



THE ARCHITECTURAL SPACE

To clarify some ideas and concepts on the exterior architectural space, previously should clarify what we mean by the architectural space.

In the book "The Configuration Space" by Eduardo Meissner, express the following ideas about space:

- D is the area in which they define and express volumetric forms.
- The space is a medium of expression characteristic of the resulting architecture is not accidental dimensional orientation planes and volumes.
- Other means of expression, valid in themselves to the arts, for example, such as line, color, surface, texture, configurators are but supports the architecture space.

José Ricardo Morales, in his essay "Architectural I", on criticism and theory of architecture says: "Architecture not "models" space, among other reasons because the space is not real and perceived entity but an abstraction that can made from very different fields of thought and from countless assumptions. therefore not configured space, but the spatial or extensive, which is something very different"¹.

So, if we stand in the vastness supposedly, in extensive or unlimited (flat desert, the ocean) who will not send us if not ourselves, and then we formed the heart of our environment . But there is no "space", there is more that extent , there is only the indeterminate. And "man errs in the indeterminate" and "what is lacking footprint indeterminate, data, signs, notes, limits, lines or points of reference, reference"².

In the course of this order, if in the vastness build, we have artificial and natural elements to protect and shelter us, we set the spatial or extensive, we set mark, sign, we find limits, references, site. Establishing the architectural space .

¹ J. R. Morales, Arquitectónica I, pág. 147.

² J. R. Morales, Arquitectónica II, pág. 40.

The distinction between abstract and concrete as a concept of space, Morales discerns: "Moreover there are profound differences between architectural space and the proper geometric, and who live in the latter, it is homogenous, and therefore divisible ad infinitum admits no degrees, because it accepts qualities, and is primarily pneumatic space³.

Architectural space is phenomenal and pragmatic, as is manifested by human operations and has provided qualitative . No portioning reveals the number and extent, on the contrary , his character is evident in the topos or place, noticeable by its forms and accidents. It is a space "topic", "villager", in the deployment of all its possibilities from the "common" or public until we are exclusive in the privacy of our habits and rooms. This space is lived , modal, locatable by its infinite differences in appearance. And we understand us back to it old as "site", in which specific man each time, has its unique and relevant "sedo"⁴.

In addition to the concrete, artificial and locatable, its qualities , is implicit in space use, or its usual condition , as well as its theming and readability as "subject."

"So when you think that architecture occupies space, we have to understand that occupies a "space" located and locatable because it gives certain occupation, distinguishing qualitatively from other places by operations of the architectural art. Works resulting therefrom, allow certain, specific human actions . at these operations, occupations and actions we must in fact refer to understand the nature of architectural space.

Architecture is not space because "is" in the general, or because it "contains" or "set ", but because it raises against inert space , or "not art", a space with intrinsic qualities that exist before can not be estimated as part "or cut" any space purely extensive. A purely spatial architecture is unthinkable and therefore should estimársela utopian or lacking in places.

Instead of vaguely referring to locations , areas or areas emerged, according to the use and purpose, in areas, roads, cities, streets, squares, houses, rooms and furniture. Consider the general or abstract space, as human tasks comprising the architectural space in his usual condition. In such a space themed action arises, in which the spatial dimension is not purely because is those limits that are appropriate to their employment. The space is a space arises and denatured by operations and alluded purposes.

Space means **space themed** legible understandable and communicable; revealed a certain way and with certain purpose. This artificial space, themed, legible and named in the uniqueness of our jobs and operations is the architectural space. The real life originates and the word specifier designates him. Therefore, the architectural space is our inherent space and is characterized

³ Noumenon: essence or hypothesized cause of the phenomena.

⁴ Sedo: Tranquility. J. R. Morales, *Arquitectónica I*, pág.148.

certain condition has biographical. Life living or concrete and that our life is located and established, are directly associated and require rigorous consideration⁵.

The architectural space, whether we refer to space, interior or exterior, there by man and man, in a place or venue and with all the activity, habit or use man carries, while uniqueness is themed, is significant and legible; named.

OUTER SPACE ARCHITECTURAL

Typically, in trials of architectural space and expressly tacit influences the interior as the main thing. And because this is primal, which is first. It is what we need first and foremost, what we first do by natural necessity we have for protection, ceiling, interior, privacy .

As we build this, we begin to generate a arquitecturizado outside, even if it is without purpose enlightening. In this sense, the exterior is almost accidental, but only in a very theoretical, because in the live action is unavoidable using the **inside** and the **outside**, which added to the gregarious condition of man leads to Exterior architectural patterns.

