The intrinsic logic of a city relies on its specific urbanity, understood here as the correlation between an urban way of life and a particular morphology. It is the materialization of the inherent possibilities of space as the generator of a particular identity. Urban space is both the physical space and the living environment of the society that shapes it and in turn inhabits it. Through everyday life, social organization, and self-representation, a society produces its own characteristic physical space. The ‘urban space’ is therefore the interface between urban form and society on the physical-substantial, abstract-societal, concrete-social and subjective-experienced levels.

The city is an extraordinarily complex entity. It is a palimpsest in which the mental attitudes of various historical phases of social life are overlaid and overwritten in space. Every architectural form is embedded in a particular time, and reflects it spatially, iconographically and aesthetically. Architecture translates the spirit of its time—the Zeitgeist—into spatial and physical form while simultaneously serving as its signifier. The Zeitgeist depicts the specific relationships of people with each other, their social and political organization, as well as their relationship to their environment.

Architecture is the transformation of the invisible into the visible. The Euclidean space gets meaning by the transformation into architectural space.

This essay aims to approximate ‘the intrinsic logic of the city’ from the architectural perspective by analyzing the relationship between society and architecture. The architectural and morphological configuration of the city gives a framework to real life—a spatial disposition that lies in the ‘intrinsic spaces of possibilities’ of their typologies and structures. It wants to make the dialectical correlation of the morphological, societal, and experienced space manifest by implementing these ideas into Lefebvre’s theory of space. We produce a space by materializing the intrinsic possibilities and leeway of architecture.

Keywords: architectonic and urban space, typologies, structures, leeway of possibility, appropriation

Introduction

To specify the intrinsic logic of the city from an urban design perspective, we have to deal with architectural theory; more precisely, with the intrinsic rules of architecture and its connection to the environment. The aim of the following study is to continue where urban sociology converges with the concrete architecture of the city. Urban space consists, on the one hand, of individual, social, and societal space, and on the other hand, of architectural and morphological space. But these spaces are not separated; they relate to each other in a dialectic manner. Looking at the questions asked by sociological research, this study tries to expand them into the architectonic realm. They seek the architectonic character of a city, its architectonic principles of generation or its architectonic habitus. How do people develop an unquestioned certainty about their city when referring to the architecture? How can the
determining structures of action—the structural logic of a city (cf. Löw, 2008)—be explained architectonically? What kind of effect does a specific morphological shape of a city have on perception, thinking, and acting? How do architectonic spatial forms and habitual dispositions correlate (cf. Berking 2008)? Since the meaning of the terms used - structures, rules, and resources - can also be interpreted with regard to the architecture, is it possible to concretize the social space architectonically? Architecture gives life a framework for what could happen, in other words, it defines what kinds of rules and self-conception a society has or creates.

Architecture opens up ‘spaces of possibility’ and gives connecting points for its concretization in reality. The starting point in this study is the relation among architectonical, existential, social, and societal space.

New approaches to the space of architecture

The theoretical reflection upon architecture is always coupled with the self-conception of a specific period. But the theoretical essence of this idea is sometimes taken up again; it is transformed, extended, intermingled, and interpreted in a new way at a later date. The involvement with the essence of architecture takes place—from different starting points—on the level of the correlation between man and environment, its social and societal organization—which then becomes a specific form and style in its materialization. In the following, the stylistic questions should be excluded and it will be focused on ‘the space.’ There is not the one theory of architecture but different perspectives, which focus on different aspects and propose different solutions. The aim of architecture is to transform the invisible (the relation of man and environment) into something visible, that means to implement the existential, social and societal space into architectonic space.

In the 1950s and 60s, the conception of the aims of architecture changed. The general discussion criticized the functionalistic und rationalistic after-war architecture and urban planning. They disapproved the lack of urbanity and questioned the formation of publicness. The architects were searching for the human and social essence of architecture: the relation between man and space. This spectrum could be differentiated into four directions: the typological discussion, the search for a ‘human’ architecture based on the philosophy of life and the phenomenology, the fusion of the young generation participating in CIAM, known as “Team 10” (later under the label “structuralists”), which focused on the social space, and Christopher Alexander’s Pattern Language, which tries to bring together human activity and architectonic space. All these theories favor a particular language of architecture, a particular style. This aspect will be excluded in this paper and instead, the analysis will focus on the common ground and the relations between the terms used—all these concepts are searching for the essence of architecture, which are described in different terms. But what they have in common is that architecture forms a space of possibilities that is realized in its use, in other words concretized in reality. Further on in this study, the ‘urban space’ will be analyzed with

2 Hannah Arendt, Vita Activa, 1960; Jürgen Habermas, Strukturwandel der Öffentlichkeit, 1962; Hans Paul Bahrdt, Die moderne Großstadt, 1961
3 Aldo Rossi, L’architettura della Città, 1966
4 for example Rudolf Schwarz, Denken und Bauen, 1963; Christian Norberg-Schulz, Intentions in Architecture 1965, Existence, Space and Architecture, 1971
5 Congrès International d'Architecture Moderne 1928-1959
6 his studies of the sixties are summed up in 1977 in A Pattern Language
the goal to implement the results into an interpretation of the theory of space of Henri Lefebvre. As seen, “space” will be the starting point in this research.

