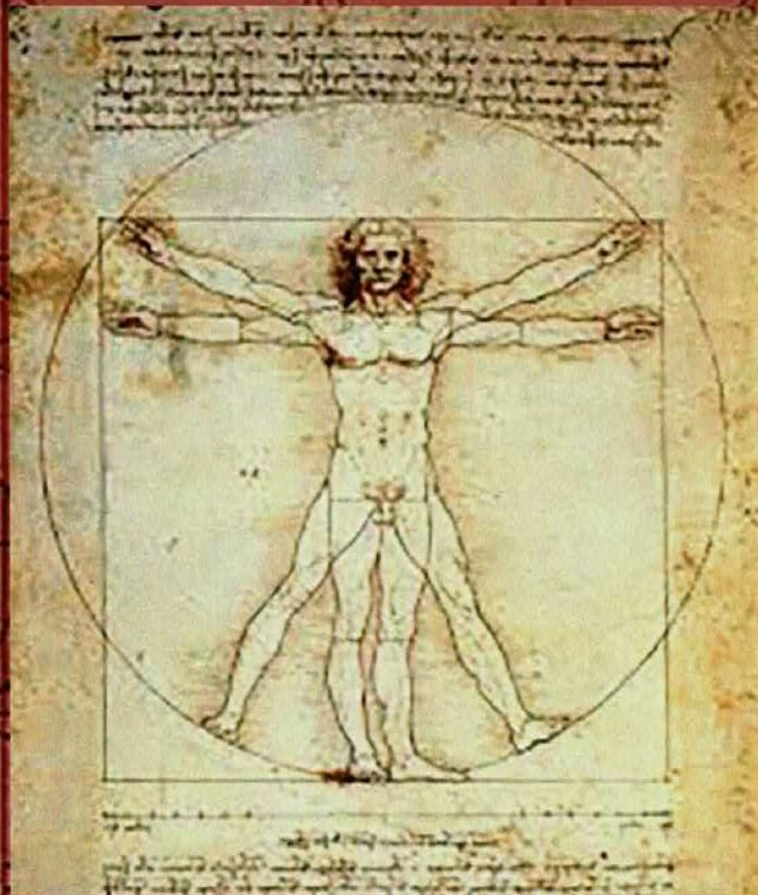


Intelligence, Creativity and Fantasy

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Chief-Editors:
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A BALKEMA BOOK

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Architecture stories in the construction of children's spatial conscience

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ABSTRACT: Based on three fundamental themes: intelligence, creativity and fantasy, this article has as main objective to focus the importance of constructing an imaginary in children that emphasises the relevance of the surrounding space in its various scales of interaction with individuals: objects, buildings and cities that surround them. Starting from a research experience carried out about two years ago, this reflection presents a critical reading of three specific stories-books produced as part of the research: *A Casa do Futuro*, *Rabiscos em Arquitectura, Urbanismo e Design* and *Uma Família de Portas*; dedicated to children and oriented for this sensitive interconnection with the surrounding space. Thus, from a set of specific objectives delimited by the theme and the approach, three editorial projects emerge, designed to formalise this intention of interaction with the young public, stimulating a critical evaluation of the space in its different approaches. Stimulating and forming the sensitivity for the themes of spatiality in architecture, urbanism and design, is the main focuses of the strategy that seeks to build *Architecture Stories*, through the development of children's spatial imaginary, using intelligence, creativity and fantasy.

Keywords: Architecture, Children's Imaginary, Space Consciousness, Habitability, Education

ABOUT CONSTRUCTING A CHILDREN'S SPATIAL CONSCIENCE

Educate is to stimulate the individual in the sense of developing and guiding his capacities and abilities for life in society and safeguard his future independence. Fundamentally, educating is to instruct competences, sensitivities and values, in order to develop all the physical, intellectual and moral skills that will structure the personality and the capacity for future action. This action has special relevance during childhood and adolescence when there is a higher predisposition for the assimilation of information and the construction of valuable imagery that will shape all the future behaviour.

In this sense, fostering education in the capacities to perceive the surrounding world, and especially from the relevance of the surrounding space as an essential element of the condition of being (Heidegger, 1996), is assumed as the primordial issue. By the various scales of the space that surround us (both near and far), structural assumptions should construct a value sensitivity, from an early age, formalised in the creation of children's spatial imaginary.

