



Designing and assessing the living experience from brief to use

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Abstract This paper aims to analyze the *living experience* at several stages of the space's lifecycle.

It will first highlight the connection between space and life and the embedded bond between architecture, mind and body. It will then focus on outlooks and respective authors that acknowledge that correlation and refer to different perspectives and interpretations of the *living experience*, first from related study fields and their impact on architecture, and subsequently by introducing specific fields that share these concerns within architectural research.

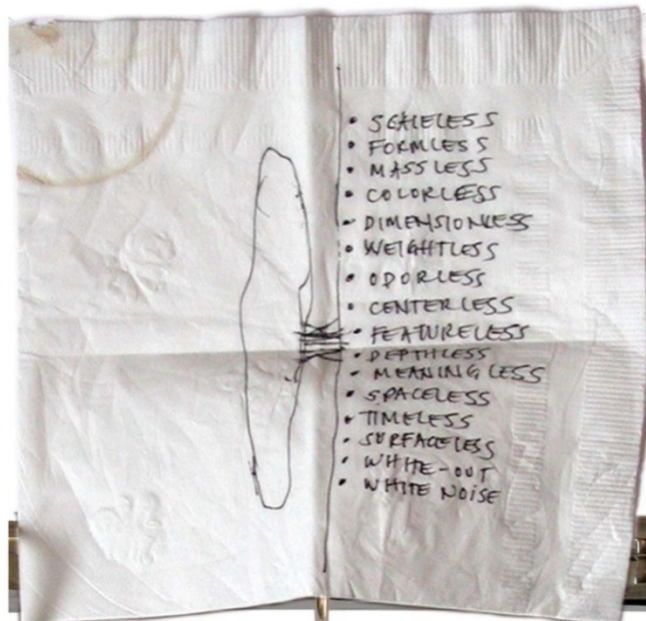
Then, it will point out projects that actually conceive space by valuing the *living experience* from the initial concept, to the final building stage and then to its effective occupancy.

Finally, it will refer to the broad range of methods, perspectives and outcomes of assessing the *living experience* during the actual spatial usage, according to the different definitions of *experience* presented earlier, the way they are interpreted by both academia and practitioners, and the way space is expected to, and effectively does, actively engage its occupants, by presenting a specific case study of experiencing life within a particular school space.

Fig. 1 Blur process sketch; ink on napkin (December 1998), by Diller Scofidio + Renfro.

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(Smith, K. (2005). Architects' drawings: A selection of sketches by world famous architects through history. Oxford: Elsevier/Architectural Press, p.224.)



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Space, Body and Architecture

“Architecture has its own realm. It has a special physical relationship with life. I do not think of it primarily as either a message or a symbol, but as an envelope and background for life which goes on in and around it, a sensitive container for the rhythm of footsteps on the floor, for the concentration of work, for the silence of sleep.” (Zumthor, 1988, p.1)

The *living experience* is deeply embedded in architecture, as a feature but foremost as a significant part of its being, to be thought while conceiving the initial drafts until its effective occupancy. This condition can consider space as a *stage* for action to happen, but also and upmost as an *enhancer* of the interaction between space and body, the self and the contextual surroundings, and ultimately, architecture and people.

The concept itself of *experience* has been interpreted in different ways according to the authors of reference. Commonly connected with the practical action and to the way how to capture the exterior, epistemologically it relates to feeling, spatial fruition and, hence, the sensorial stimulus projected by space onto its occupants, and simultaneously the occupants’ reactions that this stimulus arouses in them, strengthening people’s engagement to space.

In addition, it could be both understood as an inner and personal moment, or as a shared happening by a collectivity. Philosophically it could also be regarded as an intellectual conception of space by means of our structures of understanding and perceiving space, or it could be understood as a sensitive experience of space made through the way space arouses our senses¹.

The assumption that the object’s meaning does not derive directly from the object, but that it is actively built by the end user, was already considered in literature by works like Benjamin’s *The Author as Producer* (1937) or Barthes’s *The Death of the Author* (1968), that already established a parallel between production and reception, and assumed that literature, after being read, is interpreted and internalized, subsequently producing new outcomes.

In the artistic field, Beuys’s (1984) *Olivestone*’s sensorial stimulus or Duchamp’s work’s conceptual meaning are not only carried on by the objects themselves but in what they convey to each user, with a particular cultural background and with a social and cultural dimension. And in doing so, the artwork’s fruition passes from perception to appropriation.

More recently, Portuguese artist Joana Vasconcelos also interprets this concept, engaging spectators as a defining part of the artwork, whether physically, or more semantically, by the social, cultural or individual meaning it conveys to each person (Fig. 2).



Fig. 2 *Wash and Go* (1998), by Joana Vasconcelos. Courtesy of Atelier Joana Vasconcelos (<http://www.joanavasconcelos.com>)

¹ Kant in *Critique of Pure Reason* (whose original edition dates from 1781) already pointed out our cognition as a synthesis of both ways of perception, respectively before and after the happening itself.

So, the contemporary work of art also considers transposing the user to a more relevant position than the mere spectator, continuously questioning the boundaries of art and promoting a closer relationship between subject and object.

In the case of architecture, one of the ways to acknowledge reception is by the actual *living experience* in the space priorly conceived. This assumption was already pointed out by Barragán in 1955: *"The sense of all the beautiful things created, resides both in the soul of the beholder as in the soul of those who produced it."* (Barragán, 1955, p.379, free translation).