Phenomenology – The existential space

Architectonic space first came into focus in art history around the end of the 19th century. August Schmarsow defined architecture as “creative involvement of the human subject with his spatial environment, with the external world as a spatial entity, in accordance with his own nature.” That means that architecture is the common ground revealing “the regularities of spatial existence, through which man and the world are one for another.” Architecture forms the relation between man and the world according to his own intellectual abilities and physical constitution (Schmarsow, 1896, transl. KN). In following times the theorists tried to approximate the relationship between man and space in different ways: through psychology, the “theory of empathy” (Einfühlungstheorie), the retrospective analysis of the processes of creating form in relation to the impact on man and the spatial effects of architecture and sculpture. The human being is seen as architecture’s “teammate” in establishing an “artificially formed reality” (Frey, 1946, transl. KN). These studies revolve primarily around the idea of architecture in distinction to art, concerning stylistic and aesthetic views. Architecture and man frequently still confront one another; they are only connected by the psychological and aesthetic effect of form and the movement in space guided by architecture.

The phenomenology was able to bridge the subject/object dualism and recognized the body as the main condition of the possibility of perception. An important impulse for the application of phenomenological ideas in the architectural discussion was Martin Heidegger’s invitation to hold a lecture in 1951 at the architectural exhibition “Man and Space” in Darmstadt, Germany. In his lecture “Building, Dwelling, Thinking” (Bauen, Wohnen, Denken), he described the individual experience as spatial, and man’s relation to the world as an existential spatial quality. One of the main theorists of the use of phenomenological ideas in architecture was Christian Norberg-Schulz. He referred to Husserl, Heidegger, Merleau-Ponty, and Bollnow in recognizing space as an existential dimension and by defining the aim of architecture as transforming existential space architectonically. He also refers to the “Dwelling” in the meaning of Heidegger: “You cannot divorce man and space. Space is neither an external object nor an internal experience. We don’t have man and space besides…. Spaces receive their being from places and not from ‘the space.’ … Man’s relation to places and through places to spaces consist in dwelling…. Dwelling is the essential property of existence.” (Heidegger, 1954 in Norberg-Schulz, 1971, p.16), and the existential meaning of place, following Merleau-Ponty: “Our body and our perception always summon us to take as the centre of the world that environment with which they present us.” (Merleau-Ponty, 1962 in Norberg-Schulz, 1971, p.16). “…life and place are inseparable …” (Norberg-Schulz, 2000).

He finds this existential dimension of architecture in the “Gestalttheorie” (Max Wertheimer, Über Gestalttheorie 1924) and also in the “schemata” highlighted by Jean Piaget (Jean Piaget, Der Aufbau der Wirklichkeit beim Kinde, 1974, French 1959; Die Psychologie der Intelligenz, 1965

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7 e.g. Robert Vischer, Theodor Lipps, Heinrich Wölfflin, Wilhelm Worringer
8 e.g. Paul Frankl, Hermann Sörgel
9 e.g. Adolf Hildebrand, Fritz Schumacher, Walter Gropius
The perception and interaction of man with his environment occurs by “Gestalten” and schemata: “Mental assimilation is thus the incorporation of objects into patterns of behavior.” (Piaget in Norberg-Schulz 1971, p.8)

Norberg-Schulz distinguishes between five concepts of space: “the pragmatic space of physical action, the perceptual space of immediate orientation, the existential space which forms man’s stable image of his environment, the cognitive space of the physical world and the abstract space of pure logical relation” (op. cit, p.11). The expressive act of the creation of space consists on the one hand of transforming these spaces into an aesthetic, i.e. architectonic space, and on the other hand of the appropriation by making the “environment meaningful by assimilating it into his purposes at the same time as he accommodates to the condition it offers” (op. cit., p. 11). The architectonic space thus is the concretization of the existential space, i.e. the architectonic space gives life a framework to perform.

