



Guiomar Martín Domínguez
Departamento de Proyectos Arquitectónicos
Escuela Técnica Superior de Arquitectura, Universidad Politécnica de Madrid
guiomar.martin@upm.es

Just a failed shopping-scape? Urban and public values of Le Mirail's dalle

Abstract:

The famous plan for Toulouse-Le Mirail, by Candilis/Josic/Woods (1961), proposed a radical and hitherto new public space, the dalle, an elevated linear 'stem' that wove the whole urban intervention and concentrated all the commercial, social and cultural activity of the neighbourhood. However, the project is today stigmatized as a total social failure. The dalle has been demolished and a traditional commercial street has been implemented. Was demolition the sole alternative for Le Mirail's future? This paper aims at identifying certain themes around the conception of the dalle, capable of informing today's theory and practice in the design of new shopping/public-scapes. It reflects on both the most positive values of the project and on its naiveties and mistakes, conscious of the social unrest that aggrandized them. Ultimately, it calls for a deeper reflection on the urban proposals of the Modern Movement, beyond demolition as the only possible solution.

Keywords: Toulouse-Le Mirail, Candilis/Josic/Woods, dalle, public space, grands ensembles, post-war

1 Introduction

The district of Le Mirail, in the outskirts of Toulouse, was conceived to meet the needs of a runaway growth that characterized the region's post-war period. The population was expected to increase from 270.000 in 1954 to 400.000 in 1970, due to rural immigration, repatriation of French settlers and a rising industrial development. In 1960, the mayor Louis Bazerque received the support from the national planning authorities to create a ZUP in an area of 800 hectares situated just across the Garonne.¹ This territory would house 100.000 inhabitants, becoming "a highly urbanized 'new town' with a certain autonomy, personality and sufficiency of its own that would nevertheless be integrated with the traditional city of Toulouse" (Downie, 1972). In 1961, Le Mirail became subject of a national public competition. After nine months of work, the firm Candilis/Josic/Woods won the first prize with a radical proposal that merged the planning principles of the Modern Movement with the post-war revisions of Team 10. Within this dialectic, they endorsed a strict segregation of road and pedestrian traffic, while categorically refusing the functional zoning from the Athens Charter.

This double fact led to a very special conception of public space. A linear axis or 'stem', elevated from the ground and freed from cars, ran through the core of the different neighbourhoods that formed the new city.² This spine relied its course on the green structure of the terrain, willing to take roots within the existing context. Moreover, it was conceived as a "permanent urban infrastructure, capable of adapting to the changing conditions of an urban development that was to proceed by stages along the years" (Candilis, 1976, p.18).³ High-rise blocks plugged in directly to the stem, making up 75% of all dwellings. Density then faded away towards the external site perimeter, combining four-storey blocks with one-family houses.

¹ ZUP='Zone à urbaniser en priorité' ('Priority Planning Zone')

² The competition envisaged five neighbourhoods in two phases. However, only the first phase was ever completed, with three neighbourhoods: Bellefontaine, Reyneirie, Le Mirail.

³ Original quote in Spanish. All following quotes from this book are translated by the author.

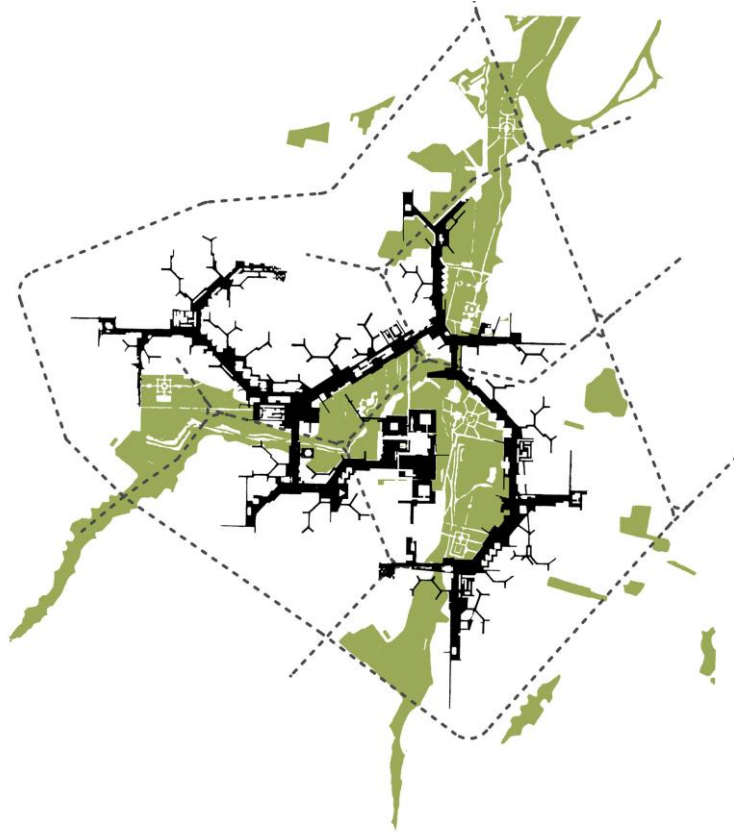


FIG. 1 - Global plan from competition entry: the stem relied its course on the green structure of the existing terrain (drawing by the author)

Commercial, cultural and social activities were naturally merged along this pedestrian deck, which became known as the *dalle*. In words of Woods, the *dalle* “contained shops, markets, social and cultural centers, places of entertainment and of worship, parks and gardens, etc” (Woods, 1965, p.13). Furthermore, this street dreamed of being a sort of collective living (*séjour*), “the element that encouraged relationships between people” (Gruet, 2011, p.196).⁴ The architects believed that blending these activities on such an innovative public-scape would foster a rich and prosperous community life.

