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Mouffe is the possibility of antagonism that bears agonism, Arendt does not admit this chance. The latter insist on the fact that politics are concerned with a plurality of different human beings aggregating, but on the other hand she does not believe... 

the place where consensus emerges. On the contrary, according to the agonistic model, public spaces are the battlefields where the hegemonic nature of the relation manifests most fully and without any chance of a final reconciliation. The agonistic opposition could happen on a plurality of discursive surfaces, meaning that it would be more correct to refer to "public spaces" in their plural form, as it doesn't deal with just one public space. This plurality of public spaces is situated and follows a hegemonistic structure, without any centre or unity principle within this variety of conflictual situations. Every form of hegemonization is an antagonistic one in the sense that, in the former, the two parties "we/them" do not see each other as opponents who should be eradicated, as it is typical in the relation "friend/enemy", but they do not consider mere negotiation as the key to solve their conflict either, as it would imply a reconciliation – which would just eliminate the antagonism. An agonistic relation takes distance from... 

The design of Relation // Chapter 1

The matter of Relation

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Since conception of the agonistic public space is upstre...
that such plurality depends on an antagonistic condi-
tion, like Hellemans, she indeed imagines that at the
eend of every conflict there could be a final reconcilia-
tion.

1.1.2 Édouard Glissant. Opacity

Now that it has been dealt with Chantal Mouffe’s con-
tension of agonistic public space, the argument of this
chapter follows with an explanation of another term
that is necessary to activate in order to support the the-
esis on the topic of relation: that of “opacity”, as it is de-
scribed in the essay Poetique de la relation (Glissant, 1997, p. 169). Thus, each particular culture cannot be broken
down into prime elements, as its limits are not defined.

The relation is what links each culture to its prime ele-
ments (“internal relationship”) and, at the same time,
each culture to other cultures that affect it (“external
relationship”). It is really important not to confuse rela-
tions with cultures, nor with their internal relationships
alone, nor the projection of their external relationships
nor even the intangible results of the intricate involve-
ment of these “contents” on which these operate
(Glissant, 1997, p. 89). Civilization is a process that brings into relation but, at
the same time, does not universalize, and links together
togather generating concepts as Frenchness, Latinness
or negritude. Although Glissant does not provide a clear definition of
what a “relation” is, regarding these cultures he speci-
tifies that “each particular culture is impelled by the know-
lage of its particularity, but this knowledge is boundless” (Ivi, p. 169). Thus, each particular culture cannot be broken
down into prime elements, as its limits are not defined.

The relation is strictly correlated to difference, a theory that
founds a duality existing between the Self and the Other.

What he hopes for would be to give up on investigating
what lies at the bottom of natures and start a move-
ment “referring not to Humanity but to the exultant diver-
sion of humanities” (Ibid.). Such approach would nullify
the mere conception of a Self as opposed to an Other,

making every citizen Other and no longer a barbarian.

Glissant does not refer to opaqueness as a synonym of
“obscure” or “shaded”, although it is possible to accept
secretiveness, difference itself – without opaci-
ity – is not enough to let the existence of such minorities
be fully considered. Difference alone can still lead
to an ordinary condition. Now, the condition that is cre-
dated within opacity allows the understanding and the ac-
ceptance of differences to move another step further:

it displaces all reductions. The “right to difference” and
the “right to opacity” differ from one another as the lat-
ter defines a “substance within an irreducible variability
(Glissant, 1997, p. 190). In this very concept lies the in-
novation in Glissant’s thinking, giving up on the obso-
letely duality existing between the Self and the Other.

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what lies at the bottom of natures and start a move-
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sion of humanities” (Ibid.). Such approach would nullify
the mere conception of a Self as opposed to an Other,

making every citizen Other and no longer a barbarian.

Glissant does not refer to opaqueness as a synonym of
“obscure” or “shaded”, although it is possible to accept
opacity as such. The definition of opacity is in this case

closed to something which cannot be simplified or un-
duced, which guarantees confluence and participation.

6 “Solidity” as opposed to “viscosity” is also used by Zygmunt Bauman to provide a definition of the “foreigner”, where he reco-
ognizes the latter term as the characterizing quality that generates fear and eventually hate against foreigners, making them difficult to be
identified. For any further clarification see Bauman, (1997).

The design of Relation // Chapter 1

The matter of Relation
Thus opacity leads to coexistence and convergence of different identities, societies and social groups, as it creates a condition that does not simply reduce the Other to an image of the Self. “I thus am able to conceive of the opacity of the other for me, without reproach for my opacity for him” (Glissant, 1997, p. 193). Opacity is the actual foundational condition of freedom, as well as the basis for “Legitimacy”, which implies a political hint in the meaning of the term.

The spaces which present the ideal conditions for relations tend to opacity and the agreement within opacity equals – according to Glissant – nonbarbarism. Creole space, which Glissant identifies as particularly characterized by opacity, is based on conflicts and contingency, on fractions between different identities, ethnicities and languages. This means that Creole space was not generated by a strategy based on transparency and connections, neither is it a celebration of a specific functionality, on frictions between different identities, ethnicities and languages.

Thus, opacity is a force that governs every community: it is the condition that brings humans together forever and at the same time makes them permanently distant.

Richard Sennett

Richard Sennett is a professor and researcher known for his studies in the field of urbanism and social ties in cities. He is a theorist of the so-called “Open city”, documented in the volume Building and Dwelling (Far: Strauss and Giroux, 2018). His distinction between the “Open city” and the “Closed city” and his research about how to design including “open forms” is particularly important in order to achieve the third and last term to talk about the topic of relation: the “membrane”.

Richard Sennett theory is similar to that of another well-known sociologist from the twentieth century: Zygmunt Bauman. Both recognized a condition that heavily characterizes contemporary societies, i.e. a common fear of exposing that, according to Sennett as argued in The conseans of the flaneur (Allard A. A. Knopf, 1990), is reflected in today’s cities layout.

The latter, the ante portas foreigner, starts from the

8 Bauman links the idea of freedom to one’s capability of moving freely within the urban context. According to Sennett the grid structure of the definition of urban environment reflects the organisation in the architectural practice of ensuring the city as an archive and neutral environment (Sennett, 1992). Although, contemporary urban contexts are highly diversified and heterogeneous, for this very reason the limits between neighbours, houses, houses, collective are often point of contention subjected to new interpretations and shifts. Thus, a citizen’s capability of freely crossing borders is emblematic of his freedom itself.

9 According to Bauman, this condition is strongly reflected in spaces built for commerce or tourism. According to this condition, the pleasure that a flaneur seeks derives from the mutual maintenance of distances between foreigners and in the certainty that the temporary experience would remain as such. This is the case of the spectacular scenographic arrangements built-up in city malls, or the amusement experienced in all inclusive beach resorts or, again, in ethnic restaurants.
concept of “interior” or “house” as opposed to “exter-
ior”, where “interior” refers to that space that is only
subjected to one’s will, and “house” is only subjected
to one’s control. This leads to a decision and desire.
The aspiration of a definable space transforms non-
familiar people – the same that for the planner
represent an “observer object of desire” (Bauman, 1999, p. 93) – into enemies. The way of this ante portas
stranger opposes that of the flaneur, as here the city
is perceived as a source of threats and dangers. Both vi-
sions lead with the time to a simplification of contem-
porary cities to a prosenium of human life (Sennett,
1992), which is highly tolerated by citizens exactly be-
cause of their fear of exposing to others’ lives.
Within this frame, an open question arises: how would
it be possible to bear a sense of community within the
inevitable of ephemeral pleasure and fear of stran-
gers? Thus, the definition of “Closed city” by Sennett
starts from a paradox: for him, the urban practice suffered –
starting from the second half of the twentieth century –
a decline, notwithstanding a remarkable improve-
ment starting from the second half of the twentieth century –
A second paradox on which Sennett reflects is that con-
temporary urban fabric, so aesthetically designed, has a
life-span that is progressively reducing10; and is less and
less capable of transforming and satisfying diversified
uses. The renewal of urban centres, in the American
continent as well as in Europe, often coincides with
the relocation of the inhabitants who already dwelled
in those areas, or the addition of new constructions wi-
thin a proper slum/moschurion dialogue. Moreover, a “closed system” as that of the “Closed city” has two main characteristics, i.e. stability and integra-
tion, to which Sennett attributes a negative acceptation.
Stability – deriving from over-determination – risks to
neglect important matters during the design process
while giving the same importance to every specific is-
10 Statistically, the life-span of new housing projects completed in Great Britain is estimated at forty years, while for New York dis-
tricts only reaches thirty-five years. For any further clarification see Sennett, 2013.
In order to support such argumentation, Sennett illustrates a case from its own planning practice: the design for La Marqueta in New York City. Sennett relates the concept of “porous” to Nolli’s 1748 map of Rome. What makes a sponge porous is its capability of maintaining heterogeneous and predictable forms. Instead of being a strict barrier, borders mark a space of exchange, as for instance between living and non-living forms, that are widely embraced by the Closed city, its homogenous and predictable forms. Instead Open city’s porous relation is essentially about the exchange the more they become individualized. This is the phenomenon described with the term “auto-poiesis”. An Open city is dense and diverse. Its physical conditions lead towards the unexpected, discoveries, innovation. The Open city opposes those capitalist ideals that are widely embraced by the Closed city, its homogenous and predictable forms. Instead Open city’s public spaces promote the juxtaposition of practices that traditionally clash in the human world’s work – for that purpose, urban planning plays a fundamental role in the delineation of the Open city. It is very important to point out that it would be more correct to refer to “an” Open city, rather than “the”, as there is not only one model for an open city. “The smart city is also open when it coordinates shifting-complexities rather than reduce them to a single standard of efficiency” (Sennett, 2018, p. 235). Here follows an explanation about how to design according to “open forms” as defined by Sennett, concentrating on three main topics: “ambiguous edges”, “uncompleted form” and “seed planning”.

Taking inspiration from natural ecologies, Sennett stresses that the difference between two kinds of edges: borders and boundaries. The latter is porous; the former is not. The boundary is a straight line, as that drawn by lions and wolves by peeing to mark their own territory: it is an edge where things end. On the contrary, borders mark a space of exchange, as for instance the border between water and lake shores, where natural selection is the most intense and organisms feed off each other. Sennett believes that such ecological differences adapt the human world’s work too. Today’s cities are defined within closed boundaries — argues Sennett — cutting out the city into smaller airtight containers where inhabitants are not so much affected by external conditions, causing really low exchanges between racial, ethnic and class communities.

The urban habitat is cut up into segregated parts by streams of traffic and by functional isolation between zones for work, commerce, family and the public realm. “Gangster city” development in Delhi, or slum-de-re, does not spread growth across an area, but rather channels it narrowly. Caracas in Venezuela employs another kind of sealed boundary in the form of ghettos; every gated community inside a boundary wall. The most popular form of new residential development internationally, as we have observed, is the gated pastoral community inside a boundary wall. (Sennett, 2019, p. 220)

On the contrary, the Open city is defined by borders rather than boundaries. The definition of “border” is related to that of “membrane”. The membrane, as that of a living cell, is a porous13 edge; it regulates the flow of matter into and out of the cellular system, sometimes steering functions. Membrane porosity exists in relation to resistance: a wholly sealed membrane would cause the cell to die, as it would happen if let anything pass through it. Thus a membrane must be selective. It allows flow to into and out of the cell only the matter that is strictly necessary of nourishment — and for the cell functioning in general. A completely open space without filters does not belong to an open city either.

In contemporary practices, a common mistake for planners is that of believing that the centre of every dwelling area, such as the traditional center or the central station, is the one where social exchanges concentrate the most, which leads to design proposals that always aims at strengthening the life at the center, thus neglecting the importance of what happens – or could happen – along the edges14. Instead, Sennett hopes for concentrating on the open exchange the more they become individualized. This is the phenomeron which is associated with the term “ichtig-porous”.11

11 Lahoffmans argues that humans, through mutual verbal exchange, structure the system of values by which they live and that the more the exchange the more they become individuated. This is the phenomena which is associated with the term “ichtig-porous”.

12 Sennett relates the concept of “porous” to Nolli’s 1748 map of Rome. What makes a porous porous is its capability of maintaining the same shape although it can absorb water; the same way, a building could be porous when it allows flow between inside and outside, still maintaining its shape of form and function. The Nolli map exemplified how porous in these terms could appear in the city. The plan shows the porous relations between solid and void, it is at the same time on architectural and social representation. For any further information, see Sennett, (2018, p. 218).

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The design of Relation // Chapter 1

Shells create forms whose possibilities are not exhausted in any particular configuration imposed at the start. The shell also creates porosity within a building, since structurally there are few fixed barriers. Its making invites more making. (Sennett, 2018, p. 230)

Lastly, “seed-planning” is auspicated as another open form of designing as opposed to “master-planning”. Such terminology is borrowed by Sennett from farming. The master plan divides a city up into a closed system where each place and function relates logically to other places – which again ignores the farming reality that different colonies of the same seed will compete for space, mutate over time or die out by contact with one another: a farm has a dynamic rather than static ecology. (ibid., p. 236)

The essence of this idea is to leave minimum indications about how form relates to function. This argumentation is moved starting from a critique of renowned city masterplans, as those of Baron Haussmann, Albert Speer and Robert Moses, who disregarded people’s needs and desires while planning at such big scale, and a matter of how “big” relates to “good”. Through seed planning, diverse themes – as where to place hospitals, schools, housing, shops, squares, parks – are developed independently throughout the city, leading to a more complex image of the urban togetherness.

