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Fig. 1: Last Photograph of Hestnes Ferreira in his office, Lisbon, December 30, 2017.

Between the local and the global - The Pedagogical Experience of Raúl Hestnes Ferreira

Abstract

This article intends to emphasize Raúl Hestnes Ferreira's (1931-2018) merits in three fields: architectonic practice, pedagogical experience and architectural research. His remarkable and important contribution to Portuguese architecture was recognized by Coimbra University in 30th of September 2007, when he was awarded with the degree of Doctor Honoris Causa. He is an honorary member of Portuguese Institute of Architects (2010) and he owns a renown and award-winning professional practice. The article addresses Ferreira's experiences in Scandinavia, in the late 1950s, where he looked at

Alvar Aalto's architecture, and in the USA, in the early 1960s, where he did a master in Pennsylvanian University and collaborated with Louis Kahn. Ferreira's research focused on Cassiano Branco's production, where he reflected about the relationship between ideology and architecture in the 1930s and the role of engineers in the change of the Lisbon image after that decade.

Raúl Hestnes Ferreira // architectural practice // pedagogical experience // architectural research // Cassiano Branco

Introduction

Architect and professor Raúl Hestnes Ferreira (1931-2018) was a relevant personality of the architectural and cultural Portuguese panorama. (Fig.1) Ferreira belonged to the fourth generation of modern Portuguese architects, who received their diploma between the 1940s and 1950s. After the graduation, his experiences, studies, and surveys made him, a key-figure to understand the national debate on architecture, particularly in the second half of the 20th century. His knowledge and experience of life were the base of his discourses as a professor of architecture at five different Universities, between 1970 and 2017, influencing and motivating several generations of students. With his collaborators in the office, he developed more than three hundred and fifty projects, including Masterplans, buildings and furniture. The most recurring project include housing and education programs, such as universities and libraries, , featured by geometric spaces, the sensitive value of light and the expressive potentialities of shape and materials. (Fig. 2)

This article is anchored in an on-going post-doc research which aims to investigate Ferreira's personal assets existent in his office in Lisbon Vila Sousa, in Graça neighbourhood. His drawings, letters, models, and memories have been fundamental pieces to understand the theoretical bases of Portuguese architecture after the Carnation Revolution of 1974.

Ferreira's educational path amongst Portugal, Finland and the USA Raúl Hestnes Ferreira was born in 1931 during the military dictatorship, proclaimed in Portugal after the coup d'etat that deposed the Republican regime in 1926. This political cycle would become consolidated after the Constitution of the New State (Estado Novo) in

1933, under the leadership of Oliveira Salazar (1889-1970), featuring the Portuguese political situation until the democratic shift, which took place in 1974.

Ferreira's family was constituted by prominent personalities with regular civic participation in different movements of the 20th century Portuguese political scene. His grandfather Alexandre Ferreira (1877-1950) was a Republican councilman of Lisbon City Hall, who developed educational policies and social support to maternity of poor families. Also, his father, the writer José Gomes Ferreira (1900-1985), was actively involved in the opposition to the Salazar regime, taking part in the artistic and intellectual cycle of the neorealist movement. It was during his activity as a diplomat in Kristiansund, Norway, between 1926 and 1929, that he got married to Ingrid Hestnes (1904-1949), Raúl's mother. (Fig. 3)

The Architect Francisco Keil do Amaral (1910-1975) and his wife the Painter Maria Keil (1914-2012) were recurrent guests in Ferreira's house, contributing to structure his sensibility and his attention to the theoretical discourse of arts since his youth, opening his curiosity to what was happening beyond the Portuguese borders, mainly in Scandinavia and northern Europe and the United States. Gunnar Asplund (1885-1940), Willem Marinus Dudok (1884-1974) and Frank Lloyd Wright (1867-1959) were central references for Keil do Amaral, shaping his thought on architecture revealed in his books, *The Architecture and Life (A Arquitetura e a Vida)*, in 1942, and *The Modern Dutch Architecture (A Moderna Arquitetura Holandesa)*, in 1943.

Ferreira's preliminary school path was qualified, attending prestigious institutions in Lisbon at the time. He completed the kindergarten at École Française and the elementary school at Academic College.



Fig. 2: Marvila Library.