⁴ Original quote by Candilis in French (1971). All following quotes from this book are translated by the author.

Unfortunately, the promised city of the future did not live up to expectations. The initial scheme was never finished as planned, due to economic and political reasons. From the three completed neighbourhoods, only Bellefontaine followed the initial scheme. In 1971 a political change in the municipality led to major transformations and Candilis resigned from his position as architect-in-chief.⁵ Reynerie and the University district minimized their *dalle* and private promotions gave way to an increasing number of individual housing. The project never found the trust of local allies and real estate developers, who preferred to invest in the city centre or in the nearby new district of Colomiers.⁶ In addition, the ZUP regulations were very rigid and did not permit innovations beyond the mono-functional framework of the *grands ensembles*. The spatial organization and mixed functions of Le Mirail posed indeed many legal problems regarding land property and subsequently raised conflicts in maintenance responsibilities. The huge areas of public space were not cared after and soon degraded. Meanwhile, medium-income families abandoned the HLMs⁷ in search for individual houses. As policies only encouraged migrants and low-income families to settle in, the original plan for social diversity was undermined. The whole neighbourhood soon degenerated into a ghetto of unemployment, crime and urban unrest. In only fifteen years the dream of Le Mirail as a “city to live in freedom” (Jaillet-Roman 2006, p.94)⁸ was doomed by the fatal destiny of most French ZUPs.

Since the 90s, the district has been target of many official programs aiming at social and urban revalorisation. In 1996 Le Mirail was labelled as a ZUS⁹ and in 2001 it became part of the *Grand Projet de Ville* for south-western Toulouse. Among the last interventions, the *dalle* has been demolished in successive stages, the Bellefontaine section being substituted by a traditional commercial street at ground level. Likewise, all the constructions on the *dalle* have disappeared, without any real debate around their historical value or architectural quality. In sum, what was envisaged as a permanent skeleton for the city has paradoxically been the first element to perish.

⁵ Although Josic was actually in charge of the development of the project, it was Candilis who legally signed the project and supervised the works.

⁶ The new Colomiers (also in Toulouse's periphery) was conceived in 1961 for 30.000 inhabitants. Built throughout the 60s, the project found efficient agreements between public and private investors, making more evident Le Mirail's financing problems.

⁷ HLM='Habitations à loyer modéré' ('Housing at moderated rents'), normally with public funding.

⁸ Original quote from a SETOMIP advertising campaign in French (1969), All following quotes from this book are translated by the author.

⁹ ZUS='Zone Urbaine Sensible' ('Sensitive Urban Zone').

Within this state of affairs, an inevitable question arises: was demolition the sole alternative for Le Mirail's *dalle*? Was it not possible anymore to identify and preserve what was valuable from its existing condition, while having no fear of correcting mistakes? It seems as if Le Mirail's "expected renaissance necessarily demanded a divorce from an urbanism with too much personality and a sinister reputation" (Jaillet-Roman 2006). Most urban proposals from the Modern Movement are today doomed by a similar social stigma. Many rehabilitation projects, like the one currently developed in the Amsterdam neighbourhood of Bijlmermeer, present the *tabula rasa* imposition as their only hope. However, it may be time to overcome this rejection, without necessarily falling for a nostalgic, 'heritage' perspective. A closer look to the original projects could disclose their real potentials and mistakes, as Koolhaas proved in his Bijlmermeer proposal.¹⁰ Assuming Habermas' belief in Modernity as an incomplete project, these realities could be considered as active frameworks for today's architects, contexts to respect but also to manipulate in order to meet present's needs.

The goal of this paper is thus twofold. First, to identify the most interesting architectural themes that made this *dalle* a key contribution for the architectural discourse of the time and that might still have a current validity to inform today's theory and practice. Second, to reflect on the project's inherent mistakes, from a specific architectural perspective. This must be done taking into consideration the social unrest that aggrandized these naiveties but not willing to assign any percentage of blame. In sum, the target is to deal with a series of key themes that emerged back in the 60s around the conception of this project, but which can still foster an interesting reflection upon the meaning of contemporary public/shopping-scapes, opening a further debate on alternatives to simple demolition when dealing with polemic modernist realities.

Specifically, the three themes that structure this paper share a generalized concern about the temporal and human dimension that architecture acquired in the post-war years. First, the *dalle* is analyzed as a pedestrian 'mobility' issue, believed to rediscover the potential of the traditional street. Then, the combination of 'dense' and 'diverse' activities is assessed from the perspective of everyday spatial practices.

¹⁰ OMA proposed in 1986 a rehabilitation of Beljmermeer original project (1967-75), which combined a revalorization of the modernist hexagonal blocks with an injection of activity and new typologies in both the infrastructure network and open spaces. OMA's new multi-functional 'strip' suggests indeed an interesting relation with Le Mirail's 'stem'.

Finally, the last section deals with the concept of 'open form' and the specific notion of 'ordinary flexibility' that Le Mirail's architecture and urban space wanted to promote.

