

Designing Under the Impact of the Land Issue – from Sitte to Bernoulli

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Introduction

Since the latest price increase for housing, the land issue is once again in the public attention. The demand for affordable housing is a recurring topic in the daily news and the need for new strategies in social housing has hence come into focus yet again. Under the pressure of these occurrences, architects resume the exploration of new ideas for cooperative housing models and developers start their own respective initiatives in order to shape a new idea of community life.

At first glance, the land issue seems to currently address the political aspect of this multifaceted topic. Put simply, one might think that the question starts and ends with the matter of property, but a second look at the historiography of the land issue reveals another, rather underestimated topic — the relationship between the land issue and design processes.

This relationship has already been acknowledged in 1907 by the economist and urban planner Rudolf Eberstadt,¹ who wrote:

“The land parcellation is a matter of speculation. The construction method, the form of the house and the production of housing are determined by speculation.”²

The outcome of these speculation processes, especially around the fin-de-siècle – in the form of the questionable housing typology of the *Mietskaserne*³ – determined a whole discourse in urban planning and architecture, which lasted until the 1930s. A dense publication activity was related to the ideals of the Garden City Movement and has been supported for example by Rudolf Eberstadt, Theodor Fischer⁴ and Hans Bernoulli.⁵

A whole generation of architects worked under the influence of the Garden City, made its impact visible for almost half a century and thus created an opposite standpoint to the existing

- 1 Rudolf Eberstadt (1856-1922) was a German economist and urban planner educated in Berlin and Zürich. His publications concentrated on housing and land issues taking into account economical parameters.
- 2 Rudolf Eberstadt, *Die Spekulation im neuzeitlichen Städtebau [The Speculation in Modern Times Urban Planning]* (Jena: Verlag Gustav Fischer, 1907), 1: “Die Bodenparzellierung ist Sache der Spekulation. Die Bauweise, die Hausform und die Wohnungsproduktion werden durch die Spekulation bestimmt.” (Translation by the author)
- 3 The term *Mietskaserne* describes the tenements that developed during the early days as a dense form of housing, a typology that consists of a series of small courtyards, exploiting the land on which it has been built.
- 4 Theodor Fischer (1862-1938) was a German architect and urban planner educated in Munich. He led the Munich office for urban expansion and was a Professor at TH Stuttgart and TH Munich. He was the teacher of several architects who were responsible for the famous housing projects of the 1920s, such as J.J.P. Oud, Ferdinand Kramer, Hugo Häring or Ernst May.
- 5 Hans Bernoulli (1876-1959) was a Swiss architect and urban planner educated in Munich and Karlsruhe. He lived in Berlin until 1912, the year when he moved back to Switzerland due to the economic crisis in Germany. He led the Basel-based building company [Basler Baugesellschaft] and was a Professor at ETH Zürich. He has been influenced by the doctrine of free economy [Freiwirtschaftslehre] a model developed by Silvio Gesell.

mindset. Out of this development a number of different design approaches for housing were built including the famous 1920s projects in Germany.

This simultaneous development to the land issue's discourse became necessary in order to react to the housing shortage after the First World War in Germany, a time when the economy was at its lowest and the political situation needed to be re-stabilized. Consequently, cooperative housing movements were recognized as a solution to avoid speculation processes and to create a new form of low-cost housing. These cooperatives, such as GEHAG⁶ in Berlin, collaborated in the 1920s with the architectural avantgarde in order to design not only affordable, but beautiful housing for the working class.

With reference to the social and political impact of the topic and its history, the intention of the article is to track the potential influence of the land issue on the architectural project, in order to investigate the relationship between the theoretical discourse and the built project of that respective period. The element of the plot is herein understood as an important instrument for controlling design processes and structuring the different spaces of the case studies in order to specify the boundaries of the spatial composition of the projects.

Referring to Rudolf Eberstadt's description on the land issue's influence on housing, the article investigates the following questions: What position towards the land issue is described in the theoretical writings from Camillo Sitte to Hans Bernoulli? (The theorization of the land issue) To what extent has the dialogical character between the element of the plot and the form of housing been described through the built housing projects at the beginning of the 20th century? (The concretization of the land issue). Therefore, the analysis of the three case studies – *Siedlung Alte Heide* in Munich, *Siedlung Britz* in Berlin and *Siedlung Im Vogelsang* in Basel – are presented in this article in order to retrace a possible design solution for beautiful and affordable housing through the relationship between private property and common spaces.

An introductory overview presents a selection of writings on the land issue and explores the different statements and methods, described by Camillo Sitte, Theodor Fischer and Hans Bernoulli. Essential passages from *Der Städtebau nach seinen künstlerischen Grundsätzen*,⁷ *Sechs Vorträge über Stadtbaukunst*⁸ and *Die Stadt und ihr Boden*⁹ are quoted with the intention to investigate the topical context of the three architects and urban planners.

Spatial Aesthetic – Designing in Favor of the Irregular

A contemporary view on the current housing issue may not inspire enthusiasm with respect to aesthetic categories. Land speculation still seems to make its visible impact all over Europe and creates monotonous spaces. Current architecture seems to be again composed of uniformed buildings, creating the maximum amount of floor space in order to exploit the land on which it has been built. Ignoring the existing urban fabric, parcellation and housing production seems to follow the principles of a market under pressure. What results is an architecture without spatial interrelations between the new and the existing, an architecture without articulated thresholds between public, common and private spaces.

Criticizing monotonous building production is not a contemporary topic, as the influence of land speculation on urban planning and the corresponding loss of beautiful motifs has been already discussed more than a 100 years ago by Camillo Sitte:

6 Gemeinnützige Heimstätten-, Spar- und Bau- Aktiengesellschaft (GEHAG), founded 1924 in Berlin, today: Deutsche Wohnen AG.

7 *City Planning According to Artistic Principles* (Translation of the English edition).