The existential space is “a relatively stable system of perceptual schemata or ‘image’ of the environment” (op. cit.p.17). Trying to orient in the world, centered on our bodily constitution (with an understanding of the directions above-below, left-right, ahead-behind) and our actions, we perceive our environment in “Gestalten.” We produce places by using them in a specific way. We organize space by producing topological relations (schemata), which tie things together. These places are connected in a larger context with hodological “paths”. (cf. Lewin, 1938, Kruse, 1974). ‘Hodological paths’ are preferred paths that correlate with our subjective, personal preferences. They help to distinguish the city into “areas”. Following Kevin Lynch (1960), we perceive areas of the same structure, typology, or function, sometimes bordered by big streets, rivers, or railway tracks. The usage of specific paths depends on our particular mental constitution and differs from person to person. A city consists of a texture of differing hodological paths of various people, based on the existing resources of the city. The city is a structured entity for everybody, sharing with others and producing identity.

Typology – Predetermined spaces of possibility

Norberg-Schulz calls the typologies “schemata” and “Gestalten”, which we produce by perceiving and acting based on the resources of our environment. Creating “schemata” and “Gestalten” is also an act of typologizing the elements of the environment. When we walk through an arcade, we don’t pay attention to every single column—we perceive the arcade as
an entity. The arcade as a whole has a specific meaning which derives from its spatial form. The meaning of architecture, starting from its form, is the subject of the discussion about ‘typology’ in architecture. The term form includes the basic geometric form, the architectural form, the form that originated in architectural history, and the form generated by culture. All these different connotations of form have a different meaning and together establish the type. ‘Typology’ was the basis of architecture for Italian Rationalism in the 1960s. Rationalism isn’t a confined style; it describes a rational involvement with architecture in search for its essence. Rationalism appears in waves throughout architectural history at times when different styles reached their limits. The Greek source is “imprint,” the Latin source is “form, figure, shape, characteristics.” The type relates physical clarity with universality (cf. Schischkoff, 1991) and makes the universal intrinsic value visible in its materialization. The typology oscillates between the universal and the specific, the idea and the form, the abstract and the concrete.

Emil Kaufmann figured out the term autonomous architecture (Kaufmann 1985 [1933]). The architectural element has autonomy, meaning that architectural elements are not merged together with secondary elements like ornaments, moldings and so on, but appear in their pure form. Its “objective form” only expresses its “architectural function” (op. cit. transl. KN). Architecture is ‘itself,’ following only its intrinsic and formal rules. The architectural element expresses its architectural function. The architectural form can be differentiated by architectural elements (like the window, the door, the roof, stairs, or a column), architectural spatial typologies (like the atrium, the peristyle, the portico, or the colonnade), building typologies (like the monastery or the basilica) or typologies generated by the correlation of a specific place with a specific function (like the ancient courtyard house, or the tenement of 19th century Berlin). The architectural form follows its intrinsic, formal rules, independent of a style related to time: “The form describes the visual quality of architecture. It is determined by formal rules, which appear in the visible appearance of the building. ... The formal language of architecture ... expresses the aesthetic value of architecture as intrinsic value. It has its own ratio, and the concept of rational architecture can only be grasped like this” (Ungers, 1991, transl. KN). Architecture communicates the meaning of the architectonic form, which incorporates a “value” of a function. A window relates the inside of a house with the outside – it organizes the inner life of an apartment (the everyday life) and also the representation to the urban space. The arcade relates the private and the public, inside and outside - it is a transition zone. A stair spans between two heights, a bridge connects two places. A portico relates the ordinary with the specific. An architectonic type has a function, but not a utilitarian one – it defines the “value of a function” (Rossi, 1975 [Ital. 1966]).
These architectural typologies, with their fundamental meanings, incorporate, on the basis of their spatial competence, functions that could change in the course of cultural development (cf. Argan 1962). The ancient gathering place, for example, becomes a theatre; the basilica of the Roman forum becomes, for example, a Christian church. The typology as a cultural condition could be described as follows: “The word *type* presents less the image of a thing to copy or imitate completely, than the idea of an element which must itself serve as a rule for the model. … The model, understood in the sense of practical execution, is an object that should be repeated as it is; contrariwise, the *type* is an object after which each artist can conceive works that bear no resemblance to each other. All is precise and given when it comes to the model, while all is more or less vague when it comes to the *type*. Concomitantly, we see that there is nothing in the imitation of *types* that sensibility and the mind cannot recognize, and nothing that cannot be contested by prejudice and ignorance. This is what happened for example in architecture. In every country, the orderly art of building was born from pre-existing seed. Everything must have an antecedent; nothing whatsoever comes from nothing, and this cannot but apply to all human inventions. We observe also how all intentions, in spite of subsequent changes, have conserved their elementary principle in a manner that is always visible, and always evident to feeling and reason. This elementary principle is like a sort of nucleus around which are assembled, and with which are consequently coordinated, all the developments and the variations of form to which the object was susceptible” (de Quincy, 1788). A type is abstract; a model – the architectonic formulation – is concrete. The typology is a set of rules and the primary connection between architecture and society. It implicates the way of life as a cultural act which it expresses architectonically.