"The fact has inalienably him build an expansionary "populate", which corresponds to inhabit and occupy with others. Beam and the underside of the architecture are that the construction always has the double meaning indicated .

As for "the people" would highlight two aspects which we consider paramount: one indicates the action to populate man quantitative others, signified by the "crowded" as abundant, and another, for the notion that the fact "populate" is in the term "public " (opposed to private, regarding the aforementioned house), which denotes the action of man as architectural opening, exit or expansion to the boundary"⁶.

As we left the outline with architectural actions, constitute the exterior architectural. This architectural outdoor architectural space must be as dimensionally settle as circumscribed space delimited and structured in its own dimensionality . Only then can we talk about space.

Over the adjective "outside" means from and what is out, "by the outside", and the interior is perfectly defined, so fully formed , but above all , what is covered, covered, protected and delimited with respect to infinite blue. What this outside, then, is primarily what has **no** roof, open to the sky .

Then the exterior architectural space or that space formed artificially, legible and named in the uniqueness of our jobs and operations is fundamentally open, free to the sky: courtyard, street, town or city.

⁵ J. R. Morales, Arquitectónica I, págs.149, 150 y 151.

⁶ J. R. Morales, Arquitectónica II, pág. 102.

Reason being from outer space

According to Morales. "The open spaces are usually par excellence, the displacement. Living in them corresponds to "just stopping" or in transit. Are Usually transient areas for the walking man moved by their vehicles or on foot and then the "treatment "has them corresponds to" stretch "to" line "that connects two points: that from which we came and to "end toward which we". Therefore, the "between" producing such pinitos not originate any privacy, considering that such an intensification of space is due to the frequency of the "many" passes over different locations. "⁷.

The result in the displacement is a reason or fundamental principal of open spaces or outdoors arquitecturizados, which is linked to the idea of public space, urban space. But not the only reason there is also a private outdoor space or outside public and restricted to having expansion functions, recreation, permanence, which serve as connection or link between the interior architecture.

What outer space could no longer be, if, in fact, architectural, is a "between" interior architecture and nature, as far as the latter forming the open space. And in this sense, the exterior is relacionador space.

We can clearly distinguish three categories of outdoor spaces in their existence as a function:

- a) **The air space, light and nature** is then proposed for specific purposes aeration or natural ventilation and lighting visual recreation through the incorporation of nature.
- b) **The space for movement** of the main function or the relationship between architectural devices.
- c) **The permanence space** for rest, recreation, the relationship between people human communication.

If we look at real situations that occur in these types of spaces, we see that nature in the vegetable, assumes a special significance for man's inherent need to bind to the natural, because we are not made to live in complete artificiality.

⁷ J. R. Morales, Arquitectónica II.

Categories and levels of outdoor spaces

In relation to the use modal arquitecturizado spaces outside world, we could also categorize and distinguish certain levels, especially in the so-called public space. And is the city that best exemplifies the experience of outer space as the action focuses man's life.

"manifests the duality city corresponding to the homes and workplaces, places of retraction or "private" and public places where the man is shown. Such duality of private and public have their equivalence purely spatial on the inside and out. Nevertheless, the "out" for the city's streets and squares is always an inside her and, therefore, an "inside of it done." ⁸

"The urban open space is the coexistence of our living as compared to the hermetic the scope of each in their rooms. Such live in coexistence can occur also by the closeness of the houses, which causes" units" in which one considers the neighbor as one who lives near or next. So feelings of community are formed, corresponding to the fact people with others, in the next set of people that make up the neighborhood, one of the main ways human society in which not enough has been repaired " ⁹.

"If the housing we have considered the possibilities of inside and outside, and the elevation in the city is manifest, combined flux activity of man, the modalities corresponding to the length and width in open architectural arrangements. Thing indicated level in the "estrada", derived from satellite strata "paved road" which comes from the Italian "strada" and the German "strasse", and in "the square", belonging to the Greek plateia, stating "breadth". the streets, for being longitudinal "run or pass through" the city, showing, in the dynamism attributed to them, the activity that takes place in them. roads are a way to "pass" between the building blocks" ¹⁰.

In the city, these spaces corresponding to the modalities of the width and the length connected, articulate the various sectors where they are located and concentrated human activities of internal order, constitute a kind of spatial mesh, canals or ponds of regulation by the man comes and goes, and where it also remains.

In the **open-plan spaces**, essential for human activity "published" there are three spatial categories: the **collective private space**, the **everyday space** and **urban space**; categories that encompassed the whole of the inner and what outside of human activity.

They nest on three levels: the **private**, **everyday** level and **city** level.

⁸ J. R. Morales, Arquitectónica I, pág.108.

⁹ J. R. Morales, Arquitectónica I.

