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**CSA+ID “HOUSING AS
AN EXPRESSION OF
IDENTITY”**

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Abstract: Conceived under the premise of recognizing the importance of residential architecture to promote user identity, CSA+ID is a social project that proposes an alternative response to the current housing problem in the Venezuelan plains. The main objective of the proposal is to establish criteria to generate real and flexible architectural responses, capable of adapting to their context and reinforcing the identity through the application of construction methods and materials of the place. Starting from the bibliographic review of topics such as individual identity and its link with society, the place, and the attributions of an urban context, it is evidently necessary to interrupt the prototype housing constructions in Venezuela to start the design of habitats that promote the sense of belonging. Through this premise a field study of in situ cases is carried out where the dynamics between people, the architectural context, the place of location are exposed and together with the compilation of air conditioning strategies in hot environments. It is established as a priority to design a house capable of being divided and adapted to three types of family configuration. Therefore, the basic criteria for the development of the proposal are the identification of the system of areas of greatest use and activities together with the application of air conditioning systems to promote a sense of belonging and improve the way of life of the inhabitants of the place.

Keywords: Identity, social architecture, climatic comfort, sustainability, cultural landscapes.

PREAMBLE/ INTRODUCTION

Architecture is the effective result of interactions between different social actors that reveals the purpose of unifying habitability and utility at the service of the community. It is time to ask ourselves if the

role of architecture can become dynamic, simultaneously contributing to the inhabitant and the city in a way that enriches spaces for interpersonal relationships.

As a consequence of its close relationship with people, architecture has everything to do with the collective will and its natural physical context to strengthen its transcendence and permanence in the future within society, whatever its origin, belief, traditions and lifestyles.

Therefore, “the objective of architecture is nothing more than to make people happy” (Rodríguez J., personal communication, March 2018).

Now it is time to ask another question, how? How to make people we don't want to meet or care about meeting, happy?

We must, ultimately, be actors and interpret the lifestyles of the users who will inhabit the designs, understand what they do, the reasons that move them, their interests and desires. Architecture transcends beyond the ordinary function of build up, it is in charge of recreating symbols in buildings that are legible for people and are reflected in it. “Architects do not dignify the user by copying their mistakes, but by replicating their successes” (Rodríguez J., personal communication, January 2018).

HAVE TO BE (PROBLEM STATEMENT)

The house, in each social position, is conceived as a teaching place where one recognizes and is recognized, it implies stability, attachment and rootedness. Their doctrines are sculpted and individuals are shaped. It is the womb of society; where each member of the family must join and in turn provide her contribution as an individual to contribute to the principle of community and equity.

The misconception of space begins in the government management of low-cost housing

solutions associated with housing granting programs in Venezuela, opting for a prototype that is distributed throughout the country, forgetting the environment, users, climate, visual, accessibility and all the essentials that should be taken into account for the design. The unsatisfied needs of people, along with abandonment, leads to the depersonalization of the space and, therefore, to uprooting and the loss of a sense of belonging and its social cohesion. On the other hand, according to Contreras W. (2015), there is a housing deficit, which leads to the configuration of new methods of cohabitation of the family group, the Malariology prototype designed in the 50s has changed along with each inhabitant and their specific climate and must be responded to!

The set of ideas that are grouped here are linked to the experiences of people living in the house. It is intended to point in this direction: changes in the way of living and the way of conceiving the house to be inhabited, design from the point of view of who is going to use the spaces and what identifies them, the inhabitant as subject and main protagonist of the action dwell.

THEORETICAL FRAMEWORK

From the moment in which man leaves nomadic life to form tribes, he forges beliefs, religions, myths and legends linked to the sense of belonging and identity with the place he inhabits. Since then, the link between the natural context and the built context with people, their memory, stories, own and inherited memories is natural. The territory is already determined and becomes decisive when creating artificial spaces, where in addition, another factor is added to the formula that must be resolved: Identity. A series of concepts developed below explain the modes of relationship, types, characteristics and importance of this term in particular:

IDENTITY (ID)

Identity starts from the self-concept of an individual that derives from the knowledge of their belonging to a group or social groups together with the evaluative and emotional meaning associated with this belonging.

The self-concept is generally used to answer who you are with respect to a group of people, to whom you are similar or different.

SOCIAL ID

The passage from an individual identity to a social-collective one is specified in the "Categoryization Theory of the Self" by Turner, J. C., Hogg, M. A., Oakes, P. J., Reicher, S. D., & Wetherell, M. S. (1987). Through three levels: Human, social group and individual, these categorizations can be differentiated by their level of abstraction, configuring a hierarchical classification system with certain increasingly higher levels, marked by class inclusion relationships. Traditionally, the issue of social identity has been analyzed considering it as a result of the interaction between individuals and groups (Tajfel H. 1984) or between social groups. (Turner J.C. 1990)

In short, the configuration of the social identity of the group is given both by the perception of similarities in the ingroup and by the perception of ingroup-outgroup differences, based on certain categorical dimensions.

So far we have interpreted people and their interactions, but where is their environment?

PLACE ID

According to Proshansky (1983) the place identity is considered as a substructure of the identity of the being and consists of a set of cognitions referring to places or spaces where the person develops their daily life and based on which the individual can establish emotional bonds and belonging to certain environments. These links are as important

as those established with the different social groups with which the individual relates.

