Think Space Pamphlets

Contents:

06

Daniel Köhler

READING HILBERSEIMER: PUNKTUALIZATION AS AN ARCHITECTURAL METHOD

Prologue

'The point here is that the failure for change to occur despite compelling critiques of the dominant social order cannot simply be attributed to ideological mystifications. Social and political thought needs to expand its domain of inquiry, diminish its obsessive focus on content, and increase attention to regimes of attraction and problems of resonance *between objects.'*[i]

Architecture is about the Many, it is about an Us. Architecture can have meaning only if more than Two negotiate with each other on a longer term basis, which overreaches their own horizon and time span. As a Platform for a Collective, the architecture is a physical constitution or, at its best, a projection, transfer of society. It doesn't matter if you see the role of architecture in establishing a power regime or strategic counter-force from within, the architecture itself is an assemblage or works within an assembly of forms.

Introduction

When I took a step back from my monitor, with all its swarms, multi-agent-systems and dust-particle-distribution-machines, and began to search for a trace of assembling strategies in the history of architecture, I came across the art-critic, teacher, and urban-architect Ludwig Karl Hilberseimer. In a continuous body of work he researched on the *Origin, Growth and Decline* of Cities over nearly 50 years. His research was driven by his interest in the *Nature of cities*, in looking for the underlying patterns and forms the description of which gave him the possibility to make his own projection of the city of industrial age.

His definition of city-architecture as absolute relations between its elements[ii], itself constituted through the inscription of specific parameters, works on one of the basic set of problems in architecture: The Part-to-Whole-Relation. Within his model of architectural elements constituting architectural elements through architectural operations (yes: recursive poietics) we find a political agenda free from dialectics of subject and object, culture and nature; The Punctualization of public domains as the basic strategy for an object oriented architecture.

Rectification of Hilberseimer Work

Unfortunately, the works of Ludwig Hilberseimer are mostly referenced to when projecting the fatal consequences of modernism observed already in 1924 with just two renderings of his *Hochhausstadt* (or the Vertical City) schema.

It is obvious that at first sight one reads the renderings as an architectural proposal for a functional determination without diversity[iii].A continuous repetition of modernistic slab became a perfect icon for postmodern polemics on modernism. Condemned for its formal banality resulting from the repetition of abstract forms, these renderings are still used as a synonym for the deficient repertoire of functionalist architecture. Whereas every critique skipped that Hilberseimer already emphasized in the description of the rendering itself their

diagrammatic character.[iv] He addressed them explicitly only as architectural schemes inside an urban proposal.[v]

The renderings are deprived from any traditional urban forms of public space, a reproduction of cells and the individual in the urban fabric. The formal approach of mass ornament, as argued Michael Hays[vi],becomes the final consequence of mass production and assembly line. Hilberseimer projected here the Zeitwille of the Weimarer Republik in its last consequence. There is no wonder, that the renderings have still a frightening tension for us, because modernism argued as the negation of the bourgeois (humanistic) domain, it can also be understood as a kind of re-boot of the public agenda. In a positive reading, you can see these bare places without any traceries as a possibility for a new negotiation of public domains, a political agenda of an absolute architecture[vii]. In a negative way, it were exactly these bare conditions of modernism that were very fast annexed by totalistic regimes and became the architectural framework for the XX century horror.[viii]

City as a democracy of architectural elements

As an Art-Critic Hilberseimer described in numerous articles[ix] contemporary projects on the city and solutions they give to specific problems, adding his own concepts to it. Hilberseimer's city evolves like a collage in a coherent reading of collective work. For a project considered as a contribution to a wider area of knowledge there is no need to be rendered in a full-blown context. The fragmented impression of his proposals is a direct result of his kind of laboratory focus on solving urban problems. Grasped by other architects of his time,the abstractly and statically rendered city elements should be become contextualized, and redefined by their own artistic 'Kunstwollen'[x].