8 *Six Lectures on the Art of Urban Planning* (Translation by the author).

9 *Towns and the Land* (Translation of the English edition).

“The high prices of the building site are the reason why a lot of effective motives have recently been eliminated and the construction of each plot is always striving towards the type of the modern building cube. Avant-corps, atriums, open staircases, pergolas, corner towers, etc. have become an unaffordable luxury for us. [...]”¹⁰

The Viennese architect assumes a certain aesthetic ideal, which correlates in the best sense with the etymology of the Greek word *aisthesis*, describing a sensation, explored through experiences conveyed by the senses. With the disappearance of architectural motifs, the urban flâneur is bound to feel bored. Sitte’s spatial aesthetic furthermore implies the idea of a city of bound spaces, not the idea of a city of loose objects. The fluent, heterogenous space is the example for beautiful cities. According to Sitte, passers-by will be bored by long and repetitive streets and alleys.

Taking up the principles that are described and introduced by Camillo Sitte in 1889, the paper comments on his famous publication through the lens of the land issue. It then discusses the further development of Sitte’s principles by Theodor Fischer and Hans Bernoulli, who formulated a turn of the matter of the land issue in architecture. Furthermore, the article will explore in which way the imagination of the city results from the land issue’s discourse. The selection of theories narrates in a new way the history of the land issue in urban planning and follows a storyboard which considers the transformation of the architects’ position, especially given the importance they all ascribed to the land issue in their theories. Through the following analysis of the books, three main topics are discussed: topography and parcellation, the irregular and the regular parcellation and the matter of land and ground as a common good.

A Scientific Discourse on the Land Issue: Camillo Sitte, Theodor Fischer and Hans Bernoulli

Camillo Sitte’s principles, expressed in his work *Der Städtebau nach seinen künstlerischen Grundsätzen*, are based on the idea that one can only describe what one sees. He names this idea: the aesthetic effect.¹¹ Sitte laments that while a lot of effort has been made on the technical side, almost none has been made on the artistic one, and that this is why the relation between monuments, squares and plots is unfulfilling. Sitte’s book therefore has the aim to offer a guide to practical aesthetics and to provide knowledge and rules for the conception of parcellation plans. The method of spatial observations, especially of Italian cities and Ancient Greece, became essential for the following generations of architects.

Sitte describes the influential motifs of composition – open and bound spaces – which create an urban space that provides the inhabitant with legible and attractive spaces. His analysis leads back to Pompeii, the Roman Forum, the Acropolis and Italian squares. Architecture has been created and should be created through the dialogue between the public space and the building by threshold spaces, he says. What matters is the proportion and limitation of the space and the form of the thresholds. Another way in which the beauty of a city can arise is the adaptation to existing topography. Therefore, one of his fundamental principles in design is the morphology of the terrain.

Urban spaces should be anticipated through the imagination of their effects, but rationalization processes create regular plots and therefore the substance of beautiful spaces disappears:

“These considerations bring us to the heart of the matter. In modern urban construction, the relationship between built-up and empty space is reversed. In the past, the empty space

10 Camillo Sitte, *Der Städtebau nach seinen künstlerischen Grundsätzen* (Vienna: Verlag Karl Graeser, 1909), 118-119: “Die hohen Preise der Bauplätze veranlassen ferner noch deren möglichste Ausnützung, weshalb neuerdings eine Menge wirkungsvoller Motive in Wegfall kommen und die Verbauung jeder Parzelle immer wieder dem Typus des modernen Bauwürfels entgegenstrebt. Risalite, Vorhöfe, Freitreppen, Laubengänge, Ecktürme etc. sind für uns ein unerschwinglicher Luxus geworden. [...]”

11 Orig. “Ästhetische Wirkung”.

(street and squares) was a closed whole of a form calculated for its effect; today, the plots are distributed as regularly closed figures, what remains in between is street or square."¹²

An analysis of old cities and their principles leads to an overall strategy of urban design. Hereby Sitte explains and opens up the discussion between the so-called technical and the picturesque in urban planning.¹³ In this case he positions himself against the influence of speculation on the image of streets and squares. Aesthetic considerations are limited by the need to exploit the land.¹⁴

The parcellation of land is predetermined. Sitte perceives the rigid grid of plots which has been used during the city expansions of the last decades as aesthetically unacceptable. The parcellation plan of the new city expansions needs to be designed and the impression of space should be anticipated.¹⁵

"The question arises how, as with such completely unhindered parcelling, it might become possible to protect the interests of art. It is generally accepted as a result of the numerous urban expansions of the last decades, that something needs to be provided. It was recognized that the stencil-like grid of plots was aesthetically inadmissible, and the intention was to approach the town construction of the old by greater freedom for the building development."¹⁶

Caused by a need for an economization of the land, a difficult parcellation system came about, which supports on top of everything else the most boring form, which is that of the cube.

"The most elementary cubic spatial distribution, which in the baroque masters had such an abundance of motifs, has shrunk under the rule of this unfortunate parceling system to a single basic form, which on top of that is the most boring of all, namely the cube."¹⁷

The human being and his perception should be stimulated, but this cannot happen by regular forms and plots, which, Sitte says, hinder any form of individuality, by which the urban fabric is historically determined.

"It is precisely the endless repetition of one and the same form of the plots that should be avoided on principle, because the factory-like imitation of the same street layout, no matter which one, is in itself boring and unbearable for the sense."¹⁸

12 Sitte, *Der Städtebau*, 97: "Diese Erwägungen bringen uns dem eigentlichen Kern der Sache nahe. Beim modernen Stadtbau kehrt sich das Verhältnis zwischen verbauter und leerer Grundfläche gerade um. Früher war der leere Raum (Straße und Plätze) ein geschlossenes Ganze von auf Wirkung berechneter Form; heute werden die Bauparzellen als regelmäßig geschlossene Figuren ausgeteilt, was dazwischen übrigbleibt ist Straße oder Platz."