It is composed of observation and interpretation with respect to the environment, these elements can be divided in two ways: one of them consists of the cognitive mode: memories, values, thoughts, ideas. The another type consists of the relationship with the configurations of space, such as identification with home, neighborhood and school. (Proshansky, 1978).

The relationship between individuals and groups with the environment translates into a true symbolic dialogue in which space transmits certain socially elaborated meanings to individuals and they interpret and rework these meanings in a reconstruction process that enriches both parties. This dialogical relationship constitutes the basis of identity.

URBAN ID

“Set of attributions of the town, neighborhood or city that configure the sense of appropriation of people.” (Lalli M., 1992) The urban identity also fulfills another fundamental function: it allows internalizing the special characteristics of the town based on a set of attributions that configure a certain image of it. According to Stokols (1981), this image determines the attribution of a set of characteristics to individuals, endowing them with a certain type of personality.

Feeling a resident of a town confers a number of almost psychological qualities on the people associated with it.

TO LIVE

According to the Hispano-American Encyclopedic Dictionary (Jackson J. M. 1940) to inhabit is to live, to dwell in a house. To live is a very broad verb, it is the essence of being, but to dwell implies the occupation of a space. From there, two dimensions of living

can be recognized: a dimension of being and another of being.

CONCLUSIONS OF THE THEORETICAL FRAMEWORK: LIVING BETTER

The identity focused on architecture consists of the space transmitting its own message so that it can be clearly legible and identified by the inhabitants of the community.

Due to the importance of identity when approaching an architectural project, specifically housing, below are some Latin American projects that had, in addition to components of need, the identity factor, and approach to communities in special situations. The answers include the subject and its way of living, as determinants of design.

ANALOGUE CASES

PLAN B Guatemala / DEOC architects

Architects: DEOC architects

Location: El Paredón Buena Vista, Guatemala

Area: 86.0 m²

Project Year: 2018

Materials: Cement blocks, bamboo, and galvanized sheet.

Project description

Housing for Plan B Guatemala is a response to the catastrophe caused by the Volcán de Fuego in June 2018. The project consists of a permanent housing model for affected families.

The house promotes the rural lifestyle that remains in contact with the outside, where families share their space with the rest of the community, their extended family and domestic animals. For this reason it was important for the design to open the house towards an interior yard, providing versatility

to the use of the house. This allows the local lifestyle and customs of the area to remain and be passed on to future generations. In addition, the design allows vertical growth on the room module, or horizontally, replicating the room module in a larger area.

Ruca Homes / Undurraga Devés Architects

Architects: Undurraga Deves Architects

Location: La Pincoya, Huechuraba, Santiago, Metropolitan Region, Chile

Area: 1537.0 m²

Project Year: 2011

Materials: Structure with reinforced concrete frames, brick, double skin of coligüe canyon.

Project description:

It is a group of 25 social housing units for the Mapuche indigenous community, in Huechuraba, on the northern outskirts of the city of Santiago de Chile.

Relationship with identity and ways of living

The rucas (name of the traditional Mapuche house) were grouped continuously on a horizontal level, thus allowing the length of the main façade to look to the east. This disposition, forced by the ancestral tradition of opening the main door of the house towards the rising sun, was the main requirement made by the community. Between the houses and the hill, a common space was arranged, analogous to the traditional urban space. From there you access the houses. The continuous construction of the complex did not exclude the individual expression of each house, echoing the rucas that unfold isolated in the landscape.

The kitchen is a larger area than that of similar social housing in consideration of the importance of the “fogón” (kitchen) in the Mapuche tradition. The dim and fragmented light inside the houses evokes an atmosphere

that refers us to the gloom of the rucas, giving rise to a time of its own, different from the one that runs outside in the city. This strategy also clearly defined the interior and exterior, opposite worlds in the Mapuche tradition, different from the modern tradition in which we are immersed, where the interior and the landscape are integrated as a continuum.

OWN VS FOREIGN

Latin America constitutes a particular case, since the human being-environment relationship as well as the natural environment suffered, for the first time hundreds of years ago, the traumas of Iberian colonization, and thus, having weakened the primitive identity, the territory and the people have been more vulnerable and susceptible to welcoming foreign influences from one side or the other, from one condition to another, in the form of new colonizations, less violent yes, but no less forceful. They learned to deny history, because it had no place in the history of Europe and therefore, they began to discredit all their own manifestations and to rebuild societies under European principles without having managed to assimilate them. Over time, denial became our own and we became accustomed to underestimating our culture and civilization

The adaptation of something that is not its own is no longer so valid, each region of Venezuela has its personality, not only of landscape in terms of geography, but also of the strength and character of the people, their customs and roots.

Just like ancient and solid cultures, today's task is to continually affirm and protect identity and thus guarantee permanence in history.

ADAPT DON'T ADOPT

It would be a fallacy to choose to adopt, repeat and copy generic models alien to our realities applied as formulas. However, denial

of what has already been done or opposition to what is established is not usually the most constructive position, it would be more coherent to establish an illustrative and critical position when reviewing external experiences and taking what can be useful to us without forgetting the social and environmental context in which we live.

THE PROJECT

Justification of the place

The influence of the quality of the built space strengthens the relationship between users and their habitat, encouraging the care of heritage and adding value to the territory. That is why the choice of territory must coincide with the characteristics of cultural landscapes that merit reinforcement and identity support for the community. Taking into account the following identifying components of cultural landscapes, it is decided to choose the population of Libertad, belonging to the Barinas State in Venezuela as the place of study and location of the isolated single-family housing project, due to its correspondence with the items in table 1 of landscapes cultural.