Fig. 3: Ingrid Hestnes and José Gomes Ferreira, Lisbon, 1931.



Fig. 4: Hestnes Ferreira in Finland, 1958.

The high school was divided between Gil Vicente School (1941-42 to 1946-47) and Camões School (1947-48), returning to Academic College (1949-51) in order to conclude this cycle.

In the 1950s, Ferreira entered at the Fine Arts School of Lisbon to attend the course of sculpture, moving in the following year to architecture. In the school he was an elected member of the newly formed Association of Students in 1953-54, a position he used as a stage to spread his political and social conscience, which resulted in his detention by PIDE (International State Defense Police), in 1954. After his court case acquittal, he asked to be transferred to the Fine Arts School of Porto, where completed the 4th year of the Special Architecture course in 1956-57. The period he stayed in Porto, gave him the opportunity to collaborate with the architects Arménio Losa (1908-1988), Cassiano Barbosa (1911-1998) and also with João

Andersen (1920-1967).

Alvar Aalto's (1898-1976) work, which had amazed the young Portuguese architects in the 1950s through the pages of *L'Architecture d'Aujourd'hui*, motivated Ferreira's option and his desire to visit the work of the Finnish master. Between 1957 and 1958 Ferreira moved to Finland, traveling around Scandinavia, pursuing Alvar Aalto's architecture and that of his Nordic colleagues. (Figure.4) This study trip was not only an opportunity to surpass the crisis of the modern movement, but also a chance to figure out possibilities for intervening in his own country, which was at the time closed behind Salazar's dictatorship. In short, it broadened his scope. In Finland, he attended, as a student volunteer at the Finnish Institute of Technology in Helsinki, classes of the urban planner Otto Meurman (1890-1994) and he followed the Architecture studio with Heikki Siren (1918-2013). These two

architects had a strong impact on Ferreira's education, revealing him the importance of the construction and structure as an integral component of the conceptual process. In 1958 he collaborated in the office of Woldemar Baeckman (1911-1994) in Helsinki, and during this period he also developed a Contest for a Church as a collaborator of Osmo Rissanen. (Saraiva 2011). On his return to Portugal, in 1958, Ferreira visited Belgium, Scotland, England and Paris.

In 1961 he concluded his graduation in Architecture at the Superior School of Fine Arts of Lisbon with the thesis: 'University Residences - Plan and Projects', with the grade 19 out of 20.

His awareness about the international debate on architecture led him to apply for a Caloute Gulbenkian Foundation grant to conduct a master program at the University of Pennsylvania. (Figure. 5) In the USA, Ferreira attended the Architecture Studio led by Louis Kahn, with the support of Norman Rice (1903-1985) and Le Ricolais (1894-1977). He had also the opportunity to attend the classes of City History by E. A. Gutkind's (1909-2004), Urban Sociology by Chester Rapkin (1919-2001), Concrete Structures by August E. Komendant (1906-1992) and Landscaping by Georges Erwin Patton (1920-1991). The weekly conferences by Lewis Mumford, Holmes Perkins, Mac Harg, Burle Max, Charles Eames and Crane, among others, were significant opportunities to understand the main ideas and experiences at the time as well as establishing direct contact with those protagonists.

In the sequence of his studies, Ferreira took part of Louis Kahn's studio, between 1963 and 1965, participating in the plans for the Pakistani government centers in Dhaka and Islamabad, as responsible for the design of the buildings of the National Assembly and Dhaka's main hospital.

The American experience allowed him to interiorize the significance

of the ancient Mediterranean culture and the extension of the idea of 'monumentality' developed by Kahn. When he returned to Portugal in 1967, this sensibility was crucial, in developing an architecture conceived from common technological processes, sensitive to popular knowledge, places, materials, and proportions, providing, in a certain sense, the restoration of some social foundations of architecture.

Ferreira's architectonic practice

His architectural practice was quite intense and can be understood by the constant triangulation between Mediterranean and Scandinavia architecture and Kahn's work, in search of the essence of architecture. More than eighty architects from different generations worked in his office, such as Vicente Bravo, Romeo Pinto da Silva, Silva Gomes, Manuel Miranda, Rodrigo Rau, Eugénio Castro Caldas, Filipa Vedes, Manuel Samora, Teresa Valsassina, Teresa Poole da Costa, Pedro Ressano Garcia, Bernardo Miranda, Gonçalo Saldanha, Ana Chiote, Marta Macedo, Susana Sequeira, as well as several designers such as Jaime Pereira, Luís Castanheira among others.

