

*A few of the aspects of the buildings of the University City designed by Carlos Raúl Villanueva in the early fifties stand out as they seem to me to be particularly seductive while at the same time being fundamental, beyond his key research about the synthesis and integration of the arts. These other aspects give us clues to explain the qualities, more atmospheric than tangible, that characterize the places that the architect created during those years. I talk about places rather than buildings due to the unique urban character that the campus acquired in those years, as it tended to transform itself into a single, integrated space, in which the inside and the outside merge. This happened after the initial formulations which were more ambiguous to begin with of the faculty of Medicine and of those closer to a first modernity, more German than French, which took place shortly afterwards in the faculty of Engineering, but in both cases always tinged with the peculiarities of what is local and the personal sense of the restless search that characterized the work of the architect.*

*The qualities of the suggestive atmospheres Villanueva created in the fifties are particularly significant to illustrate a way of addressing an architectural design that transcends its physical form and is placed in a broader interpretation of the Latin American tropical environment. It is precisely in this free and unprejudiced attitude towards the inevitable need to decode and recreate the social and geographical environment where the keys to Villanueva's architectural creation lie. Placed there, is the centre of a still existing search that can be maintained with different formal expressions in other times and circumstances. In the places that Villanueva created for the university community, which were suitable not only for the physical environment but also for the public one to which they were directed, the transit between indoor and outdoor is little noticed. The most informal academic life takes place there, the time between classes,*

*that of coming and going, that of being there, in the city of knowledge. It is in these spaces of transition, very appropriate for the climate and environment in these latitudes, where the most genuine community life is spent, that of sharing the lessons learnt as well as briefly forgetting them in moments of leisure only to remember them later on.*

*Some of the most evocative aspects of the subtle search for a Latin American tropical environment are for me, in first place, the aesthetics of the balance, which fits into a poetics of the structural, in the context of which the architect counterbalances very stable structures, with other structural supports that are more daring, thus creating a very appealing tension between the extremely stable and the acrobatic. It is as if the architect tried to integrate the desire for freedom, the dream of projecting, with the more ancestral opposite one, that of the necessary shelter, that of the attachment to land and home. Secondly I am impressed by the magic of the veils that the architect provides for us, which as well as owing so much to the Islamic culture also suggest a world of astuteness, of that which is not completely clear, of what should be unveiled, discovered, that of curiosity, that of an inside that we do not yet possess. Therefore it is not exclusively to protect from the excessive heat and bright sunlight or to let the wind pass, but also to give us the pleasure of enjoying that sort of framework and overlapping lattices that the architect weaves to allow the possibility of a veiled glance and the intuition of the interior from the exterior.*

*The other fundamental aspect is the spatial continuum that is given to us, which constantly reminds us of our condition of being in a tropical country where the internal spaces do not require barriers that separate them from the exterior, as a consequence of which a communion with the natural elements is possible throughout the whole year, one which favours a coexistence with the wind, rain, and the outdoor vegetation that seeps into its interior. The fluid space is also the culmination of the persistent search arising from twentieth century art, having one of its first manifestations with Cubism which had come about mainly from the modern considerations of Einstein's physics and where space was conceived in relation to a subject in motion,*

*in which the representation of objects from several points of view introduces a principle that has been closely linked to modern life: simultaneity. These ideas, which were linked to the architectural world of the De Stijl group, in a more theoretical and intuitive manner than real, would express themselves in all their splendour in tropical latitudes years later.*

### **Projections**

*In the diversity of the structures that Villanueva built during the fifties one observes two opposing aspects which complement each other: the desire to create supporting elements that produce a sense of stability and shelter, nearby the wayfarer, tangible, robust and solid, that incite contact; and others, more reckless and risky that defy gravity and produce shade in a more daring and bold manner. Villanueva's will to integrate for example, which has been manifested in very different aspects such as the fusion of tradition and modernity in one unique synthesis, acquires a different dimension in the conception of the buildings' structural support systems. The willingness to conciliate the ground and projection correlation in a union of opposites, in the first case it is associated with the permanence of the activities and in the second, to walking, to the informal, to the recreation and to the transit between the inside and the outside.*

*In the structures that Villanueva proposed during the first half of the fifties and to the design of which contributed talented Engineers such as R. Kaltensadler, S. Epelboin, Juancho Otaola and Oscar Benedeti amongst others, one observes two main types of structures: the stable and robust concrete porticoes and the daring projections, that in the years that immediately followed were enriched with attractive folds that combined both principles. These two different ways of covering a space complement the complex aesthetics in which the portal frame structures solve large spaces where mainly more stable functions are carried out such as celebrations, teaching and administrative activities, while the cantilever structures solve the communication with the exterior as an invitation to enter or as a greeting to the open space.*

*The restless curiosity of Villanueva in cantilever structures is very well expressed in the set of indoor corridors of the University*

City of Caracas, in which the evolution of the structural approaches are observed from the more discreet portico framed systems in the beginning to those of the curved or folded shells projected in the early fifties, real plastic and structural feats carried out thanks to technical innovations and to the contributions to the design adjustments provided by the Engineers Juancho Otaola & Oscar Benedetti and their enterprise Precompressed.