	Cultural Landscape	Population of Libertad
Natural substrate	Orography, soil, vegetation, water.	Climate and tropical savannah relief. Due to the low percentage of slope of the ground, floods occur in the rainy season
Human action	Modification and/or alteration of natural elements and constructions for a specific purpose	Due to the accelerated demographic growth, the inhabitants of the population have opted for self-construction on the periphery of the urban polygonal, resulting in an informal settlement excluded and little valued by the ingroup.

Developed activity	Functional component in relation to the economy, ways of life, beliefs, culture, etc.	The way of life is characterized by small-scale agricultural production. In addition, there is the constant need for interaction and the preference for open spaces to carry out their daily work.
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Table 1. Cultural landscapes and Libertad.

CHARACTERISTICS OF THE PLACE

Preceded by its natural wealth, the federal entity of the State of Barinas is located in the Central Southeast section of Venezuela, at the foot of the slope of the Andean Mountainous System - Llanero. According to Foghin P. (2002) this territory has the presence of two seasons due to the tropical savannah climate, where the dry months are accentuated, the wet season being very short but with torrential rains and the summer season characterized by temperatures that exceed 35°C.

To think of a town is to think of its people and the landscape around it, which has been sculpted, admired and recognized for its character for decades. Such is the case of Libertad, a settlement located in the savannah plains. Its municipality is known as "The capital of the rivers of Venezuela". The surface runoff of the Apure River represents 17% of the total of the Orinoco River, one of the most important rivers in South America. There converge a large number of rivers that are born in the Andean Cordillera, among them is the Rio Masparro, one of the most tributary of the Venezuelan plain, runs 190km from its beginning (in the Cordillera de Calderas) to its mouth (in the Rio Apure), it crosses the population of Libertad dividing the settlement in two.

ANALYSIS OF SITE STUDY MODELS

Various ways of living have been developed at the beginning of the 21st century, beyond the mere functional designation of spaces, housing must allow the performance of an innumerable number of tasks, it must combine the individual and the collective: living together and independently at the same time, rest and work, move comfortably and be able to store. Thinking about the current home must involve a review of the phenomena that is happening and how the comings and goings inside and around the house are changing.

With regard to the experience lived in the community of Libertad, a sample of four models is selected, which start from the base module of malariology that is reconfigured, molding itself to the behaviors and activities of the family. Offering results that deserve to be studied for the approach, proportional and consistent with what happens in the place.

MALARIOLOGY MODULE

The malariology module responds to an architecture to improve the rural area of the country where almost half of the Venezuelan population lived (in 1948) under conditions that compromised the health of the inhabitants. That is why the Malariology Division of the Ministry of Health and Social Assistance decided to build houses in order to level the economic, social, cultural and health conditions between rural and urban areas and balance the factors of progress in both.

It is made up of a single prismatic volume, with a gabled roof with small windows to control the extensive light. The program of areas requested isolated single-family homes with a single floor, three bedrooms, two bathrooms and adjusted dimensions for the living room-dining room-kitchen, with a total of 65m². A single typology is developed

following a basic model surrounded by a yard, given the conviction that favorable climatic conditions allow exteriority to be experienced. All the houses of the population of Libertad, are raised from the principle of centralized module in the plot, surrounded by vegetation.

Since the purpose of these modules was to dignify rural housing and eradicate diseases that plagued the population (such as malaria, Chagas and parasites), their formal configuration stems from compliance with a limited area program. Over the years, the new social interest housing configurations provided by the State have not had major variations at the level of image and function. However, people have reacted to this module, appearing altered and ruinous, but if we ignore this issue, we can realize that the transformation has given rise to an unprecedented and appropriate form to the ways of life and social conditions that are present in the Venezuelan plains.

STUDY PROTOTYPES

Next, four cases of housing in the population of Libertad are presented, which show different degrees of transformation of the malariology base module. The criterion for choosing the sample was intentional, that is, it was interesting to highlight the most repetitive and representative cases. Therefore, after a complete visual examination, the most notable cases were selected. Next, a phase of verbal interviews was carried out with the owners and users of the dwellings, a phase that initially consisted of an approach in order to get to know the users so that they would agree to collaborate in the study.

A data collection was carried out for each dwelling, with the aspects that include a spatial observation of each dwelling, as well as a description related to the functional, formal, constructive and contextual aspects.

Malariology module

- Plot area: 311.25m²
- Built area: 65m²
- Semi-covered area: 9m²
- Relationship with identity: Under the framework of dignifying rural housing more than seventy years ago, this prototype does not respond satisfactorily to the ways of inhabiting the house, forcing people to modify it.

Fajardo house “living exteriority”

- Plot area: 311.25m²
- Built area: 90m²
- Semi-covered area: 25m²
- Relationship with identity: It is located in front of the Masparrito pipe, which has trees on its banks that cast shade on the house. This particular characteristic makes the extension of the roof the most inhabited space in the house, with the presence of furniture for the stay such as hammocks and lazy chairs (See image 1).



Image 1. Furniture under canopy.

Mendoza House “inhabit the kitchen”

- Plot area: 311.25m²
- Built area: 132m²
- Semi-covered area: 9m²
- Relationship with identity: It expands in the back of the volume by adding a room with a bathroom and a dining and kitchen area, this last element rises in height to mark its use hierarchically: hosting the whole family is an airy space.