A typology gives space a framework for the realization of possibilities by giving it a “communicative certainty,” i.e. connecting factors, and includes a “communicative uncertainty,” leeway that can be filled up by the usage. It thus opens up a “leeway of possibilities of concretization” (Theory of adaption [“Rezeptionstheorie”], cf. Ingarden, 1968) through its structure. The ‘communicative uncertainty’ allow us a personal appropriation. A type opens up a specific leeway, the possibility for a personal decision, a possibility which can be realized by using it. Lars Lerup is dealing with this ‘communicative certainty’, which contains ‘connecting factors’ and its ‘communicative uncertainty’ and is trying to connect architecture and human action. In his essay entitled “Building the unfinished,” he alludes to the ‘communicative uncertainty’ of typology: “Therefore architecture bases on a limited set of repeatable types with an intrinsic logic. Cast in a mold, they get into relation with the user through a social figure, which we call architectonic meaning. This meaning could change in time but the form could remain. But also the form and its typological basis changes, even more slowly and according to different principles which rule the architectonic meaning” (Lerup, 1986, p. 7, transl. KN). The conventions that have become typologies stay in a relationship with the “real, which is present in the here and now with all its requirements” (op.cit. p.7, transl. KN). Because we act non-reflective and in routines in our everyday life we need a predestination by the architecture. A typology has been developed in several times for and under specific social and societal conditions. By its determination, i.e. the limitation of alternatives, the typology gives security to the inhabitants. Space emanates from experience, so we can say that appropriation in a way is personification which produces identity. In our everyday life, when we don’t focus on things we perceive them as typologies. Lerup calls the space between the social and the physical the “interactive space”. In this case he refers to the public space, in his words the “social space”. He points out the political aspect (with reference

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11 Lerups theoretische Ausgangsposition sind Georg Herbert Mead (aus Sicht des Interaktionismus Herbert Blumer), Martin Heidegge und Maurice Merleau-Ponty.
to Hannah Arendt), concerning the relationship between private and public, which has to be negotiated. The political space is a virtual space, which oscillates between the private and the public. Its hybridity results in interaction, because space can be appropriated in different ways and has to be negotiated. “The type is a kind of filter between men and the things.” (op. cit., p. 158)

Patterns of events – Mediator between action and space

Christopher Alexander developed the model of the Pattern Language in 1967 with the ‘patterns of events’ as a mediator between action and space. For him, every spatial organization includes an anthropological disposition. With the term “pattern” he defines the morphological and anthropological situation. In a pattern, form and content are congruent. A pattern unifies action and the space, in which this action could take place. “The action and the space are indivisible. The action is supported by this kind of space. The space supports this kind of action. The two form a unit, a pattern of events in space … And indeed, the world does have a structure, just because these patterns of events … are always anchored in the space.” (Alexander, 1979, p. 69-70) Alexander assembles 253 basic patterns through empirical investigation of several zones of the city and the house. Afterwards he analyses the results with regard to space and then proposes a specific architectonic implementation. He calls the kind of quality he wants to achieve “quality without name” (Alexander, 1979), which embraces the entire and natural relationship between man and his built and social environment, free from inherent contradictions. In other words – the congruence of human life and his environment. The patterns open up a space of possible action. They are comparable with typologies, but typologies are more basic and patterns are more pragmatic. At the description of an arcade for example, he points out the protection concerning weather conditions and the territory between public and private, inside and outside, but also describes the impact of specific proportions and dimensions. The whole world consists of a matrix of patterns whereas the relations between the elements are part of the elements themselves. The single elements of an entrance, for example, don’t exist without the spatial and functional context. Space is structured by a variety of patterns ranging from the single typology to the overarching structure.

Christopher Alexander, u.a., 64 patterns for a community center. In Bohning, 1981

Structuralism – The social space

In 1956 the last CIAM meeting took place, because the new generation of architects wasn’t able to identify with the goals of Modernity anymore. They called themselves “Team Ten”
because they organized the 10th congress of CIAM. Their voice was the “Forum”, a Dutch journal, which mainly was edited by the Dutch representatives (van Eyck, Bakema, Hertzberger). The goal of the architects was to shift architecture form the abstract to the concrete level of reality. Therefore they referred to the philosopher Martin Buber, who created the terms “in-between realm”, respectively “das Gestalt gewordene Zwischen”\textsuperscript{12}.