Over two-thirds of the content of his famous book 'Groszstadtarchitektur' (1927) is a catalog of modern projects that are aimed at demonstrating the Zeitgeist and development of new urban forms. Originally Hilberseimer collected these projects for the 'Internationale Bauausstellung' exhibition. The exhibition was organized on the side of the famous'Stuttgarter Weissenhofsiedlung'and was supposed to represent the Weissenhofsiedlung as a condensed place of ongoing international movement. So,as it was with the 'Groszstadtarchitektur', the contemporary city as a condensed place becomes an assemblage of the Zeitgeist, the collective work of many architects.
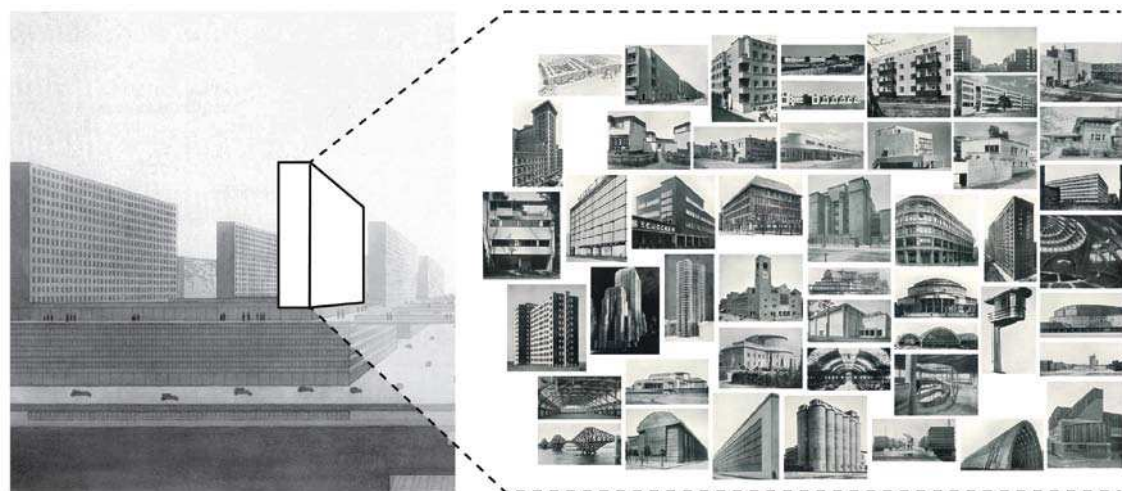
01 the Groszstadt as the assembly of the Zeitgeist; left: rendering of the "Hochhausstadt", right: Hilberseimer's images of canonical "Groszstadtarchitektur" (Photographic material © Ryerson & Burnham Archive, Art Institute Chicago)

Towards an Autonomous Architecture

In retrospective, Hilberseimer described the architecture of the 1920s as a trend towards architectural autonomy.From the autonomous status of architecture, from the existence solely in itself, he draws the conclusion that architecture as an art could only be realized with a multiplicity of buildings, with the city itself.[xi]The above ideas make it clear that

his'Groszstadtarchitektur' is not primarily a material expression of socio-economic conditions of the industrial age but more a simple formal strategy of disposition of architectural elements.
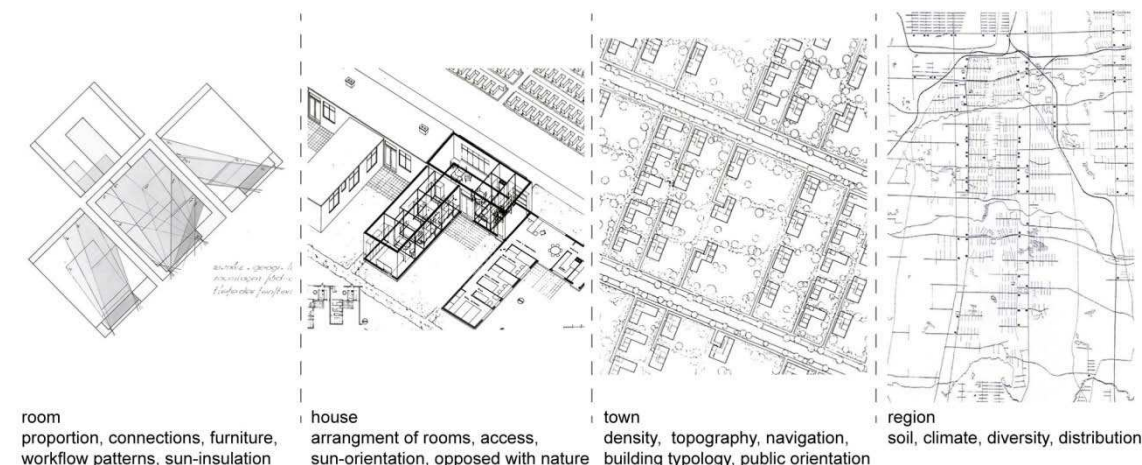
Hilberseimer repeatedly builds his argumentation on a reading of Alberti's 'De re aedificatoria' where architecture is 'arising from three things, namely the number, the figure and collocation of the different parts. The architectural problem is then to join and unite certain numbers of parts into a whole, by an orderly and sure coherence and agreement of all those parts'[xii]