Maldonado House “Inhabit the space of the air”

- Plot area: 311.25m²
- Built area: 132m²
- Semi-covered area: 9m²
- Relationship with identity: It consists of two separate volumes, the one on malariology in front used only for overnight stays and the canopy behind linked to the social.

Sierra House “Live in family”

- Plot area: 2.300m²
- Built area: 608²
- Semi-covered area: 319m²
- Relationship with identity: Self-construction volumes are added around a central common kitchen, highlighting the use of wood as the main material for enclosures (See image 2).



Image 2: Vertical and horizontal enclosure materials in the kitchen of Sierra House.

Sanguino House “Dwell in the expanse”

- Plot area: 2.300m²
- Built area: 113m²
- Semi-covered area: 21m²
- Relationship with identity: Studio apartments for rent are added to one side of the house.

THEORETICAL CONCLUSIONS

We observe how through the intervention of people, the spaces are molded taking on the character of the territory and the people who house it. In such a way that, when generating modifications, the evolution of the spaces and their dynamics is determined. Recognizing and analyzing these components provide us with ideas to translate the concepts of identity and appropriation in architecture. (See table 2).

Study model	Design rule to ensure identity on the site
Fajardo House	<ul style="list-style-type: none"> • Design livable outdoor space • Under shade • On the main façade
Mendoza House	<ul style="list-style-type: none"> • Hierarchize the kitchen • Increased dimensions • Natural lighting and ventilation

Maldonado House	<ul style="list-style-type: none"> • Include covered and semi-covered living areas • Sun protection
Sierra House	<ul style="list-style-type: none"> • Leverage local labor • Wooden structure • Giant reed enclosures
Sanguino House	<ul style="list-style-type: none"> • Functional flexibility • Possibility of division

Table 2: Theoretical conclusions on site cases.

We live in an environment saturated with ideas; human ingenuity is inexhaustible, and this is an attitude that must prevail in us: a constant search for the improvement of our habitats, through new and better alternatives.

SITE DATA

When addressing a smaller scale, it is necessary to determine a series of steps to follow, ordering them in a logical and hierarchical sense. This methodology aims at the realization of the sustainable architectural fact:

- ✓ Step 1: Data collection
- ✓ Step 2: Establish design parameters
- ✓ Step 3: Application to architectural design

Sun Orientation: In order to achieve adequate sunlight, it is necessary to know the solar geometry (See figure 1) to predict the number of hours that it is sunny by means of the radiation that penetrates through the opaque and translucent surfaces. On the other hand, the angle of solar incidence (See figure 2) could allow the study of sunlight to determine the need to control solar rays through adequate protection in the building enclosures.

Precipitation and thermal sensation: Through the visits of the four study models, the temperature was taken in different environments of the Sierra house (See Figure 3):



Gráfico del recorrido del Sol en un día, trazado a través de un diagrama cartesiano sobre el cual, la elevación del Sol se traza sobre el eje X y el acimut se traza a lo largo del eje Y.

En la trayectoria se ven las etiquetas de las horas y del disco solar.

Los datos fueron extraídos de sunearthtools.com
Gráfico redibujado por la autora

Hora	Elevación (eje X)	Azimut (eje Y)
6:00	4.91°	112.06°
7:00	18.5°	115.5°
8:00	31.59°	121°
9:00	43.72°	129.87°
10:00	53.88°	144.6°
11:00	59.98°	167.88°
12:00	59.48°	195.83°
13:00	52.64°	217.89°
14:00	42.1°	231.6°
15:00	29.8°	239.87°
16:00	16.62°	245°
17:00	2.99°	248.83°

Figure 1: Geometry of solar incidence.

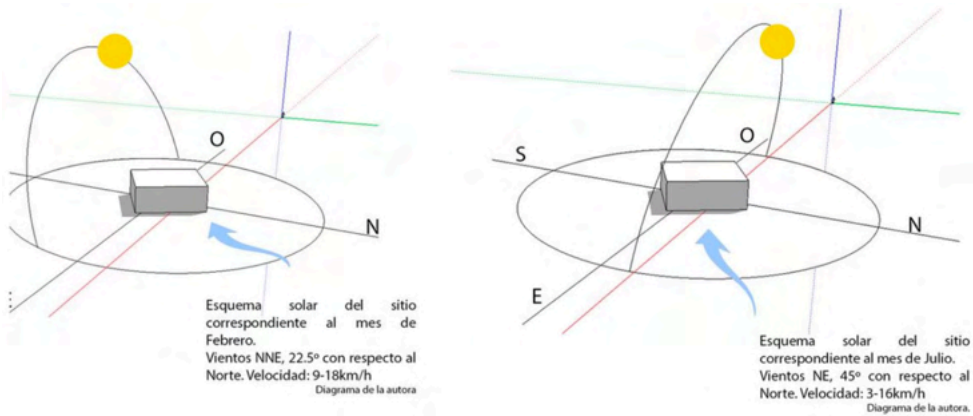
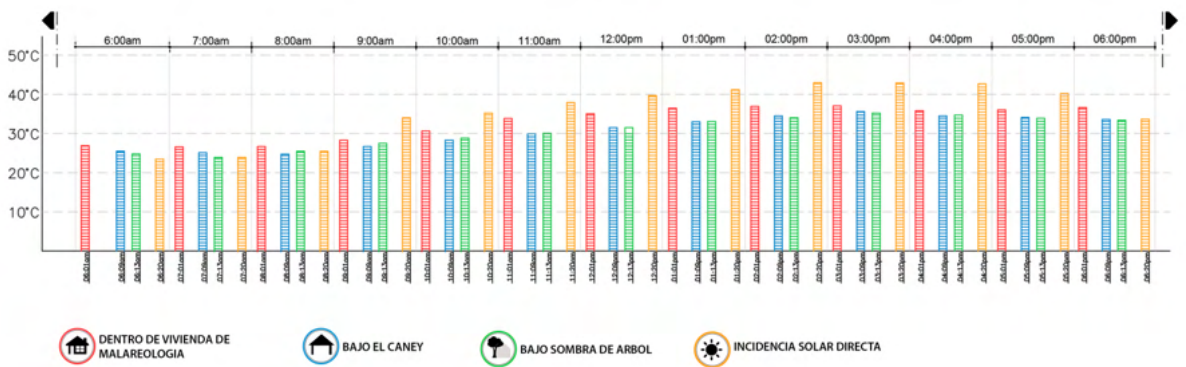