13 Sitte refers here to Reinhard Baumeisters publication *Stadterweiterungen [City Expansions]*, in which Baumeister states that it will be difficult to derive universal rules.

14 Sitte, *Der Städtebau*, 118: "Bei so kolossaler Häufung der Menschen an einem Punkt steigt aber auch der Wert des Baugrundes ungemein und liegt gar nicht in der Macht des einzelnen oder der kommunalen Verwaltung, sich der natürlichen Wirkung zu entziehen, weshalb allenthalben wie von selbst Parzellierenden und Straßendurchbrüche zur Ausführung kommen, wodurch auch in alten Stadtteilen immer mehr und mehr Seitengassen entstehen und eine Annäherung an das leidige Baublocksystem sich ganz im stillen vollzieht. Es ist das einfach eine Erscheinung, welche mit einer gewissen Höhe des Baugrundwertes und des Straßenfluchtwerthes naturgemäß zusammenhängt und an sich nicht wegdekretiert werden kann, am allerwenigsten durch bloße ästhetische Erörterungen."

15 Ibid., 140.

16 Ibid., 134: "Es entsteht somit die Frage, wie auch bei solchen gänzlich unbehinderten Parzellierungen es möglich werden könnte, die Interessen der Kunst von vornherein noch zu wahren. Daß in dieser Richtung etwas vorgesehen werden müßte, wird bereits allgemein zugestanden infolge der handgreiflichen Mißerfolge zahlreicher Stadterweiterungen der letzten Dezennien. Man erkannte das schablonenmäßige Vorrastieren von Bauparzellen als ästhetisch unzulässig und wollte sich dem Stadtbau der Alten durch die Gewährung größerer Freiheit für die Bauentwicklung nähern."

17 Ibid., 148: "Die elementarste kubische Raumverteilung, die bei den barocken Meistern eine solche Fülle von Motiven aufweist, ist unter der Alleinherrschaft dieses unglückseligen Parzellierungssystems auf eine einzige Grundform zusammengeschrunpft, welche noch die obendrein die langweiligste von allen ist, nämlich der Würfel."

18 Ibid., 156: "Gerade die endlose Wiederholung ein und derselben Parzellierungsform wäre ja grundsätzlich zu vermeiden, denn der oft fabrikmäßige Abklatsch derselben Straßenführung, gleichgültig welcher, ist ja

The perceived city and its spaces are aesthetically predefined by an ideal of the city which supports a city of inner spaces, creating scenography for the individual, the flâneur. The topography and the matter of place is a second ideal, which assumes a relation between the city and the landscape. The inner uncovered spaces, the streets, and the squares are connected to the inner covered spaces by thresholds. These thresholds define the boundary between the community and the individual. They are crucial in their capacity to organize this urban relationship.

The architect and urban planner Theodor Fischer was a teacher at the Technical University in Stuttgart and member of the Garden City Society. He studied Sitte's theories and states that a period of indecision between Romanticism and Classicism ended around the turn of the century with the publication of Sitte's *Der Städtebau nach seinen künstlerischen Grundsätzen* in favor of Classicism. The movement that has been initiated by Sitte brought back an indulging in the picturesque, accompanied by a hype of irregular shapes.

Fischer considers that one of the problems to be solved in urban planning is the fact that the property contradicts the development towards new urban plans and therefore the solution of the housing questions of that time. The solution of the land issue however lies with politics, he says.

"The whole complex chapter of land policy"¹⁹ is described furthermore in Fischer's *Six lectures on the art of urban planning*²⁰ from 1920 – not as a fact that architecture should be concerned with, but more as a political side effect, which supports a technical view in urban planning. Fischer explicitly criticizes that land had become a good:

"The land and the house become a good, cut out like Swiss cheese, or balanced like coffee, [...] wiping out what the old corridor tells, what path and margin, what wood and stream tells of the history of the families, the tribe and the people."²¹

Within the same lecture he observes that local characters and cultures in architecture have been advanced and should be further developed. Including these local characters is one of the key-points of Fischer's beliefs, thus stimulating his intentions to design within the existing context and to create something new. He denies the romantic and idealistic view on the world but argues for "hard realism"²² in service of the real. Fischer states that he can avoid all dogmas, if form and design is developed from the real and existing prerequisites. Regarding the housing issue of that time, Fischer is convinced that the new architecture will seek for light and air, therefore, will overcome the dense conditions of the tenements.

The matter of space is related to a dynamical process. While once the dichotomy between the bodily and the spatial²³ has been discussed, today the image of the city is determined by the spatial. Fischer considers the city as form. The regular and irregular shapes of town development and the medieval city are the object of analysis and critique. The city of the present raises a big problem, because no specific style has been developed.

"People like to think that style should always be something beautiful. But what if a uniform ugliness could be found; couldn't that also mean style? [...] It is inherent in human nature that it needs order as a basic condition to be able to grasp and to be able to aesthetically enjoy diversity."²⁴

an sich langweilig und für die Empfindung unerträglich."

19 Orig. "Das ganze verwickelte Kapitel der Bodenpolitik".

20 Theodor Fischer, *Sechs Vorträge über Stadtbaukunst* (München: Verlag R. Oldenbourg, 1920), 2nd reprint of the original edition published by Matthias Castorph, TU Kaiserslautern (München: Verlag Franz Schiermeier, 2012).

21 Fischer, *Sechs Vorträge*, 129: "Der Boden und das Haus wird Ware, ausgeschnitten wie Schweizerkäse, oder ausgewogen wie Kafe.[...] Ausgewischt wird, was die alte Flur berichtet, was Weg und Rain, was Holz und Bach erzählt von der Geschichte der Familien, des Stammes und des Volkes."