Two things are interesting here: at first, Hilberseimer never goes so far as Alberti himself, and aims for a final design in terms of a perfect element, a stable proportional condition without any possible disposition or subtraction of its parts. Where beauty, the aim of architecture becomes a repricational identical.[xiii]

However, even more striking is his translation of Alberti's whole (orig. civitas)[xiv], not literally as the city itself but, at the organizational level, as a coherence and agreement of all its parts. He takes here the Roman understanding of civitas as a political form of coexistence and projects it back on architecture as a strategy of disposition of architectural elements. In short: architecture as theory of assembly.

Plateaus

From this moment on, he builds on the concept of architecture as an assemblage; he is stuck in the situation when, as soon as he defines a part of the whole as an architectural element, the element itself has to become an assembly of multiple elements in itself. Every closer perception opens again the element as a proportional coherence between multiple elements. So, not only his city is described as a disposition of building cells. Furthermore, the building slab consists of multiple individual cells. The form of a slab causes by the needs and disposition of the apartments. An individual cell[xv] an apartment, is in itself a sequence of differentiated rooms. And, the form of a room depends on the coherence between doors, openings, furniture and walls. In this way, with Room-House-Town-Region[xvi] Hilberseimer establishes four clearly defined 'civitas'. Plateaus for negotiation of smaller singularities, architectural elements.

room
proportion, connections, furniture, workflow patterns, sun-insulation

house
arrangement of rooms, access, sun-orientation, opposed with nature

town
density, topography, navigation, building typology, public orientation

region
soil, climate, diversity, distribution

02 the establishment of different plateaus allows us to see an unit as an assemblage of elements and as an element of an assemblage. (Photographic material © Ryerson & Burnham Archive, Art Institute Chicago)

In his first monographic publication 'Groszstadtbauten', he recognizes the city as an over and over repeating character. His Groszstadt is already everywhere to such extent that one can speak from an already completed urbanization[xvii]. The organizational plateaus enable him to perceive complexity under one concept that spans from the scale of an individual to his involvement into the worldwide over spanning economy of the industrial age. In such a way he creates a vertical coherence working within the limits and threshold of its units.

Variety becomes here an operation of zoom-in (and -out). Where bonds of an upper level and the needs or expressions of the lower characters becoming the agreeable topics of configuration.

Definition Punctualization

One who is familiar with the Actor-Network-Theory can recognize here the same pattern of using a network of relations enclosed in one actor. ANT as a critique on dialectic reasoning, can be technically defined as a material-semiotic method in the field of science studies. As a constructivist approach, it avoids essentialist explanations of events (true or false), by taking into account just actors involved in the creation of meaning both in a material or semiotic way. As a discipline, its research focuses on explicit strategies of relating different elements together into one network so that they form an apparently coherent whole. In social science, ANT is used as a descriptive method to depict agencies. In this context, agency is understood as the capacity of an actor to act, opposed to structure as referencing back to the forces that seem to limit or influence opportunities. The network evolves by virtue of the participating elements with each other. And, a logical conclusion is then that nearly any actor can be considered merely as a total of others, smaller actors.

The evolution, use and perception of a network as actor is in ANT nearer defined by the strategy of 'Punctualization'. John Law points out that as Punctualization we can describe an effect or the product of heterogeneous networks. It states that if a network acts as a single block, then it disappears to be replaced by the action itself and the seemingly simple author of that action. At the same time the production and cause of the effect is neither visible or relevant.Through its widely, habitual use a network pattern becomes a package, a routine. The Pattern can be taken for granted in the process of heterogeneous engineering and finally becomes a resource in it.[xviii]

As Punktualization we describe the moment of embodiment, when elements becoming part of a larger entity constitute it. It is exactly this point of bifurcation between the notions of assemblage and entity that drives a hidden political agenda in the late work of Ludwig Hilberseimer, as we should see later.