Figure 2: Diagram of solar incidence angle in the months of February and July.



Luego de la recolección de datos, se procede a realizar algunas conclusiones:



La diferencia térmica entre los datos debajo del árbol y el caney es prácticamente nula. Poseen las mismas condiciones de viento, pero se diferencian en cuanto a la humedad de aire concedida mediante la vegetación.



La temperatura interior de la vivienda comienza a elevarse a partir de las 9:01am, teniendo un pico máximo a las 3:01pm de 35.9°C.



La diferencia entre el exterior la vivienda (bajo sombra) con el interior, tiene un promedio de 2°C.



En teoría, la toma de temperatura bajo incidencia solar directa que fue realizada sobre suelo blando, debería ser mayor ante superficies duras como cemento y concreto.



En base a esto, se podría decir que en un escenario ideal, debería igualarse la temperatura interior con la exterior; y en un caso óptimo, alcanzar la temperatura de confort térmico para personas en edificios naturalmente ventilados.
TN= 28.6°C.47

Figure 3: Temperature scheme at Sierra House.

1. Inside the malariology module, which does not have any type of thermal mattress, but the presence of windows allows the passage of fresh air, cooled by the trees and bushes outside. However, the zinc and steel roof, together with its low mezzanine height, produce an increase in temperature and the incorrect location of openings does not allow hot air to be swept into the upper part of the building.
2. Under the canopy, an excellence meeting place, its own condition of being a hipped roof, composed of palm fabrics raised to about three meters at its highest point, and without vertical enclosures, allows the passage of air fully, however, due to its lack of enclosures, this area is limited to being used as a social room.
3. Under the shade of a tamarind tree, medium size, about 5 meters high, alternate leaves 7.5 and 15 cm long, medium foliage. This species is characterized by having thick and superficial rooting, which indicates little viability in home yards due to possible damage to the structure. Given direct solar incidence, the temperature was taken at 120cm from the ground, which was rammed earth with the scattered presence of grasses.

CLIMATE STRATEGIES FOR SITE DESIGN

- North-South orientation of the building.
- Minimum mezzanine height: ground floor 3.00mts, upper floor 2.70mts.
- Larger openings (spans) oriented to the East, and smaller ones to the West.
- Provision of services, bathrooms and circulation to the West.
- Rooms to the East.
- Use of double giant reed panels in areas with higher ventilation requirements, such as services, vertical circulations.
- Use of simple giant reed panels in areas with greater privacy requirements, such as internal room divisions.
- Inclusion of solar protection elements on the West-East side, and provide a free planting area for vines on the ground floor, guaranteeing the total functioning of the composite panel.
- Eaves not less than 0.60m North-South and 1.40m East-West.
- Elevation of the roof in an East-West direction, the highest side to the East, to allow the passage of air in a Northeast direction.

CONCEPTUALIZATION



Figure 4: Conceptualization Scheme.

ZONING OF THE PROPOSAL

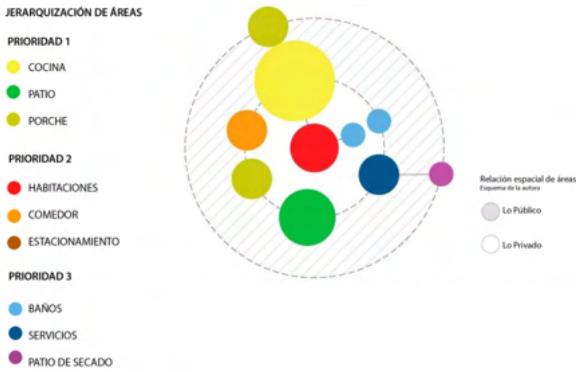


Figure 5: Concentric scheme of zoning by hierarchy of areas.

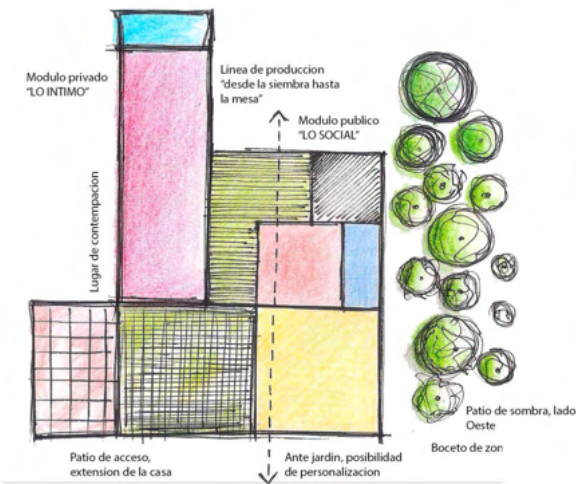


Figure 6: Sketch of zoning and character of the spaces.