As one walks along the open structures of the covered corridors it is possible to observe, there opposite, hermetic figures of a strenuous presence, such as those of the auditoriums, in some of which prevail portico frame systems with vertical members that reduce their section as they come closer to the ground.

#### **Veils**

The other fundamental theme in Villanueva's architecture is that of the veils or lattice work that owe so much, not only to the legacy of Islamic culture but also due to the questioning of the Brazilian architects of the forties, but especially that proposed by Affonso Eduardo Reidy, mainly in his complex of Pedregulho in Rio de Janeiro. Villanueva also recognises, in his book *Caracas in three times*, the debt that he owes to his colonial heritage when he creates the wefts in which he so well established subtle connections between the hidden, the veiled and the explicitly exposed.

The veils in Villanueva's tropical cosmos present subtleties in their densities and forms which manifest themselves according to the nature of their circumstances: depending on how they relate to the proximity of the openings or open spaces; according to their vertical or horizontal position depending on whether it is the ceiling or wall, lattice work or pergolas; or regarding their disposition with respect to the sun. Thus through this interaction with the proximity of the none veiled, of their relationship with what is above and below or their orientation, emerges the design of the weft and the magic of the everyday different moving shadows.

Villanueva created his screens of light, not only to solve a climate control problem, but also to offer the spectacle of its lattices and the reticulate mobile shades that vary with the passing of the hours. The theme of the veils acquires therefore, a stature that is loca-

ted in the dimensions of looking and perceiving, beyond which, is the always present relation of the continuity between the interior and the exterior which nevertheless requires the different shades that fall in between the fully exposed, without barriers, and the completely opaque.

#### **Fluid space**

The fluid space constitutes the arrival of the great aspirations of the 20th century. As in cubism, Le Corbusier sought transparency, the penetration of the interior and exterior space and the introduction of the movement in the static form, as expressed by Stanislaus von Moos and as noted in projects as early as those of the Centrosoyus in 1928 and the Soviets Palace in 1931, in which clear references appear to the structure and the lobby of the Aula Magna.

The fluid space allows a continuous vision that the displacement completes. From the distant intuition of a treasure, we are offered at distinct moments and at different times, passing from the certainty of its existence to the reward of its acknowledgement; then the precise look is required, the delight in the details that direct acknowledgement gives place to which has been prepared by infinite preambles.

The fluid space is the place of the infinite veils: of the artificial open works that let in the air, the sun or allow us to glance through them as well as the natural wefts of low vegetation or trees; it is the meeting area of volumes and surfaces suspended by graceful overhangs; it is also the place of time, of lattices' shadows that roam around floors and walls, that appear and disappear with the passing by of clouds or the movement of the sun. The fluid space is also the place of motion, discovery and surprise; it is the appropriate place for an in depth observation which is overlapped with individuals that move to seize it and that of an interior that is also an exterior. The fluid space appears before us then as the place of arrival of a search in time, as the fundamental objective, sensed more than known, but brilliantly achieved in the University City of Caracas in the fifties.

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The School of Petroleum Engineering of Maracaibo, at the western end of Venezuela, is framed within the expansion project of the University of Zulia, driven by the booming oil industry in those years. The building was to be located on a plot adjacent to the University Hospital of Zulia, a construction that had begun at the beginning of the decade. This area of expansion of the city, which main pole of attraction was constituted by the airport "Grano de Oro", the Liberator headquarters and the Surgical Hospital, were to become the future University area.

In this project, immediately after the core set of the Central University of Venezuela, the urban and climatic conditions are different. Neither the existing buildings, nor the future ones, are arranged by a general campus project, being the area for the time a faded grid of very low density. On the other hand, the marabino extreme climate (average temperature of 32 °C), is very different to the mild one of the valley of Caracas. However, in 1943 Villanueva had already designed and built in Maracaibo the neighbourhood unit General Rafael Urdaneta, and three years later a school within the same housing project.

#### **The programme and the compound**

The School of Petroleum project is perhaps the one that in the most decisive and clear way, of those employed in his contemporary works of the University campus of Caracas, has been composed as a system. The substantial difference between the academic and modern composition, -Alan Colquhoun tells us - is that in the latter the combination of the parts is free, a set of permutations between fixed elements that does not respond to pre-established rules, or the repetition of previous forms. Therefore, it is the freedom of combination, the absence of predetermined rules along with the creation of their own, what differentiates modern architecture from the classical one, not the absence of composition itself. In spite of that, the intrinsic relationship that the term "composition" drew with