¹⁰ J. R. Morales, Arquitectónica II.

These three levels are distinguished by many writers of the urban phenomenon and here we refer to the methodological distinction for purposes of the structuring of urban space for the French group led by P. Panerai and J. Castex¹¹.

The **level is the private** - private group that constitutes the elementary level in a city and is defined as an area in immediate proximity in relation to the individual. This level involves identifying a housing inner space or building, or the grouping of a number of interior spaces, but in all cases defined spatial organization concerning many cells in which they live (live, work) .

The analysis of the traditional city shows the existence of a precise organization of this private level rigorous beyond the control of public space in its absolute sense. The presence of a number of areas of relationship, graduates on a public-private axis, favoring the appropriation of the city by its inhabitants.

Beyond privacy, being an **everyday level**, which is the territory in which the individual has set his habits, selecting sites and building relationships. This level leads us to the notion of neighborhood to neighborhood .

The urban level involves the city in the broad sense of urban space, understood as a set of neighborhoods, schools, landmarks , streets , squares, parks, with a coherent structure. Is the set of space - city, while the elements of interest to the entire community: administrative, functional, monuments, etc., Places full of symbols that identify the city. With a certain degree of abstraction, we can say that this level is the large urban outdoor space gregarious man .

These levels do not always correspond to the categories of outdoor spaces are easily readable in the city and in many cases provide simultaneous references to two levels , then presenting an ambiguity in visual reading.

Moreover, interest is viewed as integrate or interrelate these levels, as articulated, and this is where the usual outdoor spaces properly involved. Traditional street is that articulates the relationship between the private level and everyday level. The wide main street, avenue or boulevard, as well as the main squares or even the monument, articulate the relationship between the everyday level and city level. These architectural spaces, outdoor and urban, connect the different levels of experiential spaces in urban man develops his life.

"The House should allow privacy, family contact, insulation, tranquility. Urban space should allow civic life in parks, squares and streets. In short, you should consider a community order that begins in housing, is expressed in the neighborhood and is integrated into urban life"¹².

¹¹ Jean Castex - Philippe Panerai "Notas sobre la estructura del espacio urbano", L' Architecture d' au tour d' hui. N° 153, enero, 71.

¹² National Development Plan Urban and Rural Housing. College of Architects of Chile, 1973.

Conformation of outer space

When we talk about architectural space, we discuss the spatial form and in this way, the human being as emotional, thinking and acting, set in outer space, receives perceptual information processing with psychological mechanisms sensory, physical reality measurand and may feel as structural and value complex aesthetically.

Eduardo Meissner space says:

- **Physically:** space is measurable, directional projections of the dimension accurately identified and quantified physical (distances, angles, areas).
- **Perceptually:** delivers space dimension differentiated information, impresses our senses through its optical - visual characteristics , often different from the actual physical dimension .
- **Structurally:** the space is made based on certain key structural constituent . It is often subdivided, articulate, organized interrelated parts . A spatial sequence is undoubtedly a spatial structure.
- **Aesthetically:** configured space , determined by physical constraints and / or perceptual, is interpreted and progressively over time as coherent and harmonious whole, as aesthetic space.

Spatial form is dimensioned physically expressive unity, perceived differently by the dynamic presence of optical - visual characteristics limiting structured in greater or lesser degrees of complexity and totalizing entity interpreted as an experience that can be appreciated aesthetically.

The elements that can shape and determine the architectural exterior space , are the foundation of human existence and all that it entails, including architecture: **the sky and the ground.**

Heaven: the sky, the roof of the world 's large geographic area. The outer space we perceive as the indeterminate , infinite in the vertical and the horizon.

Soil: the essential basis of all the architecture and all human existence, is what we feel as original base all that we settle space, we perceive it as horizontal for excellence in our standing position, as "being raised".

From these two basic benchmarks for the creation of space in the first instance we can distinguish two groups of elements:

- a) Elements Artificial
- b) Natural Elements

Among the **artificial elements** are highlighted, first architectural volumes containing interior space.

Then artificial elements - architectural architecture do not themselves, such as monuments, fountains, walls, pergolas and what is now called street furniture: lighting poles, benches, fences, poles, etc.

Also the surface treatment of soil or pavement.

Among the **Natural Elements**, we can distinguish two subgroups: alive and biotic or abiotic elements, lifeless. Among the former are the trees, plants, vegetables in general, among the latter, the natural soil as such in its various conformations slopes, hills, terraces, gorges, rocks and water.

Artificial and natural elements are usually combined to form the outside and open space we want, and that's what we usually find in urban spaces, whether in private levels, daily and urban.

