

AFTER METAMORPHOSIS
Time and Cultural Durability in Architecture

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ABSTRACT

This research seeks to understand how architecture can integrate and anticipate the time factor, becoming more adaptable, mutable and durable, and therefore, more sustainable and meaningful. To this end, we propose to understand the complex dimension of time, assuming it as a natural given composed of multiple temporal flows that represent the dynamism of life itself, in contrast to an absolute and homogeneous time disconnected from the world that surrounds it. In this way, we see the architectural work as open and in movement and analyse the challenges that architects face today with ever faster and unpredictable changing societies.

The inscrutability of time is explained here by both theories of physics and phenomenology, recognising its complexity and understanding its lived and dynamic experience, as well as the mental dimension of architecture. The concepts of cultural identity and durability are therefore analysed as fundamental values for the study of time in architecture, where architectural ruin assumes its expression by allowing a permanent journey between the past and the future, helping to build our memory and to face new challenges.

Starting from the emotional and functional relationship that buildings have been establishing with their inhabitants, on the one hand, and how they have been adapting to new demands and uses, on the other hand, we seek to analyse design premises that intentionally consider time, change and cultural durability, and consequently, sustainability since the beginning of the conception.

The value we place on permanence for our cultural identity gives way to adaptability and seeks a more meaningful and intergenerationally connected architecture.

Keywords: Adaptability; Cultural Durability; Memory; Architectonic Ruin; Time; Change.

EXTENDED ABSTRACT

Introduction

The purpose of this dissertation is to reflect, to provoke, to question. To question design methods that are not at all new, but that can take on broader proportions and uses, looking at the architectural work as open and in motion, in permanent metamorphosis. Its development started from a theoretical-critical approach to bibliographic collection about time and architecture, which involved its reading, analysis, debate and systematisation. From there, we understood that the coherence of the proposed discourse would not be obtained through a chronological sequence of events, but through their ordering in three major themes that expose the correlation of time with human existence, with space, and finally, with architecture.

We seek to understand how the architecture of the present can integrate, respond to and anticipate the time factor, becoming more adaptable, mutable and lasting, and therefore more sustainable and meaningful. To this end, we

propose to understand the complex dimension of time, without claiming to understand it completely, nor that our interpretation is the only possible one. In this sequence, we take the concept of cultural durability because it adds to the purely physical, constructive and material dimension of the word durability a more comprehensive value, the cultural one, which embraces all the previous ones and translates the intergenerational connection and the adaptability to cultural needs.

We also propose to extrapolate on the essence and nature of architecture, as a process that involves constant death and resurrection. Transitoriness and mutation are intrinsic to both human existence and architecture, and so we assess how architectural ruin can be seen as the death of a place, but can also signify its rebirth.

It is worth reinforcing that the images and videos are neither descriptive nor documentary. Rather, they constitute a visual memory discourse of their own, which intensifies and expands the arguments formalised throughout the dissertation.

Results and Discussion

The research starts from a direct expository approach of brief framing that begins with the appearance of the new mechanical clock. This great innovation enhances the abstraction of time and ends in the synchronism with biological time and nature, making it objectively measurable. The digital clock, at the end of this process, makes time susceptible to calculation and contributes to the formulation of a time strangely separated from external events, contributing to the cementation of universal time. This is no more than a pragmatic form of what Newton (1643-1727) would come to formulate as Absolute Time (1687). Two centuries later, the theories of relativity begin to prevail, (re)connecting space and time. For Einstein (1879-1955), time and space influenced each other, which originated the theory of relativity (1905) giving rise to a new single term: *space-time*. To these notions we add philosophical and phenomenological thoughts that complexify and influence a greater understanding of time. Heidegger (1889-1976) suggests that the human being is destined for death and it is this limit that makes all the possibilities of time intelligible. On the other hand, West-Pavlov (1964) admits that all time is lived and that this time does not belong only to the human being, but to all life. It is he who develops the theory of immanent time, where he argues that it is time that allows life to become something different from what it was, in an infinite mutability. We resort to this notion of temporality in the context of architecture, insofar as the latter can finally be seen as temporal, an integral part of and in the action of time.