“The fundamental fact of human existence is neither the individual, nor the collectivity. The fundamental fact of human existence is man coexisting with man. This realm I call the in-between realm. The in-between isn’t an auxiliary construction but the real place and carrier of interpersonal events. Beyond the subjective, on this side of the objective, on this narrow edge where You and I meet each other, we find the in-between realm. (Buber, “Urdians und Beziehung,” 1951 in Bohning, 1981, p. 175, transl. KN)... “Art is neither the impression of natural objectivity, nor the expression of soulful subjectivity; it is work and witness to the relation between the substantia humana and the substantia rerum, the in-between that has taken shape.” (Buber, “Urdians und Beziehung,” 1951, in van Eyck, Aldo, \textit{Writings}, 2008).

The in-between has a double meaning – firstly the dialogical relationship between man and architecture and secondly the social in-between which is adopted by the architecture by happening at a concrete place. The relatedness of architecture cannot be detached from the concrete place and the concrete situation. “Whatever space and time mean, place and occasion mean more. For space in the image of man is place, and time in the image of man is occasion. Space has no room, time not a moment for man. He is excluded. In order to ‘include’ him, he must be gathered into the meaning space and time” (van Eyck in Lüchinger, 1981, p. 27).

“Structuralism” as a comprehensive denotation for this trend was introduced mainly by the architectural theorist Arnulf Lüchinger who tried to collect different attitudes with the same goal and architectural speech and recognized their substantive affinity to structuralism in linguistics, anthropology and philosophy.\textsuperscript{13} The concept of structure heralds the start of a new assessment of correlations around the 1920s and 30s. No longer causality, static totality, and closeness; not the object, but the structure relating the elements to one another, determined theoretical reflection. This concept emerged from the idea of the ‘organism’ of the 19th century – which ’isn’t a pure aggregate of elements - and also the idea of the “Gestalt” (cf. Norberg-Schulz). A structure is more than the elements it consists of. The elements are interdependent on each other and every change in the system has an effect on the others. The focus shift away from the ‘being’ of a matter and towards its ‘being-for-something.’ The elements got a topological relation. The architects tried to concretize this topological space, which will get its meaning by its usage. The form no longer should contain a fixed meaning; the form should be a \textit{carrier} of a potential meaning. It should contain an archetypical meaning, which can be interpreted. “What we offer cannot be neutral; it must be the raw material, as it were, containing the ‘intentions’ out of which everyone can make his choice in a particular situation, extracting from it precisely the intention which ‘resonates’ with his intentions, in the sense of the intentions which give the prospect of his doing, or being, whatever will strengthen his ego-ideal. We can’t have knowledge of everybody’s personal images and associations with forms, but we assume that they can be seen as individual interpretations of a collective pattern. This relationship between collective pattern and individual interpretations can perhaps be linked to the relationship between language and speech. (We each use language in our own way; both individuals and groups can express themselves with it, and as long as they keep more or less within the framework of recognized declensions and rules, and use recognizable words, then the message comes across.) Indeed

\textsuperscript{12} This can’’t be adequately translated because the equivalent of \textit{Gestalt} (cf. Wertheimer and Norberg-Schulz) is missing in English

\textsuperscript{13} The term „structure” was already used in the architectonic context by the japanese Metabolists (cf. Kenzo Tange, \textit{Funktion, Struktur, Symbol}, 1966) and also in relation to several exhibitions and competitions.
we assume an underlying ‘objective’ structure of forms – which we will call arch-forms – a derivative of which is what we get to see in a given situation.” (Hermann Hertzberger, 1976) These forms, the architects refer to, are archetypes of the “musée imaginaire”, but less in their architectural (cf. rationalism), than an anthropological meaning. The Structuralists were interested in the study of the primitive people, like the anthropologists of this time too, to find the basic rules of man’s community – the relations between the individual in dependence to the whole. “Every solution at a different place or time is an interpretation of the archetypical: both general and specific, like the individual application of a formula.” (Hertzberger, Forum 7/67 in Lüchinger, 1981, p. 24). Starting point for their architecture is a non-hierarchical structure with implemented archetypes, which has no meaning itself but is going to get its sense through the usage, like the langue and parole of de Saussure. The langue is the preliminary theoretical system of signs and grammatical rules, the parole is the performance by talking. The langue is modified permanently and adapted to the actual requirements. Not the function should determine space, but the communication. The space in-between the structure – the relationship between the elements - gets a meaning, not a spatial, but a social: “People and space depend on one another. … Space and certainty are strangers. Space is the potential for the new. … Space as experience has to derive from an ‘Ur-feeling’, an ability to imagine a dimension the projects above basic reality, an exposure to a reality greater than we are able to conceptualize” (Hertzberger, 2002, p.30, 28, 32). A location becomes a particular place with human dimensions by its users/occupants. Through the performance of the user the competence of an architectural space - its intrinsic possibilities – will be appropriated.

