

Forming the Interval

An architectural template for the densification of the Campus of the Universidad Nacional de Colombia

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The present project is embedded in the graduation studio *Positions in Practice* focused on the city of Bogotá by the chair of Methods and Analysis. The studio aim is to challenge the notion of commons in terms of its spatial implications.

Analysis

The site in which we are intervening is the campus of the *Universidad Nacional de Colombia* (UNAL) placed within the city of Bogotá. It was constructed in 1936 and designed by the German architects Fritz Karsen and Leopold Rother following the garden city model where the buildings sit within a green lagoon.

The analysis we conducted can be seen as a synthesis of two scales, the urban and the architectural. On the one hand we studied how the campus evolved as a formal urban entity through time. On the other, because the initial aim of the project is to construct the commons in terms of its spatial reflection, we attempted to identify which places within the campus, at the present moment, can be considered as socially charged.

1. The UNAL campus although was originally designed as one system -called the *White City*- it failed to be developed as such. Examining the operations according to which the campus has been developed as history unfolds, we concluded that any formal interventions that transformed the campus have followed ad-hoc processes and have imposed their own logics, constructing therefore, a complex multitude of spatial layers that however, are functioning parallel to each other. The identified layers are: the original plan, the built form and the topography.

The original plan has been a formal application of the Karsen educational scheme where each building sits on a flat surface and corresponds to a different faculty. This has resulted into the isolation of the buildings and hence each discipline. Any architectural interventions that took place after the original plan of the *White City*, followed their own architectural language.

In addition, although nature/vegetation is a dominant feature of the urban plan since its creation, an important topographical element has been denied: two rivers that used

to meet in the campus, have been eliminated for the purpose of building in *tabula rasa*, as part of the modernist agenda.

2. Through our analysis in building scale, it became evident that the relation of the buildings with their exterior space is crucial. Building typologies which their border with the exterior has depth, offer spatial qualities that indeed host a variety of social practices. On the contrary, other typologies which clearly separate the interior with the exterior function as islands. Also, it appears that high density places can be considered as socially charged, such as the *Ché square*, whereas low density places are almost or totally uncharged. This, led us to conclude this part of the analysis identifying that commons as social practices are observed in the intermediate spaces- thresholds at the building scale and places of high density. In that sense, we identified the threshold as a spatial and hence architectural tool which can accommodate social intensities.

Problem Statement

Based on our analysis the problems identified are the following: a) The spatial layers we have defined are functioning parallel to each other. b) The flat surface where the buildings sit, the buildings that function as islands and the low density areas allow for limited spatial and social relations where the commons can take place.

The future plan of the UNAL development demonstrates that this logic is going to perpetuate.

Hence, the research questions which we pose are the following: How architecture form can unify the currently formally segregated campus? Also, how can architecture form contribute towards the overcoming of dichotomies such as public/private, interior/exterior and eventually construct one realm, that is the *common*?

Aim

We aim to respond to the identified problems by designing an integrated campus through a strategy of densification for future occupancy and contribute towards its transformation to a city. For that reason the scheme we are suggesting tries to blend public and educational uses with dwellings (which had been located away from the campus). Since the goal is to overcome spatial dichotomies, these functions have to be intersected under one scheme and not alienated the one from the other. At the same time however this system will also assemble the existing layers, while recognizing their immanent logics.

Thus, we need to deal with the opposition between the singular form and the overall plan.

Design Methodology

a. Horizontal - Plan | Balancing the singular and the overall

Architect Pier Vittorio Aureli, in his book *The Possibility of an Absolute Architecture*, analyzes two drawn representations of Rome by shaping an opposition between these two conceptions of

the city: On the one hand, the *Nuova pianta di Roma* (1748) by Giovanni Battista Nolli and on the other, the *Campo Marzio* plan (1762) by Giovanni Batista Piranesi. Aurelli notes that the fundamental principle of Nolli's map is the separation of architectural space from urban space: "*While the plans of church interiors, palace atria, and courtyards are drawn as poché excavated within built mass, the remaining built mass, primarily the residential fabric of the city, is rendered as "building" footprints filled with linear hatch.*"¹ Hence, Nolli distinguishes the "*figure of architecture and the ground of the city*"² In that sense, this mode of representation conceives the city as a universal totalizing scheme which controls the fabric of the city. The singular form is shaped by urban elements such as circulation and property, whereas architecture space is determined by its inner rationales, unrelated to the rest of the built fabric.