2 Mobility as a structuring urban element: reinterpreting the pedestrian street

"The central street, linear conception and pedestrian domain freed from the automobile slavery, adapts better to the spirit of change, mobility and growth that characterizes our times" (Candilis, 1976, p.19)

As suggested by this quote, the temporal dimension became one of the largest fascinations of architectural thought in the post-war years. Gideon had already claimed for a diachronic understanding of the urban realm in 1941¹¹ and not by chance, mobility, growth and change were the main debated themes at the 10th CIAM congress (Dubrovnik, 1956). Evidently, within this dynamic understanding of the city, the actual movement of people emerged as a central issue. In parallel to Kahn's circulation studies for Philadelphia (1952) or the Situationist theories on the *derive* (1958), the traditional (mainly pedestrian) street soon became a sort of moral fetish, acquiring a strong sociological connotation. Indeed, several studies by Chombart de Lauwe on social ethnology or texts like *Notes sur la Ville nouvelle* (1960) by Henri Lefebvre reclaimed a reconciliation between the street's physical and social character. In less than twenty years, the anti-street theses of Le Corbusier were turned around. The Smithsons's *Urban Re-identification Grid* at Aix-en-Provence (1953) or Woods' book *The man in the street* (1975) reflect well such generalized concern.

However, Le Mirail's goal was not to reproduce a traditional street but to reinterpret its essence and adapt it to modern times. "Its form and spatial structure will be different from that of the old streets, but the street idea (different from that of a 'route') is inherent to the stem concept itself" (Gruet, 2011, p.195).¹² On the one hand, the *dalle* attempted to recapture the historical street's 'structuring' character, its sense as a recognisable thread that organizes the urban fabric. On the other, it was envisaged as an enduring element that would guide dwelling and building practices throughout the city's life.

¹¹ Date of first publication of *Space, Time and Architecture*.

¹² Original quote by Woods (1960)

Looking at Le Mirail today raises the question of what failed within such good intentions. Probably, the largest architectural mistake has to do with a scale naivety, at two different levels. First, the *dalle* was exclusively conceived for the pedestrian, but at the same time, it had a length of almost ten kilometres. The architects' attention towards the positive side of human displacements on foot was certainly virtuous (and currently valuable), but their trust on this movement at urban scale was overstated. The *dalle's* pretended functionality as a connective device between neighbourhoods never worked, evidencing an obvious lack of public transportation. Candilis/Josic/Woods divided human mobility into pedestrian and private cars, not foreseeing the key role that other means would have in the following decades. The public buses were never linked to the *dalle* and nor did the subway when it opened in the 90s, missing the opportunity to update the stem's functionality to a contemporary context.

The second scale problem might be due to the implementation of parking areas beneath the *dalle*.¹³ It seems as if in order to meet the vehicles' requirements, the parking surface was determined first and then this dimension was equated to that of the pedestrian deck. The result was a huge monolithic platform that covered the needs of cars, but the upper-side, when not full of people, inevitably seemed out of scale. Finding the exact adequate dimensions for this elevated deck was certainly not easy; in fact, when the *dalle* was reduced at Reynerie it ended up being perceived as a mere footbridge. In any case, Bellefontaine's enormous deck might have been further de-humanized by the firm's excessive faith in spatial devices over material definition. True, space prevails over superficial treatment in Le Mirail (Joedicke, 1976, p.111), a fact recognised by the architects as an inevitable decision within a very reduced budget. The *dalle* entrusted its human scale and diversity to ephemeral constructions that never came to being. The extensive surface was in the end only defined by a rhythmic pavement pattern sprinkled with voids, stairs and flowerpots, made out of the same harsh concrete. On top of that, this reality soon lacked maintenance, loosing any sign of domesticity.

Another possible explanation for the *dalle's* failure regards the multiplication of pedestrian circulation options. The stem's public circulation was duplicated in the air, by three levels of *coursives* (streets-in-the-air) at the 5th, 9th and 13th floors of the

¹³ The parking areas further posed many property, maintenance, and security problems, a point that exceeds the scope of the paper but which should not be ignored.

residential blocks, permitting to get though the whole neighbourhood without touching the ground. These *coursives* were conceived as public streets, reproducing a contemporary tendency inspired by Le Corbusier's *Unité d'Habitation* and especially exploited by the Smithsons in those years. Although these aerial paths actually multiplied the freedom of choices for the inhabitant, as a secondary effect they also 'stole' a certain amount of circulation density from the *dalle*. Due to this competition, both alternatives remained in the end 'too empty', increasing a generalized sense of insecurity. The *coursives*, which also caused numerous legal conflicts with private investors and never housed the local shops that the project contemplated, have finally been walled up and privatized. In addition, the direct accesses from the parking-lots to the elevators might have been logical, but also had side effects. They made the *dalle* a place where you 'decided to go', and not the natural entrance or exist from home.

A final competitive issue arises around the ambiguous relationship established between the *dalle* and the pedestrian pathways over the greenery. The *dalle* was certainly envisaged as a place for entertainment, but nature was practically banished from it. For a leisure walk, one would logically prefer the random outline of the pedestrian trails along the park. These two realities were very well integrated (both physically and conceptually) at Bellefontaine's *Maison des Jeunes*, with the incorporation of an existing lake as an active element in the project and a wise section that absorbed both levels. However, in the rest of the scheme such continuity is worse achieved and raises the fair question about what is really gained by this section leap. The four-meter drop becomes a huge barrier for the pedestrian, who debates himself between colonizing one level or the other. The connections are reduced to a series of stairs and ramps (seemingly random along the *dalle*'s length) that fail to boost strategic overlaps (activity-condensers?) between both traces. The inevitable result is a division in two spatial realms that constitute rather exclusive alternatives.¹⁴

¹⁴ The definition of the greenery in Le Mirail is yet another interesting subject to reflect upon. Apart from its landscape definition, it opens the debate about the need for a diverse area qualification in large open spaces and about the importance of condensing activities along their perimeter, as claimed in Jacobs, 1961.