In the Portuguese as well as in the international context, authors like Carlos Santos Duarte, Paulo Varela Gomes, Willy Serneels, Ahmet Gülgönen and others, confirm the importance of Raúl Hestnes Ferreira for the panorama of Portuguese architecture. He won several awards and prizes with his works, the first of which was the National Prize of Architecture and Urbanism of 1982, by the Portuguese Section of the International Association of Art Critics and in 2002, the Valmor Prize for ISCTE II building. Ferreira was the winner of the Tektónica Architecture Award 2015, attributed, according to the jury, "for the emblematic work in Portuguese architecture".

The design, the order and the form are for Ferreira, concepts that

are interrelated and complementary, in the will to overcome the conceptual process. In Ferreira's works, ancestry, tectonics and geometry are inseparable. The materials are chosen in accordance with the formal and expressive potentials of each site and integrating the value of time and the way each material behaves throughout the life expectancy of the building. By making the construction system apparent, each work is simplified, eliminating any element that may confuse its reading. Ancestry is one of the qualities of his works, originated by his interpretation of the long time.

One of his early works, was the house in Albarraque, for his father, in 1960 This work reflects the strong connection with the owner and the respect for the surroundings, having been determinant in the formal simplicity of the house. Manuel Graça Dias performed in 2013, a short film about the house 'A Encomenda' (18') in the context of the research project, Silent Rupture. Intersections between architecture and film. Portugal, 1960-1974. In 'A Encomenda' (The order), architecture is the protagonist, but "this" architecture cannot be explained without revealing a little of the family context that accompanied its construction. And it is this story behind this architectural project, this "biography" of house in Albarraque, which the film manages to convey with effective and relaxed rigor, where Raúl Hestnes Ferreira participates.

The Municipal Library of Marvila (2014-2017) in Lisbon, was his last work, with almost 3000 square meters, occupies two buildings, one new and another recovered. The books and memories of the past coexist side by side, between reading rooms, work rooms and play areas for different age groups. In the old restored building of the Quinta das Fontes there is an area of homage to the writer José Gomes Ferreira, the architect's father.



Fig. 5: Hestnes Ferreira with Edgar J. Kauffman and others architects, Fallingwater house, 1963.

Ferreira's pedagogical experience

In 1966, Ferreira applied for a Professor position on Architecture at the School of Fine Arts in Lisbon. Although his international experience and the level of his studies and capacities, attested by a recommendation letter of Louis Kahn in person, he was excluded by a decision of the Ministers Council, confirmed by PIDE information. The base of the decision was Ferreira's previous path as student and his registration as an opponent of the regime.

This fact postponed the beginning of Ferreira's pedagogical experience which took place between 1970 and 1972 at the Lisbon School of Fine Arts. During this period, he was invited as Guest Lecturer Assistant, collaborating with Frederico George (1915-1994), in the disciplines of 'Architecture' of the 4th, 5th and 6th years.

Sixteen years later, after a short two-year experience (1988-1990) as a Guest Professor at Cooperativa Árvore University, invited by Pedro Vieira de Almeida, Ferreira initiated his work as Guest Professor at Coimbra University. It was in Coimbra that Ferreira established stronger links with pedagogy, during a period of twelve years, between 1990 and 2003, when he shared his classes with a generation of prominent assistants, such as, Gonçalo Neves, Pedro Maurício Borges, Adelino Gonçalves, Nuno Correia, Armando Rabaça and Susana Lob. (Bandeirinha 2013). Between 2001 and 2003, Ferreira also taught at ISCTE University, concluding his Professor career at Lusófona University, where he taught from 2010 until 2017. The methodology and type of exercises proposed to his students were similar in all the schools he taught. Generally, he always taught at the 1st year of architecture. For this stage he gave a kind of condensed architecture course, where the students should perform exercises

with different scales, programs, and situations. According to Ferreira, the students should 'leave the first year with an overall idea of what architecture is.' (Saraiva 2011:296).