Actually, the construction of our thinking and our way of interacting with the surrounding contemporary world is increasingly complex (Morin, 1991). Activating new forms of education that are structured on

motivations, sensitivities and stimuli will be a fundamental component in the educational reinvention of societies, given the new ethical problems associated with new concepts and definitions.¹

2 ABOUT ARCHITECTURE STORIES: A CASA DO FUTURO

The book *A Casa do Futuro* [The House of the Future] became the first foray into this mission and aimed to bring academic education in architecture, urbanism and design closer to the general public and particularly to children and young people (Louro, Martinho, 2017). This strategy was materialised through the production of an illustrated book where spatial themes were approached in order to stimulate interest and awareness on the importance of the surrounding space (Fig. 1).

The target audience is children in elementary school (between 7 and 11 years of age), although it can also be used with younger children in kindergarten who

1. Reference to the fact that current issues of knowledge, education and teaching are established in new conditions of experience, where new ways of acting reinvent new systems of characterization, centred on new conditions of appropriation, reference and valuation.



Figure 1. Cover of the book: *A Casa do Futuro* [The House of the Future], by Margarida Louro and Camila Martinho, 2017.

do not yet have the autonomy of reading but who can be assisted by educators, teachers, parents, or grandparents. Moreover, in this way, the general public was integrated into the project, as adults are the ones who choose and purchase books for children. This aspect had some relevance in the very disclosure of the book, which appeared in some cases associated with more thematic stores, like museums, art or architecture galleries.

The title of the story, *The House of the Future*, derives from a very objective definition, on the theme of the *House*, assumed as a second body that soon will surround and delimits us. Moreover, it is from this primordial condition of existence that all story unfolds in order to emphasise the importance of space in the formation of *Being*. By associating thematic and problematic aspects of the current consciousness on environmental sustainability, a kind of subtitle emerges: "A story about sustainable architecture for kids and adults", thus clarifying of the scope of the book theme and the audience to whom it is addressed.

In this sense, the story unfolds around a young architect advised by an older person to guide her in solving an architectural problem faced by a family (of extra-terrestrials) who asks her to design a house they could take when returning to their planet. The extraterrestrial planet is used to foresee Earth conditions since it had also suffered many environmental cases of abuse. In this way, the story stresses the search for new ways of life. Combining the reinvention of new concepts, such as the portable, transformable, adaptable house, the intrigue captivates the reader across its resolution, while, at the same time, activates concepts and consciences about new conditions and current problems.

Several concepts or themes emerge and interrelate in the construction of different consciousness:

- The environmental awareness, present in the book subtitle, associated with sustainability and the effective balance between needs and resources, safeguarding from pollution and habitat destruction.

- The reinforcement of social conscience and the importance of intergenerational knowledge and the family. Time and temporality are effectively the underlying themes of the story as the title implies. The social promotion is stressed through the emphasis on the family, and the timeless value of this reliable condition for economy and sustainability.
- Current cities conditions and the construction of the awareness of problems and difficulties are developed in the references to the cars and traffic, presenting proposals for alternative mobility, associated with clean, non-polluting and inexhaustible energies. Another aspect is the question around the new forms of communication and the existence of telepresence.
- The importance of the space valuation appears on different scales: in the typology of the city; the relations between centre and periphery; in the presence of green spaces (concerning the vast forest that is focused in the story) and that functions as the green lung of the city. This calls attention to the need for the valuation of public spaces and the importance of their existence in an urban context. Regarding the house, it appears related to the idea of movement, as something that goes with the inhabitants, the mobile house. Thus, although associated with the organisation typological archetypes, related with more classic concepts such as rooms, kitchen, living room, garage, etc., the form arises associated with innovation, creating a kind of egg house, which relates to the metaphor of the shell that surrounds in the background the first house that contains the embryo of life.
- Another aspect is technology, and it refers to the coexistence of state-of-the-art technologies (such as the energy converter that immediately transforms concepts into things). On the other hand, more traditional and universal concepts such as drawing and imagination emerge, associating it with the coexistence of representation techniques (such as pencils and pens) and its evolution (associated with computer and digital drawing), always safeguarding the importance of human intelligence, creativity and imagination in solving problems.

Illustrations reinforce the written text, creating an imagery of objectification. Approaches that go beyond the spaces which are formalised in individuals and the clothes they wear, the objects they handle, exploring the spatial configuration in its multiple scales: objects, buildings and cities.