Contrary to that, Aureli places Piranesi's Campo Marzio. There, Piranesi reconstructs the ruins of ancient Rome by representing the city as if it is produced only by its architectural elements. Implying that, the space is devoid of urban elements of hierarchy and circulation and is a result of the accumulation of architectural form. Aureli writes: "*The form of the city is the unresolvable confrontation between the individuality of its parts.*"³

The difference between these two drawings becomes evident. While Nolli separates the urban mass from architectural space, Piranesi draws the city as a "*conjecture of its architectural form*"⁴. In Campo Marzio the juxtaposition between the singular forms generates the overall scheme which eventually can be read as a continuous architectural form without having any urban elements operating in it and hence, interrupting it. If anything, *Nuova pianta di Roma* illustrates the architectural form as a framed enclave between a solid urban mass.

Commenting on this dichotomy, we claim that in order to intervene uniformly in the UNAL campus while recognizing the individuality of the existing fabric, we need to balance the above opposition between those two representations. That is to say, a city type (of mixed uses) densification of the campus, demands juxtaposition of different architectural typologies. However, this cannot be implemented by introducing a variety of forms which they will be isolated. Since we are aiming for a balanced composition that will form the territory of the campus, it is necessary to apply an overall strategy which will set the principles of such a large-scale intervention. Hence, there is a need of an architectural model that will operate also in urban scale. In that sense, the topography (nature), the existing fabric and the circulation have to be treated as architectural elements.

b. Vertical - Section | composition between the layers

Although Piranesi's Campo Marzio plan composes the city out of the differentiation of its individual forms, we can tell that this composition remains in a two dimensional plane. We have already mentioned that the modernistic plan that treats the ground as a flat thin surface, and consequently, leads to low density socially uncharged places. For that reason, the

¹ (Aureli 2011), p. 108.

² Ibid.

³ Ibid, p. 131.

⁴ Ibid, p. 137.

articulation of our proposal has to compose and intersect the layers that operate within the campus, not only appose one next the other. Thus, we are proposing to no longer perceive the ground level as a two dimensional surface. If anything, by thickening the urban carpet we are introducing the third dimension to the whole of the campus and as a result the multitude of relations are multiplied.⁵

Synthesis in urban scale

In terms of figuration, the scheme we propose, is generated by the grid system according to which the campus has already been built. The use of the grid, also, reveals an indirect relationship we want to have with city's form.

The existing fabric: In our proposal we choose to include the existing faculty buildings while reformulating the scheme of existing circulation and nature-landscape.

Nature – Landscape: We are reintroducing the two canals that used to penetrate the site, however, we chose to increase their width in order to enhance their influence over the site, as well as over the composition. In addition we apply vegetation and landscape manipulation to the whole campus area.

Circulation: Since the river is the only element that literally moves from city to the campus but also penetrates and segregates it, we propose a linear public platform as extension to the river which will function as the most public element of the site. This constitutes the primary public circulation, beyond that, the secondary circulation network is generated by the grid system.

This public platform is derived from what Shadrach Woods called *the Stem* [fig. 3]; element that appeared first time in the work of Candilis, Josic, and Woods in competition for the extension of the city of Caen in France.⁶ “*The stem was based on the organization of public areas of city life in a linear fashion as a sequence of social activities.*”⁷ Buildings of private uses were articulated along these public zones. The stem was concentrating all the social activities and “*was acting as the core of the habitat*”.⁸

However, such a public platform cannot by its own generate the spatial continuity we are seeking; there is a need of a three dimensional extension of it.