22 As described by Matthias Castorph.

23 Orig. "Körperhaft und des Räumlichen".

24 Fischer, *Sechs Vorträge*, 170: "Man geht zu gern von der Meinung aus, dass ein Stil immer etwas Schönes sein müsse. Wie aber, wenn eine einheitliche Häßlichkeit zu finden wäre; dürfte das nicht auch

Theodor Fischer expands here the terminology of Sitte by arguing that heterogeneity needs homogeneity in order to fulfill its aesthetic purpose. Fischer refers to the natural principles of structure and, by doing so, perhaps touches on the impact of proportion. Fischer who, as mentioned before, tried to avoid dogmas, includes several categories of beauty in order to create diversity, while heeding the issues of topography and landscape. The role of the plot is therefore crucial. He challenges Sitte's ideas by stating that the regular has always been part of the city just as the need for transformation processes. He here refers to the transformation of plots in the agricultural sector and its impact on the formal conditions of city expansions.

"Here, then, where the unification of large areas of land into one property has eliminated consideration for the individual small property, where, apart from the need for space, only the interests of traffic and economic exploitation are in question, regularity may apply, up to the degree of uniformity that has always been and will always be the same sign of the big city."²⁵

The dialogue between the regular and the irregular, the spatiality of the city, beauty as a further development of the existing are all important topics for the Fischer, who formed a whole generation of architects working in his office, including Ferdinand Kramer, Ernst May or Bruno Taut. The aesthetic ideal refers to the view and the recognition of formal characteristics of the history of the city and the heritage of topography. Embedding the existing in the architectural project creates meaningful spaces, pointing to the cultural history of a place. The aesthetic reality is a different one for Fischer than for Sitte.

The Swiss architect and urban planner Hans Bernoulli was indeed convinced that something beautiful can only be designed on a common ground. In his book, *Die Stadt und ihr Boden*,²⁶ he describes the return of the land to public ownership as the basis for the rebirth of a good and beautiful architecture and town planning by referring to the Garden City Movement's principles. Since Bernoulli explicitly studied Sitte's principles and had been educated, like Theodor Fischer, by Friedrich von Thiersch, he must have been influenced by the former's perspective on urban planning. He also studied the ancient city, medieval towns and tiny houses from Northern Europe. Incomparably more than Sitte or Fischer, Bernoulli can be seen as a politician, as underlined by the latest publication on his work, edited by Sylvia Claus and Lukas Zurfluh.²⁷

"In other words, all the beautiful and good things that result from the study of old cities, all the great designs for new creations, lack the main thing for the time being, the land on which they can arise and then develop freely. The conscientious young man puts the books which he so carefully read back into their ranks. He has become doubtful and uncertain: there seems to be something wrong with the land."²⁸

Bernoulli himself was to explore what is wrong with land and ground; he published numerous articles and books to determine the historical and contemporary value of land, with the aim to claim a political and formal rethinking. The first chapter of *Die Stadt und ihr Boden* is dedicated to the becoming of the city and furthermore illustrates an idea of the city, which for Bernoulli

Stil heißen? [...] Es ist der menschlichen Natur eingeboren, dass sie das Geordnete als Grundbedingung braucht, um überhaupt eine Vielfalt zu erfassen, ästhetisch genießen zu können."

25 Ibid., 164: "Hier also, wo längst durch die Vereinigung weiten Geländes in einem Besitz die Rücksicht auf den einzelnen Kleinbesitz wegfällt, wo also neben dem Raumbedürfnis lediglich die Belange des Verkehrs und der wirtschaftlichen Ausnützung in Frage stehen, mag die Regelmäßigkeit gelten, bis zu dem Grad von Gleichförmigkeit, der immer das gleiche Zeichen der Großstadt gewesen ist und sein wird."

26 Hans Bernoulli, *Die Stadt und ihr Boden* (Zürich: Verlag für Architektur, 1946).

27 Sylvia Claus and Lukas Zurfluh, *Städtebau als politische Kultur. Der Architekt und Theoretiker Hans Bernoulli [Urban Planning as Political Culture. The Architect and Theorist Hans Bernoulli]* (Zürich: gta Verlag, 2018).

28 Bernoulli, *Die Stadt*, 6: "Mit anderen Worten: All den schönen und guten Dingen, die sich aus der Untersuchung alter Städte ergeben, all den großartigen Entwürfen zu neuen, unerhörten Schöpfungen fehlt vorerst einmal die Hauptsache, der Grund und Boden, auf dem sie entstehen können und sich danach frei entwickeln sollen. Der gewissenhafte Junge Mensch stellt die Bücher, die er so sorgfältig durchgelesen, wieder in ihre Reihen. Er ist zweifelnd geworden und unsicher: Mit dem Grund und Boden scheint da etwas nicht in Ordnung zu sein [...]."

is an organic one. According to Bernoulli, the city is liable to various transformation processes, but must therefore provide services; architecture should serve the inhabitants. The city does not perish like the vile house, it exists and should become “a being of special character.” The becoming of the city comes about with the staking out of the quadrangle. The plot sets the system, it organizes the city, but building lines alone and the corresponding laws will not create a city. Moreover, the city has no right of disposal over the land, it is distributed to a multitude of individual owners. On these plots, the reconstruction of cities is to be organized and new quarters are to be built on the old fields.

“The new city, the new quarters, must be built on an area that has been furrowed by the plough for decades, divided into one hundred and one hundred fields.”²⁹

Like Theodor Fischer, Bernoulli discusses the matter of the heritage of the form of the agricultural land and its impact on city expansions.