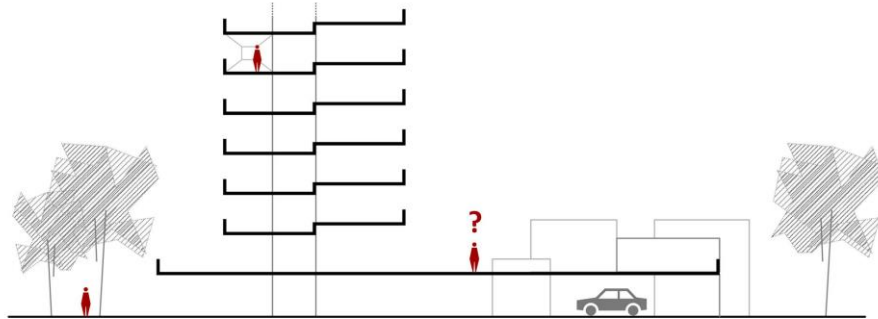


FIG. 2 Schematic section: the pedestrian debates himself between the *coursives*, the *dalle* and the greenery (drawing by the author)

In any case, continuity remains a key word for the conception of the *dalle* itself. Indeed, we cannot talk about the *dalle* as a mere pedestrian deck, since its physical connection to constructions makes it a much more complex system. As Josic explained: “the buildings are welded to the equipments, willing to form a continuous reality. The resulting ensemble creates a new type of public space” (Gruet, 2011, p.87). Jane Jacobs defined in those years the sidewalk as an abstraction that only depended of its nearby activities.¹⁵ Conversely, Candilis/Josic/Woods preferred to exploit the palpable materialization of such abstraction, obsessed with the creation of recognisable structures that mirrored the modern *Zeitgeist*. Jacob’s sidewalk was thus solidified and blended with its nearby activities, constituting a hitherto not imagined artefact, a continuous public complex (half building – half landscape) that fought against the modernist scheme of isolated objects on a park. The *dalle* was further extended through the residential blocks thanks to the public *coursives*; this continuity was graphically represented through several coloured schemes in the shape of fractal ramifications. Paradoxically, converting such continuous movement into a built solid became the most paradoxical drawback of the project’s dynamism and ability to change, a fact that made Le Mirail a “petrified life, an immobile city” (Gruet, 2011, p.197). Despite the mistakes, it is nonetheless necessary to appreciate the firm’s theoretical effort to conceive an alternative to ordinary streets, and the large interest of the spatial devices that were developed to pursue such goal.

¹⁵ This subject is further developed in the first chapter of Jacobs, 1961.

3 Everyday density and diversity: a guarantee for public life

“The structure of the city lies not in its geometry but in the human activities within it” (Woods, 1968)¹⁶

The transition from defined functions and spaces to dynamic activities and relationships was also a recurring theme of the post-war years. The ultimate role of the *dalle* was precisely to foster a type of human activity that would guarantee public life and thus construct social and urban identity. However, for Candilis/Josic/Woods this public life did not longer depend on great civic events or monumental buildings, but resided first and foremost in ordinary life. Following Candilis’ conviction that “the spectacular is of very little use in the field of human habitat and urban design” (Avermaete, 2005, p.83), the *dalle* did not house any symbolic square or memorial statue. Instead, it held “a voluntary mixture of everyday activities” (Candilis, 1976, p.53), that is, a balanced combination of commercial, cultural, recreational and social equipments. Aligning with a general post-war bias, these architects considered that everyday spatial practice was indeed the “frame, substance and goal of architecture and urban design” (Avermaete, 2005, p.106). Trusting that maxim and supported by the proximity of high-density blocks, the *dalle* would guarantee a continuous and meaningful human exchange along its length. Moreover, this renewed street was conceived as a democratization device, permitting all neighbourhoods to have the same access to public services.

Diversity and density based on users’ spatial practices were thus a intrinsic duality of the original project whose current validity is indisputably recognised today. Contemporary shopping-scapes tend to search new connections with leisure and cultural activities and their success obviously depends on the density of users. Jane Jacobs already assigned to this couple a primary role in urban security, and these concepts are also at the core of other theoretical reflections on the metropolis, like Rem Koolhaas’ concept of ‘the culture of congestion’. However again, despite the original intentions, the expected couple density-diversity also found certain obstacles in the actual development of the project.

In the first place, the envisaged concentration of all public and commercial functions on the *dalle* was never fulfilled. In fact, it is interesting to compare the sketches and

¹⁶ As quoted in Avermaete, 2005, p.87

global plans from the competition with the drawings of the executed project. In the first ones, all the equipments were literally on the *dalle* or directly connected to them, liberating the rest of the terrain for an almost virgin nature and reserving certain areas for low-density dwellings. Unfortunately, as Paul Desgrez (worker of the office) explains, the administration required registered plots for certain public equipments, especially educational centres (Gruet, 2011, p113). Schools ended up moving away from the *dalle* in both Bellefontaine and Reynerie, with the exception of a couple of kindergartens that obviously suffered from its demolition. In turn, the University district further distorted the original project. The *dalle* was minimized to a small commercial centre next to the university, loosing any of the structuring character it had left. The rest of constructions (both equipments and dwellings) were sparsely scattered all over the terrain, following the interests of private developers.