The following chapter deals with the interrelations of space and time that directly or indirectly imply the understanding of the experience of time, in the architectural space and material world. Just as in science and philosophy there was an evolution of the concept of time, also architecture began to realize its temporal value through Giedion's architectural space-time (1959). In his book *Space, Time and Architecture* (1941) he tries to explain to what extent modern painting and architecture after 1910 conceived what he believed to be a new tradition related to the demands of the time. On the one hand, Cubism was able to look at objects from various points of view through the spatial representation of interpenetrating planes, using shadows and a new concept of simultaneity. On the other hand, futurism adds to the previous discoveries, movement. With the example of the Bauhaus building, Giedion shows us that interior and exterior are represented simultaneously. Like in cubist

paintings, the transparent walls of the building seemed to be superimposed, making it possible to experience several spaces simultaneously and widening the interior- exterior fields of vision. Even so, according to the author, it is also necessary to resort to movement in order to observe it from all sides and understand it as a whole. Space, hitherto static, becomes dynamic, a reflection of the integration of time. However, the result he arrived at, that of a new conception of space, can, in some way, take us back to what Bergson would refer to as the *spatialisation of time*.

In the following we will focus on the work of Bergson (1859-1941), who criticised the previous philosophical and scientific thoughts for disregarding real time, focusing only on a spatial scheme that hides the true nature of time and that is separated from physical and psychological events. (Coelho, 2004) From this approach emerges the spatialisation of time; instead, Bergson understands time as the very 'flow' of instants, which can only be understood in its passage - duration -, and never in the stop - instant. This allowed Bergson to interpret the dimensions of real time: *succession, continuity, change, memory and creation* (Coelho, 2004), which connect his thought with the architectural space. Succession is what explains that events occur one after the other, integrating a history and being part of a larger whole that interconnects them. We also know that time is a continuous process.

We quickly refer to history as a temporal continuum in which all events follow one another. In turn, this continuity is in constant change; reality appears to us as a perpetual becoming. On the other hand, Bergson proves that time is also memory. In his discourse there is an idea that the past follows us at every moment. In this sense, memory becomes essential to the understanding of the relationship between continuity and change, not only for his philosophical thought, but also for the whole architectural work. Finally, real time can only be creation since its unpredictability, linked to its complexity and transformation, is due both to the memory that links the past to the present, and to an internal and creative dynamism (Coelho, 2004).

In this sequence, we turn to the theoretical work of Pallasmaa to materialize the previous arguments and to understand the meaning of time as a mental dimension in architecture. Enveloped by the current accelerated and fragmented spirit, the architect suggests that we have lost our ability to live in time. Harries (1937) points out that "architecture is not only about domesticating space; it also constitutes a profound defence against the terror [of the passage] of time" (1982, cited in Pallasmaa, 2012: p.70). In this way, architecture is able to mediate our relationship with the *ephemeral, mysterious and fleeting dimension of time*, inhabiting us in both space and time. Pallasmaa believes that we are primarily *historical biological beings*; the comfort that ancient cities and buildings bring us is due to the fact that they situate us in the temporal *continuum*. As *benevolent museums of time*, they record, store and express temporal marks different from our current notion of time - *nervous, hurried and flat*.

According to this idea, we conclude that architectural constructions function as instruments with which we fix and sustain History and Time, as well as through which we access and understand reality - our own and our surroundings. What we argue is that it is the traces of use that humanise buildings by making their history of time intelligible and cultural evolution comprehensible. Therefore, architecture also has the enormous task of housing our memories, dreams and desires, and of reinforcing our sense of belonging - our roots and the perception of 'our self in the world'.

The third and last part focuses precisely on the continuous and metamorphic character of architecture, where the acting force of time reveals its transformative and evolutionary capacity. We start from two architectural entities - Monument and Ruin -, with distinct temporal values, in order to analyse them in their multifunctional character over

the years and in their ability to project us into the past and into the future. According to Rossi (1931-1997) in *The Architecture of the City* (1966), monuments are "historical permanences" that will attain the value of monument, either for their intrinsic value or for a particular historical situation. *The Palazzo della Regione di Padua* (1218) is a great reference brought by the author, whose current function is no longer the original one. What is surprising is the plurality of functions that this palace (and others) can contain, completely independent of its form. However, it is that same form, which according to Rossi, remains imprinted in us, with which we relate and in which we live the city, structuring it. The permanences show us what the city has been over time. The ruin, on the other hand, target of many interpretations and conceptions, constitutes a paradox: "Any ruin presents the problem of a double exposure to the past and the present". (Huysen, cited in Dillon, 2011: p.52) And yet, as Dillon (1969) states, "the ruin is a fragment with a future" (2011: s/p), in its ability to project us into the world of possibilities.