Richard Sennett’s definition of “membrane” is the last position on the matter of relation. In many contexts, such as the metropolitan one, “membranes” and “opacity” within multiple “agonistic public spaces” all contribute in the definition of a specific condition of urbanity. They avoid static forms and repetitions they thicken the material conditions where people densely experience collective life.

New York. In 2015 he was involved in the plans for designing a market to serve the Hispanic community of Harlem, which is located up the 96th Street on Manhattan’s upper east side; below the 69th Street, lies one of the richest communities in the world. The proposal for La Marqueta envisioned to locate the market at the very centre of the community, twenty blocks away from the 96th Street, regarded as a dead edge, a boundary. Sennett, critically analysing his own experience at some years’ distance, recognized in such decision a lost opportunity, as location La Marqueta along the edges of two communities could have contributed to the definition of a porous edge, a membrane where the poor and the rich could have related with each other during daily life.

14 For this instance, the given examples are Alejandro Aravena’s design for incomplete living units for Iquique, in Chile, as well as the Woburn Walk in London, designed by Thomas Cubitt, as an example of shell-design that supplied middle class users (for any further information see Sennett, 2018).

Moreover – according to Sennett – even form and function should not be strictly connected, if not even not related. While a building functioning is normally subjected to change with time, its form is unlikely to adapt excessively over-determined. For instance, skyscrapers are characterized by a complex structural, machinery and spatial system, which can hardly be adapted to other uses, as from office to residential. Nevertheless, Sennett points out how today’s technologies in the architectural field could still promote the designing of more flexible and adaptable buildings, whose spatial organization should resemble that of a shell.
As it results from what exposed in the previous paragraph, socio-spatial relations do not only entail exchanges of mere social nature, but can be traced within complex systems of ecological, political or economic nature. This second part of the first chapter analyses four projects that took into account the dimension of relational design as essential for the definition of their programmatic solutions. In general, matters of relation design often result in the architectural practice — in processes of densification aimed at intensifying practices of social exchange by the juxtaposition of different programmes within the same space, structured around two main spatial organizations: vertical and horizontal. Eventual relations become an evaluation parameter of spatial qualities, as a planning reflection around such matters of densification aimed at intensifying practices of social nature, but can be traced within complex systems of ecological, political or economic nature.

1.2 Horizontal. Parc de la Villette and Living rooms at the border

Parc de la Villette

Parc de la Villette by OMA is the first project analysed. Such project was presented by OMA at the 1982 international competition for Parc de la Villette — aimed at creating a new park for the twenty-first century — was one of the range of programmes and situations. As he described the project, “reorganizing the life of the mass population according to the direction outlined in the Bolshevik party’s Marxist program” (Cooke, 1987), Koolhaas took the idea of a linear city. It led to a research of new forms of institutionalism, where the architectural project was intended to be integrated as that of a “social catalyst” — as defined by Catherine Cooke. In the constructivist thought, a social condenser is an architectural or urban project conceived as a “social catalyst” — as defined by Catherine Cooke. In the constructivist thought, a social condenser is an architectural or urban device that is dedicated to natural history and zoology, wide open areas for mass sport activities as well as political or economic events, fully equipped with open air-screens, radio transmissions etc. Leonidov — whose conception was directly recalled by Koolhaas in La Villette — interpreted these educational programmes that, before him, were not usually mixed together: for instance swimming pools, laboratories and winter gardens. New Social Type and the masterplan for the linear town (see picture 2 in the following page). All his facilities included many cultural and educational programmes, as follows: La Villette by OMA (1982) and Casa Familiar by Estudio Teddy Cruz (2001-ongoing) as examples of horizontal programme; SESC Pompeia by Lina Bo Bardi (1977-82) and Gymnasio Vertical by UT -T (2004) as examples of vertical programme.

1.2.1 Horizontal.

Parc de la Villette

OMA's proposal for Parc de la Villette by OMA (1982) and Gymnasio Vertical by UT -T (2004) as examples of vertical programme. In general, matters of relation design often result in the architectural practice — in processes of densification aimed at intensifying practices of social exchange by the juxtaposition of different programmes within the same space, structured around two main spatial organizations: vertical and horizontal. Eventual relations become an evaluation parameter of spatial qualities, as a planning reflection around such matters of densification aimed at intensifying practices of social nature, but can be traced within complex systems of ecological, political or economic nature.

Social Condensers

A name that is most commonly associated with the idea of social condensers is that of Ivan Leonidov, kown for designing the Club of a New Social Type and the masterplan for the linear town (see picture 2 in the following page). All his facilities included many cultural and educational programmes that, before him, were not usually mixed together: for instance swimming pools, laboratories and winter gardens. Social condensers were designed at every scale, be it that of a single residential building, a sport or cultural facility, a city. What associates all these projects with each other is that they are all loaded with a multiplicity of programmes, interpreted as tools to foster relations and collectivization. Such projects expressed a will to not only redefine architectural and spatial programmes but also to open intellectual activities to workers and that transform urban life completely. A name that is most commonly associated with the idea of social condensers is that of Ivan Leonidov, known for designing the Club of a New Social Type and the masterplan for the linear town (see picture 2 in the following page). All his facilities included many cultural and educational programmes that, before him, were not usually mixed together: for instance swimming pools, laboratories and winter gardens. Social condensers were designed at every scale, be it that of a single residential building, a sport or cultural facility, a city. What associates all these projects with each other is that they are all loaded with a multiplicity of programmes, interpreted as tools to foster relations and collectivization.

15 The term “social condenser” refers to a spatial idea that was first developed in the 1920s by the Russian constructivist movement. In the Russian post-revolutionary context, the Constructivist movement started to integrate social matters into the architectural practice, aiming at “reorganizing the life of the mass population according to the direction outlined in the Bolshevik party’s Marxist program” (Cooke, 1987). Leonidov’s Club of a New Social Type, the masterplan for the linear town (see picture 2 in the following page). All his facilities included many cultural and educational programmes that, before him, were not usually mixed together: for instance swimming pools, laboratories and winter gardens. Leonidov – whose conception was directly recalled by Koolhaas in La Villette – interpreted these educational programmes that, before him, were not usually mixed together: for instance swimming pools, laboratories and winter gardens.
Programmatic layering upon vacant terrain to encour-
age dynamic coexistence of activities and to generate
through their interference, unprecedented events.

La Villette’s spatial structure is generated by the su-
perimposition of seven layers on the project’s area, so-
titled: 1. Initial hypothesis; 2. The strips; 3. Point grids,
or confetti; 4. Access and circulation; 5. The final layer;
plus, two additional layers dealing with the natural
components and the park’s relationship with the sur-
rounding built environment. The first layer is directly
related with the definition of the park as a social con-
denser; the second layer explains OMA’s strategic ap-
proach – the strips – and in particular how to embody
the Soviet reference.

The diagram representing the “Initial hypothesis” states
the impossibility “to create a park in the recognizable sense
of the word” (Koolhaas et al., 1998, p.921) because of the
programme’s extension. Therefore, Koolhaas tackled
the problem deriving from condensed and dynamic co-
existence with horizontal congestion, within which the
programme undergoes constant change and adjustment
(Koolhaas et al., 1998), or in other words, he developed a
design proposal based on the frequency between diffe-
rent activities and their interrelation. Parc de la Villette
should be socially interactive in order to introduce – as
required by the competition programme – a new way of
urban living; Koolhaas accomplished such purpose by
emphasizing on la Villette’s cultural initiatives as well
as promoting mass culture. The mechanism of Koolha-
as’ social condenser generates diversities, establishes
links between activities, fosters unprecedented events
while maintaining an overall continuity and unity, yet
allowing “any shift, modification, replacement; or arbitra-
tion (…) without damaging the initial hypothesis” (Ibid.).

Thus, the programme of la Villette is redefined as that
of a social condenser16, outlining a flexible and unified
strategy while still leaving space up for new interpreta-
tions. Such process is defined by Koolhaas as

16 Even if Koolhaas’ project belongs to different time than that of social condensers, it is clear how both aim at designing an or-
ganization apt at promoting diverse activities of various kind as well as cultural mutations.

picture 2 (above left): axono-
metric drawing for Magiro-
risk new town’s masterplan,
also known as the linear
town, whose design team
was also joined by Leonidov
(OSA team, 1930)

picture 3 (below): Parc de la
Villette’s working model com-
pleted with the stripes and
their different scenarios.
(Cliché, 1982, author’s
rework)
The second layer programmed by OMA is that of the strips, which defined the most in Villème's spatial structure. The park was exclusively designed in plan, where each strip was conceived as an adjustable zone, each one arranging its own border, acting as a distinct unit within the whole and according to its own rules, narratives, dispositions. Within such space, an archipelago of activities and fragments was envisaged. In order to grant the maximum interaction within the park, the strips are placed parallel one to the other, running from east towards west. Each strip was composed of both natural and functional elements, used to create shared and surprise gardens, playgrounds or natural landscapes integrating the existent buildings (the museum and the Grande Halle). Moreover, the strips would allow, along their axes, a perception of the park as a whole, granting the maximum level of permeability along their longitudinal axes. The grid of points or confetti – including elements like kiosks, picnic areas, playgrounds, service points – was placed over the strips in an apparently irregular way. The next layers comprised of a system of main paths or routes, intersecting the strips perpendicularly, a layer of adjoint rooms – the museum sphere, Atanuca’s rocket, the tunnel, etc. – and a series of connections with other Paris’ homopores.

For Koolhaas, the experience imagined for the visitor of Parc de la Villette was that of a constant shifting within elements that belong to landscape and superimposed elements belonging to the metropolitan context, always arranged in mutable configurations and somehow conditioning human behaviours.

Living rooms at the border

The second project selected exemplifies how a design of spaces for relation can involve not only considerations regarding diverse activities and programmes, but also – and most importantly – issues of economic development, social inequality and the democracy of space.

Living rooms at the border is an affordable housing project – started in 2001 and still ongoing – by Estudio Teddy Cruz and Casa Familiar in the historic heart of San Ysidro, a community in San Diego, California, located less than a mile from the American border and almost exclusively populated by immigrants from Latin America. Tackling the social and political dimensions of housing and density, Cruz investigated how to transform a neighbourhood into a producer of new housing policies and economies. He did so by focusing on the design of small plots as infrastructures that, mobilising social entrepreneurship, create new space for housing, cultural production and political participation. Therefore, Living rooms at the border is a programmatic project acting as an economic framework for informal land use and development for its own housing stock. Moreover, empowering San Ysidro, envisioning the community as developer of its own housing stock in the context the involvement of the NGO Casa Familiar results of primary importance in the definition of a “micro-policy”19 facilitating construction permits, programmatic mixed uses and densification processes, as well as granting micro-loans.

17 The positioning of the various points within the park depends on a mathematical algorithm based on the desired frequency for each single spot.
18 An NGO community-based nongovernmental agency that aids San Ysidro’s population by providing immigration services, education and job placement.

19 The so-called “micro-policies” comprised a strategy for housing development involving different acts, i.e. city’s administration, community activism and designing collaborations as well as neighbourhood participation. Such strategy could be resumed by the following four steps: 1. Transforming the informal, by mapping and documenting all the illegal or non-conforming additions and spontaneous mixed uses in San Ysidro; 2. Defining new zoning categories through a new housing typology in order to legalize the non-conforming units; 3. Allowing the NGO (Casa Familiar) to manage the new construction process, in order to facilitate the design; 4. Facilitating micro-lending through Casa Familiar’s intervention, residents of the new units partner Casa Familiar to co-own the resources.
same strip at different times of the day.

Thus, unlike La Villette, nothing is left open to interpretation, but a development programme is designed as follows. The first step regards the existing church and its retrofitting into an “incubator of cultural production” (Cruz, 2010, p.116), meaning that it would be used by Casa Familiar to generate “new categories of socioeconomic programming” (Ibid.) by supporting it with a determined cultural and economic plan, since housing to be built as “units-only” would not be sustainable for the NGO.

While creating a first core of social interaction around the church, a different strip is equipped with “open frames” or “social rooms” functioning as small infrastructures for housing, i.e. structures equipped with electricity, collective kitchens and communal gardens. In the preliminary phase, most of the space in this strip is left empty, left available for collective programming of activities that support social organization as well as relations. Such programming allows new interfaces with the public across time: community workshops, informal markets, gardening, collective kitchens etc., are all activities that take place in those structures at different times of the day. The “open frames” would then be completed in a further step, transforming them into residences specifically designed for young couples or single mothers with children. Yet, dwellers would not just own – or rent – the units, but also participate in the co-managing programmes. Different housing typologies would be located on the other strips. A second housing type designed as live-work duplexes for artists would assure an exchange of rent for social service, as by collaborating with Casa Familiar they would contribute to the definition of educational programmes for children and families. Therefore, artists partner with families and Casa Familiar as co-producers. On a new strip a third housing type is meant to host two large families – for instance comprehending grandparents – equipped with shared kitchens. The fourth housing typology is the most flexible, comprehending accessory buildings as alternative housing, e.g. rentable office spaces or small studios.

The example of Living rooms at the border has particular importance in the discourse about relation, as it is a project that not only redefined housing as a system of economic and cultural interaction, but even interpreted relations as the element necessary to trigger the performance of a small plot into a social infrastructure, producing housing economies and social systems.

picture 4 (above): the model illustrates the diverse housing typologies designed for each specific strip and the different social exchanges they are dedicated to.

picture 5 (below): model’s detail.

(The Studio Teddy Cruz, 2010, author’s rework)
1.2.2 Vertical. 