Of course Hilberseimer could not know ANT or even a particular concept of itasPunctualization. Whereas the origin of the term Punctualization can be traced back to theAristóteles notion of *hexis* (Greek: ἕξις)[xix] translated as an active condition, a deep and active disposition as constitution. Similar to the Punctualization, constrained to Social Science Aristóteles discusses *hexis* as practical acting, behavior in time. In the context of *praxis* he describes *hexis* as an arrangement of parts (comparable to the term agency) such that the arrangement might have excellence being well arranged or, in contrast, might be badly arranged.[xx] Here again, unlikely Alberti's treatise, there is not any outer dialectic evaluation included, hexis describes only the constitutional character.

In the *Nicomachean Ethics* Aristóteles brings hexis directly in contact with *poiesis.*The term poiesis alone is described as result-oriented action that can change the practical acting and, by such detour, alter hexis. Analogue to the modern assumption of functional reasoning in architecture: poiesis forms hexis.

But in the *Nicomachean Ethics* Aristóteles explains that *poiesis* comes into being through *techne*, the virtue (disposition) of making ('*meta logou hexis poietike'*). Aristóteles argues further that techne cannot be different from the making itself. As opposed to *theoria*, techne, as the virtue of a poietic object, is not anything descriptivenor is based on the need, purpose or nature but has its origin in itself. Knowledge derives from making and cannot be differentiated from the made object. The poietic objects are the basis for alasting posture, hexis of making (techne) itself. In short: *hexis forms poiesis which alters hexis.* An effective alteration of an architectural work can only be done through a self-reflection of its inner virtue, its hexis, arrangement of its parts. That means, architectural interventions are a zooming-in or opening (de-punctualization) of the common, reconfiguration of the expected architectural element.

From projective to inscriptive reasoning

Over the time, a shift can be seen in Hilberseimerwork from a projective functional to an inscriptive historical reasoning.

In Hilberseimer's case ascontemporary of the industrial age, his city was necessarily functional in the beginning which implies architectural form constraint by socio-economic relations. He connects the consequences of physical effects as a cause for social behavior and comfort. Well-famous are his sun-insolation studies where he connects in a linear relation healthiness and time of direct sun-insolation. (A common medical understanding at the time). As a necessary consequence, buildings are disposed to it. The private separation of persons and the linkage of one cell per individual is a conclusion of the medical understanding of better recreational effect in isolation. (padded rooms as the paranoid pentant). In his early proposals, Hilberseimer projects social, medical and political domains directly into architectural form.[xxi]

During his American period, in 1940s, the embodiment of humanistic issues continuously dissolves in favor of historic descriptions. History is considered more as a pool of projects, level of complexity reached through the evolution of architectural strategies.

Hilberseimer argues a column as a repeated sectional operation on a pillar, the concave shape of the cannelure amplifies the absence of material. The type of basilica as a result of scaling pillars leadsto the break in the ceiling, overlight and differentiation between side- and main-ship. The highly differentiated and complex structure of the Petersdom is interpreted by him as stacking the Pantheon on a basilica.

In his reading of history, he builds up a hierarchy where one finds on each level of the scale an object as a result of multiple architectural operations on architectural elements.In a more and more profound, inter-relational way, elements work on each other, establishing new elements, wholes.[xxii]
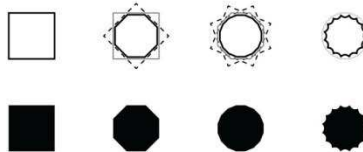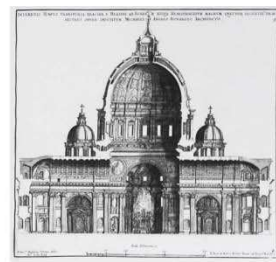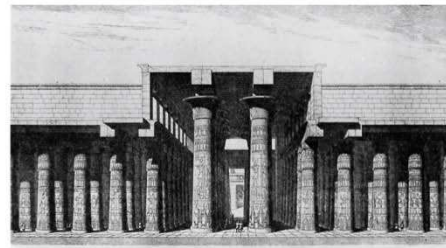

the column as a repeatedly cutted pier

"by making longitudinal sections through each corner of the square piers eight-sided piers resulted, which appear considerably lighter. Repeating this process (...) with it a new architectural element was created"