Derrida (1930-2004) presents a definition of ruin that confronts the more common romantic and Picturesque view: "(...) In the beginning, there is a ruin. (...)" (Derrida, in Dillon, 2011: p.42) There is here an idea of ruin as something initially inherent in any building - a *panorama zero*, as Smithson (1938-1973) called it: "the panorama zero, seemed to contain inverted ruins - all the new buildings that would be built." (in Dillon, 2011: p.46). Opposing the romantic, Picturesque ruin, Smithson believes that buildings did not ruin after they were built; rather, they became ruins even before they were built. This can be, in our view, the starting point for any project and one of the methods of making architecture. Knowing that architecture is meant to be lived and appropriated, the distension of time only adds meaning and significance to it.

In a second moment, we tried to reveal the expression and adaptation of examples that have been accompanying us, in an attempt to understand why time has become so important and how we should deal with it during the design process. By discovering how people have reacted to what has been built, either in the way of appropriation of the building or in their emotional relationship with it, we can, in the next moment, assess how the ruin can be our "panorama zero". Revealing of all these characteristics is the example of Lingotto, in Turin. Piano's project (1937) consisted of the conversion of this old factory into a multifunctional centre where the building was preserved, while a variety of new functions were created. This proves that if the building (form and structure) has the ability to transform itself and is open to new interpretations, then there is no doubt that it will persist continuously and can be reborn multiple times. In this case, not only did the pre-existence allow it to evolve into something else, but the new design itself offered multiple other functions in a multifaceted vision, reinforcing that this building can be constantly renewing itself.

The *Time-Based Architecture* symposium, held at the University of Delft in 2003, was the fundamental pretext for launching some design premises that increasingly consider time and the durability of buildings, and consequently, their sustainability. The city is a living and dynamic organism, itself in constant metamorphosis. van Reeth wrote *Cultural Durability* (2005), with the realisation that our buildings and cities have been damaging the environment and that architects can play a decisive role in this process. As such, he adds to architectural design an awareness and a reflection on what happens to the building at the point when it no longer serves its original purpose. The development of the architectural project thus consists of several layers, each with its own rhythm and cycle, which determine its hierarchical position: 1) The site, the place, the urban footprint ~ eternal; 2) The structure and the skin (façade) ~ 400 years; 3) The installations ~ 30 years; 4) The use of the space (use/function) ~ 10 to 15 years; 5) The refurbishment of the building ~ 5 years. The place, according to the author, is eternal in the sense that it is pre-

existent and even if it changes by the natural evolution of the city, the implantation of the building and its relationship with its surroundings will remain for a long time, evolving with its inhabitants. On the other hand, it is clear to the author the need for the project to anchor itself to the site, completing its destiny.

Regarding the structure, the author argues that architects should design buildings to last for many centuries. The remaining points consist of what is temporary and what changes during the life cycle of the building. Facilities are necessary for any building of today and, although they have an average lifespan of 30 years before they need to be changed, they will need to be generously designed so that they can adapt to the use of the moment. The latter, in turn, along with the refurbishment of the building, has a much shorter lifespan than the construction itself and its change happens at an increasingly accelerated rate. Therefore, van Reeth believes that the answer to achieving sustainable buildings is to design intelligent ruins, as history has verified: buildings with the capacity and generosity to change ceaselessly during their life cycle.

To this end, we must highlight the contrast between the transient and the long-term, between the permanent and the impermanent, between the primary and the secondary. Culturally enduring projects presuppose an approach to the design process that differs from the so-called functional programme of requirements, which, in van Reeth's view remains the basis of architecture, both in education and in practice. What it seems is that, in this case, the programme may tend more towards secondary and temporary layers than permanent ones, insofar as it is the former that connect the building to its most current use.

Bob van Reeth's intelligent ruin is identical to Bijlendaal's solid: a sustainable building in the *economic, functional, technical and emotional senses* of the word. This is achieved through two qualities in common with the intelligent ruin: *adaptability and preciousness*. Adaptability relates to individual values and consists of the ability of the building to be able to serve each new user. Preciousness relates to collective values, those that translate the identity of a building and the degree to which people relate to it. In turn, achieving these qualities often requires additional investments in the *base building* which are justified by their long-term return, according to the author.

