

"And the wicked will be ashes under the soles of the feet of the good," Malachi 4:3

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Keywords: Plan, Rhetoric, Morality,
Alexander Klein, Cornelis Van Eesteren

ABSTRACT

Plan comes from the word *ichnos* – the impression of the sole of a foot on a terrain. The ground plan of a building, historically understood as the footprint of such building on a site, acquires a new literal meaning with the emergence of the modern city. Architecture gradually starts to address problems that go beyond its own scale. The urban and the civic – the polis –, become expanded fields of the discipline. From mere representation to instrumentalisation, the act of drawing a Plan will prove to contain rhetorical and thus political power. By analysing Alexander Klein's plans and diagrams of the "Functional House for Frictionless Living" (1928), this article narrates the ideological and moral connotations underlying the Modern Plan. Klein distinguishes "a good plan" from "a bad plan," articulating a moral agenda and the utopic desire of social and urban reform. Cornelis Van Eesteren city axonometric will act as an extension of Klein's argument at territorial scale. This utopia will permeate the modes of architectural production and thinking of the first half of the 20th century, despite the contradictions, challenges and rejections that will affect the Plan in the decades after WW2.

Ichnos was the word to refer to the Plan in the past. From the Ancient *ichnographie* (a footprint), it meant "to thrust in with the sole of the foot". It referred thus to the idea of vestige, and not only to a trace in general but particularly to the trace that a foot imprints on a terrain. The drawing of the ground Plan of a building may simply be seen as its imprint or trace in a site. Here, the word "site" might refer to the actual material flat sheet on which the lines are outlined, but likewise to the real material ground in which a building is to be inscribed. Furthermore, the "site" becomes a discursive territory where the drawing draws (and writes). The paper as site is thus endowed with a rhetorical and pedagogical function, beyond its own materiality.

The word "site", from *situs*, not only refers to a location but also to the act of locating, of positioning in relation to others. As the poet centres his plot on a limited area of land, the planner produces an interior arrangement which is always already related to an exterior. In many respects, the site becomes much more than mere context referring not only to the drawing (and writing) but also to a more abstract milieu in which the plan acquires meaning.

Ichnos discloses thus a conceptualisation of site which refers to more than a parcel of land or a physical enclosing in which a plan is imprinted but to a set of topographical and cultural

relationships, mainly issues of spatial and territorial organisation. This raises questions that go beyond the physical representation of the architectural project, but rather with a discursive function, with the process of construction of a territory (architectural or urban). Understanding the Plan as an impression (a double inscription of a site) implies that drawing is able to cause certain effects. That is, a discipline concerned with the possibility of affecting, rather than only communicating. In these terms the Plan can be understood as graph, from *graphein*, meaning both writing and drawing. This situates the Plan in the middle of representation and organisation, acting both as narrative, to unfold in time, and as synoptic cartography. The Plan moves between these two poles, the simultaneity, and the sequential, the cartographic and the narrative, the grammatical and the rhetorical. *Ichnos* allows the understanding of writing and drawing as a double imprint in a territory, one physical, another discursive.

While Vitruvian understanding of drawing implied that the relation of signified to signifier was one of recording, in the Renaissance the drawing of the Plan became a projective device used to develop long-term strategies, distinguishing thereby the notion of projective from a representational cast and analogical shade. Beyond projection, an instrumental function was put forward in the nineteenth century, in which the relation between

signified and signifier was instead one of transformation, based on the coding and decoding of conventions. In the nineteenth century the Plan becomes not only prominent but drifts from a mere representation into a rhetorical instrument to formalising the ways in which individual buildings (the private) and the city (the public) can relate.

The time of the School of Beaux Arts marks a turning point in the role and function of drawings: a shift from the representation of how existing objects are in the time of Vitruvius, to a device to project how future objects ought to be in the Renaissance, to eventually an instrument to plan how these objects might relate. The Plan's meaning drifts from that of a drawing that records an existing object, to the description of an orthogonal projection, to refer later to strategies and tactics of organisation. From mere representation to instrumentalisation, the act of drawing a Plan will prove to be inserted in a game of power relations and ideological connotations. Such change of sense correlates with a shift in the definition and scope of the discipline: from the building, to the drawing (disegno) of buildings as objects, to the building as a device to manage the city – the building as an urban piece. A different function of Plan within the discipline discloses, anticipating an indissoluble relation between the Plan – ichnos, and its Site.