SESC Pompeia and Gymnasio Vertical

In addition to the previously illustrated projects, two new cases are introduced as particularly exemplifying of densification projects enhancing relations along a vertical structure. The first case is SESC Pompeia (1977-86), a leisure centre designed by Lina Bo Bardi, most complete and mature work of the Italian-Brazilian architect. SESC (Serviço Social do Comércio) – a non-profit organisation supported by Brazilian trade leaders – commissioned Bo Bardi the task of restoring a dismissed factory complex into a leisure centre in Pompeia neighbourhood in São Paulo, an area whose inhabitants traditionally belonged to immigrants’ groups or the working class.

The programme envisioned by the commissioners was very wide: while a theatre, an exhibition space, a library and some workshops were accommodated on the ground floor in the restored industrial units, sport facilities were placed inside two newly built towers in the proximities. The latter were built on the opposite sides of the Águas Pretas creek, a potentially floodable valley running along the western side of the industrial complex. Because of such ground conditions, the sport facilities could have been located only on two plots of different sizes and divided by the floodable area: thus, the only reasonable solution within many constraints was that of two interconnected buildings.

Both towers are designed with a concrete structure, recalling the image of Brazilian seashores military forts: like two silos, they are consist of a strongly introverted character, retaining the social exchanges they imply within their borders. The circulation happens vertically within each building, as well as transversally through four double footbridges between the towers. The larger and lower one, based on a thirty by forty meters plan and five double-height floors above ground, hosts the sport centre: a swimming pool is placed on the ground floor, along with basketball, soccer and volleyball courts located in the next floors. Such facilities should be used, as Bo Bardi herself pointed out, for strictly leisure-related activities, and not for competitions. Only the swimming pool has a direct access from the boardwalk, whereas the others are only accessible through the adjacent tower. In fact, the circulation is vertically organized within the opposite tower and along the skywalks. Finally, within the concrete façade, unglazed irregular picture 6 (left): the two concrete towers seen from the outside.

(Iñigo Bujedo Aguirre, 2012, author’s own)
The design of Relation // Chapter 1

The matter of Relation

The bar was later replaced by spaces for office work.

Bardi had envisioned it. Although after the completion of collective life and social participation, exactly as Bo Bardi in Lima, 2013, p. 174 – individuals, along with their behaviours and practices, continued to live within this complex as protagonists. Framing architecture as a collective service, SESC Pompeia still promotes today a model of living and sharing within a general sense of community, enabling diverse programmes juxtaposed and sometimes overlapping situations of cultural and social contact and participation.

Gymnasio Vertical

The Gymnasio Vertical is a vertical sport facility designed by Urban-Think Tank. This architectural project, founded by Alfredo Bello and Humbert Klumpner and based in Caracas and Zurich, started as an NGO – Caracas Think Tank – aiming at conducting research on informality in Latin American environments. The Vertical Gym is one of their first projects aiming at "connecting the formal and informal city" (Navarro-Serrano, 2011, p.106). The project’s initiative started from a quite different issue in Caracas – as well as in the rest of Latin America – i.e. that most of the built environment is claimed by housing, leaving only a little space for public facilities, spaces for social exchange and aggregation. Thus, the environment where the project interventions is a confluent area, an informal settlement in Caracas, whose potentials are though acknowledged, thus legitimated, by giving local communities better accessibility to public spaces and structures. U-TT attempted to do so by developing "best practices of typologies that can be repeated in different areas of the world, but which get adapted locally" (du, p.106). Such initiative started in 2004 with the opening of the first vertical gym in Campeche, Caracas, followed by other three gyms built in the city and many others around the world, making the Gymnasio an exportable model, a kit-of-parts adaptable to any context – especially that of densely built urban fabrics – satisfying diverse demands of financial, social or ecological kind. Such purposes are accomplished by encouraging sustainable developments, involving modular designs and using prefabricated elements in order to design a general framework open to be reinterpreted by municipalities or communities according to specific local needs.

The general scheme for vertical gyms includes a running trail, a basketball field and other sport facilities positioned one on top of the other. The gym with its multiple floors is usually superimposed over an empty plot, therefore transforming the void into a dense multi-layered complex aiming at accommodating hundreds of people at the same time. The design structure includes three floors and a rooftop court, providing a vertical succession of spaces for plural recreational activities.

Moreover, it is designed so that it could be integrally assembled over a period of three months. Each vertical gym structure could be further integrated with specific facilities responding to needs of various kind, be them social, programmatic, typological or climatic. For instance, Gymnasio Vertical Petare (Caracas, 2007-11) includes on the ground floor a commercial base, providing small shops for informal vendors. Baruta Vertical Gymnasium 42 (Santa Cruz del Este, Caracas, 2007-11) was designed stressing particular attention to matters of sustainability including recyclable materials, rainwater gathering tanks, solar panels and wind towers. The one in San Antonio (Caracas, 2010) was integrated within the metro cable station La Ceiba, at the same time developing new public space and being a connection

The very rigid and plain volume of the building is overlapped, situations of cultural and social contact and participation. Framing architecture as a collective service, examines services related to the sport courts, such as bathrooms, changing rooms and lockers, along with medical facilities, exercise rooms and – originally – a bar. The services are split throughout eleven floors. The services are split throughout eleven floors. The very rigid and plain volume of the building is overlapped, situations of cultural and social contact and participation.

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Bardi had envisioned it. Although after the completion of collective life and social participation, exactly as Bo Bardi in Lima, 2013, p. 174 – individuals, along with their behaviours and practices, continued to live within this complex as protagonists. Framing architecture as a collective service, SESC Pompeia still promotes today a model of living and sharing within a general sense of community, enabling diverse programmes juxtaposed and sometimes overlapping situations of cultural and social contact and participation.

Gymnasio Vertical

The Gymnasio Vertical is a vertical sport facility designed by Urban-Think Tank. This architectural project, founded by Alfredo Bello and Humbert Klumpner and based in Caracas and Zurich, started as an NGO – Caracas Think Tank – aiming at conducting research on informality in Latin American environments. The Vertical Gym is one of their first projects aiming at "connecting the formal and informal city" (Navarro-Serrano, 2011, p.106). The project’s initiative started from a quite different issue in Caracas – as well as in the rest of Latin America – i.e. that most of the built environment is claimed by housing, leaving only a little space for public facilities, spaces for social exchange and aggregation. Thus, the environment where the project interventions is a confluent area, an informal settlement in Caracas, whose potentials are though acknowledged, thus legitimated, by giving local communities better accessibility to public spaces and structures. U-TT attempted to do so by developing "best practices of typologies that can be repeated in different areas of the world, but which get adapted locally" (du, p.106). Such initiative started in 2004 with the opening of the first vertical gym in Campeche, Caracas, followed by other three gyms built in the city and many others around the world, making the Gymnasio an exportable model, a kit-of-parts adaptable to any context – especially that of densely built urban fabrics – satisfying diverse demands of financial, social or ecological kind. Such purposes are accomplished by encouraging sustainable developments, involving modular designs and using prefabricated elements in order to design a general framework open to be reinterpreted by municipalities or communities according to specific local needs.

The general scheme for vertical gyms includes a running trail, a basketball field and other sport facilities positioned one on top of the other. The gym with its multiple floors is usually superimposed over an empty plot, therefore transforming the void into a dense multi-layered complex aiming at accommodating hundreds of people at the same time. The design structure includes three floors and a rooftop court, providing a vertical succession of spaces for plural recreational activities.

Moreover, it is designed so that it could be integrally assembled over a period of three months. Each vertical gym structure could be further integrated with specific facilities responding to needs of various kind, be them social, programmatic, typological or climatic. For instance, Gymnasio Vertical Petare (Caracas, 2007-11) includes on the ground floor a commercial base, providing small shops for informal vendors. Baruta Vertical Gymnasium 42 (Santa Cruz del Este, Caracas, 2007-11) was designed stressing particular attention to matters of sustainability including recyclable materials, rainwater gathering tanks, solar panels and wind towers. The one in San Antonio (Caracas, 2010) was integrated within the metro cable station La Ceiba, at the same time developing new public space and being a connection

The very rigid and plain volume of the building is overlapped, situations of cultural and social contact and participation. Framing architecture as a collective service, examines services related to the sport courts, such as bathrooms, changing rooms and lockers, along with medical facilities, exercise rooms and – originally – a bar. The services are split throughout eleven floors. The services are split throughout eleven floors. The very rigid and plain volume of the building is overlapped, situations of cultural and social contact and participation.
between the informal and the formal; thus, one building, whose programme is vertically organized including facilities of various kind, becomes a catalyst for urban and social change being integrated in the transportation infrastructure.

Therefore, U-TT in its practice investigates new methods to reconfigure the city, coming up with new experimentations that operate in the dimension of relations. Buildings such as the vertical gyms are actual devices that bring together and relate different stakeholders and disciplines involved in urban developments, such as municipalities, neighbourhood communities, architects, engineers, entrepreneurs, activists, etc.

Again, the matter of relation results at the core of the practice dealing with informality: intervening in such contexts in a political act - and not just a mere physical transformation - that must take into account conditions related to ethnicity, internal hierarchies, cultures, standards, environments, values, etc. Therefore, Gymnasio Vertical – as reported by the architects who designed it on their website – is more than a building; it is a piece of social infrastructure that reduced crime rates, promoted healthy lifestyle and strengthened social capital.

\[\text{picture 7 (above): the Vertical Gym El Dorado in Petare, Caracas, provides spaces for informal markets on the lower floors. (U-TT/Daniel Schwartz, 2012, author’s rework)}\]

\[\text{picture 8 (below): Vertical Gym in Barrio San Augustín, Caracas, connected with the rest of the city through a metro cable. (U-TT/Daniel Schwartz, 2012, author’s rework)}\]
The design of Relation // Chapter 1

picture 9: spatial diagram of the four analyzed projects. (author’s work)

Parc de la Villette - OMA, 1992
Living rooms at the border - Estudio Teodó Cruz, 2001-ongoing

The matter of Relation

SESC Pompeia - Lina Bo Bardi, 1977-86
Gymnasio Vertical - UTT, 2004-ongoing
On the basis of the concepts explained in this chapter, it is possible to draw certain conclusions. As anticipated in the introduction, public space is generally referred to as the privileged place for relations, where social exchanges assume a concrete form and thus can be experienced as such. However, such relational forms must not be pictured as extremely pacific or stagnant; on the contrary, they often imply a friction between a plurality of realities, communities, desires and imaginations. They are in fact born – as all of the above cited through a process of confrontation, during which oppositions are pointed out – by the recognition of a difference. As Chantal Mouffe terms it, relations are always based on a plurality of diversities that try to prevail one on the other. Each relation is thus hegemonic and finds in the public realm its battlefield, a term borrowed from biology to refer a system of relations to each other within the urban fabric. What deeply matters of social exchanges could be for communities but even relating different social realities, projects that function as relational devices points out how important matters of social exchanges could be for communities but even relating different social realities. In the same manner, OMA’s design proposal for Parc de la Villette in Paris – taking as a reference the 1950s ideas for social condescenders – exemplifies an attempt to influence human behaviours through urban space, designing different scenarios organized through horizontal strips and enhancing interaction by the insertion of certain relational devices – be they “points or confetti”. Ch’ titly Graw’s Living rooms at the border, is an innovative instance whose success is strongly based on the impact of human relations in order to design new units for dwelling and public gathering, he redifined the concept of density as the number of social interactions exchanged per square meter. Lanka Bo Rumb’s SESC Pompeia is an interesting case of a programmatic layering of activities distributed along a two separate vertical cores, yet granting a continuous connection within the two. UUT’s prototypes for the Vertical Gym, as the last example, shows how spatial situations that settle the demand of diverse groups and identities. Like membranes, they function as systems that sometimes combine different imaginaries, other times separates them yet allowing each social category to find its own corners and niches within the same environment. The following chapter illustrates the Tiergarten analysis. It must be read and intended while keeping in mind the general discourse on relation, but more importantly the concept of “sharing” or processes of spatial production in general. Relations usually matter in the design practice for those densification projects that aim at combining different programmes or communities within the same urban framework, structured around vertical or horizontal spatial organisations. More specifically, OMAs design proposal for Parc de la Villette in Paris – taking as a reference the 1950s ideas for social condescenders – exemplifies an attempt to influence human behaviours through urban space, designing different scenarios organized through horizontal strips and enhancing interaction by the insertion of certain relational devices – be they “points or confetti”. Ch’ tity Cruz’s Living rooms at the border, is an innovative instance whose success is strongly based on the impact of human relations in order to design new units for dwelling and public gathering, he redifined the concept of density as the number of social interactions exchanged per square meter. Lanka Bo Rumb’s SESC Pompeia is an interesting case of a programmatic layering of activities distributed along a two separate vertical cores, yet granting a continuos connection within the two. UUT’s prototypes for the Vertical Gym, as the last example, shows how spaces for relation can be also addressed as spaces for urban regeneration, not only providing new public spaces for communities but even integrating different social structures for relation.
The place, the individuals. Der Große Tiergarten
This chapter deals with the survey conducted on Tiergarten, already referred to as a place within which a plurality of communities, imaginaries and differences gather. Its use by individuals that belong to diverse social categories recalls utopic qualities of tolerance, coexistence and freedom within a general sense of community. Nevertheless, Tiergarten should not be imagined as an idyllic park, but rather as an obscure forest, made of dense shrubs, intricate paths and shaded clear, where mobility is defined by ambiguous levels of permeability and relations happen within borders that constantly shift and overlap. As Sandra Bartoli termed it, Tiergarten is an “obscure object of desire”, a point of contention by individuals who have diverse needs, dreams and wants. Tiergarten might be the most public space in Berlin, 220 ha of forest located in the very heart of the city, where the most intense forms of social relation manifest. Thus it cannot be simply intended according to the canonical elements that define an urban park; it is indeed an ensemble of tiny and particular anomalies gathered in an open system – as defined by Sennett – in which flora, fauna, urban space and its users are linked by mutual dependence. Moreover, in Tiergarten matters of ecology, urban planning and politics manifest as transgression. The study investigates Tiergarten’s spatial and environmental qualities, its practices and communities, its maintenance policies and management. The argument starts from the park’s history with a particular focus on the latest developments, starting from 1950, in order to understand the characters and conditions that characterize the area. Follows a description of some typical Tiergarten practices – gardening, gay-cruising, nudist sunbathing, birdwatching, informal dwelling – and the places – materials, atmospheres, vegetation, conditions – they are related to. All the informations presented in this chapter were gathered proceeding with two analyses, one top-down – investigating the Tiergarten through cartographic and bibliographic sources – and one bottom-up – realised during on-site excursions conducted between April and August 2019. Eight moments – or zooms – emblematic of Tiergarten were selected at the end of the excursions and are now presented in the following chapter, completed with drawings in order to better understand each spatial context and its features, as well as the practices it implies – specific dwelling forms, transgressive practices, spontaneous uses, etc. The park’s maintenance and restoration policies of the last 30 years are mentioned in order to introduce three further moments lacking those relation conditions previously described. The conclusion is that at the basis of Tiergarten’s functioning as a place for relation lays its spatial structure, source of innovation.