Basilica type: scaling of elements leds to a second storey

"the central avenues are higher than the side avenues in order to admit light through a clear story (...) a new building type, the Basilica, was created"
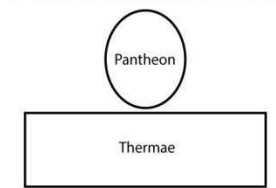
Petersdom: a stacking of architectural types

"To put the Pantheon on top of the Thermae was a very fascinating idea of the Renaissance. Michelangelo however was able to architecturalize this unarchitectonic idea"

03 Hilberseimer draws the history of architecture as architectural operations on architectural elements (Photographic material © Ryerson & Burnham Archive, Art Institute Chicago)

Synoikism exchanges the dialectic argumentation

Hilberseimer opposes his city to the common modern city project canonically linked with Le Corbusier's 'Une Ville Contemporaine' (1922). Directly, by creating a confrontation between the Corbusier's project and his vertical city as a critic as if addressing the evolving traffic problem from the point of view of functional separation.Indirectly, positioned Le Corbusier his new city in contrast to the historic city; and the cut through the city as the symbol of the clearance from a bourgeois society. This concept is based on the negation of the existing. Ultimately, Le Corbusier translates this dialectic argumentation between new and old, or good and bad, architecturally into the opposition of a figure and ground. Later on, the most

modern architectural evaluation and critique will be based on dialectic pairs like figure-ground, private–public, open–close, box-pyramid[xxiii]and so on. This list can be endlessly extended. Architecture is considered as dialectic difference.

Contrary to Le Corbusier, Hilberseimer starts his argumentation and reasoning from historical perceptions. He explains that historically cities always grew from synergies of lives in bigger entities. From the shelter for a family, through the rural assemblies of clans, to the walled cities of the Greek and medieval times, each step had a bigger advantage for its inhabitants for trade, protection, and finally knowledge. Here the theory of assembly goes far beyond of being just a proper disposition of architectural elements. Drawing on a concept called Synoikism[xxiv]heargues that a surplus willemerge as soon as multiple elements form a bigger entity. Here again, he closely follows Aristóteles definition of *polis* not only as a gathering or protection of multiple families and clans in one formation but also that the polis is the place that enables culture and knowledgedue to its number of constituting objects.[xxv]On the contrary, the number is limited to the voice-strength of a speaker on the agora, which means that every produced effect of the city should produce a cause back on every single individual.
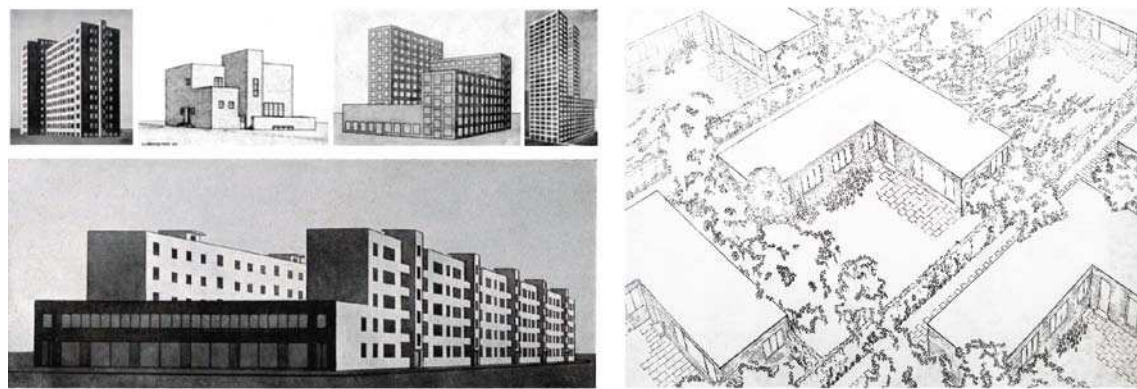
04 shifting from 3-dimensional poché-figuration to the linear grouping of elements