DESIGN PROCESS

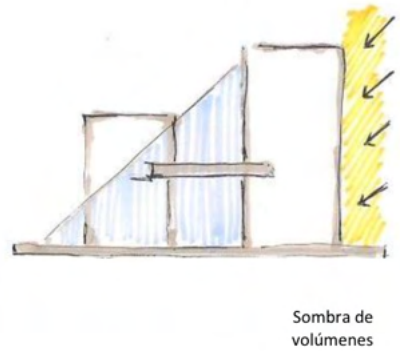
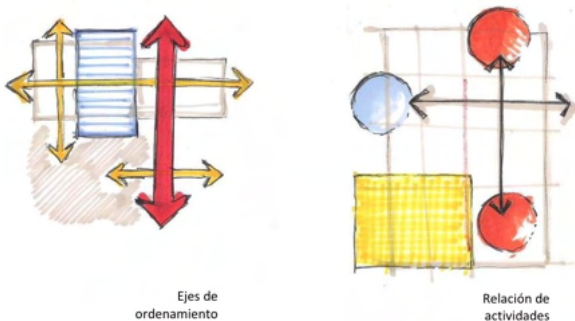


Figure 7: Diagrams of the 2D design process.

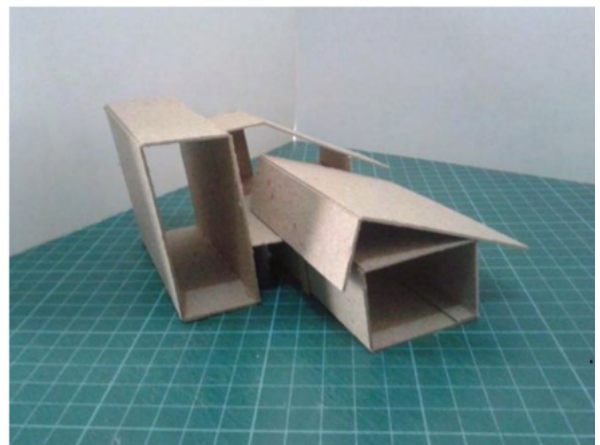
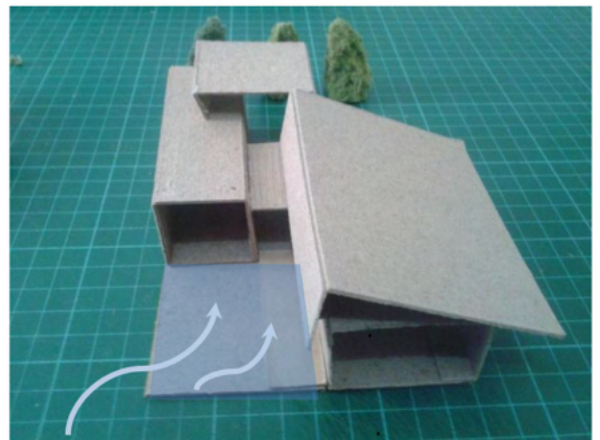


Image 3: Volumetric layout, location test of solar protection elements, and reception of winds.

ACCESS AND OUTDOOR SPACES

The development of housing models is proposed in paired lots. In the main access, three hierarchical spaces are delimited: The public space that is ceded to community life

developed on the site with green areas that function as a thermal mattress for the city. A semi-public space is then delimited by raising a platform (See image 4). The permanence in this place is framed by a virtual enclosure with porticoes, articulating the two volumes, allowing complete visual connection with the street. And lastly, spaces for planting aromatic and/or floral species to personalize the homes, together with the backyard where a private crop is grown, suitable for family consumption (See image 5). The choice of species will be specific to each family nucleus according to the season and the requirements that it merits.



Image 4: Visualization of main access.

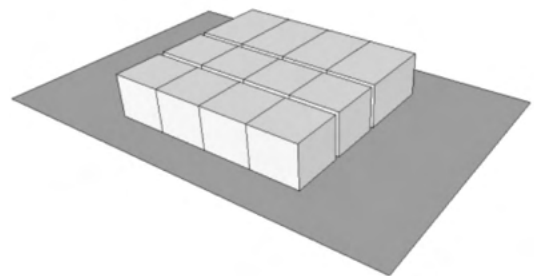


Image 5: Visualization of the rear façade.