\[A concept expressed by Sandra Bartoli during the symposium Tiergarten. Landscape of transgression (04/07/2015) held at the Haus der Kulturen der Welt, Berlin. (For any further clarification see Paragraph 2.3).\]
10. der Große Tiergarten. The park and other significant buildings located within it.
2.1 Formation and location

Berlin's foundations were built in the thirteenth century, although Tiergarten's origin can be traced back much earlier than the city's history. Before the city existed, a marsh forest lied where Tiergarten is today, on a fertile wetland valley flowing from Warsaw to Berlin. In the fifteenth century the forest, sited just outside the medieval city's wall, was used as a private royal hunting ground. Tiergarten's first cartography dates back to this period. In 1698 the forest is represented enclosed by walls, but it is already possible to recognize some elements that are still present today in the urban fabric: for instance, the axis connecting the Brandenburg gate with Ernst-Reuter Platz, and the Grunewald, where finds place the Segenswiese – the victory column – another iconic monument of the city; within the city fabric, today's Museumsinsel – the museums island – is as well visible in the Spree river. This condition in the Tiergarten remained unchanged for three centuries, until 1765 when the forest was made public and opened to the city. Thus the fence was torn down and Wenzeslaus von Knobelsdorff - royal landscape architect between 1740 and 1786 - was charged of converting Tiergarten from a wild forest into a baroque pleasure garden (Rellensmann, in AA.VV. 2018) baroque salons, rooms, geometric alleys and labyrinths where extracted from the wild vegetation, within "insides" cut out through the dense woodland in order to make the forest more accessible, yet integrating them within the wilderness. As a matter of fact, Tiergarten, still and until its 1960's greenness, was still maintained in the parts where the vegetation remained untouched. The painting Großer Tiergarten von Tiergarten (Daniel Nikolaus, 1670), literally "community in the Tiergarten", illustrates how spontaneously and informally this place was lived by the society of the time: in the picture young aristocrats dressed in fine clothes chat while sitting on a moorland close to a pond; the majority is gathered around a statue, while a group of women is sitting on the dirt in a natural niche on the opposite side of the lake, hidden by the foliage. At a later time, between 1833 and 1839, the landscape architect Peter Joseph Lenné further modified Tiergarten's layout: taking inspiration from English parks, he removed more plants to make space for new clear and introduced a new system of ponds and streams - still present today. Nevertheless the attempt to domesticate the lush nature, Lenné himself recognized the difficulty of thinning out the Tiergarten, a forest - for him - with the mere characteristic of park rather than the opposite (Bartoli, 2014). In the following years, still under Lenné's guidance, Tiergarten was integrated with a series of anti-calendrical monumens sponsored by the Prussian government, in memoir of renowned royals and war victories. Probably such additions in the park provoked also changes in people's behav-

2 For any further information see Wendland, 1993. 3 The lateral Maria Sibylla Merian – in her essay “Der Große Tiergarten – Botanischhistorische Exkursion in Berlin-Mitte am 1. Juni 2008” – referenced old sixteenth century reports about Tiergarten which describe it as a swampy forest laying south of the Spree river, while another eighteenth century survey reports how diversified the park's biodiversity was at the time: specifically, 170 weeds, 34 mosses, 19 fungi and 44 different species of trees were registered.

4 Peter Joseph Lenné (1789-1866) was the landscape architect who served the Prussian Kind Frederick William III of Prussia.

5 An example is the Victory column itself, which was built to remember the 1864 Prussian victory in the war against the Danish, and is still today an iconic Berlin symbol.

6 More than 200.000 trees were cut down and only a hundred secular oaks are still standing today.

7 Between 1945 and 1949, the park that remained completely empty was divided into smaller plots and could be rented by citizens to cultivate vegetables (Wendland, 1993).
The design of Berlin // Chapter 2

The place, the individuals. Der Große Tiergarten

picture 15: diagram of Tiergarten’s historical evolution until current time. (Author’s work)
The design of Belkin // Chapter 2

picture 16 (above left): Citizens walking along the old Siegesallee, where celebratory statues were placed from the early 1900s. (Waldermar Titzenthaler, 1901 ca., Landesarchiv Berlin)

picture 17 (below left): Ice skating in Tiergarten. (Waldermar Titzenthaler, 1902 ca., Landesarchiv Berlin)

picture 18 (above right): A military parade hosted in Tiergarten. The picture is taken from the west end, in front of the Brandenburg Gate. (Unknown, 1933, Landesarchiv Berlin)

picture 19-20 (next page, left and below right): Cleaning and reorganization of damaged Tiergarten. (Willy Kiel, 1949, Landesarchiv Berlin)

picture 21 (next page, above right): Berlin citizens cultivating Tiergarten’s land. In the background, a post-war scenario, the damaged Brandenburger Gate and Reichstag are recognizable. (Willy Kiel, 1949, Landesarchiv Berlin)
A walk in Tiergarten in the time between 1946 and 1949 meant that one would start into a horizon of endless ruins, no matter from which side of the park one would start, and Tiergarten itself, or better, what was left of it, would be part of a landscape, but was part of the landscape itself: a really innovative concept for the time, to which was then referred as “zero-history” (Bartoli, 2018), still maintaining as a reference the ancient history of the city itself. Thanks to his great knowledge in botany and horticulture, Alverdes conceived a space that was meant as a habitat for plants, animals and humans all together. He – as Katrin Lesser-Syrac writes (Bartoli, 2018) – believed in the “power of plants”: he considered each plant as an individual, which in turn should have been sustained by the gardener without forcing them into a specific shape – opposing the traditional gardening practice. Thus the landscape architect decided to recreate the complexity of plant species by matching and intersecting different species of trees, shrubs, bushes and grass, recreating a wide biodiversitariy within the new Tiergarten. What particularly fascinated Alverdes of plants’ world, was its wide biodiversity – all of which came from the Berlin region: oaks, maple, linden, ash trees, willows and birches were all integrated in the new park and distributed within the area according to the more or less favourable conditions of the soil; moreover, those species were integrataed with autochthonous vegetable species, as the United Kingdom plants located around the Kgugskolonie.

Tiergarten’s formation, yet it was far from being an historical reconstruction. The first issue addressed by Alverdes’ project started from a process that started in 1946 in order to define a strategy for Berlin’s future development and ended with the putting in writing of the so-called Kollektivplan, i.e. the first masterplan for the reconstituation of the German capital after the war.

Alverdes’ design proposal operated an ambigous position in its relation with the site history, as it took inspiration from every historical moment that characterized Tiergarten’s formation, yet it was far from being an historical reconstruction. The first issue addressed by Alverdes from the ‘20s, in order to demonstrate the end of the Nazi hegemony in favour of democracy and, as a consequence, of a new manner of designing and thinking the city. Taking inspiration from the Garden city, the exhibit promoted a vision of the city that not only integrated in the new park and distributed within the area according to the more or less favourable conditions of the soil; moreover, those species were integrataed with autochthonous vegetable species, as the United Kingdom plants located around the Kgugskolonie.

2.2 Processes: Willy Alverdes and the Biotopemap. Tabula rasa

In 1950 with a reforestation plan designed by Willy Alverdes and of legislative decisions set out in the late 1970s.

Willy Alverdes was a landscape architect – and director of Tiergarten from to – who won a competition held in 1946: for the park’s reconstruction. His proposal must be considered within a wider context, defined by a process that started in 1946 in order to define a strategy for Berlin’s future development and ended with the putting in writing of the so-called Kollektivplan, i.e. the first masterplan for the reconstituation of the German capital after the war.

Alverdes’ design proposal operated an ambigous position in its relation with the site history, as it took inspiration from every historical moment that characterized Tiergarten’s formation, yet it was far from being an historical reconstruction. The first issue addressed by Alverdes in his design was the very need to fill the empty space left by the war damages as fast as possible. Thus, the Großer Tiergarten was meant as a place offered to the city and its citizens as a place for leisure and free time, while concealing the horrors left by the bombing stuck in Berlin’s memory. Through the replantation of the lost vegetation, Alverdes’ project started from a moment of “zero-history” (Bartoli, 2018), still maintaining as a reference the ancient history of the city itself.

Thanks to his great knowledge in botany and horticulture, Alverdes conceived a space that was meant as a habitat for plants, animals and humans all together. He – as Katrin Lesser-Syrac writes (Bartoli, 2018) – believed in the “power of plants”: he considered each plant as an individual, which in turn should have been sustained by the gardener without forcing them into a specific shape – opposing the traditional gardening practice. Thus the landscape architect decided to recreate the complexity of plant species by matching and intersecting different species of trees, shrubs, bushes and grass, recreating a wide biodiversitariy within the new Tiergarten. What particularly fascinated Alverdes of plants’ world, was its wide biodiversity – all of which came from the Berlin region: oaks, maple, linden, ash trees, willows and birches were all integrated in the new park and distributed within the area according to the more or less favourable conditions of the soil; moreover, those species were integrataed with autochthonous vegetable species, as the United Kingdom plants located around the Kgugskolonie.

This connection results evident by comparing two proposals for the Tiergarten: Alverdes’ from 1952 and one by Reinhold Lingner, member of the Planungskollektiv, from 1947.

8 Already the planning for Tiergarten’s reconstruction started on the 2nd of July, 1945, less than two months before the end of World War II. Such priority could express the importance that Tiergarten always had for Berlin and its citizens, recognized by the public institutions as well.

9 The Kollektivplan derives its name from the group that created it, the Planungskollektiv. Such masterplan was exhibited in an event organized by the architect Hans Scharoun – who at the time was municipal building officer – in August, 1946. That was, a few months after the fall of the Nazi regime. The exhibition – titled „Berlin plant/Erster Bericht“ – comprehended ideas and projects of plant species by matching and intersecting different species of trees, shrubs, bushes and grass, recreating a wide biodiversitariy within the new Tiergarten. What particularly fascinated Alverdes of plants’ world, was its wide biodiversity.

10 This is how the Tiergarten was renamed after the 1950 reconstruction, although today (as well as in this thesis) it is still generally referred to simply “Tiergarten”.

11 Less-Syrac, 1996.

12 Moreover, Alverdes’ studies at that time implemented scientific researches on matters of biology, botany and ecology.

13 Most of the uses of Tiergarten is theatre today, such as gay cruising and nudist sunbathing, were before World War II strictly forbidden.
picture 22-23: Newly re-planted vegetation along water courses in Tiergarten - right after the 1950s reconstruction (Bert Sass, 1952, Landesarchiv Berlin)

picture 24-25: Englischer Garten in north-western Tiergarten, designed by Willy Alverdes with typical British plant species. (Willy Kiel, 1952, Landesarchiv Berlin)
The key concept here was the basic rule for reforestation, i.e. growing an alternation of rapid and slow-growing species. As the soil itself had been heavily damaged from the bombing and the massive cut down of trees, the first step was necessarily healing the soil, regenerating the favourable conditions for the settlement of slow-growing species.

The estimated time for such process was of thirty years, after which Alverdes disposed to gradually cut down the fast-growing trees in order to facilitate the rise of the slow-growing ones. In addition, the planting of dense vegetation along the perimeter of Tiergarten contributed - and does such still today – to creating an internal micro-climate in the park, necessary to enhance the plant’s growth, by sheltering it from the stronger west wind currents.

Generally, Alverdes’ goal was that of triggering a compensatory mechanism: this was made possible thanks to a selection of fast-growing trees, such as the poplars, whose roots could clean up the soil, regenerating the favourable conditions for the settlement of slow-growing species.

Moreover, Alverdes opposed the recreation of military axes and celebratory monuments, even ordering the complete destruction of all the still-standing stumps after the war, on the contrary, he invested in the research for more naturalist forms, designing maintaining crossed alleys. The key was a variation of plants densities, which were wide grasslands as well as more introverted spaces.

However, the thirty years tree-felling plan was never enacted, due to legislative policies agreed upon in the late 1970s.

Right after the Berlin division in the two factions, Tiergarten remained completely included in West Berlin. Thus the park’s eastern edge – in front of the Brandenburg Gate – faced directly the wall’s west side: it became a peripheral area, part of the context of the West, which partly unattended and neglected by the gardeners. In this frame, during the 1970s, a new ecologist movement started to influence the way the city and the urban environment were conceived and approached. As a consequence, the Berlin Senate commissioned the so-called Biotopo Map, a mapping of all the biotopes present at that time in West Berlin, a tool that addressed the city as a habitat for animals and plants as well as humans (Bartoli in AA.VV., 2018). In the Biotopo Map all the unattended areas, such as Tiergarten, were conceived as a resource, a conception similar to that of ‘third landscape’ as theorized by Gilles Clement in the Manufac du Terroir paysagé (Éditions Sujet/Objet, 2006).