“In such a fragmented and torn area, the division of which is already the most difficult on the agricultural company, the artistic areas of our cities are now to arise, the existing cities must develop further, spread out; every city grows into such a desperate confusion of lines, if it wants to expand the suburbs, which barely have been fought free.”³⁰

This fragmentation of property, which according to Bernoulli is not even suitable for agriculture, contrasts with the need to build new homes and develop new quarters, let alone build a piece of the city. Accordingly, Bernoulli argues for the free disposal of land by municipalities. He is convinced that the right of ownership is a false prerequisite – it is an immanent obstacle where a city, not just houses, need to be built. Instead, Bernoulli argues for a new beginning to enable an artistic construction of the city.

In comparison to the statements of Sitte and Fischer, Bernoulli can be seen on the one hand as a politically active architect, rooted in the real world and with a more rationalistic view on architecture. On the other hand, due to the fact that he was much more connected to economic issues than Sitte and Fischer and therefore influenced by economists like Rudolf Eberstadt or Silvio Gesell, his argumentation deviates from an aesthetic discourse towards a social controversy, with the aim to prepare the road for a new architecture and a new system. This politicization of land issue announces a change in architecture.

Which Aesthetics?

The three case studies that follow — *Siedlung Alte Heide*, *Siedlung Britz* and *Siedlung Im Vogelsang* — are all examples built with the aim to improve the living conditions for the working class of the time. Initial characteristics of a rationalization process are visible, but at the same time the projects are characterized by spatial diversity within a structured system. It may be said that these case studies revisit Sitte’s principles and represent the idea of an architecture of spaces.

Theodor Fischer, Bruno Taut and Hans Bernoulli referred to Camillo Sitte in different ways in their theoretical and built work. For Sitte the aesthetics of the land is accompanied by the argumentation of an economic advantage. As described by the architecture critic Michael Mönninger, Sitte’s preference for irregular and curved streets has not only been an artistic

29 Ibid., 17: “Die neue Stadt, die neuen Quartiere, müssen angelegt werden auf einem Gebiet, das schon seit Jahrzehnten vom Pflug durchfurcht, in hundert und aber hundert Felder aufgeteilt ist.”

30 Ibid., 19: “Auf solch zersplittertem und zerfetztem Gebiet, dessen Einteilung schon auf dem landwirtschaftlichen Betrieb die größten Schwierigkeiten bietet, sollen nun die kunstvollen Gebiete unserer Städte entstehen, müssen die bestehenden Städte sich weiter entwickeln, sich ausbreiten; in solch verzweifeltes Liniengewirr wächst jede Stadt hinein, wenn sie die kaum erst freigekämpften Vororte erweitern will.”

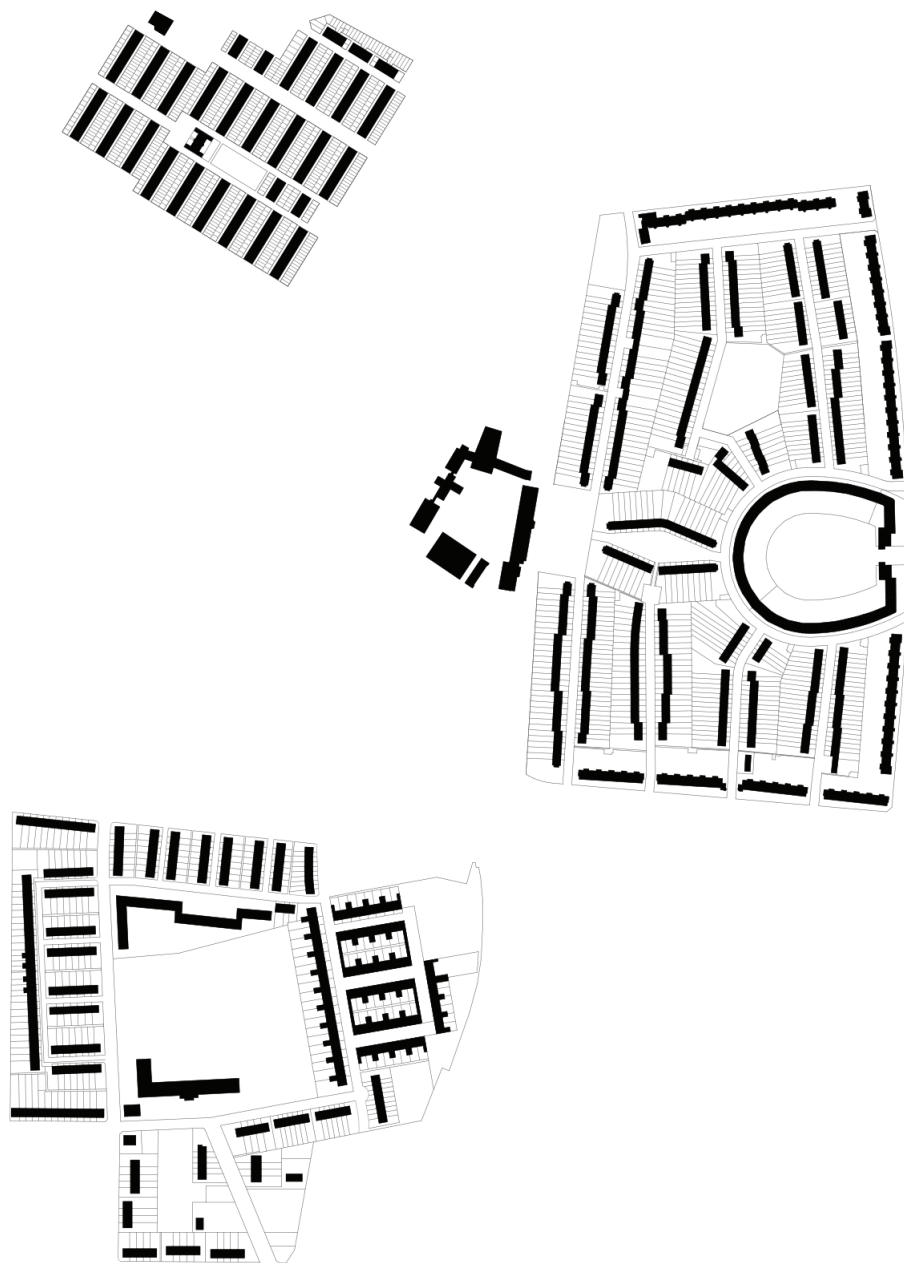


Fig. 1: Figure ground plan with parcellation. Scale: 1:10,000, Redrawings top left: Case Study 1, Siedlung Alte Heide, Theodor Fischer, right: Case study 2, Siedlung Britz, 1925, Bruno Taut, Martin Wagner, Leberecht Migge, bottom left: Case study, Siedlung im Vogelsang, 1925, Hans Bernoulli together with August Künzel