Despite the general belief, even in Bellefontaine, the original intentions were somehow distorted. The initial project visualized the homogeneous integration of shops along the *dalle* and underneath the residential blocks, as shown in several perspectives drawn by Josic for the competition entry. However, the ZUP regulations posed great obstacles for this and moreover, the mayor preferred to concentrate shops in what later came to be Bellefontaine's Commercial Centre. With this centralization, some parts of Bellefontaine's *dalle* became under-used. As the next section will explain, the expected network of ephemeral constructions and activities along the street never compensated this fact. Soon, the dilemma between focalization and decentralization of commercial establishments came back to the fore during the definition of the Regional Centre. In theory, this huge complex of twenty-five hectares was supposed to house administrative functions at a regional level as well as an intense cultural and leisure pole that would attract users from Toulouse centre and other municipalities. However, two facts contributed to its failure in relation to the *dalle*. First, despite its original strategic position in the centre of the five neighbourhoods and directly connected to their *dalle*, it ended up completely isolated when the urban scheme was left uncompleted. At the other side of a huge lake, the car became the only possible connection to both dwellings and *dalle* and created an enormous parking ring around it. Moreover, the political and cultural functions were never implemented. A *Géant-Épargne* (soon *Géant-Casino*) opened in 1970, becoming the largest hypermarket in France and creating a ruthless competition with the little shops on the *dalle*.

In sum, Le Mirail's *dalle* was never as diverse as it should have, and lost quite a

potential density of users due to several overlapped reasons. Three other explanations can be added to the sense of insecurity that doomed its destiny. First, the ambiguous differentiation between public and private properties, which in fact has been recognised by Jane Jacobs as one of the urban mistakes that inevitable leads to insecurity. The well-intentioned freedom of access in all directions, for all passers-by, ended up revealing against the project. The covered parking areas and the *coursives* were not 'controlled' by the inhabitants' eyes (key issue against insecurity for Jacobs) and soon became 'dark spots'. In addition to this, despite the diversity of public activities implemented on the *dalle*, there was not a continuous active schedule along day and night. Bars or late-evening recreational activities were hardly contemplated, despite the high percentage of young people living in the district. Finally, offices and industries were also banished from the stem. Although certain industrial activities obviously needed larger portions of land, the region also promoted numerous companies in the computer and electronic field. Part of these could have definitely contributed to a larger 'condensed diversity' along Le Mirail's central spine.

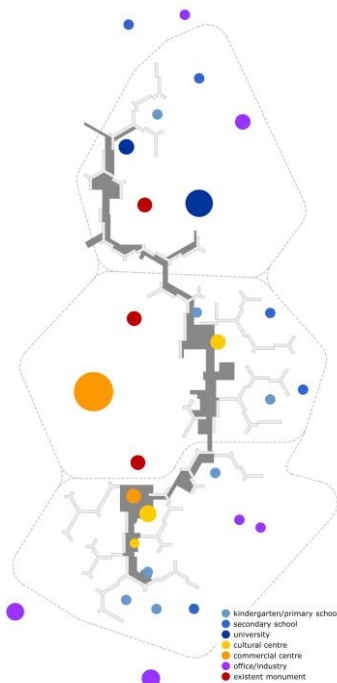


FIG. 3 Distribution of activities along the dalle... and away from it. (drawing by the author)

4 Open systems: systematic organizations for unexpected futures

“The plan is in a constant state of change, of becoming rather than being (...) Indeed, the difference with the past is simply that now change is perceptible and can be considered as positive whereas before it was imperceptible and was considered as negative” (Woods, 1965, p.14)

Along with human mobility, the post-war obsession with time logically led to questioning the actual evolution of buildings and cities. Reflections on the change, growth, conceptual and physical metamorphosis of spatial structures brought to the fore yet another moral fetish: the open form. The avant-garde had already claimed openness as a means for overcoming academic and classic compositions. In turn, the post-war context saw in open systems and structures the salvation from the rigid functionalism of modern objects. Curiously enough, the contemporary scene has discovered new potentials within the same term, adding yet other connotations to an already large ambiguity. Trying to surpass post-war limitations, the theoretical reflections of Manuel Gausa or Bernard Cache represent well the current attraction of today's architects by dynamic and undetermined fields.¹⁷

In the case of Le Mirail, openness to change was searched at every scale and level of the project, although it unfortunately did not work evenly. As mentioned before, Gruet has found a terrible paradox between the original intention of the stem as a permanent structuring element which however would suffer a “feed-back process” and thus, “ideally, change constantly” (Woods, 1965, p.13), and its actual result, “not an evolutionary system (...) but a pure form, ignoring the complexities of the social world, a continuity of fixed volumes” (Gruet, 2011, p.397). Despite the architects' desire for projecting organizing devices and not pre-defined plans, the *dalle* was always understood more as a closed object than as an open system. A combination between its imposing physical presence and the ‘legal juggling’ developed around its spatial organization led to demolition as its only possible ‘change’.

Likewise, it could be stated that, following a general tendency in those years, Candilis-Josic-Woods fell for an excessive confidence in inhabitants' commitment with their

¹⁷ See for example Gausa, M. (2010) *Open*, Barcelona: Actar or Cache, B. (2011). *Projectiles*, London: AA Publications

social and physical environment.

They believed that “in a modernized world, it was the task of architects to secure for the inhabitant the opportunity to construct his own place” (Avermaete, 2005, p.126). Subsequently, spatial practices would permit to transform creative actions over such architectural framework into a rebellion against conventions, the consumer society or the oppressing State. With this reverie in mind, the *dalle* was ready to receive “provisional light structures, removable and transformable, devoted to undefined, ephemeral or temporary urban activities” (Candilis, 1976, p.62). Even the volumes that were supposed to house commercial and public functions were represented in Josic’s initial perspectives as light boxes elevated from the deck by thin legs, suggesting an imminent displacement or removal. Furthermore, the surface of the *dalle* was colonized in all drawings by an infinite number of interactive ‘objects’ of variable sizes, with neither functional nor material concreteness.