The place, the individuals. Der Große Tiergarten

14 A hawthorn designed by Alverdes himself during 1950s Tiergarten reconstruction, located in the north-western section of Tiergarten (location is marked on picture 10).

15 According to Hobert, the perimetral vegetation still accomplishes today its sheltering function in the park. Moreover, it affects the climate of the entire city by creating a cooling core attracting warmer winds channeled from the south by Park am Gleisdreieck and Tempelmüllerviertel (location is marked on picture 10).

17 The only exception made was for the so-called Lenné-Dreieck, Leoné’s triangle. This name designated a 4 ha empty plot located between Tiergarten and current Potsdamer Platz. Although the triangle belonged to the jurisdiction of West Berlin, it was cut out of the park’s perimeter and, subsequently, left empty for whole duration of Germany’s division.

In 1988 a series of processes for the property transfer from East to West started, while in West Berlin construction plans had already been made for the plot. This decision provoked a strong reaction from groups of biologists, scientists and ecologists, who used to attribute to the Lenné’s triangle a third-landscape value. Thus they decided to demonstrate and occupy the plot with tents. When the property transfer was made official, the plot entered under the jurisdiction of West Berlin, whose police immediately attacked the occupants. In order not to get arrested, more than 180 protestants climbed over the wall and escaped to the east, where DDR armies waiting to receive them and offered them breakfast. The same night, DDR armies brought the demonstrators back to West Berlin through the regular checkpoint in Friedrichstraße. This episode constitutes the only case in which civils where allowed to climb over the wall during Berlin’s division.

18 Gilles Clement stresses the importance of neglected and unattended spaces. He attributes to such places a value, as privileged areas where biodiversity is set free to develop and grow, describing neglected places as planet Earth’s reserve, always open to new re-inventions.
The place, the individuals. Der Große Tiergarten

The design of Belston // Chapter 2


picture 27 (right): Visitors observing the elephants at Berlin Zoo in Tiergarten. (Siegmann Horst, 1959, Landesarchiv Berlin)

picture 28 (above left): Gardeners on a morning break by the Haus der Kulturen der Welt. (Horst Siegmann, 1957, Landesarchiv Berlin)

picture 29 (above right): Chess players in Tiergarten. (Horst Siegmann, 1968, Landesarchiv Berlin)

picture 30 (below): Men fishing in the Spree on Gotzkowskybrücke. (Horst Siegmann, 1969, Landesarchiv Berlin)
in its very essence and are not always easily accessible to humans.

All these policies, events and decisions together enhanced the vast biodiversity that is still today beautifully hospitable in Tiergarten, generating a multitude of different spatial situations. Both conditions – according to Bartoli – led to a plurality of usages, by different communities, of the spaces in Tiergarten, intended in this thesis as a particular “device” for relations. The term “device” – or “apparatus” – is referred to according to the definition given by Foucault.

A thoroughly heterogeneous ensemble consisting of discourses, institutions, architectural forms, regulatory decisions, laws, administrative measures, scientific statements, philosophical, moral and philanthropic propositions.

(Foucault, 1972, p.194)

A very important point in this study is that such relations must not only be intended within humans, but also between the human and the non-human world. Tiergarten gathers all kinds of living species and – as argued in the following paragraph – functioning like a “device” it also relates humans with hawks, badgers, falcons as well as with poplars, oaks, maples and all kinds of common and rare herbaceous species.
In the introduction of this chapter, Tiergarten has been described as the maximum expression – almost the full public space in Berlin’s context. A public space that is, as it will be precisely described in the following parts of this chapter, clearly framed within Mouffe’s conception of “agonism”, where different social groups – along with their practices, imaginaries, desires and characteristics – constantly confront or take the distance one from the other. As previously mentioned, Tiergarten cannot be described only according to the standards of a city park: it is a forest, sometimes a place for demonstrations and mass events, a naturalist reservoir, a space for leisure and entertainment. Notwithstanding such plurality of uses, Tiergarten was never divided in themed areas, nor was a zoning plan for the park ever conceived. Rules of governance are being constantly transgressed, as the only key that defines the usage is contingency, in a place that bears spontaneous practices constantly subjected to new interpretations and shifts. Thus relations – of various kind, be them social, political or ecological – are defined within edges, or “membranes” constantly redrawn and disconnected.

Wandering on a warm Saturday afternoon through Tiergarten, it is possible to observe groups of parents sitting in the shadow and looking at their children playing on the grasslands and, a few meters further, nudist sunbathers laying in the sun on the Fleischwiese.20 Tiergarten does not only gather joggers and cyclists, but also homeless men that dwell in the deep and intricate vegetation – which offers them a shelter from the coldest winds. Moreover, botanists as well as gardening lovers visit the park to study and monitor its trees and grasses, so as volunteers21, as well as groups of birdwatchers that meet quietly more often than during the park looking for rare birds’ species22 to observe. Tiergarten is a place that bears relations, along with acts of inclusion and exclusion. Here nature – and the multiplicity of landscapes it bears – can be considered as the relating condition that softens the frictions that such a diversified cohesion of different communities would involve. Quiet, social groups are divided within the spaces of the park, separated by natural shelters and filters. Thus Tiergarten is spontaneously divided in functional areas, although their edges are not clearly marked. They are dedicated to gardening, cruising, birdwatching, mushrooming, sleeping, drugs dealing, etc., as their perimeters are marked by marked lines, by ambiguous “membranes” that are constantly shifted, transferred, repositioned and broken. Many objects, scattered around the park, attract certain individuals rather than others. They are not always related to the practices they enhance, although it could be argued that they function as particular “devices” for relations.23

Many objects, scattered around the park, attract certain individuals rather than others. They are not always related to the practices they enhance, although it could be argued that they function as particular “devices” for relations. For instance, the Löwenbrüke – located located north of the Neuer See – is a popular gay-cruising meeting spot: everyday, during the daily as well as nighttime cruising, gay-cruisers meet up, sit behind the shrubs and wait for encounters looking for intimate contacts. Moreover, botanists as well as gardening lovers visit the park to study and monitor its trees and grasses, sometimes even doing a bit of maintenance themselves as volunteers24, as well as groups of birdwatchers that meet quietly more often than during the park looking for rare birds’ species25 to observe.
ight hours, men of various age – some of which as a sex worker – sit on the western side of the bridge and wait, cheering at the visitors that pass by, mutually relating to their stranger encounters by exchanging silent hints 25. Both the artistic and natural heritages accomplish the same function: while the former – comprehensive of the statues and sculptures positioned in the park – generate spaces for relation for tourists, the latter – its particular bird species and rare plants – is a device that gathers birdwatchers as well as gardeners.

Thus, in Tiergarten relations happen not only within the human world, but also between humans and non-humans: they are the species’ meeting point, manifested in the respect that birdwatchers have for the habitat and animal’s quietness; in the activism that many amateurs have for monitoring and taking care of the plants; in the privacy offered for intimate encounters within shrubs and grasses, left growing undisturbed; and again in the cosiness provided by the trees sheltering homeless’ informal settlements.

25 Even though since 2009 the bridge has been closed for a restoration due to a structural failure, it still functions today as an important meeting spot as described in this paragraph.
The place, the individuals. Der Große Tiergarten

The design of Relation // Chapter 2

picture 33 (above left): amateur gardeners taking care of plants in the Steppengarten. (source AA.VV., 2014)

picture 34 (below left): a birdwatching tour in Bellevueallee. (Susanne Schinke, 2015, NABU Bezirksgruppe Mitte)

picture 35 (centre): nudist sunbathers in Fleischwiese. (author’s photograph, June 2019)

picture 36 (right): children’s birthday party in Tiergarten. (author’s photograph, August 2019)
The place, the individuals. Der Große Tiergarten

The design of Relation // Chapter 2

picture 37 (left): the love parade in Straße des 17. Juni with the Victory column in the background.
Barbara Esch-Marowski, 1999, Landesarchiv Berlin

picture 38 (right): an informal settlement in Tiergarten.
Heba Khamis in Black (book), 2018

picture 39 (left): a homeless sleeping on a bench.
Heba Khamis in Black (book), 2018

picture 40 (right): a gay cruis- er and a sex worker.
Heba Khamis in Black (book), 2018
Here follows an in-depth description of Tiergarten’s representative moments, emblematic of spatial situations and organisations that are recurrent throughout the whole area. Each moment is presented in its spatial structure, as well as in its materiality and uses. The selected cases are extracted from their context through coring; they are all located on the same axis, running from Straße des 17. Juni towards south, like Sudoku boxes thus, they exemplify how different degrees of permeability, opaqueness and porosity can be experienced according to an irregular succession and not a gradient.
2.4.1 Straße des 17. Juni

Straße des 17. Juni defines the strongest urban axes that crosses Tiergarten from east towards west. In its middle, from the Große Stern other three main roads spread out, dividing Tiergarten in other five smaller sections. After its widening to host military parades during the Third Reich, Straße des 17. Juni measures today about 45 m width, has two carriageways for each travel direction and hosts numerous demonstrations and public mass events. Every year on the 9th of October it hosts Germany’s reunification day celebrations, as well as the Love parade and other demonstrations that start or culminate in this street. Between 2006 and 2015 Straße des 17. Juni hosted numerous Fanmeile, showing the football matches of the World Cup.

The street derives its name from workers’ strikes against the socialist movement started from 1953 in East Germany. On the 17th of June the first of many national strikes, involving more than seven hundred cities around DDR and more than a million people. Such demonstrations were harshly repressed from the soviet army; thus, from 1953 until Germany’s reunification, the 17th of June was always celebrated as national holiday all over West Germany.

The separation of the green areas from the vehicular flows is marked by a strong border. Along Straße des 17. Juni’s both sides, a tree line traces the division between car space and pedestrian and cyclist lanes. A bit further, a hedge that runs continuous – only interrupted in correspondence of the entrances – along the external edge marks the end of the road and the beginning of the proper green areas. While Straße des 17. Juni is characterized by wider axial visibility – reason for which it is apt at hosting many mass events and marches – although it does not allow any visibility towards the inside of the park as a matter of fact, along the edges the vegetation’s density was increased in order to grant an internal micro-climate to enhance plants growth. This also contributes to enhance in the visitor’s mind – who leaves the street side to penetrate the intricate vegetation – the sensation of entering an actual forest, as the sound of cars gets softer and softer, muffled by the tangled foliage. Finally, Straße des 17. Juni is also the only place in Tiergarten where night lighting is present, while the rest of the park is completely dark during the night hours.

For any further information see Sandra Bartoli in AA.VV., 2015.
2.4.2 Alleys

Before proceeding with the description of the connections internal to the park, it is important to point out that the current alley and path system already existed before Alverdes’ design in 1950, although he decided not to reconstruct the straight axes characterized of a more military aspect (Bartoli in AA.VV., 2019). The latter where later integrally reconstructed, beginning from the fall of the wall until 201839, while the former – with which this paragraph deals – more curvilinear, are a result of Alverdes’ project.

From the moment the park is entered, the paving is almost completely absent. The large alleys running throughout Tiergarten are thus simply defined by dirt ground and, sometimes, their edges are marked by a 20 cm high fence, underlining the beginning of grasslands and woods. One could abandon those alleys anytime by simply overstepping the short fence to enter the denser vegetation. They cross the park shifting from different spatial situations: sometimes they cross clears, sometimes they are completely surrounded by intricate vegetation and do not grant any visibility outside their own path, generating a sense of surprise at every turn. At the same time, there is no hierarchy that establishes a traffic order within the paths: every way is both cycling and pedestrian and there is no lane distinction. Only a few benches, trashcans, touristic maps and direction signs constitute the urban equipment placed along the alleys; anything else – street lamps or covered space – is absent.

39 For any further information see paragraph 2.5.1.
2.4.3 Woodlands

Many forestry areas surround paths as well as woods, providing an increasing degree of opacity. Biodiversity is here richer, as plants can grow undisturbed and supporting each other, creating complex patterns made of leaves, branches, foliage, shadows and colours. They adapt to human’s passage as paths are no longer defined by design, but rather by visitors’ perpetual walking along the same directions.

According to the geographical location within the park, woodlands host different activities that were born spontaneously. Close to the Venus Basin, Steppengarten’s designated areas for gardening result almost impene- trable given the shrubs’ density: a wide naturist moor just a few minutes’ walk from Straße des 17. Juni. This is the only place remained in the Tiergarten – after 2006’s reconstruction of the Venus basin – where plants typical from the Steppes - such as lavender, mulleins and a wide selection of weeds such as dwarf feather grass and the little bluestem - can be found; those are continuously cultivated and cured by many volunteers who freely joined the association. Other areas in the woods, especially those close to the Löwenbrücke, have been

an iconic gay-cruising meeting spot since the 1950s30. Such context presents very thick shrubs and bushes, as well as dense foliage that contributes to creating a sense of secrecy and privacy within the twilight. Every day men of all ages and social status hang out in this part of the park looking for quick encounters, standing by the bridge statues or waiting further in the darkness, recognizing each other thanks to explicit signs and attitudes. Moreover, woodlands are also home for many protected bird species, some of which red listed. An analysis surveyed in 2010 revealed that at the time 82 different species of birds lived in Tiergarten. Birds attract to Tiergarten many birdwatching lovers, alone or in organized tours, looking forward to spot rare animals within the nature.