Ancient models and their translation in terms of present-day architecture, Hertzberger, 1976

Architectonic space – A conclusion

As seen, the architectonic space is interwoven in various ways with existential, social, and societal space. With this knowledge, it is possible to analyze the architectural space through its typologies and “Gestalten,” - its intrinsic structure and patterns - on different layers. With his aim to organize his environment, man produces “Gestalten” and “schemata” within the given resources of the environment. He locates his actions topologically and through his personal, hodological paths. It is possible to analyze the structure - or lack thereof - that links
together the elements of the city as well as the patterns that describe the specific, culturally and socially conditioned use. We can also examine how particular functions are transformed architectonically, i.e. which spaces of possibility are opened up by the typologies, structures, and patterns. How does the architecture create personal leeway, the communicative certainty and uncertainty, the connecting factors? Everybody has different creative abilities to appropriate architecture; some need more connecting factors, whereas others are able to appropriate space of their own accord. People have different psychological, cultural and social dispositions, and aesthetic preferences to decode architecture and accommodate themselves within their world.

Urban space

To analyze the intrinsic logic of the city we have to switch further to the urban space. Henri Lefebvre called the urban space the ‘mediator between the private and the societal.’ Urban space is the public space, the relation between different functions, and the relation between the public and the private. This is a very important matter, because the kind of relationship describes the relevance and grasp of the private and the public - the publicness (cf. Bahrdt, 1961) - which is reflected by the urban structure.

The morphology of the city is characterized by the specific everyday life, the political-economic and social-cultural situation, and the mental attitudes. The circumstances and conditions of origin - building activity at times of economic prosperity or demographic change, construction related to the political, economic and/or cultural position of a city, reconstruction after natural disasters or wars, and the financial opportunities or private patrons - mostly shape the basic structure of a city. But the structures and typologies of previous times shimmer through the palimpsest of the present. To understand the time-related structures of a city, we will describe the differences between the medieval and modern eras (cf. Pahl, 2003) and also the changes in the twentieth century.

The consciousness of the early Middle Ages14 was influenced strongly by the monotheistic Christian religion. The physiognomy of the city was characterized by dualistic contradictions: This world/afterlife, city/landscape, inside/outside, good/bad, soul/nature, clerical/secular, bourgeois/aristocratic, freedom/serfdom, etc. All this antitheses find their specific location and relationship in the medieval city, predominated by the Aristotelian idea of space as “location.” Space was the “distance,” “that which lies between things.” The medieval city was organized holistically and collective, i.e. with several dependencies. Everybody had his place in the (cosmic) totality (totum in toto), with distinct borders to the outside and its symbolism (because few people were able to read). Explicitly defined public space as we understand it and urban space as artistic articulation did not exist. The “ego” was collectivized in the “sense of unity.” The individual and the world weren’t separated. In the change to modern times – the introduction of the abstract monetary economy, the discovery of perspective, the establishment of the architectural profession, the orientation to the ‘here and now’ – which was accompanied by the investigation of natural phenomena, the philosophy of rationalism (Descartes), and the liberation of the arts from symbolism into perspective reality – all this led to the objectification of space and the subjectivization of the ‘ego’ and consequently to a mundane orientated self-determination. All these ideological criteria and the conditions of time are reflected in the typologies of the buildings, the shape of the private, collective and public space, and in the principles of spatial formation.

14 we talk about the medieval cities north of the Alps
Let’s take a leap into the twentieth century. The beginning of this century was influenced strongly by the consequences of the enormous growth of the cities and the search for adequate solutions to the attendant problems (cf. Noack, Oevermann, 2010). Generalizing, they can be described as conservative and avant-garde. Modern urban planning, for example, divided the city into industrial/business and housing areas, buffered by parks and sports areas, and connected by the traffic system. Life should be convenient, hygienic, and functionally well-organized for everybody. Public space as a place of social encounters and political exchange, one for encounters with strangers, did not exist in this concept. In Le Corbusier’s visions, local amenities were located in the *Unité d’habitation*: meeting points were the rooftops of the skyscrapers. (cf. Corbusier, 1964, Hilpert, 1988). The well known drawing “Paris: A contemporary city for three million inhabitants” (1922) shows paradigmatically the self-consciousness of this time - the viewpoint is from the ground-level, unpeopled terrace of one of the apartment towers, with two small coffee tables in the foreground, the tree-lined view opening to the city consisting of other widely separated skyscrapers, with low greenery in-between, an elevated highway, and a plane in the sky.

Man lives in a clean environment, undisturbed by urban chaos, self-referred, and close to nature; the technical opportunities are accessible for everybody. This drawing transports a new attitude towards life – indeed with a suggestive power. But after World War II, this vision disappeared. The city centers have fallen to tertiarianization, the economic miracle
allowed (almost) everybody a retreat in peripheral suburban developments accessible by newly constructed streets. Because of the lack of any vitality, this kind of city provoked a lot of discontent and proposals for a change. The Structuralists modified the functional hierarchy into a new one – house, street, district, city (Smithsons, 2005), and the Situationists contrived the “homo ludens” strolling through a city of situations (Constant, 1971). The consumption-orientated society and the ensuing pollution were denounced and instigated a variety of utopian ideas.