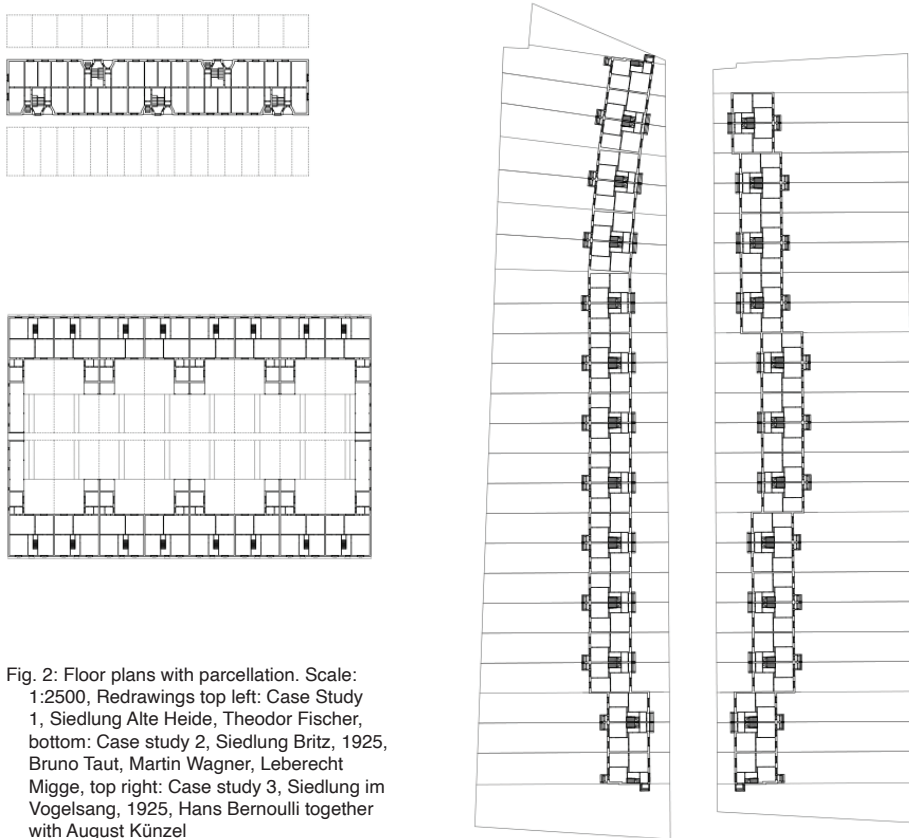


Fig. 2: Floor plans with parcellation. Scale: 1:2500, Redrawings top left: Case Study 1, Siedlung Alte Heide, Theodor Fischer, bottom: Case study 2, Siedlung Britz, 1925, Bruno Taut, Martin Wagner, Leberecht Migge, top right: Case study 3, Siedlung im Vogelsang, 1925, Hans Bernoulli together with August Künzel

invention, but also a result of conventional ownership.³¹ This argument introduces an important aspect: the relationship between ownership and spatial concepts. By comparing the three case studies, the article introduces three different rapprochements towards an aesthetic ideal, which is designed through the relationship between the building and the plot. The three case studies represent three variations of small housing estates³² for the working class. Different strategies are represented by the projects, which stand for different strategies of spatial composition. [Fig. 1]

The dialogical effect of private and common ground can be seen as a topic for the following generation in order to create beautiful spaces for the people and to create community life. The analysis of the exemplary case studies reveals different formal categories: the linear block, the block and the row. [Fig. 2] The land issue is hereby understood as a kind of litmus test for the design of the projects. The discussed theories as well as the projects are only a fragment of a chronology of the relationship between the land issue and the housing issue from 1890-1930.³³ With a focus on the Siedlungsbau during the 1920s, the ambivalent formal preferences between the form of the block and the linear block can be seen as a culmination of new strategies for appealing and affordable housing — a topic still highly relevant today.

31 Michael Mönninger, "Die Stadt und ihr Boden: Zur Rationalität einer bewahrenden Eigentumsordnung" ["The City and the Land: On the Rationality of a Preserving Property Order"], in *Die Idee der Stadt* [The Idea of the City], ed. Uwe Schröder (Tübingen/Berlin: Ernst Wasmuth Verlag, 2009), 74-87.

32 Orig. "Kleinwohnungsbau".

33 The chronology is discussed in the ongoing PhD Thesis of the author, carried out at Politecnico di Bari together with Prof. Defilippis and Prof. Carlo Moccia and RWTH Aachen together with Prof. Uwe Schröder [Department of Spatial Design].