30 Such practice started here in the late 1920s when many gay bars were opened in Berlin and, notwithstanding the harsh repression during the 30s, cruisers started meeting again after the trees were replanted in 1950. West Berlin’s municipal author- ities tried again during all 1970s to suppress such practice, as the police tried to banish from the park everybody who was caught cruising in Tiergarten. Later on, from the mid-1980s, cruising began again to be widely practiced near the Löwenbrücke, until today, becoming an iconic practice of the Tiergarten.
2.4.4 Clears

Dense woodlands always enclose clears, grassy areas with low weeds surrounded by thicker vegetation. Clears are mostly empty, except a few trees with large foliage that create shadowed areas around which people gather. Clears look like sponge pores within Tiergarten’s vegetation. They grant a high degree of visibility within their own borders, although they are often sheltered from the outside by the shrubs and trees that surround them. Clears are usually lacking urban equipment, apart from a few small relational devices randomly placed: two showers have been installed in the western Tiergarten, a few table tennis tables are scattered around the whole park.

The activities that happen here are the most diverse: playing, resting, reading, picnicking, as well as nudist sunbathing. This last practice mainly happens on the south-west of the Große Stern, in a relatively big area close to car streets: the so-called Fleischwiese, or flesh-meadow. This is densely attended during the warm seasons by the Berliners – of all ages, but mostly by men – to lay naked under the sun and socialize.

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31 Both showers were built in the 1980s, when a generous donation was made to Tiergarten’s administration on the condition that a certain amount of money would have been spent to install them (Bartoli, 2014).
Many of the more intricate paths are not directly accessible from the clears, but it is necessary to walk further in the woodlands in order to cross them. Here trees, shrubs, bushes and leaves are so thick that one could barely see outside the path itself. Most of such paths are part of 1980s Tiergarten project, they are sometimes marked by a stone paving and always surrounded by higher trees or bushes. They represent the peak of the circulation climax - as conceived by Alverses in his 1950 design - where visitors are guided from the built environment, through alleys, woodlands, clears and eventually paths to the most hidden spots within the dense vegetation. In such introverted areas, some of the most intense forms of social relation are exchanged.

In northern Tiergarten, an open-air drug market finds place within the thicker vegetation (Baers in AA.VV., 2019), while some spots in the south-western section are commonly known as meeting places for male prostitution.

As described by the Egyptian reporter Heba Khamis, over a hundred customers visit the park every day to meet sex workers who are mainly Iranian or Afghan refugees. Nightingale couples used to live in Tiergarten, who found in the woodlands the materials necessary to build nests and reproduce. In the following years, the administration, in order to discourage certain kinds of behaviours, decided to cut down many shrubs and bushes. As a consequence, in 2015 only eight nightingale couples were surveyed (Bartoli, in AA.VV., 2019). This fact proves how strong the mutual relations between humans, animals and nature can be: an act of nature management coincides with an action of social control, having consequences on the fauna as well.

In Germany is legal for consenting adults since 2002.
2.4.6 Riverbanks

There are two main water streams in Tiergarten, Neuer See on the west and Tiergartenwässer on the east. Both include small islands that can only be reached by water, although most of them are protected areas because of the species of birds that inhabit them: in particular, on the small islands in the Neuer See live hawks, common moorhens and buzzards. Moreover, in the north-west of Tiergarten a marshy pond can be found: the Fauler See, whose surface is completely covered by green algae, thus making it impossible to look beyond its surface. Each stream with its riverbanks defines small niches that are always a bit hidden from the paths that run parallel to them, becoming an important place of social exchange. Sometimes a few benches are located along those edges, hidden behind high bushes and by the thick foliage.
The place, the individuals. Der Große Tiergarten

The design of Relation // Chapter 2

picture 41 (left): a bushy meadow in the Steppengarten Berlin’s park area (author’s photograph, august 2019)

picture 42 (right): Fauler See, a pond in north-western Tiergarten; its surface is completely covered with algae. Daffodils grow on its edge, while a small island is visible on the background (author’s photograph, august 2019)

picture 43 (left): alley surrounded by thick vegetation (author’s photograph, august 2019)

picture 44 (right): a path in the forest, defined by the ‘visitors’ steps rather than a design (author’s photograph, august 2019)
The place, the individuals. Der Große Tiergarten

The design of Relation // Chapter 2

picture 45: one of many Tiergarten’s meadows, a deer-cut sheltered by the thick foliage. (author’s photograph, may 2019)

picture 46 (left): an introverted path branching out from a wider sinuous alley. (author’s photograph, August 2019)

picture 47 (right): The Rosengarten. Located at the very heart of the park, it is surrounded by a thick layer of trees and bushes. Inside, a wide range of rose varieties as well as other flowers are cultivated by Tiergarten’s gardeners. (Barbara Esch-Marowski, 2001, Landesarchiv Berlin)
picture 49 (previous page, left): some shrubs define a niche along the Neuer See. (January 2019)
picture 50 (previous page, right): a stone paved path surrounded by high grasses. (Author’s photograph, January 2019)
picture 51 (left): the path continues within thicker and higher vegetation. (January 2019)
picture 52 (right): the path ends in a small clear by the water-enclosed within thick shrubs. Thus, visitors, walking along the paved way, are guided through different degrees of permeability and spatial situations enhancing diverse relational exchanges. (Author’s photograph, January 2019)
2.4.7 Zoo

The Berlin Zoo is on the south-western edge of Tiergarten. This hybrid structure is still today an iconic erotic attraction of the city; at the same time, it is a place dedicated to learning and scientific research. Nevertheless, when it was opened in the early '20s, the zoo represented a symbol of colonial power, whose pavilions' architecture directly recalled that of exotic countries subjected to colonial dominance. It was the zoo's directorate itself that in 1925 organized an expedition to Ethiopia in order to capture new wild animals to be exhibited and studied. Moreover, from the time of its opening, the zoo was also used to host parties and events organized by politicians and diplomats, who wanted to impress their guests by exhibiting exotic wild animals. Many of those were organized on the wide restaurant terrace, jutting out on the flamingos' fence, creating light illusions to impress the guests.
Characterized by a strong symbolism, the congress hall was built for the Internationale Bauausstellung (Internationale Bauausstellung) in 1959 as a gift from the United States government representing their friendship and collaboration with West Germany.

The big auditorium is located at the north-western edge of Tiergarten, a strategic position as it could have been seen from the eastern side of the wall in the DDR section as well. A symbol of power, financial stability, collaboration and freedom, as well as of engineering innovation. American architect Hugh Stubbins designed the building characterizing it with a wide open terrace, on the top of which runs an hyperbolic wood in reinforced concrete\(^\text{33}\). On the quadrangular ground floor can be found services, spaces for temporary exhibits and a restaurant. On the first floor, accessible through the terrace, there is a wide oval auditorium. The terrace instead is accessible through a self-standing concrete staircase, always open at every hour of the day and night.

Due to the peculiar form of the roof, the Haus der Kulturen der Welt is commonly known within the Berliners with the name Schwangere Austern: “the pregnant oyster”.

From 1989 the congress hall is commonly referred to as Haus der Kulturen der Welt, which is the name of the association that is since then in charge of organizing the various events throughout the years. The initiatives comprehend visual arts, literature, science, music and dance. Before the fall of the wall, most of the events were related to either American or German culture, although now they mostly promote foreign cultures, in particular from the African and Asian continents – thanks to the involvement of many non-European curators.
The design of Belzón // Chapter 2

picture 53 (left): the giraffes’ pavilion at the zoo slightly recalls Byzantine architecture. (Heather Cowper, 2009, flickr)

picture 54 (right): the zoo entrance. Like many other pavilions, directly recalls the architecture of the countries colonised by Germany during the 1920s— in this case, China. (Jean-Pierre Dalbéra, 2011)

picture 55 (above): the Congress hall accesses on its southern side. The main one through the self-standing staircase and the terrace, a secondary one from the street's level. (Daniel Vorndran, 2013)

picture 56 (below): entrance to the congress hall on the wide HKW’s terrace; the latter is always accessible to the public at every hour of the day. (Metodi Popow, 2017, imago)

The place, the individuals. Der Große Tiergarten
Healing Tiergarten’s maintenance (and Berlin’s parks in general), there are two bodies: the Bezirksamt Mitte and the Landesdenkmalamt. The former is one of the twelve districts comprehended in the state Berlin, in which Tiergarten is integrally included; the latter is the state office in charge of historical buildings, gardens and landscape preservation. There is a wide collaboration between both bodies, despite Mitte’s administrative policies are more leisure-oriented, whereas Landesdenkmalamt once promote the restoration of monuments are historical parks in the park (Tate, 2015). Generally, all the funds used to take care of the plants and manage the park derive from the general budget assigned by the Berlin state to each district and the income from the events organized in the park over the year. As a matter of fact, in the last twenty years such budget for the maintenance of green areas decreased of 60%: actually, in 1991 the administration disposed of four directors in charge (Tate, 2015). The current maintenance plan was written during the 1980s, in order to contain costs. Nevertheless it is important to point out that not only the designated gardeners are the ones that care plants, but also, as already mentioned, many citizens (amateurs as well as professional entomologists, dendrologists and biologists) that spontaneously take care of Tiergarten’s vegetation as volunteers (Rohner et al, 2017).

After Germany’s reunification in 1989, Berlin’s municipality promoted the reconstruction of some of those military areas that were excluded in the restoration from 1950, as well as the addition of celebratory statues. The latter, just like “exclamation marks” – term borrowed from Stamos – attract tourists that everyday gather around them. Such interventions – assured between 2006 and 2009 – were promoted by the Landesdenkmalamt director from 1978 to 2011, Klaus-Henning von Krosigk. As pointed out by Ed. Sennett, in the last twenty years such budget for the maintenance of green areas decreased of 60%: actually, in 1991 the administration disposed of four directors and a hundred gardeners only for Tiergarten, whereas today only one director and twenty gardeners are still in charge (Tate, 2015). The current maintenance plan was written during the 1980s, in order to contain costs. Nevertheless it is important to point out that not only

2.5 Maintenance and recent transformations

Clears, paths, alleys and all the aforementioned spatial situations contribute together – for the way they were designed by Willy Alverdes – in making Tiergarten a device for relations. Yet there are places in Tiergarten that do not enhance the environmental conditions – i.e. a reduced degree of visibility or permeability defined by natural filters, an ambiguous arrangement of the de
designed spaces open to interpretation, etc. – necessary for specific forms of social exchange and, at the same time, present critical issues in terms of ecology.

In order to address such matter, it is first necessary to understand what are the bodies behind Tiergarten’s maintenance policies and how they operate, specifically referencing the latter transformations actuated over the last thirty years.

Germany is divided into sixteen federal states, out of which Berlin – exactly like Hamburg and Bremen – is governed as a city-state.
The place, the individuals. Der Große Tiergarten

subjected to most interventions. The findings revealed that the number of biotopes had decreased. A loss for an area that before the fall of the wall used to host not only rare birds and herbaceous species, but also gay-cruising practices while being a research terrain for biologists and botanists. More recently, Rohner contributed to the making of a new maintenance plan, after a budget increase thanks to the selling of plots adjacent Tiergarten's perimeter. Precisely, the earnings derive from the money compensation (in German Ausgleichsmaßnahme) that the administration received for the loss of ecological heritage after the construction of Diplomatenpark, south-west of Tiergarten: a plot that once belonged to the park, where today are located residential buildings.

In the following pages, the argumentation proceeds with a description of the latest interventions on Tiergarten, mainly focusing around the reconstruction of historical axes and the Venus basin.
2.5.1 Military axes

As testified by two historical maps dated 1985 and 1994, many of Tiergarten baroque axes have been reconstructed as big Alleen, with a more military character. Such axes are the ones spreading from Zeltenplatz – in the north-east – Fasanerieallee – close to the Victory column – and Bellevueallee – in front of the Bellevue castle.

The axes system was in part already present in many older Tiergarten maps: the ones branching out the Victory column can be already traced in the 1698 chart, whereas another 1765 map shows the Bellevueallee crossing the Tiergarten diagonally and Fasanerieallee on the western side. Right before the war, in a map dated 1936, all the cited axes can be recognized. Later on, in 1985, a map shows Tiergarten thirty-five years after the beginning of the replantation: no military axis is present, exception made only for half of the Bellevueallee in the southern half of the park. Five years after the fall of the wall the majority of such axes had already been reconstructed as proved by a 1994 map. In addition, the path system in the Großer Hein – south-eastern Tiergarten – underwent a restoration process as well in the following years: while in the 1994 map it was still drawn as it was conceived by Alverdes, only crossed by one path and mostly characterized by green spaces of different densities, it is today crossed by two other mirrored curve paths, constructed in 2006, on which a series of contemporary sculptures and monuments are positioned. In the 2011 survey, Rohner registered in this area the loss of seven herbaceous species – along with other two species that stopped growing spontaneously and thus can currently only be found in Steppengarten’s designated area (Rohner, 2011, p.10), where they are cultivated by the volunteers association. Until the end of 2018 the whole axis system was restored – as pointed out by Bartoli (in AA VV., 2019).

The character of such axes distinctly contrasts the rest of the park, as almost lacking vegetation they grant a too high degree of visibility and do not allow a complete immersion within the park and its nature; instead, they contribute to creating a more rigid and formal atmosphere – one which Alverdes openly refused in his design – which does not leave enough space for spontaneous uses as it happens in the rest of Tiergarten. Alverdes project is thus distorted.
2.5.2 Venus basin

Another recent transformation is the one that underwent the Venus basin, located in the southern-east half of Tiergarten, as part of a project that modified the whole eastern side of the park—involving as well the aforementioned paths in the Großer Heinz. Such reconstruction was directed by von Kroßk.