3 ABOUT ARCHITECTURE STORIES: RABISCOS EM ARQUITETURA, URBANISMO E DESIGN

The book *Rabiscos em Arquitetura Urbanismo e Design* [Scribbles in Architecture, Urbanism and



Figure 2. Cover of the book: *Rabiscos em Arquitetura, Urbanismo e Design* [Scribbles in Architecture, Urbanism and Design], by Margarida Louro and Camila Martinho, 2016.

Design] is assumed as a graphic activity book, primarily oriented to children, although it may be extended to the juvenile and eventually adult readers due to the specificity of its theme (Louro, Martinho, 2017). Usually, the title of the book *Rabiscos em Arquitetura, Urbanismo e Design*, awakens the attention of other readers specialised in these three areas (Fig. 2).

The subject of the book is not exhausted in its playful approach as a workbook, associated with drawing and painting. This book, essentially, seeks to be an educational tool on many sources and natures. Based on thematic challenges that seek to meet specific functional requirements in order to reach certain objectives, children and young people are invited to reach different levels of creative complexity, where they activate mechanisms of critical and creative response.

Educational projects must respond to real needs. First and foremost, they have to identify a problem and then design an initiative to resolve it. (Raedo, 2018)

Based on thematic challenges associated with FAULisboa's six areas of expertise – Architecture, Interior Architecture and Rehabilitation, Urban Design, Product Design, Communication Design and Fashion Design – several challenges are proposed to provide a multiplicity of imaginative capacities.

Intended primarily for children, the produced material can be accepted as didactic support at school education, as a recreational or leisure element, or even as a family activity to be unscrambled together between parents and children or grandparents and grandchildren.

From the multiple thematic challenges promoted in the areas of Architecture, Urbanism and Design, this was another initiative taken by the FAJunior Office of the Faculty of Architecture of the University of Lisbon (FAULisboa), oriented to children, with the aim of increasing sensitivity to the themes of Architecture, Urbanism and Design, bringing them closer to these realities and familiarizing them, in some way, with the academic offer of the FAULisboa.

Complementary to this institutional objective, the book assumes the mission of raising awareness of the



Figure 3. Cover of the book: *Uma Família de Portas* (A Family of Doors), by Margarida Louro and Joana Gonçalves, 2018.

importance of the surrounding space at the various scales where it determines the individual:

- The scale of the body, next to the various objects that surround us (from the clothes to the objects that we use and see).
- The surrounding scale of the building (defined in the different spaces we inhabit like: home, school, hospital, cinemas, etc.)
- And the larger scale of the cities and territories we inhabit (defined in the streets that we walk along, in the cities we live in or the landscapes we visit).

Critical experimentation is promoted, activating the intelligence, the creativity and the fantasy in a consolidated construction of a spatial imaginary and promoting a solid foundation for the children's formation, and the bases for a critical evaluation of the surrounding global space.

As Atrio Cerezo et al. (2016) referenced, it is the student, by himself, who must discover through his senses the characteristics of his environment space and the power of manipulating objects in the definition of abstract concepts.

4 ABOUT ARCHITECTURE STORIES: UMA FAMÍLIA DE PORTAS

The book *Uma Família de Portas* [A Family of Doors] is a second architecture story, following the first experience with the book *The House of the Future*, reinforcing the mission of bringing academic higher education closer to the general public (Louro, Gonçalves, 2018). Following a similar logic, an illustrated history was created, which deals with themes related to common and accessible problems about the space that surrounds us (Fig. 3).

The title of the story: A Family of Doors, emerges from a theme very present in the current conjuncture of cities and especially in the context of Portuguese cities, which refers to the rehabilitation of old buildings at the expense of the option for new construction. In this

way, the theme of rehabilitation associated with the restoration of buildings assumes a strong expression (as in the first example focused on The House of the Future) from the suggestion of a subtitle where this is explicitly defined as: "A story on the rehabilitation of buildings for kids and adults."

In this sense, the story of this book unfolds around an old house, which occupies a consolidated area of the city and which, as in a family, is composed/inhabited by several members (where the doors are assumed as protagonists) of various ages, statutes and personalities. In this context, an adventure unfolds that revolves around the process of transformation and modernisation of an old house, where uncertainty about the permanence of the old doors of the house, in the process of rehabilitation emerges, in suspense, almost until the end of the story.