Thickening the Urban Carpet: Here, we are following Shadrach Woods whose claim was that since society is universal and space is total, these realities have to be reflected on planning⁹. In his text called *the Web*, published in *Le Carré Blue* in 1962, he proposes the formal system of the web as an extension of the stem which can provide a polycentric unformed system, and can

⁵ The element that demonstrates and proves that the ground is and can indeed be treated as a thick plane is the canal that used to penetrate the site.

⁶ (Woods, Concours pour l'extension de la ville de CAEN 1961), un-paginated.

⁷ (Maria Gonzalez 2010), p.70.

⁸ Ibid.

⁹ (Woods, Web 1962), un-paginated.

establish a “*large scale order, which by its existence, makes possible an individual expression in smaller scale.*”¹⁰

Consequently, these layers mentioned previously extend themselves over the ground level, as well as beneath it. This process results into the differentiation of the publicness of the linear platform due to its expansion in different levels of different density. Moreover, the element of nature is extended to all levels, in that way forming the unbuilt and the transition between the different height levels.

Synthesis in architectural scale

The web, in the present project, emerges via the figure of the *mat building*. The suggested form of the mat building is derived again from a G. Candilis, A. Josic and S. Woods project: the competition entry of the Open University in Berlin, where they proposed an articulation of different educational spaces under one overall type. This contributes towards an educational scheme that is operating against the isolation of each discipline. They planed “*a system giving the minimum organization necessary to an association of disciplines. The specific natures of different functions are accommodated within a general framework which expresses university.*”¹¹ Thus, they propose a space organization based on different room scales under one cohesive structure: from spaces for the individual to auditoriums. Therefore, following this scheme, we suggest such an articulation as strategy for the future expansion of the UNAL campus.

However, it is crucial to mention that we do not separate the educational functions from the dwellings. The figure of the mat will host the whole spectrum of the common realm: from the most public to the most private.

Consequently, going back to Campo Marzio, we are claiming that the mat figure provides both order and openness; is a system that allows for the individuality of its parts to affect it back. It generates a reciprocal relationship between the singular and the overall. As Woods notes regarding the web system: “*Openness is guaranteed by the initial even intensity of activities over the web, so that it can be plugged-into at any point and can itself plug-in to greater systems at any point. These connections provoke points of greater intensity but the original flexibility always remains and the points of density which occur, as the web becomes poly-centric through use, retain a non-fixed character.*”¹²

We choose to focus on an area of high density because the layers are more apparent and form a thick composition of a variety of spatial and material qualities where different functions coexist. Around the existing faculties we propose dwellings, public facilities such as a cafeteria, an auditorium, a library, and trans-disciplinary educational spaces under the same structure. The proximity of different functions refer to the variety of uses and density of the city. It is important to mention here, that we do not consider and hence treat those four layers as

¹⁰ Ibid.

¹¹ (G. Candilis 1968), p.208.

¹² (Woods, Web 1962), un-paginated.

different elements that happen to coexist at some point. On the contrary, in order for those layers to be able to function, they need to be considered as one unified form.

The design in architectural scale is based on the spatial resolution of the implications that emerge by the assemblage of the identified layers. For that reason we focus on two sites/ test grounds that have been elaborated from their diagrammatic scale (showing spatially the relation between different layers and functions), to their formal articulation, up to the fragment, in order to apply in a coherent way to all scales the parameters we have set to design with. It has resulted that this scheme can host both site specific architecture form in the case of the first area of intervention (public functions) but also modular, that can be repeated, in the case of the second area (the courtyard and the dwelling unit).

On discourse and its materialization

Up until this point, it has become evident that the present project has drawn its formal foundations from architectural concepts that have been put on the discourse through the work of Candilis, Josic and Woods (stem, web, mat figure); mostly via the winning competition entry for the Free University in Berlin. However, it is important for such a proposal to explore capacities of this specific case-study that they did not become actual. That is to say, not only to just apply the principles set by those three architects but to be able to unveil their hidden capacities.