The basin was first designed by Wenzeslaus von Knobelsdorff in the eighteenth century: it had a strongly geometric perimeter and, at one end, there used to be a statue of goddess Venus. In 1830, Lenné significantly increased the basin’s size and depth, in order to integrate it with the water streams’ system that he was designing in the same years. Later on, the basin was renamed Gol’dfishteich, “goldfish pond”, when the Russian royal family donated a variety of goldfishes to the Prussian empire. Around the end of the nineteenth century, Venus’ statue was replaced with a sculpture celebrating three German musicians’ one can be found today on the southern edge.

Notwithstanding, in 2006 von Kroßk promoted another reconstruction intervention, this time exactly as it was designed by Lenné in 1830. Such intervention happened in conjunction with the removal of Entlastungstraße. The recent renovation integrally deleted Alverdes’ actions, while trying to give to the ex-Goldfischteich the exact outlook it used to have in the nineteenth century. The perimeter was again redefined according to rigid geometries, a lighting system was installed and the access from Straße des 17. Juni completely cleared from its vegetation, granting a higher level of visibility from the busy road. After removing great part of the steppes vegetation, cherry trees were planted along the basin’s both sides - another reference to the eighteenth-century outlook.

Such interventions were subjected to harsh critics by the association Steppengarten Berlin, perceiving von Kroßk’s actions as a damage to the entire plan developed in 1950. However, Steppengarten Berlin members continue to cultivate part of the lost vegetation in their designated plot which is right on the eastern side of Venus basin.

38 This was a vehicular street that crossed Tiergarten north to south, connecting Berlin Central Station with Potsdamer Platz. With the 2006 works, the street was replaced by a tunnel and on its surface new vegetation was planted.
39 Even though Venus’ statue was never replaced there, the pond was again renamed “Venus basin”. Indeed, a copy musicians’ one can be found today on the southern edge.
40 For any further information see, http://steppengarten.de/de/garten/geschichte.html (last checked on 28/12/2019).
The place, the individuals. Der Große Tiergarten

The design of Relation // Chapter 2

picture 58 (left): current Zeltenplatz in 1985 (above) and 1994 (below) completed with the reconstructed axis system branching out. Southern of Zeltenplatz, the northern half of Bellevue Allee can be distinguished in its 1985 and 1994 configuration. (Histomap, Landesarchiv Berlin)

picture 59 (right): Fasanerie allee as designed by Albers represented in a 1985 map (above) and in 1994 after its reconstruction according to its older baroque outlook. (Histomap, Landesarchiv Berlin)

picture 60 (above): the northern half of Bellevue Allee directly facing the palace. The alley presents a higher degree of permeability and visibility after its reconstruction. (Markus Wächter, 2018, Wächter)

picture 61 (below): Fasanerieallee after being renovated as a military axis. Celebratory prussian statues have been located at both its edges, the maximum level of visibility is granted within the whole street from one end to the other. (Julius Ahn, 2015, Flickr)
The place, the individuals. Der Große Tiergarten

Chapter 2

The design of Belotion

picture 62 (left): the Eastern Tiergarten in 1985 before (below) the 2006 renovation and today (above). On the east the former Goldfisch pond can be distinguished as designed by Alverdes in 1950 and today after the reconstruction of the whole axis system. (Landesarchiv Berlin)

picture 63 (right): The Goldfisch pond in the 1930s, as designed by Lenné during the second half of the nineteenth century. The perimeter is strongly geometric and symmetric, a small fence encloses the pond's edges. (Waldemar Titzenthaler, 1930 ca, Landesarchiv Berlin)

picture 64 (above): a picture of the Goldfish pond taken before 2006, testifying its look as it was designed by Alverdes: a more natural and sinuous silhouette surrounded by more thick and dense vegetation comprehending thick foyages, shrubs and daffodils. (Maria-Sofie Rohner, 2011)

picture 65 (below): a more recent picture of the pond, after the renovation. The form is again defined within a geometric perimeter, the fence has been reinstalled and the vegetation is different as well: cherry trees have been planted along the edges, as is reference to the baroque period. (Thomas LeBas, 2014, minigram)
In conclusion, Tiergarten as a case study – for the way it was designed in the post-war and the variety of practices it comprehends – allows many reflections around matters of dwelling and relations. Tiergarten is, notwithstanding its natural origins, a human product; it is thus artificial. However it has reached a certain degree of "autonomy". Some of Tiergarten’s features, such as usage, scale, vegetation’s density and diversity, make it “incommensurable” (Bartoli, 2015, p. 10) and it is for this reason apt at triggering mechanisms that do not depend upon human’s intervention. Like a certain degree of “autonomy”143. Some of Tiergarten’s features, such as usage, scale, vegetation’s density and diversity, make it “incommensurable” (Bartoli, 2015, p. 10) and it is for this reason apt at triggering mechanisms that do not depend upon human’s intervention. Like a certain degree of “autonomy”41. Some of Tiergarten’s features, such as usage, scale, vegetation’s density and diversity, make it “incommensurable” (Bartoli, 2015, p. 10) and it is for this reason apt at triggering mechanisms that do not depend upon human’s intervention. Like

For instance, Tiergarten’s mass plays an important role in regulating the climate of the city, as it absorbs and cools the wind currents coming from southern big open spaces, like Tempelhofer Feld and Park am Gleisdreieck (Hohent), 1962). Moreover the neglected woodlands reached such a density degree that they result impenetrable to humans; thus their quality in terms of biodiversity confers them the same values attributed to the third landscape by Gilles Clément144.

This factors allow to intend Tiergarten as a product of both nature and humans together, related – according to Bartoli – by mutual dependence. Resuming Sennett’s conception of the Open City, Tiergarten is regulated by an open system whose complexity, given by distinguished parts, could be retraced in its wide biodiversity; simple rules, like those of replantation and the thirty-years tree-falling programme, generated something extremely complex in terms of vegetation patterns and usage; both conditions could have not been foreseen, but they were both triggered by a known beginning, i.e. the decision of interrupting the cutting down of trees and the Biotopemap of neglect; all these events and conditions together contributed in the definition of auto-regulatory processes within the park, making it “incommensurable”.

What are then the conditions that allow such a variety and plurality of practices and communities to co-habit Tiergarten? From the conducted analysis, it is clear that is not zoning the determining key. Different social groups move informally and chaotically throughout the park, within edges marked by membranes rather than barriers.Opacity – according to Glissant’s given definition – can be definitely retraced as Tiergarten’s determining condition, allowing as many communities to share the same spaces, sometimes hiding from each other. Here nature is the key-element determining opacity. Tiergarten’s opacity depends upon his trees, shrubs, mansematic and other all together attributing to each spot a certain level of permeability. Relations, along with every form of social exchange, such as that of Berlin – Tiergarten’s alveolar structure is a condition implying that quality of opacity necessary for gay cruisers, botanists, birdwatchers, joggers, families and many others Tiergarten represents a space in the city that goes beyond the canonical definition of the third landscape. Thus Tiergarten’s spatial structure is alveolar. This implies the idea of “permeability” distance that “porosity”, as intended by Bernardo Secchi in his project for Paris. Forms of relation such as co-habitation, sharing and tolerance manifest in Tiergarten as a “disjunctive synthesis” or “inclusive disjunction”, both terms used by Deleuze to describe those relational forms that are caused by distancing, detachment or disconnection. Such concept could be further enhanced by the examples described in the paragraph 2.5, where the recent thinning of the vegetation and the substitution of nature-inspired forms designed by Balducci with historical reconstructions – lacking those natural filters provided by the plants – resulted in a decrease of social exclusiveness. In such quality lays innovation. In reference to the first hypothesis sustained with this thesis, in a developed country’s metropolitan environment – such as that of Berlin – Tiergarten’s alveolar structure is a condition implying that quality of opacity necessary for gay cruisers, botanists, birdwatchers, joggers, families and many others Tiergarten represents a space in the city that goes beyond the canonical definition of
a park: trees, shrubs, streams and grasses – working like membranes – surround and define niches, actual insides gathering communities, realities, imaginaries, desires.

In conclusion, the result gained from the conducted analysis is that Tiergarten, because of the way it was designed, does enhance relations and affect matters of socio-spatial inclusion or exclusion, functioning as a foucaultian “device” of relation. Relations themselves cannot be designed or programmed, although Tiergarten’s spatial structure affects those mechanisms that produce relation such as proximity, zoning, the distribution of public equipment or quantitative and qualitative parameters. What Tiergarten is or represents for its communities must not be neglected in the urban planning practice. Tiergarten must be addressed as a place for relation especially in those interventions that directly affect it, such as further modifications, densification processes, maintenance of the green areas or the renovation of artistic heritage.

picture 66: Tiergarten’s alveolar structure comprehensive of its monuments, ancient trees and birds: the elements that make it function as a device.

(Author’s work)
Tiergarten reloaded.
Designing a space for relation
Tiergarten’s relations could be referred to as a Ber- lin-specific “spatial thought”, i.e. a form and method of socio-spatial production characterized of the German capital. In this regard, the second hypothesis argued that, in certain conditions, local spatial thoughts could be approached as “objects”, which – in the design practice – could be exposed or assembled in other places, modified according to different conditions and even integrated with other spatial thoughts. Thanks to the analysis illustrated in the second chapter, it is now possible to acknowledge what the spaces of relation in Tiergarten are, how they are distributed and how they function as foucaultian devices. Furthermore, it is also possible to identify some Tiergarten moments – be them natural or linked to maintenance policies – operating within a generic context where specific causes and the conditions it entails, sometimes enclosing natural heritage. Thus the new design proposal aims at replicating that “alveolar” condition identified in other areas of the park and generative of the relationships that make Tiergarten a space of agency, importing it in the three selected plots and taking it to further extreme by the addition of new architectural and landscape elements. By the integration of new relation devices within the three pavilions – sometimes referring to practices already existing in Tiergarten, sometimes proposing new activities – in order to provide new spaces for different relational forms. The result is an enhancement of Tiergarten’s relational mechanisms by providing a plurality of new spaces for a multiplicity of social exchanges of various kind – within a gradient ranging from wide open spaces for communal gathering to smaller enclosed niches for more introverted relation devices. The pavilions’ outlines relate to the existing landscape – each pavilion is made suitable for a wide range of individuals.

Each membrane completes the area where it is inserted creating new niches, “insides” that provide new gathering spaces for Tiergarten’s diverse communities. The size of each niche is directly referenced to the ones already present in Tiergarten – defined by natural clearings and cuts in the dense vegetation – while providing spaces for diverse forms of relational exchange: sometimes the option of living the whole pavilion as a unique space is allowed, other times only some niches are related, and sometimes every space within the fence is completely disconnected. They twist the perception of the inside and the outside of the pavilion, generating new enclosed spaces with their meander-like perimeter. Each niche is meant to function like a small “alveolus”, which, by dividing an area that was previously a whole, functions as a filter between two newly-born spaces. The pavilions’ outlines relate to the existing landscape and the conditions it entails, sometimes enclosing na-
natural woodlands or ponds within their perimeter, other times excluding already existing practices happening in their proximities. The second point focuses on the ground’s layout. As learned by the investigation on Tiergarten’s characters and conditions, a plurality of spatial situations enhances spontaneity in the practices that happen within them. Thus, the existing natural elements – including woodlands, dense grassy areas and low dry meadows - circled in the pavilion are integrated with a new ground layout, defined by a contrast between different heights and depths, shadows and lights. Third and last step is the insertion of relation devices in each pavilion. Such objects encourage relational forms that may already be present in Tiergarten, although they do not establish a given function or purpose discouraging the others. They are grouped in macro-categories regarding work, leisure and ecology and distributed within the three pavilions according to specific environmental conditions. The spatial situations produced by the new pavilions, or social condensers, is configurated as an alveolar space taken to extreme. Even though they initially referenced the projects analysed in the first chapter, as the striped space of OMA’s Parc de la Villette, they do differ from them as the spaces proposed for the three areas appear more as nested bubbles or insides within interiors, each one defining a different degree of social exchanges.
The design of Relation // Chapter 3

The following pages proceed with a description of the three projects developed, integrated with illustrative drawings that space from the conceptual level until a more detailed scale of representation. The drawings not only show the design proposal with an architectural consistency, enhancing their materiality and the relational forms they would produce, but also underline aspects related to the design of relation intended within the social sphere as well as ecological aspects. As a matter of fact, each case takes into account matters of rainwater recycle, planting of extinguished herbaceous species or inclusion of Tiergarten’s fauna within the relational processes. Moreover, they aim at providing as many differentiated spaces as diverse relational exchanges could be: they recreate different conditions of inclusion, for as many different groups as possible to appropriate them.