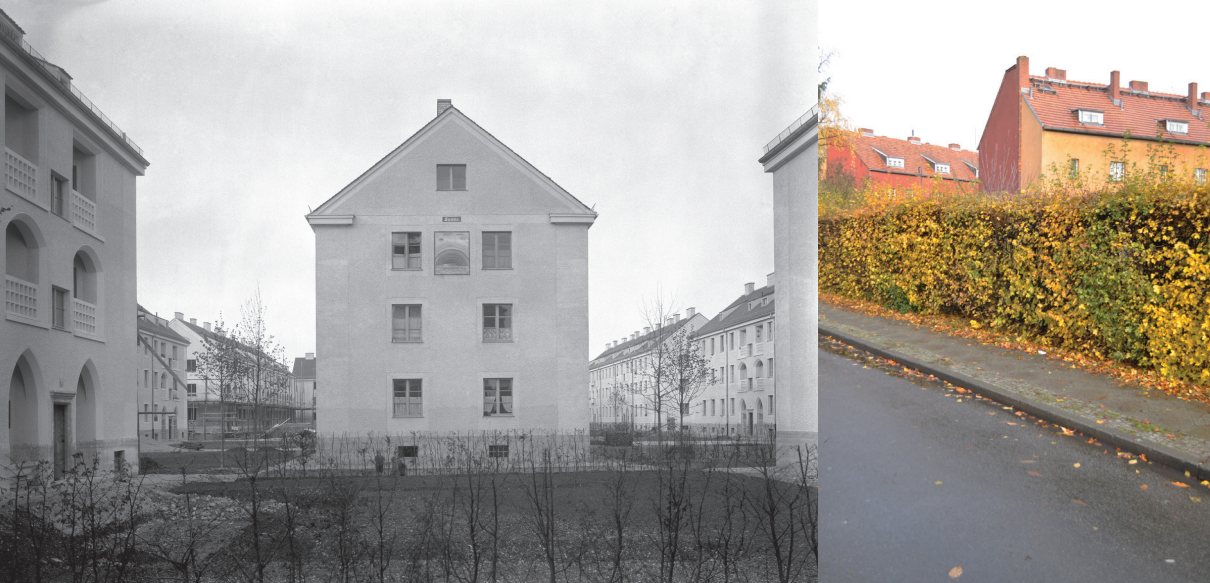


Fig. 3: Kitchen gardens in between the linear blocks in Siedlung Alte Heide, 1916/1923

Fig. 4: A view on the open end of the diamond-shaped row houses from Onkel-Bräsig-Straße. Siedlung Britz, 1925, Bruno Taut, Martin Wagner, Leberecht Migge

Case study 1: Alte Heide, 1918, Theodor Fischer

The housing situation in Germany was untenable in 1918, directly after the end of the First World War. It came to an enormous increase of the inhabitants in the bigger cities like Munich where there was almost no building activity between 1918 and 1924. To counter this problem the strategy of the administration of the city of Munich was to populate the existing vacant spaces.³⁴

An exception and one of the early examples of the linear block typology is Theodor Fischer's *Siedlung Alte Heide* (1918-1928), a composition of linear blocks, built by a cooperative with the name *Gemeinnützige Baugesellschaft Alte Heide*, founded by six companies, and offering affordable housing to their workers.

As stated by Theodor Fischer, the responsibility for solving the untenable living conditions is in the hands of hygienists and social policies. The architect, however, should concentrate on the form and the good and right composition of spaces.

The orientation of the linear blocks in *Siedlung Alte Heide* follow the idea to offer light, air and sun. An idea that can be clearly seen as a counter reaction to the form of the *Mietskaserne*. The structure of each building is conceived as 5 single row houses each with a small covered space marking the entrances, directly connected to the pathway. Starting from these staircases two small apartments are accessible on each of the three stories. One linear block consists therefore of 30 apartment units. 12 of them oriented towards north-west and 18 towards south-east. Green spaces in between structures are divided in plots, which determine small kitchen gardens for each apartment unit. Part of the master plan of the projects was the implementation of a day-care and a centrally organized washhouse. The orientation and the entrance situations alternate from one side to the other side of the linear block, creating a community amongst the different buildings through the green intermediate spaces and the small niches of the entrance situations. [Fig. 3] This principle of alternating entrances was designed to the detriment of the principle to offer light, air and sun.

Alte Heide represents an early experiment on the linear block typology, on private gardens, and on communal spaces. Despite the fact that this early form of linear block seems repetitive, a complex variation of spaces between the individual inhabitant, the community and the

³⁴ Steffen Krämer, *Das Münchner Wohnungsbauprogramm von 1928 bis 1930 [The Housing Programme of the City of Munich Between 1928 and 1930]* (München: Schriftenreihe der Winkelmann Akademie für Kunstgeschichte, 2013).

public has been created through the composition of garden plots and niche-like accesses to the staircases. The public buildings are implemented as spatial reference points, creating a dialogue between private and public. The overall masterplan clearly shows the aim to create, or maybe imitate the urban image with reference to Sitte's principles. Alte Heide can be seen as an ambivalent project, preparing the road for a formal change, but at the same time applying architectural motifs, such as arches or bay windows.

Case study 2: Siedlung Britz, 1925, Bruno Taut, Martin Wagner, Leberecht Migge

The development of the *Mietskaserne* evoked the need for a change, due to the fact that apartments were overcrowded, especially in Berlin. The dense living conditions and the hygienic problems created the need for new housing concepts. In order to find an answer, directly after the First World War housing cooperatives were founded and companies were confronted with the need to provide housing for their workers. After the so-called *Hauszinssteuer*³⁵ has been introduced in response to the impact of hyperinflation, communal investments in housing became possible. A new building activity in Germany hence arose. Within the administrations, important posts were given to architects and urban planners, such as Martin Wagner.³⁶ The same Martin Wagner was the leading architect of the building cooperative GEHAG, which was responsible for the construction of housing projects in Berlin in the 1920s. Bruno Taut, a friend of Wagner, designed one of the most famous examples of cooperative housing: the so-called *Hufeisensiedlung* in Berlin-Britz.