With the concept of the city as a constitution that provides growing benefits to its individuals Hilberseimer begins to draw, at the beginning of the 1920s, simple geometrical massings in the figure-ground dialectic developed as poché-figures as an outlining of a consistent group of figures (cells). In a figure-ground-diagram the technique of grouping multiple elements into one figure by marking areas opposed to the (back-) ground origins in the Ecole des Beaux Arts term Poché that defines the hatched areas of cutted parts in a section or plan[xxvi]. By this a poché-figure is a definition of a group from an outside point of view. As an observation it marks a border condition within a global context, but it is unable to reflect on the constitution of parts of a figuration. A poché visualizes the difference between the one and the other, but not between the one and the many.

During the further recension on the Vertical-City proposal[xxvii] the critics nether catches up with the intended assemblic depth of Hilberseimer's proposal. Emphasizing the inhuman scale of the polis-size highrise-slabs, the architectural research is drown under the socio-political reactions. Consequently after 1925Hilberseimer moves from the volumetric poché representation to linear graphics. The form and laminar contrast dissolve. Areas are defined now by their densities, directions and characteristics of its lines. In the schemes of the settlement unit,he goes away from even drawing the architecture itself and just the streetsas the only feature that they have in common to ensure their relations. The drawings represent now a balance between a perceived entity or a smaller scale configuration of smaller elements - the moment of punktualization.

The drawn relative lines is a good visualization of what Hilberseimer understood as the structure in architecture, i.e. a design method evolving not from a dialectic contrast but from a closer reading of existing objects and the recognition of their underlying structures. To this

end, he points out the similarities between different historic conditions, looks at their causes and consequences and identifies through comparison their underlying structures and patterns.The extracted structure is then the '(...) relation of parts, and finally as an idea of parts. Structure is the embodiment of a conception. The form of architecture is a consequence of the structure. Form is fact made manifest.'[xxviii]

The tayloristic tendency of his functional design can be read in this context otherwise: By placing the design concept on an edge condition like a minimal agreeable position (standard), the underlying structure could be evaluated. Never forget that his drawings - similar to anylaws - just show the most extreme conditions under which they should be proven; the drawing is the limit of an agreeable situation.

EmbeddingSpeculation

During his course in the Bauhaus the students designed one-family houses on the one hand as an alteration of proportions and functional relations, on the other by their multitude in repetitive arrangements. In both ways, the insight in the collective condition alters the configuration of an element, or the potential of an element in configuration alters the character of the collective. The collective condition became a dialectic critique with the designed element itself. The urban field itself became an inherent property of the architectural element.
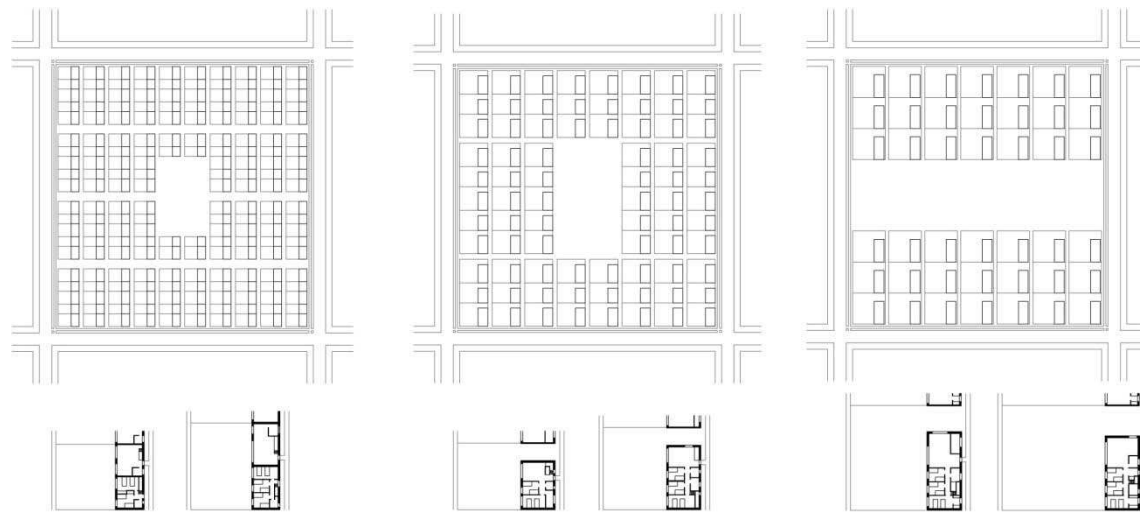
05 testing the design in a collective field condition
original drawing by Pius Pahl, Bauhaus student in Hilberseimer's course