More specific, what is at stake for us is the possibility of such a model to be conceived not just as a building within a city, but as the city itself. This, we believe, requires the revision of the isolated building concept via its urban integration. The site-diagram below [fig. 4] presents precisely that possibility: The intervention exceeds the boundaries of the site and attempts to establish connections between the site and the ground activity of its surroundings. Although we can observe such an effort by the architects, that attempt remained in a diagrammatic level.

That diagrammatic state is what we tried to expand and formalize in architectural terms, since the parameters we defined in the beginning of the project demanded an architectural model which can operate also in urban scale. Following that, the process of thickening the urban carpet contributes towards that: It recognizes and integrates the existing fabric; as well as becomes a tool for overcoming the dichotomy of built/unbuilt, since the proposal forms also both the landscape and circulation. Therefore, built fabric (both existing and proposed), landscape and circulation belong to the same figure. Hence, we address the elements that construct a city as material artefacts which can be physically defined.

Consequently, we derived the possibility of urban integration that is inherent but not obvious in the project of the Berlin Free University and attempt to actualize it in the terms that our project has defined. Thus, commenting on the discourse itself, what is important for any intervention is, on the one hand, to realize that it belongs to a genealogy. On the other, to find those immanent hidden possibilities of its origin in order to materialize them. In that sense, architectural research is not any more discursive but instead embedded in the materialization of the architectural project.

The previous introduce one more aspect to the project, that of time. Since there is already a one hundred year plan illustrating future interventions that are going to emerge within the campus, we need to position ourselves in these terms. Precisely because our proposal deals with urban integration, we do not suggest it against the existing future plan. On the contrary, the project occurs by the reciprocal relationship it has with its urban context. Therefore, as time unfolds and interventions will take place within the campus, the scheme we are proposing will manage to be further elaborated. However, taking into account the situation at the present moment, we consider as a coherent strategy, regarding the project's logics, to keep it controlled at places that have been already urbanised.

Finally, we discuss urban integration as a necessary pole for project's elaboration but nonetheless, we retain the intervention within the physical borders of the UNAL campus. Can however this model be applied at any other urban environment? We believe that this is indeed possible. The layers that we have identified can be abstracted into fundamental concepts of 1) treating the existing buildings with the same importance (no hierarchy), 2)connecting/ networking in different degrees, 3) understanding the site-specific topographical qualities of a space and treating them three-dimensionally; and all that composed into a system where the whole exists to unify but also to accept its individual components in formal, material level but also in gradient of publicness (commoning). Hence this model, proposes the logic that could be applied in different urban contexts but in different proportions and formal expressions according to the site specific qualities and necessities.

Images

Fig. 1: Giovanni Battista Nolli, *Nuova Pianta di Roma*, 1748

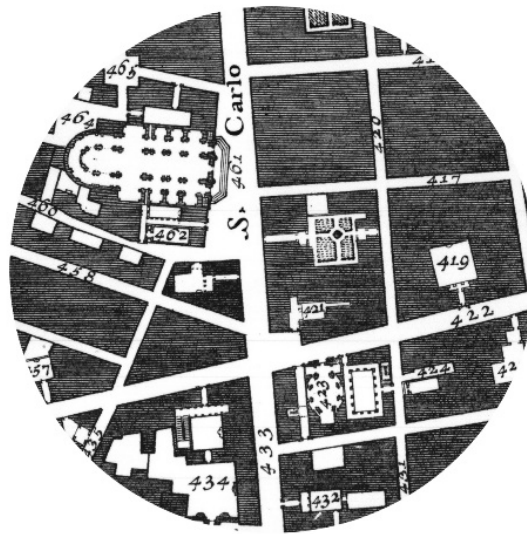
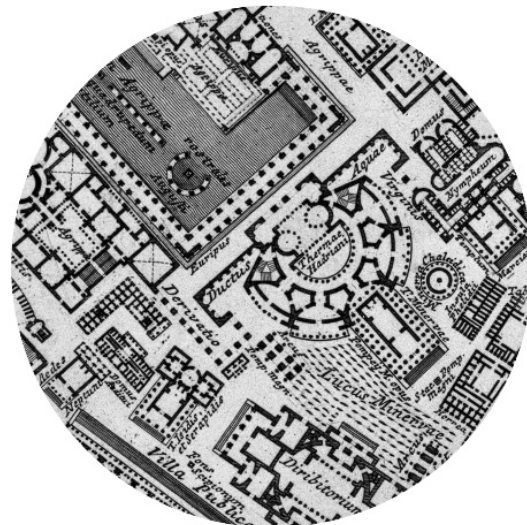