The project is based on a precise scenography of the different public, common and private spaces, accompanied and supported by the different colors of the facades and determined by the aim to specify boundaries that are defined firstly through the plots and secondly through the different housing typologies. The project is characterized by the contrast of more defined spaces, such as the street space of the houses and less defined spaces, such as the shifted end of the row through which the rows correspond to the private gardens and open spaces.[Fig. 4] The landscape architect Leberecht Migge designed the gardens underlining the different use of green spaces, the common and the private ones.³⁷

By means of parcellation, which created the different rhythms of the quarter, public, common and private spaces have been organized. Bruno Taut, who has been influenced by Sitte and as well by Fischer, breaks with the principle of a formal continuity of the idea of a linear block and proposes a kind of fragmentary translation in the form of row houses, with the aim to avoid tediousness. Consequently, the influence of Sitte could be presumed, since scenic motifs determine the spatial character of the project, even if the formal appearance could be described in some parts as artificial and prominent. However, Taut uses this unique concept of creating ambiguous spaces as a method of composing.

Case study 3: Siedlung im Vogelsang, 1925, Hans Bernoulli together with August Künzel

The so-called *Hirtzbrunnenquartier* was concluded in 1929. The Swiss architect Hans Bernoulli was the responsible architect for the master plan of the quarter. In 1925, together with the architect August Künzel, he designed one of the several parts of the quarter that is called *Im Vogelsang*. The aim of the housing cooperative *Im Vogelsang* was to provide accommodation for families with many children and to offer low-cost housing. The public hand supported the project financially in order to fulfill this goal.

35 Martin Wagner proposed the introduction of a taxation on land profit before 1918 with the aim to finance publicly subsidised housing.

36 Martin Wagner (1885-1957) was a German architect and urban planner. He has been educated at the TH Berlin-Charlottenburg and wrote his Doctoral Thesis with Josef Brix. In 1918 he became the city planner of Berlin-Schöneberg and led from 1924-1926 the GEHAG, the time in which Siedlung Britz has been built.

37 Migge's design proposal has been finally concluded by the garden architect Ottokar Wagler in a different way.



Fig. 5: A view towards Paracelsusstrasse, showing one of the completed blocks on the left and the open block on the right. Siedlung im Vogelsang, Basel 1925, Hans Bernoulli together with August Künzel

Hans Bernoulli studied variations of floor plans for small residential buildings, such as the social housing quarter *Fuggerei* in Augsburg, Germany, built in 1521 and initiated by Jakob Fugger.³⁸ Bernoulli also travelled to the Netherlands, northern Germany and to England, where he followed Raymond Unwin's traces, whom he admired so much. He must have been impressed by the smaller houses and the brick architecture characteristics in these areas, since he brought them back to Switzerland. The project *Im Vogelsang* picks up the aesthetic of these tiny brick houses and can be seen as formal and structural references to Northern European building traditions.

The project is determined by two entire block-like row houses that create an inner courtyard with private gardens and by three slightly different half-open block-like row houses in the south-east, south-west and west-north of the area. The internal courtyard of the blocks and the repetitive rhythm of the row houses are the most significant elements of the project. A public pathway cuts across the block, connecting the surrounding streets. This pathway³⁹ begins with an opening of the enclosure of the project, emphasized by an arch. Fences define the thresholds to the private gardens. The wooden extensions in the courtyard create smaller communities within the big community of each block.

Im Vogelsang, an apparently rigid project offers at second sight plentiful variations of different spaces, dedicated to various forms of private, common and public spaces. Through the precise setting of a scenography of spaces, underlined by different architectonic elements, such as gables, high bay-windows or balconies, Hans Bernoulli managed to create a small city, a dense and urban version of Garden Cities. [Fig.5]

The role of the plot can be described as an ordering instrument that is consistent with the structure of the buildings and the rhythm of the different spaces, dedicated to different gradients of private and public. Furthermore, the plot highlights not only the property, but also the unit of usage. Taking into consideration these two characteristics of the plot, its role in the design process of the area becomes apparent.

Although his argumentation always followed a rationalistic view, Hans Bernoulli's projects also reveal a certain romanticism, maybe due to his excursions to the Netherlands or his studies on medieval monastery complexes, such as the monastery of Valsainte, a Carthusian Monastery in Switzerland, founded in 1295. Furthermore, the different coding of spaces are in evidence of a romantic notion of urban coexistence. In contrast to Bernoulli, Taut understands architectural form on a symbolic level, a certain ideal of what is the meaning of common, is reflected in the work of both architects.

Towards an Aesthetic Reality

The aesthetic ideal of that time is an ideal rooted in reality, in the existing, and developed in dialogue with architecture's social responsibility. Aesthetics is furthermore understood as something which can be experienced with all senses. The beauty of the discussed projects lies within the relationship between interior and exterior spaces. Aesthetics arises from the composition of the diversity of spaces. The spatial experience with the senses is of high significance in all of the projects, even if this is particularly visible in the work of Bruno Taut, who created ambivalent situations of different spaces through the method of precisely placed shifts and breakthroughs – irregularity as a method. In contrast to Taut, Bernoulli aimed to design clearly legible spaces. Boundaries are strictly defined within the plot layout of property and use. In comparison to Fischer, Taut and Bernoulli are searching for generalizable solutions, whilst Fischer created individual compositions for each place.

38 See Lukas Zurfluh, "Vom Prototypen zur Serie" ["From Prototype to Series"], in *Städtebau als politische Kultur. Der Architekt und Theoretiker Hans Bernoulli*, eds. Sylvia Claus und Lukas Zurfluh, (Zürich: gta Verlag, 2018), 91.

39 The analogy in German is the term *Mistweg*, which refers to agricultural origin.

The 1920s housing development and the experiments on different typologies, from the block to the linear block, to the row, tell the story of the importance of the plot in architecture which becomes a spatial building instrument. The significance of designing what is not initially visible, the importance of thresholds organizing the relationship between communal and private spaces appears obvious through the discussion of the projects. In consideration of the existing, a new approach to the exploration of an aesthetic ideal has been revealed.

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