But the natural elements combined together constitute not only architectural exterior space, but natural space and natural space is in the order of the architecture as it is artifice par excellence.

These artificial and natural elements can be grouped into three categories that include all, categories that emerge from the shape of the element, either as isolated objects or as a group. We will mention here some of the research conducted in the Massachusetts Institute of Technology by Philips Thiel, and in relation to the denotation of space, movement and orientation.

Thiel distinguishes three categories of building elements of space: **surfaces, screens and objects.**

The objects are three-dimensional shape that exist solely as a visual entity independent and are located on or in the vast space or in a space no larger than architecture contributes to define, even in the context of the vastness or aerospace or an area no greater than architectural helps define, even in the context of the spatial expanse or quasi indeterminate, the object can not play the role of forming one space and consequently comes to be an artifact. Is the case of the monolith or the tree.

The surfaces are flat shapes dimensional space whose role is limited to outer space and help to determine the interior, which does not mean that they can also become a mere open when in a larger context.

The screens can be surfaces or objects placed very close to each other, thus forming an intermediate state between the two extreme cases of the object and the surface. This is the case of a row of trees and poles (see Figures 1 and 3).

Operating In one case , analysis or design, in which interested check whether a surface, a screen or a particular object or not given space - shaping element, mentally erase enough space set : if space , while forming and finite volume is not affected by the disappearance of the item, we would conclude that this is not a determinant of space.

These categories listed , surfaces, screens and objects, building elements and determinants of outer space, can be natural forms or artificial forms created by man. In both visual forms can be described by name, position, shape, direction , its size, color and texture .

This is interesting for formal valuation analysis space. To complement and clarification, lo is transcribed Thiel studied by Philips Research in relation to man observer space determined by these **building elements of space**, and point out the abbreviation **ECE** .

The position of the ECE is required with reference to the place occupied by the observer in space out therein. In general, it is said that the ECE which are in a horizontal plane on top of the space having the "up" position , similarly, those located in the lower part of the space, are "down" position, ECGs which are found mainly in a vertical plane , have the "next". The latter position ECE is required by the notions of left, right, front. These indications corresponding to the position of the ECE are completed by the mention of "above or below the eye level of the observer" when it comes to the side position, "the left or right of the observer" .

Figure 1 shows a range of occupying space forming elements these various positions.

The position of an ECE refers to the direction of greatest dimension is vertical, horizontal, cross or other variation, as well as its angular position with respect to the three horizontal and vertical axes of the space itself .

The shape of an ECE refers to the profile or the general contour and configuration of its surface.

ECE texture concerns a two or three dimensional plots of a surface or a screen or an object.

Forming Grade Outer Space

Among the characteristics of outer space made according to the types or categories of items, a very primary level is the determination of the space formed and established.

Since the lowest degree of determination to total determination, we can distinguish three degrees: **Suggested space, space and space outlined volume**. In figure 3 you can see that the gap ranges from imprecisely and unambiguous space nebula suggested by some objects without binding, to a space volume that is entirely delimited by surfaces that are concatenated various arrangements. Between them, appears outlined space, which results from a variety of surfaces, screens and objects occupying different positions.

The interior spaces are clearly spaces - or spaces volumes vigorously outlined, there are also outdoor spaces that are on the level of volume as the squares of medieval towns. Also the courtyards of the houses and the current Chilean courtyards and green light in modern buildings.

The exterior spaces of the new towns belong to the category of spaces outlined, particularly those designed according the principles of the Charter of Athens.

Suggested spaces, which are essentially in the natural landscape, are also found in modern cities .

Figure 4, which corresponds to a development research Thiel illustrates the association or juxtaposition of surfaces which intersect along the orthogonal (top, the bottom , front and side) as the seen in a hemispherical projection. The example, for reasons of demonstration and the pregnancy , is developed based on orthogonal surfaces, regular and equivalents.

The absence of determination (thus forming the space) is indicated by the lack of **space forming elements (ECE)**, whatever they may be, in projection, this situation is represented by a visual field formed by half and half sky of empty land (the vastness or spatial, indeterminate). No architectural space, in any degree, example would be the ocean or a desert flat and uniform.

On the other extreme, the maximum determination is indicated by the presence of ECE occupy all five positions described: the formation of the space.

Between these two extremes , the other possibilities are grouped into a model proposed as "reference base". A numeric index and a graphical notation reported in 10 % . The basic reference symbols is modified to show the extent to which the determination is reduced when there are significant gaps representing ECE, or when an ECE is independent (separate from the others), or screen - ECE or ECE objects.

In the numerical scale of Figure 4, the spaces under the index spaces 30 are classified as suggested, those who are on the index 70, as space volume and the spaces between these two indices are outlined spaces.