Fig. 2: Giovanni Battista Piranesi, *Campo Marzio*, 1765



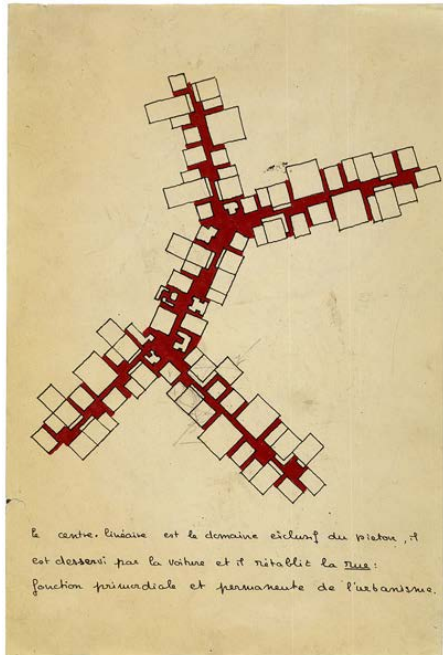


Fig. 3: Candilis Josc, Woods, *Extension of the city Caen in France*, stem, 1961

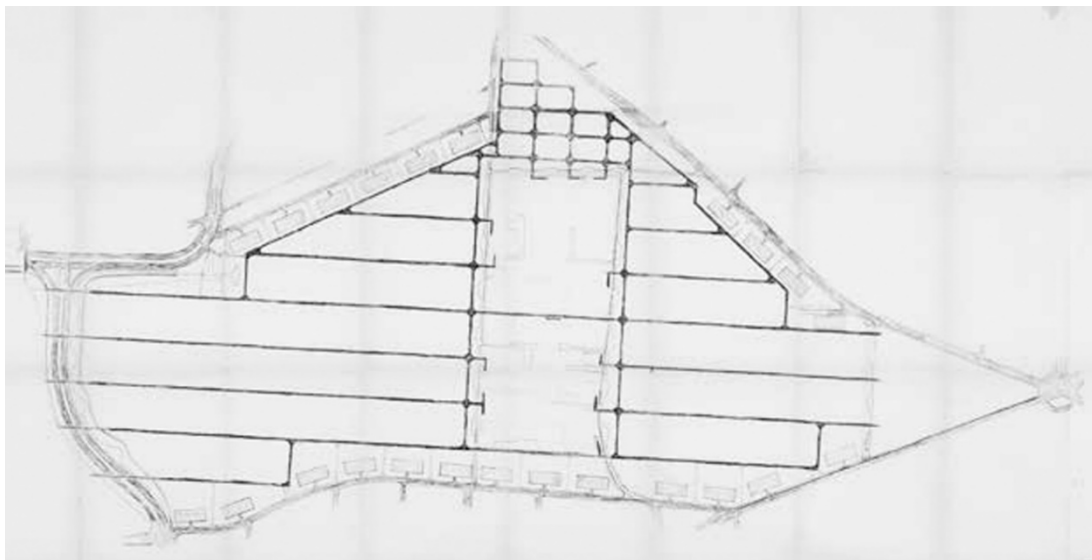


Fig. 4: Candilis, Josc, Woods, *Berlin Free University*, 1965-66 | site-plan.

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