The aseptic “top down” urban design strategies have been criticized and the participation at the planning of the environment with a “bottom up” strategy was claimed. The rediscovery of the city resulted in the slogan “urbanity through density” – expansive buildings with cultural institutions, parking structures, and department stores, all connected by skywalks and vehicle-free pedestrian zones, but “careful urban renewal” – the rediscovery and revival of historical structures and neighborhood milieus – was also supported. Simultaneously the architects tried to give the urban space a meaning by using explicit ‘forms’ - architectural Postmodernity produced a potpourri by using historical forms randomly, carried to the extreme in the ‘New Urbanism,’ which, for example, used medieval structures – detached from all meaning – to create small settlements.

Looking at the city structures and spatial configurations of different times, we notice that the specific mental attitude, the self-representation of the society and its organization, produces different principles of spatial formation: geometrical or undirected structures, grids and systems of ordering, volume compositions, and culturally generated or geometrical spatial forms. These structural principles of urban space depend on the building typologies and their inherent rules of addition. The typological space produces a societal structured space. By the constant transformation of the city, these spaces and structures are overlaid, overwritten, converted, rebuilt, and expanded. Like this a palimpsest is formed, through which the ways of life of different times are shimmering through. This optimized spaces of previous times need to be appropriated and adopted in today’s use. The contemporary morphological space of a city is one space where the past oscillates by traces of the way of life and the self-representation of previous societies.

The self-representation of a time manifests itself in the daily routines (the micro level) and how they are implemented in the societal organization (the macro level). Private lifestyles, attitudes towards family conditions and routines, the relationship between private, free, and working time, and needs concerning security or dynamics are manifest in the typologies of habitation. But the private life also correlates with the understanding of publicness. Where do we work, how do we work, and how are professional networks established?

Where are we active in our free time, how do we spend our leisure time, how do we participate at the public life? Henri Lefebvre defined the city as the ‘mediator between the private and the public.’15 (Lefebvre, 1970) The city is the “relay” (Schmid, 2008) between the “near order” of the every day and the “far order” of the societal (global) conditions.

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15 More precisely, Lefebvre defined the city as the mediator between ‘the private’ and ‘the state.’ In the following study ‘the state’ should be substituted by ‘the society,’ because like this not a polarity but an interweaving between private life and the self-consciousness of the society becomes obvious and relevant. A society, of course, consists of various parts, but they are all involved in a socially-based consensus defining a hierarchy of ethical values and rules, dealings with political, economic, and social questions, and the processes of communication, power, and decision-making.
The trialectics of space

The previous studies concerning the architectonic and morphological space now should be implemented into Lefebvre’s theory of space (Lefebvre, 1974) which is able to be the basis for the analysis of the intrinsic logic of the city because of its openness and dynamism, its concreteness and abstractness. He brings together the perceived space, its construction (reflection and planning) and its use - the creation of networks of interaction – in its experience. These constructed, perceived and experienced spaces stand side by side in a dialectic and dynamic relationship. Edward Soja calls this relationship “thirding-as-Othering,” meaning they do not establish a closed, dualistic either/or relationship, but rather a dialectically open both/and relationship (Soja, 1996). All the spaces include fragments of the others. The morphological space, defined in this paper as the typological shape of the city, contains a spatial structure that opens up possibilities of use of a typological (i.e. open) nature. The constructed space is both historical and contemporary in its conventions and hierarchies, and the morphological space has an expression with both objective and subjective meanings.16

The morphological space

In this study we want to equate the perceived space with the morphological space. It is the absolute space of the present that becomes reality through architecture – the architectonically shaped ‘Euclidean space,’ which is given meaning through the architectonic structuring and typologization. An apartment of 80 sq ft, for example, in reality represents a specific typology – as a loft, a 19th-century apartment, a post-war apartment, an industrialized building apartment or a semi-detached house. An office of 250 sq ft, for example, is located in a creative quarter within a renovated industrial building, in one of many skyscrapers in a business district, in a spacious block dating from the founding era along a prestigious shopping street, or in a building constructed by an investor alongside an arterial highway. The morphological space can be analyzed with objective criteria. The decisions made in designing this space depend on each other – the parcels, the typologies, the dimensions of the volumes, the infrastructure, and inherent organization. The structure of the parcels determines, to some degree, the typology with inherent specific principles of addition. We can analyze the morphological space through the structure of the parcels, the typologies, and the structure of the street proportions, its borders, transitions, rhythms and places. The next step is to analyze the transitions from private to public space in relation to their functions – how is the space of the private, the collective, the public, and the semi-public—space that is public but not accessible for everybody—elaborated architectonically? How are the borders and transitions defined? How big is the ‘space of possibility,’ the leeway of a typology? How are the public spaces shaped? How does the architecture determine the ‘connecting factors’ of appropriation, or the ‘patterns of events’? By analyzing the morphological space, we want to know something about the how of the architectonic space, the how of the typological and structural transformation into a private, collective and public space—its relations, transitions and borders.