As background, in addition to a specific architectural problem, namely its durability, conservation and transformation, other contemporary values are associated, such as the role of the family, cooperation between the various elements, the role of each in the context of the house (making an analogy with the place in society). This set of issues allows us to build existential ethics towards others, especially related to appreciation and respect for the spaces we inhabit, offering children a complete awareness of the value and respect for the space they inhabit, and so become one day more demanding adults.

The illustration in this book is taken as a second narrative. In this way, in addition to giving body and image to the plot of the story as well as the design of spaces and main characters, in this case, the doors, the book reveals new entities and secondary elements that subtly are also understood as characters, telling parallel stories. This emphasises children's ability to observe and encourages multiple readings of the book through various perspectives that allow the discovery of new things and details that, at first reading, were not perceived.

All the spaces we inhabit, outdoor spaces, cities, landscapes, interior and intimate spaces have their particular characteristics. Moreover, these are interpreted in different ways according to who designs them, how they are planned and also according to those who inhabit them and frequent them. (Arqui-con in AAVV, Amag, 2016: art. 05)

5 GENERAL CONCLUSIONS

To educate by architecture, it is assumed as a pedagogical strategy in the sense of cultivating a critical conscience that, besides promoting eventual future students of architecture, urbanism or design, establishes a valued relationship, positive and particularly demanding with the surrounding space.

These three experiences (embodied in these books for children) formalise a strategy to foster more

knowledgeable public about the need and relevance of the architectural quality of the spaces in their education and formation and consequently in society in general.

Architecture and its conceptual basis founded on the Vitruvian triad established on *utilitas*, *firmitas* and *venustas*, must respond effectively to a function (response to a given program), with a logic of durability (permanence in time) and effectively aesthetic purpose (or whether it has to have aesthetic value, emotion, touch). In this sense, teaching with architecture or by architecture, becomes more and more aware of the role of the architect profession,² starting in Portugal the first steps on this approach with institutional incursions that seek such a revision and implementation at multiple educational levels, from pre-school to pre-university formations.³

As Baeza (2013) points out, to be an architect can be someone who can turn a house into a dream. To combine the materials needed to build a building in such a way that the result is a wonderful space.

This is the mission currently underway in the scope of the FA Junior Office in complement with many other actions that,⁴ in a partnership with several educational institutions, will allow through intelligence, creativity and fantasy, to support the education and development of children and young people so that they become more conscious and demanding adults.

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2. Reference to the PuEmA Seminar – For an education in architecture, promoted and held at the Order of Architecture Lisbon between 1 and 16 February 2019 and which took as the inaugural scope: "PuMAM aims to mobilize national and international experts from different areas: architects, teachers, educators, artists as well as children, young people and families for a joint reflection on the themes of Architecture Education" (<https://www.puema.pt>)

3. Reference to Decree-Law no. 55/2018, of July 6, which establishes the curriculum of basic and secondary education, the guiding principles of its conception, operationalization and evaluation of the learning, in order to ensure that all students acquire the knowledge and develop the skills and attitudes that contribute to achieving the competencies foreseen in the Profile of Students Exiting Compulsory Schooling. This recent diploma emphasizes a complementary appreciation of cultural education (distributed by its various areas) in order to educate children and young people within the horizon of the next 12 years.

4. Reference to other actions carried out by the FA Junior Office of the Faculty of Architecture of the University of Lisbon, in particular the various activities developed in the scope of research and formalised in actions applied and offered to different audiences. (FA Junior Office: <http://fajunior.fa.ulisboa.pt/>)

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The texts presented in Proportion Harmonies and Identities (PHI) - INTELLIGENCE, CREATIVITY AND FANTASY were compiled with the intent to establish a multidisciplinary platform for the presentation, interaction and dissemination of researches. It also aims to foster the awareness and discussion on the topic of Harmony and Proportion with focus on different visions relevant to Architecture, Arts and Humanities, Design, Engineering, Social and Natural Sciences, and its importance and benefits for the sense of identity, both individual and community. The idea of modernity has been a significant motor for development since the Western Early Modern Age. Its theoretical and practical foundations have become the working tools of scientists, philosophers, and artists, who seek strategies and policies to accelerate the development process in different contexts.

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