Outer Space Form according to the layout of the Elements Conformers

The provision on the ground of outer space forming elements determine the internal shape of the space, directly related to the underlying plot, we can consider in this regard two prototypes of spaces:

a) **geometric spaces**, pure, ordered, to which we can assign the quality of regular generically (in these spaces must demonstrate its cogency the right angle, for example).

b) **spaces, not ordered**, to which we can assign no rigorously, the quality of irregulars. (see Figures 2 and 3).

Regarding these two types of arrangement and shape of the outer space, it is relatively simple to operate in a formal quality analysis, as research has tried Thiel. In this regard, argues that the formal qualities outlined a space or a space volume is independent of its determination or degree of "closure".

Suggested Space, being by definition a kind of nebula, are excluded from these considerations. From two polar formal prototypes (the egg, coded O and a tree, coded X) outlined a space or volume can be characterized by their formal quality on a scale ranging from O to X.

Type O space is characterized by regularity, the character "closed", rest, completeness, cohesion, balance or symmetry.

The space X is characterized by irregular, random, scatter, imbalance, incompleteness, mobility range. (This characterization belongs to prof. Gyorgy Kepes).

The scale and proportion in space Exterior

Now we would like to add something about the proportion and scale outdoor spaces, scale and proportion that only serve from the point of view of man as a physical being and as being psychological, perceptual, thinking. As says Jose Ricardo Morales, the man who is primarily a being¹³ of what is, according to the variables of knowledge projects carry.

¹³ In the medieval squares have an average of 57 m. x 140 m.

135 m. is the limit to discern an action. The maximum distance to distinguish people is 1,200 m.

4,500 m. is the distance of the horizon for a person who has the eyes to a height of 1.65 m. above ground.

Regarding the angular extent of the visual field from focal focus of what we want to watch.

Before the proportion of the various parts forming, limitations and determinants of space, whether in themselves, each other or in total, which we believe is of interest is the proportion of space in both surround and cobijante of man, in a way that this "feel" the architectural space, you feel "inside" the space and not just "in space" feel determined and shaped, with form and quality, we think that in this sense matter the ratio, which leads to the idea of human scale defined as the ratio between the proportion of space and the dimension of man's mental images, settings that must lead to a sense of ownership of that space, which leads to the usufruct ownership of such space.

As this series of events take place, would be facing the architectural space, exterior or interior, which has proportion and human scale, and that is perhaps full.

Moreover, as significant progress in knowledge of the phenomena of perception in humans as well as communication phenomena, provides new and powerful scientific tools for creating architectural level, the design of the environment.¹⁴

The existing architectural spaces in the world are innumerable and no one can appreciate and feel them all, but the creative possibilities are endless space, this is our ability to make full spaces, human, transcendent and therefore appointed. And on this last point, we quote again J. K. Morales: "Since ancient times it was understood that name is known, is the association established between Nosco analog and nomen." And as the root corresponding to "know" in Indo-European equivalent to "birth or father" this allows us to assume that the known and named "born" because the name assigned to them contributes to "create places in space, which do not arise as such until we can name them". In fact arise because by naming with his own name are specified, making them unmistakable, as "called" somehow come to our call caller or evocative, submitting to the rule of our will, since, knowing assumed dominate ground and places known are our true "domains"¹⁵.

Finally, if we try a parallel between our sense of the man in front of an architectural space feel full and our architects facing the space in the creative process, pudríamos set the following

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- At an angle of less than 5 °, what we have is a view.
 - Between 0 ° and 45 °, is a point of view.
 - Between 0 ° and 90 °, perspective. From 0 ° to 135 °, overview.
 - More than 135 °, secondary space.

¹⁴ Thiel research and other sources, data is obtained as follows:

- 1.80 meters minimum dimension of a space.
- 2.10 - 3.60 m. is the distance between two people chatting.
- 9 m. marks the beginning of the limit for social relations.
- 24 m. limit the distance to recognize a face.
- 48.5 m. is the threshold at which the visual serial between two people suffer a total deterioration (J. Carretón).

¹⁵ J. R. Morales, *Arquitectura I*, pág. 151.

sequences in each case. The man immersed in the architectural space takes positions and then takes possession of it, as this space is full. It permeates, feels it, endorses inside, "settles down". Then in a more rational, man perceives and then analyzing and then enhances the space. Finally, names, as it is "domain".

In our process of creating the space, as architects, we imagine the position of man and it is our purpose to take possession of the space we are imagining. We who, on a model level, perceive, analyze, and we value the space, and we modify it until we meet. The big question that remains is: ¿that space we created is it named? Distressing is the eternal question of the creative process of the architect.