3.2.1 Nested Bubbles

The first pavilion is located in a void in eastern Tiergarten, central to the Großer Hein. The area is circled by two alleys – result of a 1990s reconstruction. Along both alleys, a series of monuments and sculptures is located, attracting tourists like exclamation marks1. At the centre, a wide dry meadow is left unattended2. Evidently oversized in comparison to the other clearings irregularly scattered throughout the park, its scale might be too large in order to allow the communities in Tiergarten to occupy it. Thus, the pavilion proposed for this space is structured as a network of circular niches of various sizes - floor area between 50 m² and 400 m² - organized around a bigger rectangular shape. Far from being a canonical square, the central space is marked out by a small curvilinear hill and a lower rectangular form (maximum -1,20 m below ground level), occasionally offering places for people to sit. The rectangle accomplishes a double task. The first is that of enhancing three different activities in it at the same time a market square and a sport court. On its ground, the drawing of

Three multi-purpose kits-of-parts

1 Term borrowed from Richard Sennett (For any further information see Sennett, 2018).
2 From the 2011 ecological survey conducted in this area by Maria-Sofie Rohner, it resulted that - as a consequence of further modifications and reconstructions – part of the natural assets, mainly comprehending herbaceous species, ceased here to grow.
Overall axonometric drawings of the nested bubble plots. On the following page, two axonometric zooms evidence different relational conditions produced by the pavilion’s meanders: below left, the fence marks smaller cells completed with devices that enhance diverse practices (shaded spaces to sit and rest in tranquillity and a wide sand box for a kids’ playing area); above right, the possibility to still share the wider inner court as a common open space for informal markets, play sports or just sit and play on the grassy hills. 
a basketball court lines is overlapped by further rectangular shapes, referring to the spaces occupied by market stands, while on its both sides, curved edges recall the shape of a small skateboard ramp. Moreover, the low square is paved with an impermeable material eventually transforming it into a basin. As part of a larger water harvesting system, the lower square – or basin – is filled up with the rain water collected by stainless steel gutters running along the whole pavilion’s perimeter. The collected runwater is later integrated in the irrigation system – already present all over Tiergarten – and could be used in a second moment to irrigate the dry land surrounding the pavilion, where extinguished herbaceous species could be planted in a second moment in order to integrate and improve the whole park’s biodiversity.

Regarding the smaller pavilions organized like tents around the sides, while some are left undefined, some others are further equipped with four devices of relation. Taking as a direct reference the existing 1950s playgrounds designed by Alverdes, two sandboxes are placed as a relational device addressed to children and families in general. As the whole project area is exposed to solar radiations, covering elements are built over three smaller alveoli, in order to grant within the area cooler places to sit and rest during the warm season. Circular stone risers, shaped like a small amphitheatre, provide a place to sit as well as to work, as the alveolus where they are placed is also supplied with a free Wi-Fi spot.

Thus, such plurality of spaces and shapes favours different forms of coexistence: visitors are allowed to live the space as a communal whole, gathering in the wide central core, or distanced from each other, splitting within the smaller niches.
Tiergarten reloaded. Designing a space for relations

The design of Relation // Chapter 3

- Water collection surface: 608 m²
- Collected water: 350 m³ (70% of the amount required)
- Irrigated area: 1,240 m²
- Necessary water: 495 m³ (source: Deutscher Wetterdienst)
- Average annual precipitations in Berlin: 48 l/m²

Gedran venum
Sedum acre
Hylotelephium arenarium
Peluca ovina tenuifolia
3.2.2 Branched Bubbles

Between the Soviet memorial and Zeltenplatz lays the second selected area, located within the ray-splaying baroque axes reconstructed during the 1990s. Unlike the Nested Bubbles, the Branched Bubbles do not entail a central wider space; instead they are structured as a cluster of five separated alveoli, each one having its own meaning. Here the floor area of each unit varies between 600 m² and 1000 m².

Two cells, located at opposite ends, enclose a few trees that provide shadow while recalling a more intimate idea of relation, hidden or sheltered, detached from its surroundings, as could be that happening within the wooded areas in Tiergarten.

The centre − which is not meant to be more than a transit space − is crossed by an alley, on both sides of which the ground is given the form of a soft hill functioning like a filter between the two halves and especially enforcing the idea of separation within the five cells.

Enclosing part of a water stream, one of the alveoli is dedicated to bathing. Thus the water is made suitable for bathing and swimming through the insertion of a retaining wall and a regeneration zone: the retaining wall, running along the perimeter of the fence below the water level, encloses a small portion of the pond; the water is pumped inside the enclosed area through the regeneration zone, where a series of water plants and algae are planted in order to purify the liquids and thus transforming the pond into a cleaner natural swimming pool. In the same bubble, the ground is modelled as a soft hill, over which bathers can lay in the sun to dry. Moreover, a pair of showers are placed on the sides, for the bathers to get clean after swimming. Nudist sunbathing and swimming is allowed in this spot as it is in the rest of the park.

The northern unit is finally equipped with a different device: fire pits. The practice of open-air barbecuing is quite diffused all over the country and for the purpose of this design experiment it is addressed as a properly German spatial thought, while the fire pits in particular are conceived as relational devices that stimulate this use. Such objects are thus imported in the Branched Bubble, although they must not certainly relate to only one specific practice. They could be used during the day by families for open-air cooking and communal gathering, or during the night by the homeless squatters as a heat source in the cold winter nights, or even for mysterious mystic rituals.

A cool temperature will be granted inside as well as out-
Overall axonometric drawings of the Branched bubble plot. On the following page, two axonometric zooms illustrate two strongly different activities that could still take place at the same moment in two different cells of the position. This relation is made possible through the complete detachment of each single bubble from the others.
side of the pavilion, as a system of nebulisers are placed along part of its perimeter. Again, exactly like in the first pavilion, a rainwater gathering system runs along the Branched Bubbles’ perimeter, in order to collect water to be recycled and used for the nebulisers and the showers. Unlike in the Nested Bubbles, the rainwater storage is not visible from the surface, being completely integrated underground. The nebulisers do not relate to a specific function, although they can be surely considered as devices to: they enhance social exchanges as they provide those qualities of comfort – such as maintaining a low temperature during the warmer days – facilitating public gathering and exchanges. Relations as they happen in this pavilion differ from the ones described in the previous pavilion. The Branched Bubbles lack a central space functioning like a meeting core, as the centre only functions as a circulation artery. Thus, all the five niches branch out detached from one another, conveying on a more introverted idea of relation – without providing any connection between such diverse spaces – yet allowing differences to coexist within proximity. Here the idea of alveolar space – as investigated in the second chapter – is taken to extreme in the most dramatic way, as the users relate to each other only when sharing the same niche, being completely divided from what could happen in the adjacent spaces.

The absence of contact points – and thus the recreation of opacity – is a condition that, as expressed by the first hypothesis of this thesis, enhances the most intense forms of social exchange, be them nudists laying in the sun or families consuming a warm meal.
Tiergarten reloaded. Designing a space for relations

The design of Relation // Chapter 3
3.2.3 XL Bubble

Third and last social condenser for Tiergarten is named XL Bubble. By breaking the axis of Fasanerieallee, it provides the condition of opacity and disconnection necessary to generate spaces for relation within the reconstructed axis as well as in its proximities. Spreading out in between an existing nudist and a gay-cruising area, the XL Bubble not only proposes new spaces for socialisation, but also acts as a shelter for the practices already settled in its surroundings, separating them from the axis – coveted of excessive visibility and permeability – and thus giving them more privacy.

The fence encloses mostly woodlands as well as the birds that inhabit them. Completely covered with a thick net, like an aviary, it is meant to relate humans with animals. It would be thus possible for the many birdwatchers that spend time in Tiergarten to observe here diverse bird species that will find a shelter within the wooded areas enclosed in the pavilion. Two larger lots within the pavilion are covered with grassy meadows – in order to preserve Tiergarten's biodiversity as well as improving it by cultivating extinguished herbaceous species – which include sea thrift (orameria maritima), cinquefoil (or potentilla norvegica), the maiden pink (or dianthus deltoides) and others. Amateur and professional botanists that already monitor Tiergarten's vegetation in other areas of the park are thus free to spontaneously take care of the newly-planted species – functioning both as a relational device and a safe storage for biodiversity. The water required for the irrigation system is again provided by a rainwater-gathering system: a lowered space with pipes paved impermeable retains the water – collected within the basin as well as through stainless steel gutters running around the pavilion’s perimeter. Here the fluids are accumulated until they are needed in order to water the surrounding plants, integrating them within the existing irrigation system.

Here the matter of relation is expressed in its most communal aspect. The last pavilion is conceived as one big XL bubble, the meander-like perimeter of which does

3 Which are both qualities that, has explained in the first two chapters, do not enhance any form of relation, but rather oppose them. Since relations mostly manifest in a conflictual atmosphere, excessive transparency and openness oppose the development of social exchanges and related forms as they do not enhance the condition of opacity.

4 In this case as well as in the Nested Bubble plots, in order to select which specific species should be planted, the 2011 report by Maria-Sofie Rohner is again taken as a reference (For any further information see Rohner, 2011).
Overall axonometric drawings of the XL Bubble plot. On the following page, two axonometric zooms exemplifying the activities it could host. In both zooms, the pavilion - along with its devices - is used as one large communal space by the visitors.
not enclose small separated niches, but rather defines a singular open space, sub-divided by different floorings, heights and plants – constituting different areas of diverse meanings that are still integrated within the same space. Thus, users are engaged in sharing one large open space while dedicating to different practices, within a general sense of community. Yet, more introverted niches are produced within the thicker vegetation, in the woodlands.

Moreover, unlike the other two cases, the XL Bubble is an example of how aspects concerning man’s interaction and ecological matters can be also related with the fauna, stressing the relation that exists between human birddowers, birds and the trees where the latter find the materials necessary for feeding and building nests.
Water collection surface 476 m²
Collected water 274 m³ (62% of the amount required)

Irrigated area 1.110 m²
Necessary water 444 m³

average annual precipitation in Berlin 48 l/m² (source: Deutscher Wetterdienst)

Pseudophrasia norvegica
Salvia nemorosa
Armeria maritima
Cardamine proxima
Dianthus deltoides
Origanum vulgare
Conclusions
This thesis explored a discourse on the design of Relation through the analysis of three positions on such topic – those of Chantal Mouffe, Édouard Glissant and Richard Sennett –, an investigation on the Tiergarten in Berlin – intended as a particular foucaultian “device” for relations – and a design experimentation around its functional logics.

Relations play a considerable role in the public realm; they are entailed as part of everybody’s daily lives and they do manifest in a concrete form, experienced through social interaction in matters of political, institutional, jurisdictional, economic or ecological nature. Relations always happen within a certain context defined by spatial, rules, politics and they can be referred to in order to study or explain how a certain community is, or how specific conditions of exclusion or conflict are born.

Thus the previous chapters argue the power that such relations often manifest in a conflictual sphere, they entail as part of everybody’s daily lives and they are entailed as part of everybody’s daily lives and experienced through social interaction in matters of political, institutional, jurisdictional, economic or ecological nature. Relations always happen within a certain context defined by spatial, rules, politics and they can be referred to in order to study or explain how a certain community is, or how specific conditions of exclusion or conflict are born.

This insight leads to two main conclusions. In the first place, that relations that-selves cannot be designed or programmed. Thus, in the architectural practice, it is possible to act on those devices or mechanisms that produce them – for instance, zoning, proximity, a strategic distribution of public equipment and quantitative/qualitative parameters. Secondly that, when intervening on the urban space, it should be approached as a device in itself, taking into account every relational aspect it entails and not only one singular aspect, be it historical, political, formal, ecological or institutional. For instance, the recent planning of the vegetation in Tiergarten as a form of social control not only had a repercussion on the practices it stimulated, but even caused a decrease on the nightingal species that inhabited it between 2012 and 2015 – being in this particular space the humans and the non-humans linked by a mutual relation.

Moreover, the recent reconstruction of historical axes and the Venus basin revealed a misconception of Tiergarten’s functionalities and led to the design of spatial situations that do not enhance relations, as they do not grant that specific condition of opacity recreated by the acting of nature as a filter or a “membrane”.

To conclude, a designing experimentation around the

ce defining a specific condition of urbansity in the Ber-

lin’s context, entailing a heterogeneous stratification of spontaneous and diverse practices. The result of the investigation is in the first place an exhaustive explana-
tion of the logics and the spatial structures within which Tiergarten’s interactions happen. In particular, at the bottom of Tiergarten’s functional mechanisms lies its own structural organisation – the design of which was strongly influenced by events and conditions develop-

ed from the 1950s –, being it conceived as an alveolar space. The term “alveolar” designates a Tiergarten-spe-
cific situation influenced by its being a forest-like ur-

ban park, where the urban space is defined by natural elements – comprehensive of dense woodlands, intimi-
cate paths, clear, natural meadows, grassy lawns and boggy streams – that, like Sennett’s “membranes”, at the same time shelter, disconnect and filter the diverse practices they enclose – to cite some of them: gay cru-

ising, gardening, nudist sunbathing, birdwatching and many others. Here an ambiguous distribution of various situations that do not enhance relations, as they do not entail that specific condition of opacity recreated by the acting of nature as a filter or a “membrane”.

To conclude, a designing experimentation around the
matter of relation in Tiergarten tackled topics such as the “right distance” – between objects or individuals – and the “coexistence” – of different practices. The design exercise was aimed in the first place at intensifying the practices that already existed in Tiergarten, stemming from the consideration of such relational exchanges as Tiergarten-specific “spatial thoughts”, meaning a properly Berlin method of socio-spatial production. The aim of the experiment was to export such ‘local spatial thoughts’ from the environment they were born in and try to replicate them in other areas of the park – i.e. the three identified areas that, in the last thirty years, underwent significant urban and ecological transformations.

Thus the three design proposals are not meant to represent the one and only possible way of approaching a design transformation in Tiergarten, but rather an attempt to put into practice the theoretical conclusions deduced from the second chapter, taken to extreme into an urban space. Although the design proposals refer to certain practices for some of the objects they are equipped with, neither of the three structures impose a specific function on the area where it is located, nor it takes into consideration only one important aspect of Tiergarten: be it about its communities or ecology. On the contrary, they are designed in the first place so that their formal characters directly recall a spatial situation that enhances a type of human relation – from the most open and communal to the most private and introverted – while trying to relate them to important aspects of the park’s ecology and maintenance.

Relations do have a consistency. They manifest in behaviours as much as in institutions and spaces. They thicken the material conditions in which human and non-human interaction manifests, defining agencies and producing specific conditions of urbanity.
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