Apart from the conventional stairs, benches and lamp posts, these drawings foresaw more pieces of ‘urban furniture’, as a natural consequence of citizens’ spatial practices. The *dalle* was thus conceived as a heterogeneous ‘formation’ of multiple additive layers (constructions/structures/objects/voids...), very hard to describe graphically, as Josic recognised (Gruet, 2011, p.87).

In these years the office also designed the hexa-cubes system, conceived as “parasitic elements that nestle into the margins, nooks and cracks of the recent or historical urban tissue” (Avermaete, 2005, p.374).

Some original photographs from the 70s show hexa-cubes actually intruding onto Le Mirail’s *dalle*, as a sort of manifesto for the new and fleeting mode of dwelling that the office wanted to promote. Unfortunately, in general terms, the spontaneous occupation of the *dalle* was never produced. In any case, it is interesting how, at a conceptual level, this dreamed landscape from the 60s lies amazingly close to contemporary interpretations of public space, like Aymonino’s ‘Un-volumetric Architecture or Stan Allen’s notion of ‘land-form buildings’.¹⁸

¹⁸ See Aymonino, A. & Mosco, V.P. (2011): *Spazi pubblici contemporanei. Architettura a volume zero*, Milano: Skira. or Allen, S. (2011) *Landform Building: Architecture's New Terrain*, Baden: Lars Muller.

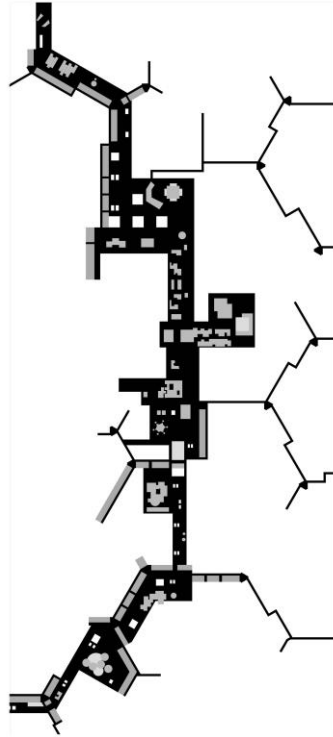


FIG. 4 Expected occupation of the dalle: ephemeral structures for unpredictable spatial practices (drawing by the author)

To sum up, neither the most permanent elements (at urban scale) nor the most ephemeral ones (with a sort of 'objectual' scale) lived up to expectations. Nonetheless, the intermediate stage (that of the buildings actually erected for the moment's needs at an architectural scale) did produced interesting results. Obsessed with the aesthetics of the great number, the work of Candilis/Josic/Woods constantly looked for open systems to reconcile regularity and variation, arguing for the potential diversity hidden in repetitive processes and the interest of strategic (or random) ruptures of such order. In this case, 'avoiding monotony' was also one of the guiding principles made explicit in the architects' description of the project (Candilis, 1976, p.17). In fact, openness is applied in Le Mirail at two complementary levels. On the one hand, it is seen as a generative tool that guides the design process of an otherwise uncontrollable scale, making decisions both easier and more flexible for the architect himself. On the other, the resulting spaces were also to become open

systems *per se*, that is, adaptable frameworks for unforeseeable changing needs.

Regarding the design process, Candilis/Josic/Woods projected a regular grid onto the site, as a basic organizing pattern. At the Bellefontaine section,¹⁹ a strict 4,80m modulation determined the *dalle's* outline and the internal organization of both the Commercial Centre and *Maison du Quartier*. The Social Centre played with further divisions of this module that still fitted in the original pattern (3,60x4,80m). In general terms, it could be stated that the square constituted one of the most recurring generative principles of the office's work.²⁰ The intensive geometrical research developed around this figure sheds light to an interesting two-sided coin: the module as an autonomous combinable shape and the pattern as a generative homogeneous trace. In Le Mirail's case, most schools follow for instance what Tom Avermaete called a "from cell to cluster" logic,²¹ while Bellefontaine's Commercial and Cultural Centre experiment with modules' autonomy, within the limits of a strict grid scheme.

The conversion of Bellefontaine's grid into architecture follows a careful game between regularity and randomness, based on very simple combinatorial rules and exceptions. The grid is materialized into a nude skeleton of concrete pillars and beams. Subsequently, it all comes down to the definition of the enveloping planes of the resulting 'virtual cubes', in relation to the surrounding ones. Height variation of the upper lid determines dimensional diversity of spaces. Likewise, the combination of changing heights constitutes the main device for introducing light in an otherwise too extensive horizontal scheme. Furthermore, this variation contributes to increasing the buildings' additive character (and thus to their sense of 'becoming' rather than being, to their image of incompleteness). The Commercial Centre's floor plan relies its organization on the temporary 'pixelized logic' of shops' surface needs. This 'pixelation' respects a strict repartition of technical cores but also allows for a less rigid circulation scheme that invites the user to stroll along the intermediate crooked alleys. In the case of the *Maison du Quartier*, the floor section is further manipulated to create both a central amphitheatre serving as a public condenser among the

¹⁹ We will only refer to this area in order to better understand the argument. However, similar repetitive patterns were present in practically all the buildings of Le Mirail (including schools, university, and low-density dwellings)

²⁰ This geometrical pattern was used in both residential complexes (i.e. Barcarès-Leucate) and in more public programs (i.e. the Sevres Artisanal Centre).