Figure 1: CURRENT ELEMENTS AND DETERMINED THAT MAKE SPACE

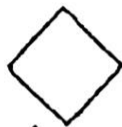
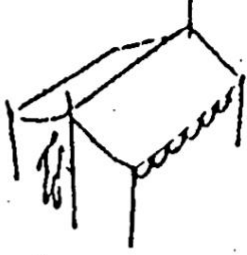



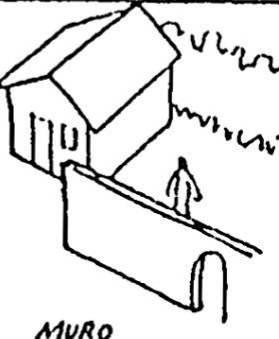






<p>POSICION ARRIBA</p> 	 <p>CIELO RASO PALIO TECHU BALDAQUINO, etc.</p>	 <p>PARRON FOLIAJE RAMAS CELOSIA, etc.</p>	 <p>ALAMBRE RAMA PARAGUAS NUBE, etc...</p>
<p>POSICION AL LADO</p> 	 <p>MURO CERCO FOLIAJE TELON etc...</p>	 <p>PANTALLA ENREDADERA CERCO FOLIAJE etc.</p>	 <p>EDIFICIO MISTIL COLINA ARCOOL etc...</p>
<p>POSICION ABAJO</p> 	 <p>ALFOMBRAS PODIUM ESTRAZO TERRAZA etc...</p>	 <p>ENREJADO GRILLA BARANDA etc.</p>	 <p>CUERDA TENSA PIEDRAS ESPACIADAS PEDESTAL etc.</p>