In his redevelopment plans for Chicago, Hilberseimer introduces an operation which allows an individual pedestrian flow without the necessity for crossing streets. He engendered a transformation of the city pattern towards his settlement unit by a constant pattern of activity.[xxix]The city is perceived here not as a static object but as something that originates, grows and declines in time. He describes often a city as an organism but goes here further then 'the common part to whole reference' and highlights the needs and causes of a city, without a city would distinct. The most interesting consequence is not that you perceive the city in relation to, or dependent on, something but the moving vector, the embedded need for change.

Here the introduction of one operative strategy and its evolution in time opens the field for speculation on the whole. Urban Design becomes a perception, introduction and reconfiguration of elements, their unfolding, growth and decline. The master plan is then nothing but a projection, speculative map, amplification of multiplicities. The city is perceived as open entity constantly reconstituted by its elements. It is in this bifurcation between the entity and multiplicity of elements that we find a hidden political agenda in the later works of Ludwig Hilberseimer. Architecture is not only a cultural add on, formal play,

but through the architectural operation of Punctualization as the threshold of one to many, it plays an active part in the drawing agencies, their synoicistisc constitution, based on the needs of their individual parts.It becomes something rare in the times of separation, competition, explanations based on difference and dialectic oppositions. This I will call an environmental design strategy.

Existing

1. Phase

2. Phase

3. Phase

06 redevelopment plan of Chicago

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He holds a Magister in Architecture, which he perceived at the Angewandte Vienna under Prof. ZahaHadid and Patrik Schumacher with distinction. Currently he lives in Vienna, where he and his friends work for their collective: lab for environmental design strategies.

iLevi R. Bryant (2011): The Democracy of Objects. Ann Arbor: OPEN HUMANITIES PRESS - An imprint of MPublishing – University of Michigan Library., p.211

ii For a more precise translation of an object-oriented-ontology for architecture, I will replace the term *object* with *element*. As Levi R. Bryant points out, an object can include everything: e.g. things, social agencies, organizations. According to NiklasLuhmann's System Theory an *element* is an object as part of a communicative system, like here the architectural discourse. The term element should help to frame an object to just its architectural condition.

iii Schumacher, Patrik, 2012, 'The autopoiesis of architecture.' 1st ed. Hoboken, N.J: Wiley, figure 1, p. 59

ivKilian, Marcus, 2002, 'Großstadtarchitektur und New City: Eine planungsmethodische Untersuchung der Stadtplanungsmodelle Ludwig Hilberseimers', Köln, p.45-77; in his PhD Marcus Killian spends a whole chapter for relieving Hilberseimer reputation from postmodern polemics.

v Hilberseimer, Ludwig, 1927, Groszstadt Architektur', Stuttgart: Julius Hoffmann, p. 18.
Hilberseimer argues the vertical city proposal as a critical answer to the traffic problem in Le Corbusier's Ville Contemporaine, resulting from his functional separation.

viHays, Michael, 1992, 'Modernism and the posthumanist subject: The architecture of Hannes Meyer and Ludwig Hilberseimer', Cambridge, Massachusetts: mit press, p. 263.

vii Aureli, Pier Vitorio, 2012, 'Architecture for Barbarians: Ludwig Hilberseimer and the Rise of the Generic City', AA Files 63, 3–18 at 18.

viiiHays, Michael, 'Modernism and the posthumanist subject', p. 270.