²¹ Avermaete applied this concept mainly to urban projects (Avermaete, 2005, pp.290-291). However, a similar principle was applied to Le Mirail's schools, in a conscious research of links between spatial relationships and children's learning processes.

different functions, and a set of successive platforms at the *Maison des Jeunes*, enriching its internal free plan and making a subtle transition towards a pre-existent lake.

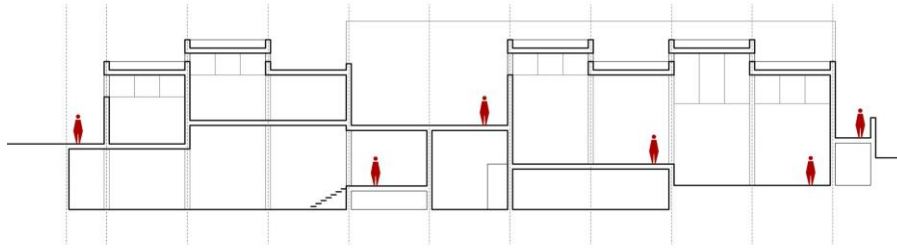


FIG. 5 Maison des Jeunes: the floor-plan respects the grid, but the section freely plays with platforms' height (drawing by the author)

In both the Commercial and Cultural Centre, vertical partitions can be fix, (re)movable or actually inexistent. This apparently simple set of options is however cleverly mastered, creating numerous 'transitional spaces'. Such in-between areas present a somehow ambiguous character, being either covered but external or uncovered but felt as a room, within a virtual envelope. The rich transition and articulation between indoor-outdoor realities is in fact one of Le Mirails' finest achievements. Complementary, some transitional areas could rather be called 'spaces in transition'. Normally surrounded by removable partitions, they can make sense either autonomously or in connection with their adjacent spaces, acquiring a constant transmutable character. The niches between classrooms at the Commercial Centre's kindergarten constitute a good example of such dynamic enclosures that furthermore, break the grid's main lines.

This kind of transitional areas were especially valued by the architects for their quality to foster users' creativity. This search of a constant 'negotiation' aligns with several contemporary convictions, like those of Sou Fujimoto or Lacaton & Vassal.²² In general terms, the buildings on the *dalle* were conceived as "a landscape of *béton brut*; a rough structural outline of spaces that can be appropriated, abandoned and re-appropriated" (Avermaete, 2005, p.299). Candilis/Josic/Woods believed that only by 'minimally defining' these spaces a real negotiation (and thus polyvalence) could be

²² See for example Fujimoto's interest in the spatial archetype of the cave (versus that of the nest), as a provocation to incite users' creativity; or Lacaton & Vassal confidence in the inhabitant to reinterpret certain ambiguous spaces like their 'displaced' greenhouses.

achieved. Willing to “avoid the impersonality of buildings that are the result of a cold programming by ‘specialists’” (Candilis, 1976, p.61), they transformed their architecture into ‘neutral space-frames’, categorically refusing classic and modern monumentality. Anti-monumentality was in fact another key recurring theme of the 60s. At Le Mirail it permitted for instance to create a church with no façade, integrated in the basement of the Commercial Centre. As a result of these ideas, a ‘face-less’ architecture emerged along the *dalle*, a fact that was highly appreciated by the architects of the time but which found many detractors in the following decades. A recent intervention at the Architecture School from the University District acknowledges this dilemma: a new monumental entrance was added to the no-façade spatial pattern, willing to give character to an otherwise ‘too neutral’ building.

5 Conclusions

“The greatest number was not considered a problematic given, but rather an opportunity to reconsider the very essence of architecture and urbanism” (Avermaete, 2005, p.122)

Probably, the most evident value of Le Mirail lies in its condition as a built manifesto of Team 10’s reflections and ambitions, with a hitherto not known scale.²³ An entire city was to be conceived in the head of very few people and furthermore, it needed to be built. Le Mirail presented itself as a sort of ‘living test’ for the most recent theoretical hypothesis in urban and habitat matters. With a huge repercussion in professional and academic circles (both national and international), it worked as an actual laboratory canalizing the thought of the time. Candilis, Josic and Woods were conscious of such challenge and focused their efforts on a paradoxical double goal: accepting the main accomplishments from the modern legacy and at the same time, undermining some of its most fundamental principles. Candilis’ words are clear about this: “If it is necessary to integrate the achievements of the Modern Movement (...), it is also necessary to follow the urban codes of the past, trying to conciliate the past and the present” (Gruet, 2011, p.406). This conciliation is neither found in a slavish replication of past forms, nor in a blind adherence to modernist ways of doing. Rather, it is understood as a field of tension between the two realities.