Alexander Klein (1879-1961) lived and worked as an architect and city planner in St. Petersburg and later in Berlin. He emigrated in 1934 to Palestine where he became an important urban planner, to eventually move to New York in 1960.

He had an important however forgotten role in the Existenzminimum (minimal dwelling) being part of an official body (Reichsforschungsgesellschaft) to research into the economic and constructional problems of mass housing along with Gropius, Taut, Hilberseimer and Le Corbusier. His architectural drawings are an exemplary case of the ways in which the utopic desires of urban and social reform (and control) were to be achieved by manipulating movements of bodies in the Plan.

In the first decades of the twentieth century the urgent need for dwellings that followed the years after World War I was the ground to determine new standards for housing. During the late twenties, Klein developed an extensive system of architectural diagrams as part of these studies. Part of the March 1929 number of the Architectural Record, the diagrams were published under the label "Illustration of German Efficiency Studies," part of an article on "Efficiency in Apartment House Planning." Klein developed these plans in the context of the German Housing Agency, contrasting the outcome of his research, "the Functional House for Frictionless living," with a typical nineteenth century layout. He draws routing diagrams comparing efficient and inefficient movement of the households. Through his flow-line diagrams, morally distinguishing "the good" from "the bad", the movements of persons are reduced to the minimum as a desired goal. The continuous and the segmented lines represent different households, different types of inhabitants, or distinctions between inhabitants and strangers within the building.

While the house on the left conveys a continuous and gregarious space in which the inhabitants' movements constantly mix and overlap, Klein's plan segregates and individualises movement to its limit, lines do not cross or intersect, but the plan only allows circulations to follow their own autonomous routes, in which the possibility of "friction" is eliminated. Inhabitants are mapped and located, movements are guided and their transactions mediated. While in the plan on the left, continuous and dotted lines intersect each other multiple times and in many directions, the "frictionless" drawing on the right reduced overlaps to a zero degree. The room is the basic unit to be distributed and related to others, but arranged in such a way that each maintains its sovereignty and autonomy from the rest. The distributor in Klein's experiment ensures access to each room without having to pass through any other. Accidental encounters are eliminated in his domestic machine.

Relations between husband and wife, parents and children, between each family and its neighbours are all planned, coordinated and orchestrated through spatial patterns of surveillance, moral and sanitary habits: the government of the family that will turn into the government of the society. By interfering and normalising patterns of behaviour in the interior of the house, it becomes possible to manage not only the family, but by means of the house-type repetition, the entire population. The planning of housing was thus seen as an instrument of the social progress of the entire city. Domestic architecture becomes the touchstone of moral and physical reform, the house as the centrepiece

for urban and social transformation. An instrumental relationship between morality and architecture set forth. The Plan (ichnos) imprints a moral and ideological agenda on a territory, one that is physical, but furthermore discursive. It dictated how a family ought to live -frictionless, and by means of the Plan's repetition how the larger city should develop. The Plan performs a managerial manoeuvre to administer a society with minimum contacts, minimum friction and no resistance: "docile bodies."

Part of this biopolitical operation is the conceptualisation of movement as circulation. Movement is taken to its limit in Alexander Klein's flow diagrams putting at the centre the question of relations. This explains the ways in which the notion of environment becomes prominent, the city becoming an expanded field of the discipline. From circulation to relations and topology, the notion of environment starts to resonate in the discourses of the discipline. From the interior of the dwelling to the exterior urban surrounding, the space of circulation and the idea of environment become conceptually interrelated. Circulation and communication are at stake in the notion of milieu, as discussed by Foucault.

"The space in which a series of uncertain elements unfold is, I think, roughly what one can call the milieu. (...) What is the milieu? It is what is needed to account for action at a distance of one body on another. It is therefore the medium of an action and the element in which it circulates. It is therefore the problem of circulation and causality that is at stake in this notion of milieu. (...) The milieu,

then, will be that in which circulation is carried out. (...) It is an element in which a circular link is produced between effects and causes, since an effect from one point of view will be a cause from another". (Foucault, 2007, pp. 20-21)

The origins of the word "environment," from old French environs, refer to "surround, enclose, compass, encircle, and circuit," from environ: "round about, around," and viron "circle, circuit". Etymologically environment and circulation are interwoven by an act of embracing and surrounding: a circuit. The other idea behind both "environment" and "circulation" is that of relations, of a chain of reactions between things. Lamarck introduced the word milieu into biology from mechanics, and it helped to offer a model of explanation of living beings through a system of connections with its environment, from the organism to its context. Architecture borrows such model: the man as possessing functions, receiving stimuli and reacting to the demands of a milieu.