'Introduction to Architecture' was the subject that Ferreira coordinated at Coimbra University, aiming at clarifying the multiplicity of factors that informed and conditioned the organization and composition of architectural space, and its relationship with the environment. The pencil (graphite or color) was the main representation medium. In its pedagogical practice, the composition of an architectural space goes through an internal process, supported by cultural factors, which should encourage the development of the capacity of seeing, understanding, inventing, rationalizing and transmitting the architectural proposals.

In 'Introduction to Architecture' seven exercises used to be launched as a strategy to confront students with the experimentation of the most recurring situations in architecture. The first exercise aimed at underlining the realistic sense of architecture, through an analytic work focusing on historical buildings and their construction processes. This gave students the opportunity to develop their skills in two-dimensional representations at different scales and techniques. A three-dimensional representation was also explored through physical scale models. In the second exercise he focused on concepts of abstraction. Short programs were launched to be manipulated through platonic solids. Students should deliver their proposals using the scale 1/200 and 1/100 accompanied by a scale model. The third exercise used to correspond to the constructive development of the previous one. Students should use their preliminary knowledge about ordinary materials, to strengthen an internal and external characterization of their proposals. The control of acoustic, ventilation, insulation and

lighting conditions of the projects, in accordance with its location, were also mandatory aspects. The drawings had to be drawn at a 1/50 scale, with stereotomy representation, textures and chromaticism. A constructive scale model, at 1/20, was also requested. The fourth exercise aimed at understanding the ergonomic proportions of human beings as an essential factor in architecture. The students had to design a piece of furniture integrated in an appropriate internal space. This exercise had to be done on scale 1/5. In the fifth exercise, focusing on the importance of landscape architecture and natural materials, students had to adapt an unoccupied urban area into a leisure nucleus, with the definition of all plant species and facility elements. In this exercise, larger representation scales had to be explored, for example the model of the intervention area had to be made at scale 1/200. The sixth exercise encompasses the development of a house with a very simple program in a limited amount of time. The seventh and last exercise comprises the design of a small two-story building, in a difficult urban context. Usually very small lots were proposed, preferably in a corner of a block. All the requested graphic elements had to be delivered with a pencil (graphite or color) on opaque paper (vegetal sheets or copies were not allowed). Each exercise should be accompanied by a short supporting text.

His teaching was innovative in the experimental way that the exercises are divided into two distinct phases. In the first phase the students must exercise the ability to 'see', 'feel' and 'represent' the environment, at various scales, through various techniques of design and volumetric representation. In the second phase, they learn to 'create', while formulating their own proposals

Once a week, Ferreira showed the students a multitude of slides, ranging from Greek and Roman architecture, to Romanesque, Gothic,

Renaissance, Baroque, nineteenth-century architecture, or the most significant architects of the 20th century (such as Le Corbusier, Barragán, Aalto, Scarpa, among others).

Ferreira's research activity

As an architect, Ferreira investigated his own projects, which were used by himself as cases studies to rehearse new typologies, material techniques and light capacity on space definition. These architectural fundamentals were important tools for him to understand the human behavior and the capacity of modern architecture in establishing connections with the legacy of the ancient past. The sense of 'monumentality' apprehended from Kahn, potentiated Ferreira's investigations about a certain sense of eternity, clearly characterized in the durability of his architecture and in its resistance to the cadence of time. Ferreira pursued those principals through the complexity of his graphite drawings, encompassing his gestures and his own body in the same process of his projects' conceptualization.

Ferreira also dedicated himself to organize and reveal the assets of his own family. His father and grandfather personal, artistic and political paths were thoroughly studied as a source of inspiration for framing his ethical principles. In 2000, Ferreira was the curator of the exhibition of the commemorative catalog of the centenary of his father's birth, entitled José Gomes Ferreira, the workman of the words, where several personalities from different areas reflect on the "imaginary" of his father and the different artistic areas he developed, from literature (fiction, poetry, chronicles, memoirs and diary), music, translations and events that marked the life of his father. The biography published by Ferreira in 2001 is important because it fits the various personal events, with the social and political events

of José Gomes Ferreira, showing the different facets of the poet: literature; science and technology; art; music; cinema - relating to the Portuguese and International contexts. Among the friends with whom he created ties of deep friendship and camaraderie, are musicians such as David de Sousa and Lopes Graça, architects and artists such as Keil do Amaral, Maria Keil, Bernardo and Ofelia Marques, Manuel Ribeiro de Pavia and Nikias Skapinakis, men of science such as Bento de Jesus Caraça, Alberto Candeias and Luis Soeiro, and writers such as José Rodrigues Miguéis, Manuel Mendes, Mário Dioniso, Manuel da Fonseca, Carlos de Oliveira, Joao José Cochofel, José Fernandes Fafe, Alexandre Pinheiro Torres and Augusto Abelaira.