This explains how, for instance, modern discontinuity and zoning were both ‘assumed

²³ Le Mirail’s ZUP was the largest one ever created in France.

and refused' at the same time in Le Mirail. On the one hand, the project accepted the advantages of the hygienist 'discontinuous' open block, but on the other, it yearned desperately to overcome such discontinuity, refusing to reproduce a monotonous scheme of 'isolated objects' over an unqualified green plane. Aligning to Le Corbusier's orthodox principles, the general urban structure maintained the modernist superposition of independent layers (greenery - infrastructure - built volumes). This separation inevitably implied a refusal of the continuous texture from the traditional city, where these three levels were integrated as a unique reality. Moreover, following a strict functionalist reasoning, infrastructure was specialized in pedestrian and car circulation, a fact that beyond the *dalle's* particular character, produced several 'mono-functional pouches' linked to isolated parking areas and low-density dwelling.²⁴

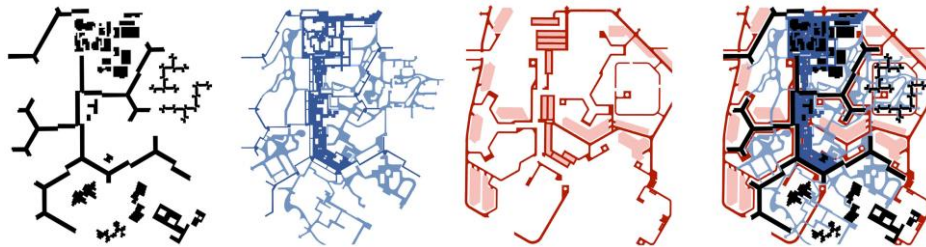


FIG. 6 Modernist superposition of independent layers over the greenery: built volumes – pedestrian paths – road network (drawing by the author)

Nonetheless, this modernist scheme was made compatible with yet another superimposed layer that categorically denied both discontinuity and zoning: the stem. The traditional street was thus negated in general terms but paradoxically, also constituted the core of the scheme. Along the stem, the virtual and physical connections between objects assumed a primordial role. Indeed, the historical city was reinterpreted at Le Mirail through the actual 'materialization' of relationships in a linear activity-condenser, a continuous artefact willing to compensate the Athens Charter's lack of attention to the intermediate realm among buildings. The pedestrian was the sole owner of a new spatial reality that distanced itself from the modernist void, elevating from it and becoming a solidified (infra)structure. The void became a

²⁴ This separation in independent layers further created a high sense of disorientation for the passer-by, who had to learn completely different itineraries depending on his means of transport and failed to find an intermediate scale of reference between the external primary roads and the internal cul-de-sacs.

mass; the street, a building (a *bâtiment-rue*).²⁵ Paradoxically, as we have seen, this inescapable materiality transformed the whole urban plan into an inevitable architectural object. What was supposed to work as a flexible trace, as an 'organization' open to evolution, ended up perceived as a sculptural (compositional?) form, which on top of that, also betrayed the offices' desire of anti-monumentality.

It is indisputable that Le Mirail's evolution, failed to respond to a complex social reality. The post-war optimism put definitely excessive trust on political interests, financing developers and administrative procedures that never fulfilled an equal development of scales in an urban scheme of unprecedented proportions. Likewise, there was too much confidence in the inhabitant's will to spontaneously transform and revalorize his physical environment. Scared of the dictatorial dangers of 'over-design', Le Mirail's deliberate neutral spatial-frames curiously raised the opposite question: where are the limits of 'under-design' and to what point a minimal spatial definition can really stimulate creative spatial practices and thus foster individual and collective identity? In addition, we could say that some of Le Mirail's original values, like a real concentration of diverse and dense activities along the *dalle* to guarantee a healthy public life, were never fully implemented. Insecurity was inevitably derived from a complex three-dimensional organization that was never 'congested enough', failing to provide enough 'eyes' for a natural control, in Jacobs' terms.

Nevertheless, Le Mirail also holds important lessons for today's architects that should not be ignored. Among them, we should underscore its radical conception of public space as an innovative urban reality that questions the limits between architecture, urbanism, landscape and even object design. This sort of 'inhabited urban infrastructure' undermines the classical Nolli's division of the city in black and white diagrams (built vs void). Rather, it suggests other ways of representing and thus analysing, conceiving and transforming public space. In this line, the *dalle* calls for reinterpreting mobility as a starting point for further reconsiderations of public space (as in contemporary recycling projects such as New York's Highline). Likewise, this artefact calls for the importance of a congested but not-homogeneous complexity in the definition of large-scale public-scapes: although partially achieved, Le Mirail's idea was that each section of the stem should acquire a different recognisable character, based on the specific 'injected' activities and a distinct physical qualification. As for the point of view of the architectural design process, this project constitutes a living proof of Brancusi's maxim: "simplicity is the solution to

²⁵ Expression originally used by Josic in 1976, as quoted in Gruet, 2011, p.87

complex problems". Le Mirail's research on simple geometrical elements and combination rules proves simplicity's potential for producing a high degree of plastic richness within an accurate human scale. It moreover suggests that a humble "poetic dimension" can be achieved from a particular attention to spatial proportions and from the *brutalist* use of 'nude materials' (Chaljub, 2010, p.106)

To conclude, it must be said that this project opens the debate on a lot of polemic issues that still have no clear answer today. The *dalle* questions for instance the inevitable dependence that new urban ideas present in relation to the established legal procedures of defining and working with space. What is the future of a 'spatial urbanism', as Le Mirail's suggested, beyond conventional floor-plan coloured schemes? Likewise, the intrinsic spirit of Le Mirail invites to reconsider our contemporary relationship to modern heritage, a polemic issue still full of uncertainty. In general terms, is it possible to update such heritage to meet our present's needs, respecting its contribution to the architectural knowledge and the value of its actual physical realizations? Likewise, more specifically, how should we deal with the large surfaces of open space intrinsic to modern urbanism (both in its orthodox and most critical versions) that suffer today from both a conceptual stigma and an infinite list of social problems?

Back in 1963 Woods suggested that the stem's validity would be given by an evolutionary society: "The door of the future must be left open", he said (Gruet, 2011, p.256). Today, we may ask ourselves whether Le Mirail's demolition... simply closed that door.

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