Klein's "frictionless" plan becomes a diagram of the larger city. By controlling the fundamental unit, the whole territory is administered and furthermore normalized. Architecture becomes a mode of urban governance, where, paradoxically, the private life of the individual becomes the collective and the public building block. At the urban scale, the drawings of Cornelis Van Eesteren, identify similar conceptualisation lines. He was a Dutch architect and urban planner at the Town Planning Department of Amsterdam (1929-59) and was also the chairman of the CIAM between 1930 and 1947. Through these two

main roles he constructs his idea of the "Functional City" as formulated by his "necessity of the plan" (as cited in Van Rossem, 1997). In "Part of a Business District of a Modern City," and "City of Circulation" axonometric, both done in the 1920s, the relational interdependence between fundamental urban parts is being emphasised through the persistent repetition of elements. In Van Eesteren's view the elements of the metropolis are not the problem themselves, but the way they relate to each other, circulation being installed thus at the centre.

Both drawings show the schematic relationship between two urban elements, tall buildings and circulation, which extends infinitely in all directions unveiling the city as an open system of these two interrelated functions, yet autonomous programmatic elements. Again at the urban scale, as it was for Klein at the domestic scale, the element of circulation plays a dominant role: the relational space of the street becomes the locus to think the city. Circulation becomes the device to construct the urban space, and will remain the backbone of all subsequent debates on the modern city, the main concern of the practice of urbanism, and of the science of urbanization as well. Both Klein, at the scale of the building, and Van Eesteren, at the urban scale, took "circulation" to its most extreme consequence: while the first reduces spontaneous life to a zero degree, controlling and normalising behaviours, the latter reduces movement and building elements to pure necessity. These drawings recapitulate thus an aspect which has been a central bone of the Plan's archaeology: the emergence of a back and forth movement from

interior to exterior. At one level, the exteriority of the urban pervaded the planning of the architectural interior. At another level the scale of architecture gradually gets engaged with problems and demands that historically had escaped its disciplinary boundaries. This implies that the Plan attempted to perform an autonomous function within itself (the domestic -interior) but also one in relation to other systems (the environment - exterior). This corresponds to the famous aphorism “form follows function”, expressed by Louis Sullivan in 1896 (Sullivan, 1896, p. 408). A scalar tension which only reflects the Plan’s main contradiction: a movement or circulation from an internal search for disciplinary autonomy and response to a use and purpose on the one hand, while obeying to an external determination, a social function and fitness to a site and environment on the other. The Plan entails such conflicting system of values. These two elements are essential to the Plan’s mode of narration: a formulation of a discourse based on the spatial organisation of functions, on the rigorous and rational disposition of bodies in space, and above all on the idea of a formal ordering that responds to social and moral needs.

Deprived from the social utopia, the Plan turned into “means without end” (Agamben, 2000), that is form following form, means following means, raising the issue of the political responsibility of the discipline. Despite the contradictions, challenges and rejections that the Plan experimented in the decades after the Second World War, the topic emerges once again as one to be re-visited and re-updated. The Plan materializes the

most essential architectural means and disciplinary autonomy, that of form. In its extreme diagrammatic version, the Plan has proved to communicate in the mode of a formula, the most synthetic and essential aspects of form. The definition of an architectural form inescapably sets forth a conjecture about a territorial organization that will develop in time, a narrative. By defining limits, by marking and inscribing the land, the Plan positions itself in relation to a site. This positioning is always already critical, at defining a frontier, a limit between interior and exterior, between private and public, between bare life and civic life. At framing and limiting a determined form, order and organization, the Plan might confront the dynamics of urbanization led by economic imperatives.

After the 50s and 60s celebration of spontaneous and thus acceptable de-regulation of cities in which laissez-faire policies became naturalized, the Plan re-positions today as a possibility of friction and resistance. Released from its reformist and “frictionless” agenda, the Plan held at the beginning of the twentieth century now has the potential to become a real project of crisis, an act of writing and inscribing the city. In these terms, the relevance of the Plan is not located on the border that separates and outlines the building but in the fact that the Plan might engender the environment (as site) and that architecture not only draws on paper with lines, but draws on the site with walls. **m**

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