Figure 2: BINDINGS; TYPES OF SPACE BUILDING ELEMENTS

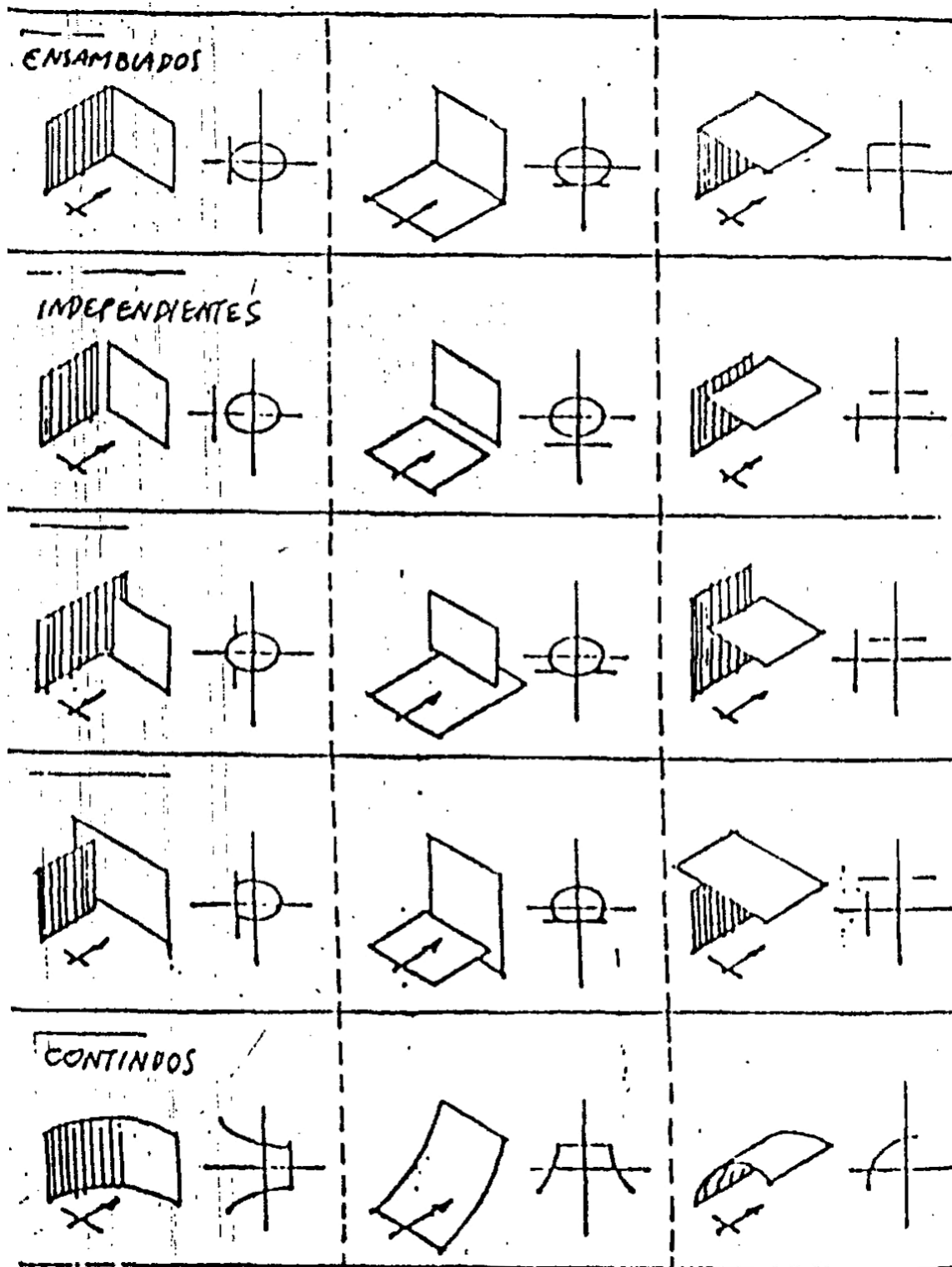


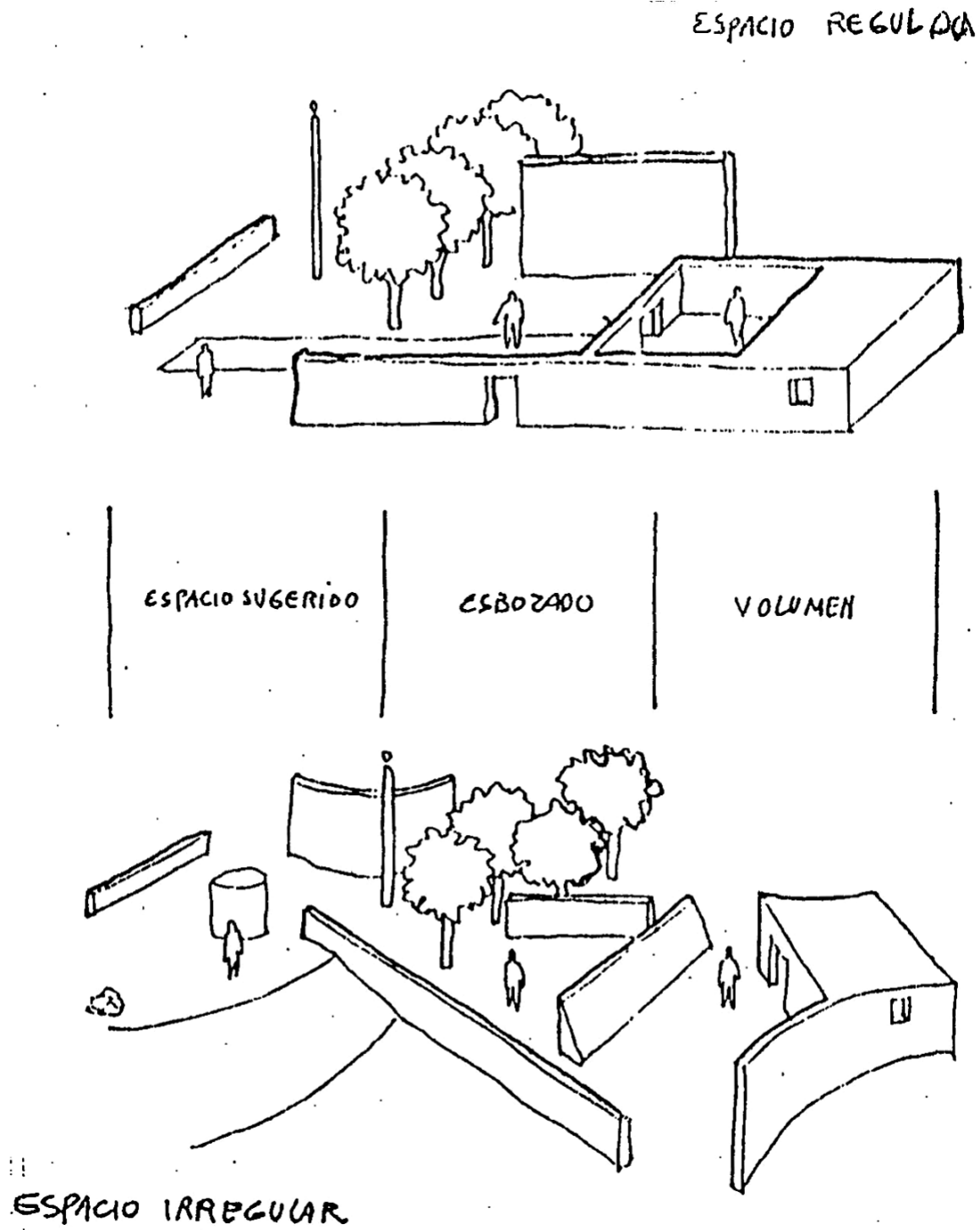
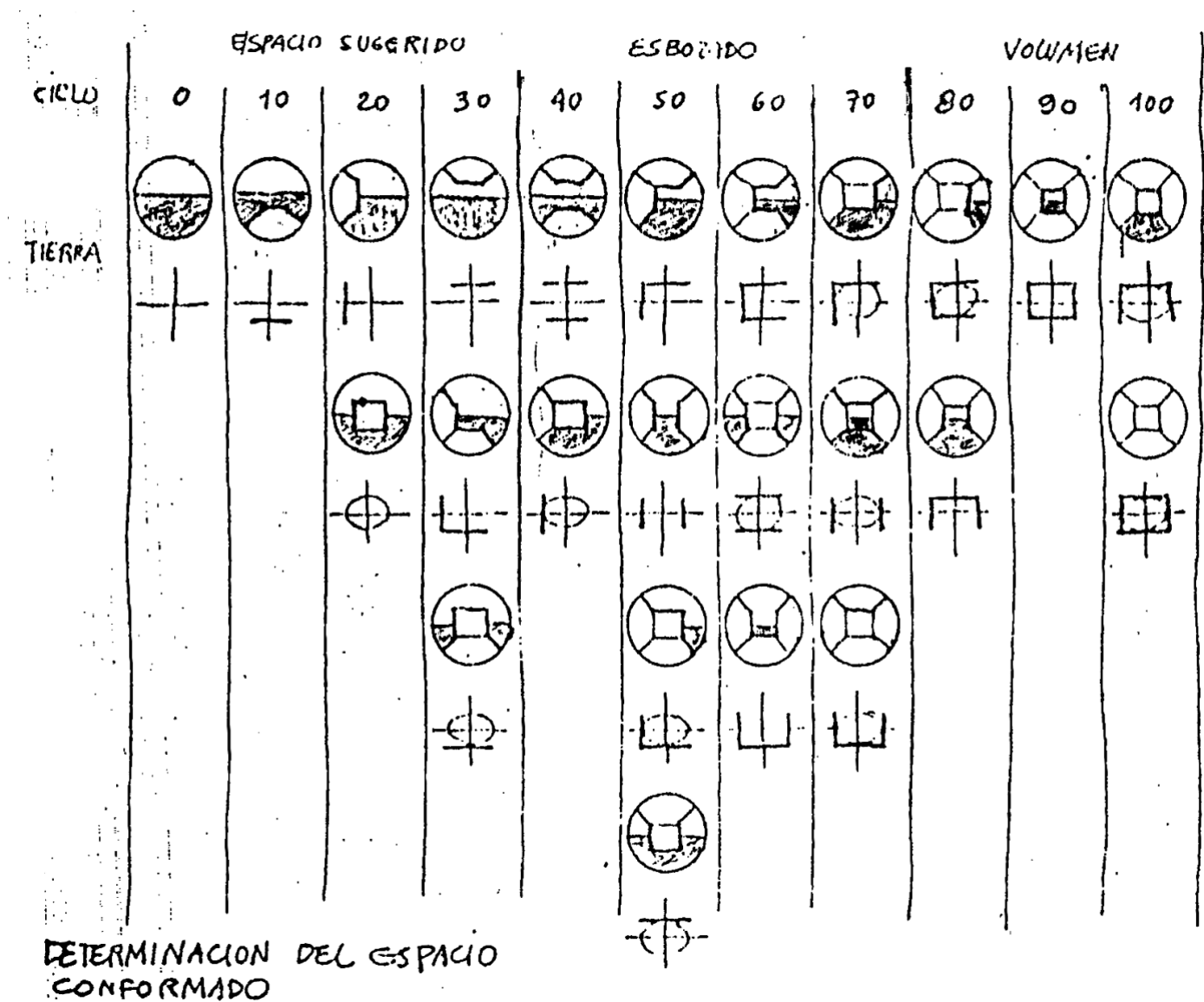
Figure 3: GRAPHICS REPRODUCED FOR RESEARCH P. THIEL.

Figure 4: DETERMINATION OF SPACE FORM**TEXT REFERENCE**

📖 *Architectural Space*, Muñoz Serra, Victoria Andrea, Website: Victoria Andrea Muñoz Serra (http://www.victoria-andrea-munoz-serra.com/arquitectura_ingles.html), Concepción, Chile, December 2012.

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