ix Harmut Geeken, 1980, 'Der Einzige – Faksimile', Kraus Reprint, München
L. Hilberseimer began 1919 to write for the Berlin Magazine „Der Einzige", where he published several articles („Form und Individuum", „Schöpfung und Entwicklung"), which contain already his theoretical framework. Significant is the imprint on the last page of every magazine: „Der Einzige (literally: the only one) don't knows any parties. He is standing on individualistic ground and fights against any mass-suggestion and mass-psychose. It is his opinion that the salvation out of our dranged present into a clear future can only be an appeal on the Ego, the going back to individuals like Stirner and Nietzsche, to develop their ideas (...)". Concluding further: When Hilberseimer's proposals are standing on such an individualistic ground, architecture can hardly become a mass-ornament.

x Hilberseimer often uses the term „Kunstwollen"(literally: will to art), which was first defined by the Viennese art-critic Alois Riegl (1858-1905). Riegl never really explained this term very precisely. But for the question how a permanent Stil evolves, he oppose „Kunstwollen" to Sempers 3 determinants: purpose, material and technique. As an individual but contingent tendency of an age, nation or collective a „Kunstwollen" is able to drive stylistic development without respect to Sempers determinants.

xi Hilberseimer, Ludwig, 1964, 'Contemporary Architecture: It's Roots and Trends', Chicago, Paul Theobald and Company, p. 104/ p. 116.

xii Hilberseimer, Ludwig, 1956, 'Mies van der Rohe' , Chicago: Paul Theobald, p. 36.

xiii Mario Carpo, 2011, 'The alphabet and the Algorithm', Cambridge, MIT-Press

xiv Hilberseimer is just referencing to the first book, Chapter 9: „Quod si civitas, (...), maxima queda est domus, & contra domus ipsa minima quaedam est civitas," Leon Battista Alberti, De re aedificatoria, Florenz, 1541, p.12. He never refers Albertis term of beauty, because any organizational form, driven by a right relationship between Material and Kunstwollen will be beautiful

xv The term cell is understood here as an analogy to biology and the notion of a city as organism. A common reference in that time.

xvi Hilberseimer, Ludwig, 1945-1949, 'Physical Planning, a textbook: Room, House, Site, And Town', Chicago, Ryerson & Burnham Archive, p. 1.

xvii Hilberseimer, Ludwig, 1925, 'Groszstadtbauten', Hannover, Apossverlag, p. 8.

xviiiLaw, John, 1992, 'Notes on the Theory of the Actor Network: Ordering, Strategy and Heterogeneity' 5, Systems Practice 5(4):, 379–93 at 384.

xix Aristóteles, Nikomachische Ethik, 2006 , ed. Ursula Wolf, Reinbek bei Hamburg: Rowohlt-Taschenbuch-Verlag; Spec. EN, VI, 4, 1140, 0-24

xx Aristóteles, Metaphysics, p. 1022.

xxiHays, Michael, Modernism and the posthumanist subject, p. 263.

xxiiHilberseimer, Ludwig, 1949, 'Architecture: Structure and Expression', pp. 19–27

xxiiiIn his lecture series "What can architecture do?" Jeffrey Kipnis shows how you can translate all architectural knowledge in any kind of dialectic figuration. More ironically he switches the political statement of figure-ground to pyramid-box dialectic.

xxivHilberseimer, Ludwig, 1960-1963, 'City Architecture: The Trend towards openness'.

xxv Aristóteles, Politik, VII, 1326, a

xxvi C. Rowe and F. Koetter, 1997, '*Collage city*', 5th edn., Basel, Boston: Birkhäuser, p. 114.

xxvii Hugo Häring, 1926, 'Zwei Städte', Die Form, p.172-5: critizes the artificiality and inhumanity of the Vertical-city.

xxviii Hilberseimer, Ludwig, 1949, 'Architecture. Structure and Expression', p. 1

xxixSpaeth, David, 1988, 'Ludwig Hilberseimer's Settlement Unit, Origins and Applications', in the Art Institute of Chicago (ed.), 'Ludwig Hilberseimer: In the Shadow of Mies', Chicago, Rizzoli, p. 64.

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Drawing 5 retraced by author, original drawing by Pius Pahl (Bauhaus course Hilberseimer) 1931, © and courtesy of Ryerson & Burnham Archive, Art Institute Chicago
Drawing 6 retraced by author, original drawing by Ludwig Hilberseimer, 1955, © and courtesy of Ryerson & Burnham Archive, Art Institute Chicago