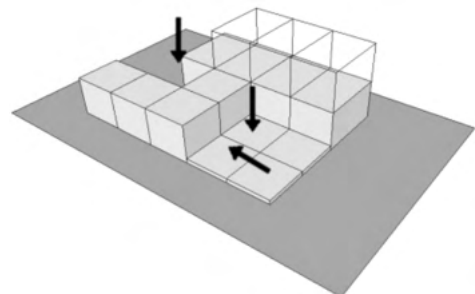
MORPHOLOGY

Motivated by climatic factors and the effects of pests and animals, the house rises 0.75m. The building is planned in two displaced volumes (See figure 8): one main and hierarchical, which houses the public and interaction areas and another of smaller dimensions as a container for the bedrooms. The main volume is repeated in

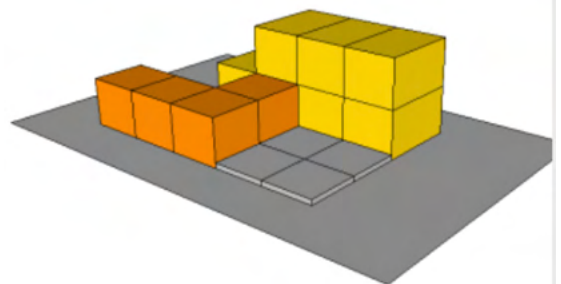
each model due to the fact that common life, the need to meet and the joy of sharing are recurrent elements, it is for this reason that, regardless of the number of family members, said container of interaction activities. The separation and displacement of the same, allows the penetration and circulation of fresh air from the northeast to all areas of the house. However, the volumes are articulated through the use of pergolas and frames, which in addition to visually uniting, help to generate shadows.



Modulation system



Moving and deleting modules



Production of two models with the same system

Figure 8: Morphogenesis.

FLEXIBLE-ADAPTABLE

Through the study of the social context of the proposal, the development of two housing models became a premise: one for couples (two people), or small families (three people), and another for medium-sized families (five people) and large families (six people). This latest model has the ability to be divided,

and make the volume of rooms for rent independent. This quality that the house can be flexible is part of the analysis of the case studies, since the family configurations of the inhabitants of the population is not standard, but rather, varied, due to demographic growth, and the migratory rate begin to exist new methods of cohabitation.

PLANIMETRY

TYPE A - SMALL FAMILIES-

Total area: 110m²
Kitchen - dining room
Two rooms
Two bathrooms
Services

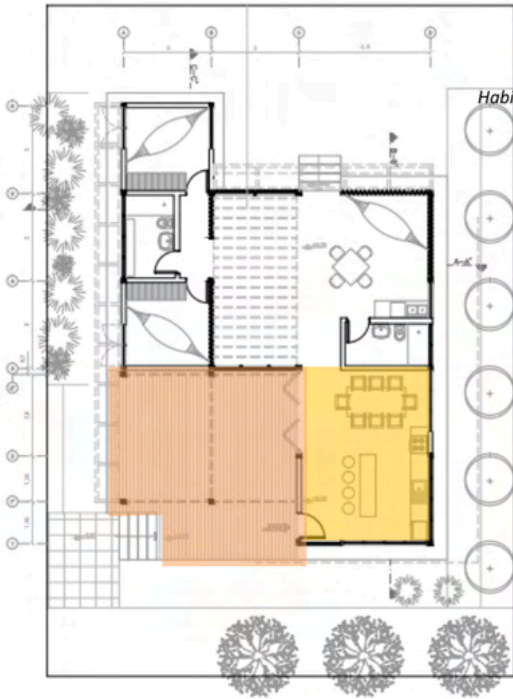
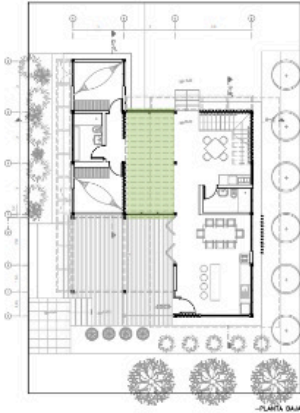


Image 6:
Habitable platform view



Image 7:
Kitchen-dining room view





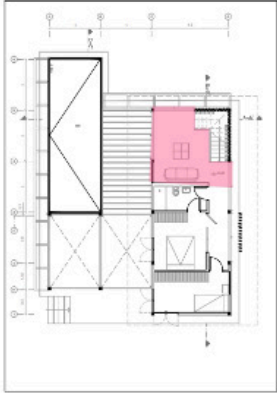
TYPE B - GROWING HOMES-

- Total area: 165m²
- Kitchen - dining room
- Four rooms
- Three bathrooms
- Services
- Living room

Spaces for future growth are foreseen (type C model), following one of the determinants of the flexibility project funcional.



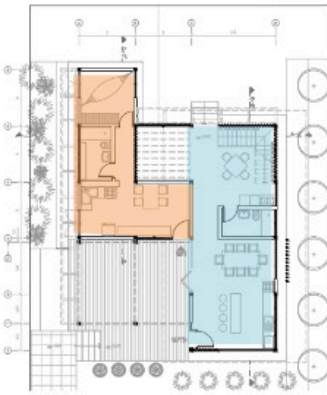
Image 8: Internal view of giant reed space



Destined to be the semi-covered space. The contrast of light and shadow achieves an atmosphere for

Image 9: Multifunctional space

Designed with an open multifunctional space on the upper floor, which could serve as a living room, studv. or possible bedroom



TYPE C - MODIFICATION OF TYPE B-

Total area: 165m²



- Standard module: 110m²
- Kitchen-dining room
- Two-three rooms
- Two bathrooms
- Services



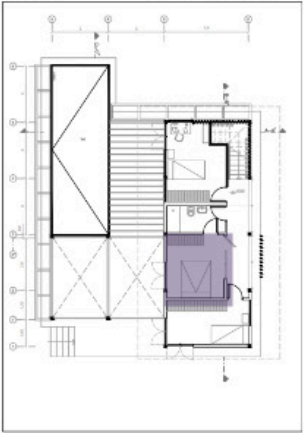
- Modified module: 56m²
- Kitchen-dining room
- A room
- A bathroom

It is housing in its maximum proportion, conceived so that it can be divided and accommodate a family of five people and another of two.