Besides Ferreira's researches about his architectural activity and his family, the role of architects and civil engineers in the 1930s was also a subject of his particular attention. The massive use of concrete in public works and residential buildings in that decade defined a new vocabulary for architecture. Cubic shapes, plans, curved balconies, and cantilevered slabs, became recurrent elements of the urban image.

Cassiano Branco's (1897-1970) personality emerged among the architects considered the pioneers of modernity in Portugal. Hestnes Ferreira, together with Fernando Gomes da Silva, initiated in the late 70s a preliminary research about this relevant architect of Lisbon that had a huge production in the capital. Cassiano Branco was also seen as opponent to the regime, as Hestnes Ferreira. Indeed, his activism also conducted himself to be arrested in 1958, which made him a particular character among his generation.

The studies and scientific interest about Branco's architecture started in 1976 when the magazine L'Architecture d'Aujourd'hui, dedicated an issue to Portugal two years after the Carnation

Revolution. Hestnes Ferreira was deeply implied in the structure of dossier named 'Portugal an II', proposing the article "Cassiano Branco (1897-1970) – L'Exception et la Règle", written by Gomes da Silva. This article was later used as base to the exposition organized by the Portuguese Association of Architects, commissioned by Hestnes Ferreira and Gomes da Silva in 1981. They wrote the catalogue, to show that Branco's production corresponded to a relevant contribution to the Portuguese history of architecture, particularly about the relations between ideology and architecture. (Ferreira & Silva 1986) Hestnes Ferreira and Gomes da Silva would also be involved in the preliminary analysis of Cassiano Branco's assets, saved by the City Hall of Lisbon, since 1991. (Bonneville et al.1991)

Conclusion

Ferreira's path as an architect, professor and researcher was the basis of his civic personality, which inspired a high number of students and collaborators. His remarkable and important contribution to Portuguese architecture was recognized as an honorary member of Portuguese Institute of Architects. Within the professional practice, his father is linked to the first and last work. In the first, he creates his house in Albarraque and in the last, creates a space where several documents were present, pieces of furniture and portraits of José Gomes Ferreira.

Although his own projects were the center of Ferreira's activity, his surveys about the bases of modernity in the Portuguese architecture of the 1930s were also relevant. Particularly through his research about Cassiano Branco's production, he reflected about the relationship between ideology and architecture and the role of the engineers in the urban change of Lisbon image after that decade.

His important contribution to the pedagogical experience was recognized by the University of Coimbra (2007) with the degree of Doctor Honoris Causa, Merit Medal of the University of Lisbon (ULisboa) (2011) and the Diploma of Recognition and Merit of the Lusófona University (2014). In 1995, Hestnes Ferreira presented a very clear reflection on the Architecture course at the University of Coimbra's Tomar Meeting, emphasizing the importance of drawing, constructing models as tools of a mental process. According to Ferreira, 'In any creative work, the mental capacity of conceiving should be considered the fundamental phase, preceding any type of representation' (Ferreira, 2000). Ferreira finishes his communication, comparing his experiences as professor with a microcosm where the students should be involved to develop their own sensibility as architects.

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Fig. 1: Last Photograph of Hestnes Ferreira in his office, Lisbon, December 30, 2017. Credits: Hestnes Ferreira's personal archive

Fig. 2: Marvila Library. Credits: Hestnes Ferreira's personal archive

Fig. 3: Ingrid Hestnes and José Gomes Ferreira, Lisbon, 1931. Credits: Hestnes Ferreira's personal archive

Fig. 4: Hestnes Ferreira in Finland, 1958. Credits: Hestnes Ferreira's personal archive

Fig. 5: Hestnes Ferreira with Edgar J. Kauffman and others architects, Fallingwater house, 1963. Credits: Hestnes Ferreira's personal archive