The conceived space

16 In this study we want to cancel out the Marxist connotation of his theory, because we don’t want to disclose capitalistic problematics but make a non-ideological analysis of the kind of urbanity.
The conceived space is equated with the societal space. Through the typologies and structures, it can be analyzed in terms of what kind of societal self-representation is produced. We can analyze the distribution of space in a Bourdieu sense. We can allocate the societal (financial) value of space and its identification with this allocation – for example the subsidization (e.g. subsidized townhouses in prime locations in Berlin), the political control (e.g. of social housing), the real estate price (e.g. to motivate investment) or the transformation of neighborhood districts (e.g. car lofts in Kreuzberg).

By looking at the kind of correlation of private, collective and public space (the shape and the functions) we can analyze the kind of urbanity. Is the space fragmented, is it a unit, are there transitions, or borders? Every configuration of a building and its courtyard, (proportions of) streets, outdoor space, and entrances contains different patterns of events and possibilities of use. What kind of social encounter, what kind of leeway do they open up? How can we use the public space? Do we sit down and watch, stop, and have a picnic, or do we have to behave soberly?

The conceived space is the space of the present oscillating with the past. How does the space of the past determine the present use? The societal space is the space of possibilities but also of hierarchies and relations of power. Does a space determine the use? Is it well organized for a specific use and behavior? Is it hybrid, designed, controlled, polyvalent, occupied, or open?

In this analysis, we want to know what kind of self-representation and what kind of social space is produced. What kind of social encounter and action can be produced in the architectonic shaped space? Which possibilities and leeway do they open up? What could (possibilities) and should (determinations) happen in these spaces?

The experienced space

The experienced space is characterized by the way of realizing the intrinsic possibilities. Everybody has his own preferences and his own habitus, but the appropriation is based on the resources: the possibilities a space opens up with regard to the opportunities of its users. There is a range in architectonic space, sometimes fewer, sometimes wider. But first let’s take a step back. How do different people orient themselves (in an existential sense) in the city? How do they formulate “centers” by producing “Gestalten” and “schemata” (cf. Norberg-Schulz)? How do they orient in space, appropriate it, and give it a personal touch? How do they create identity; how do they feel secure and at home? Which “hodological paths” do they choose to connect their places in the city? What is the rhythm of specific streets and places, when are they used, by whom, and how (Lefebvre, 1992)? In which way do people grasp the intrinsic possibilities of space? In which way do they fill up the “realm of the in-between” (cf. structuralism), and in which way do they concretize the spatial patterns (cf. Alexander)? In which way do they rebel against the determination of space, subvert the given structures, transform them, and give them a new interpretation (de Certeau, 1980)? What are the different adaptive, renunciative, and subverting tactics and strategies to appropriate space?

The intrinsic logic of the city

The city is the mediator between the ‘near and the far order.’ That means the city is a palimpsest of different abstract and concrete processes of different scales, which are taking or have taken shape. But the space of a city is the space of the present, one space, which includes
perceived, conceived and experienced space. These spaces correlate in a dialectical and dynamic way. The cultural character of a city implicates the typologies that emanate from the past, in a specific historical and social situation; the historical layers and also the implementation of dealing with actual challenges. Urban space is frozen history, transformed, subverted, distributed, and appropriated in the present. The structural logic of a city is its morphological structure, telling what could and what should happen. It is the leeway, the spaces of possibility opened up by it, the social hierarchies and its decisions and the texture of cultural and societal patterns. Based on the spatial resources we orient ourselves in a city; we create identity and feel at home. Sure, to feel comfortable depends on many other factors, but the way we live, the apartment we can afford, the quarter we can afford to live in, reflects the ‘conceived space’ which correlates with the other spaces.

If we want to analyze the intrinsic logic of a city, the specific kind of urbanity, from the architectural point of view, we can analyze these three spaces separately, with their specific mode of analysis. As architects we will do this by plans and maps, where we summon up and locate the typological and structural analysis, the statistics, the observations and the empirical material. Like this it is possible to analyze the correlation of the spaces, find out congruencies and contradictions between space and use. “‘Space is the expression of society.’” (Castells, 2003)

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