Image 10: Stairs view vertical



Image 11: Rooms view



MATERIALS AND ELEMENTS OF AIR CONDITIONING

The different spaces of the house consider the use of local materials in their design. The idea of implementing materials such as cane, block, wood and mosquito nets along with the premise of easy construction is generated by the need to involve people in its development. The opportunity to use elements that generate shade and allow the passage of fresh air is imminent. Both windows and doors vary their direction and percentage of opening to direct the hot air towards its expulsion and/or allow the influx of fresh air into the house. In the upper part of the main volume, teak wood romanillas are used to guarantee the capture of air from the northeast.



Image 12: East elevation view. Location of habitable platform and rooms. Opening for reception of winds.



Image 13: View from West corridor. Protection of rooms from direct solar incidence. Application of exterior vegetable panel for air cooling.

PANELS

According to the requirements of visibility, air passage, and location (interior - exterior),

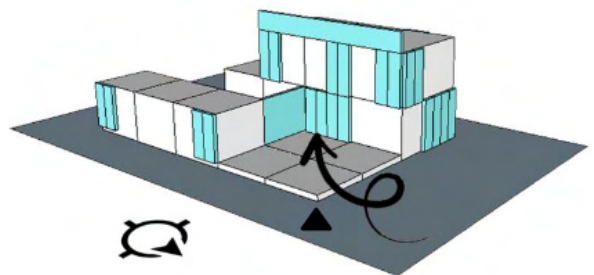
the design of a series of panels is developed.

Exteriors:

- Vegetal teak panel: Used to generate shade on facades, its elongated configuration from floor to ceiling offers greater coverage. The horizontal and vertical grid allows climbing plant species such as pansies, climbing jasmine and ivy to cling to the panel, generating shade without adding excessive weight to the structure.

Interiors:

- Double panel: Named for its double arrangement of rods, separated by a horizontal anchoring structure. The reeds are raised from the ground with a concrete die at the bottom giving stability and rigidity. Inside the panel there is a mosquito net to prevent the passage of pests.
- Simple panel: It has a single row of reeds. The layout of this panel in the building corresponds to spaces that merit divisions, but require the passage of air.
- Woven panel: Its aesthetic quality allows the arrangement of this panel in any space that requires a particular characterization, and thanks to its simple anchoring system, it can be quickly dismantled.



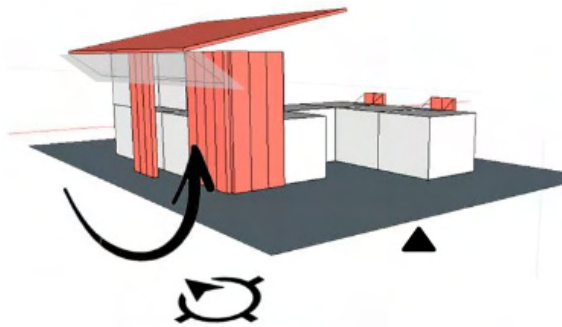


Figure 9: Panel positioning diagram in proposal.

CONCLUSIONS

Venezuela is one of the most privileged countries in terms of climate and diversity, this at the time of design generates determinants to which it is necessary to respond assertively in a sensitive manner. Gathering knowledge related to the symbolic interaction between the natural landscape, the built landscape and individuals helps to recognize the ways of inhabiting the house of the Venezuelan plains, designing from that dialoguing relationship between the inhabitants and their environment. The variety of modifications that have emerged over the years in the module used as public policy in the face of the health problems of rural housing in the 50's is enriching, however the position of architecture in the face of such an urgent situation must be one: dignify families with suitable spaces, designed for particular, cultural and environmental needs through a disposition to research and openness in the vision of architecture as a transpersonal fact.

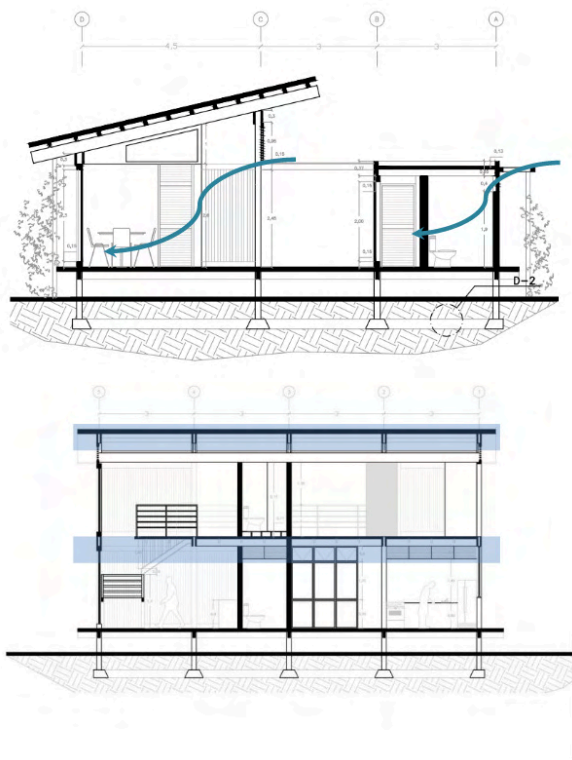


Figure 10: Panel behavior diagram as a passive air conditioning method.

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