This conception is deeply rooted in what we have been observing over the years. We can, therefore, try to synthesise the concept of cultural durability in the following way: the easier the adaptability of a project, that is, the more competent the building is to change, the greater its durability will be. In turn, the longer it lasts, the more likely its users and inhabitants are to establish an emotional relationship with the building and its surroundings. This translates into the collective value of architecture - in our opinion more powerful than the individual - in its relationship with a place and time. This cultural dimension of architecture is truly conveyed in this critical generosity, that is, in the building's predisposition to embrace, without prejudice, new possibilities, more meaningful and intergenerationally connected. This *cultural durability* is, in our analysis, one that adds to the purely physical, constructive, material dimension of the word *durability*, a more comprehensive value, the *cultural* one, which embraces all the previous ones and translates the intergenerational link, and the adaptability to cultural needs.

Final Considerations

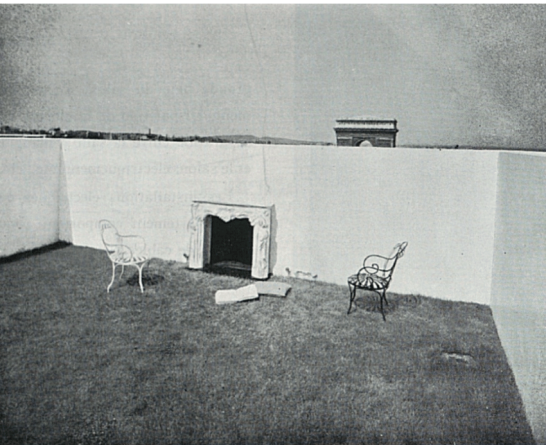
We remember the past and imagine the future. All this in a present that is lived in the now. The perception of change is central here; not only the objective transformations that we naturally review countless times in our daily lives, but those that connect to our memories and to the sense of the flow of time.

In this way, we understand the limits within which a work can achieve maximum openness, also motivating the intervention of the user himself, without ceasing to be seen as a work. What is argued is that this work, understood and enjoyed as it is conceived, is more competent and intelligent to embrace all the transformations and interventions that may occur, in mutual respect between architect - work - user. In architecture, designing *intelligent ruins*, in our opinion, can be a design method that responds to the constant provocations of the indeterminate, the ambiguous, the unexpected. Each interpretation, each transformation, explains the form in a possible way, but does not exhaust it. We believe that the response to pandemics, wars, catastrophes or other unpredictabilities of our time can be more effective and meaningful with the existence of architectural constructions that have the capacity to adapt and transform themselves.

Cultural durability is therefore a key concept that should be understood and promoted in the field of architecture, and its consequence is one that seems quite evident: sustainability. Not in the common sense to which we are accustomed, but that reports at the same time to the economic, functional and human environmental values of the word. Environmental, because if buildings encourage constant transformation during their life cycle, there will be less need to demolish and build again; economic, because despite a high initial investment, the value of the building will increase with time; functional, because within the basic limitations, it is possible to make changes according to the occasion, the use, the time, the user; finally, human, because it promotes that the building may belong longer to the community and be emotionally, morally and intergenerationally connected. In this way, the inhabitants will want to preserve it, contemplate it and use it.

On the other hand, we question ourselves whether the adaptability to which we refer fits absolutely all architecture, or whether there are more suitable, competent and valid forms. It is certain that in most of the examples we have seen we are dealing with mega-structures, warehouses, palaces, factories, seminars. What we conclude at this point is that in fact there are structures with more aptitude than others for future adaptability. Moreover, there are building typologies that seem to us to be more adjusted to this method than others; for example, multifaceted or public programmes. In any case, whether it is a house, a museum or a school, the hierarchy between the various layers should be evident from the beginning of the design. We therefore encourage that these new design methods are also introduced into the teaching system of our universities, since this awareness can be all the greater the earlier it is grasped. It is urgent and necessary to reflect on what will happen to the building we have designed and built at the time it ceases to serve its initial purpose.

At the same time, we wonder what the role of ruins may once again be and whether they can be the starting point of any architectural project. Ustarroz made us see that perhaps they are, after all, as alive as our current projects and works, because they die, are reborn, and flourish with every new look and every new use, with the passion and intensity that they overflow. They are the expression of metamorphosis, in a permanent uncertainty between being inside and/or outside their own time; they are the signs of the sublime of architecture.



19 Terraço em Paris, Le Corbusier, 1947



20 World Trade Center, Hiroshi Sugimoto, 1997



22 The Spirit Leaves the Body, Duane Michals, 1968



21 Potsdamer Platz, Michael Wesely, 1997-99



23 Atlas Mnemosyne, Paine 79, Aby Warburg, 1928-9

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