Yet, architectural experience carries significant specificities, given that the inhabitant, as a contextualized subject, will interpret the values raised by space within his cultural coordinates, in real time and space. Also, because spatial experience takes places at different levels, such as aesthetic, social, environmental or functional, whether of a more intentional or unconscious way, that bear meaning to this analysis.

Nevertheless, appropriating space is a stage of a building's lifecycle that can also, and cyclically, redefine/reinterpret the conceived space by the architect. In fact, by living in space, dwellers change space, shape it to their needs and wants, to their cultural and social background, and overall take ownership of it. Hill refers to active inhabitants as *"illegal architects"*, both spectators and creators of space: *"The illegal architect questions and subverts the established codes and conventions of architectural practice, and acknowledges that architecture is made by use and by design."* (Hill, 2003, p.131).

In this sense, a spatial conception that conditions a fixed and specific use of space will confine its appropriation to a pre-determined spatial experience. From the paradigm of the house as a *machine à habiter* to Grete Schütte-Lihotzky 1927's Frankfurt Kitchen, particular spatial uses were suggested, narrowing the actions and dwellers to a modernist standard. Thus, *function* is understood as a single part of the potential of the building's use.

Conversely, the term *experience* is broader, comprising the various ways in which to inhabit a building. The intangibles, measurable only by forms of appropriation of space, are not amenable of analysis when only analyzing the functions of space, considering the space as a flexible vessel for ownership and thus a *facilitator* of experiences.

Besides previous participatory experiences, the 1960s leads us back to the emergence of a bottom-up attitude of civic responsibility in shaping the physical environment. Architects came closer to the people, space embraced individual specificities, and people enjoyed the space they envisioned along with the architects. If the practice sought alternatives to the modern movement, theorists, particular study fields and respective publications were arising on the issues around man-environment relations, spatial perception, behavioral studies, proxemics (Hall, 1966), Ekistics (Doxiadis, 1964), environmental design, facility evaluation methods, evidence-based design, among others, all with their particular outlook on them.

Architecture and Experience - conceiving forms of engagement

The sensorial stimulus as a vehicle for a deeper and closer interaction between space and inhabitant(s) has already been recognized and dealt by diverse approaches and respective authors. Ernesto N. Rogers (1958) refers to *"esperienza dell'architettura"* and Rasmussen (1962) as *"experiencing architecture"*. Pallasmaa, within his phenomenological research, recently encapsulates it as *"understanding architecture"* (McCarter & Pallasmaa, 2012). By and large, and despite the choice in verb, architecture bears life within and possibly influences the actions that it shelters. So, the *living experience*, contextual and cultural as it is, is placed in space and time, and architecture is its vehicle.

According to Steven Holl, Pallasmaa *"[...] practices the unanalysable architecture of the senses whose phenomenal properties concretise his writings towards a philosophy of architecture."* (Holl, 2005, p.7). This assertion is most insightful since the space is considered to individually arouse the senses, but foremost this *"phenomena"* is considered *"unanalysable"*. Louis Kahn corroborates this statement with his famous saying: *"A great building must begin*

with the unmeasurable, must go through measurable means when it is being designed and in the end must be unmeasurable.” (Kahn, 1961, p.149)

On the other hand, Hacking in his essay *The creation of phenomena* (1983) claims for another perspective of the term phenomenology, which he shares with the realm of science: “My use of the word “phenomenon” is like that of the physicists. It must be kept as separate as possible from the philosophers’ phenomenalism, phenomenology and private, fleeting, sense-data. A phenomenon, for me, is something public, regular, possibly law-like, but perhaps exceptional.” (Hacking, 1983, p.222).

While the first assertion acknowledges architecture as perceived by each person’s relation to space, the latter may be translated into the recursive and collective features of use, and hence the actions a certain space is likely to project, assuming a common denominator for all.

Conversely, Bernard Tschumi (1990) argues that the unpredictability and the events are central for architecture, which can then be defined by actions rather than by shapes that merely create the boundaries of that experience. In fact, the acknowledgment of the lived space complements the design process, simultaneously approaching and validating concept and experience, creator and user. Thinking about the condition of architecture as a vehicle of sensorial stimulation, is thinking about contextual layers of architecture, not at the expense of functional or aesthetical values, or even by breaking the architect’s professional boundaries, but by recognizing architecture’s feature of conceiving a space that will contain life within.

The following projects are examples of spaces that potentiate the *living experience* and people’s engagement during the space’s lifecycle, conceived as such from the brief, foreseen in the design, drawings and building. Here spatial fruition is a matter of design and its main content.

This paper will initially address the projects that dynamically change spatial conditions presented *a priori* and whose sensory response by individuals is part of the experience in space. These works illustrate new skills and tools for architecture and stretch ways to experience space.

Michael Hays highlights that situation when addressing specifically Diller Scofidio and Renfro’s works: “These projects use the specific and irreducible techniques and cognitive potentials of architecture to articulate the crucial connections between our everyday encounters and experiences [...]” (Hays, 2003, p. 130). Precisely, in their projects architecture is a form of cultural production, focusing on communicating with the subject and the context, and establishing an *inter* and *trans*-disciplinary approach to the arts. By envisioning a shifting environment and a spatial experience in real time, they seek unconventional forms of expression through architecture, carving the stiffness of a defined shape, the boundaries of a specific functionality.

From *Facsimile*’s video projections (San Francisco, 2004) to *Arbores Laetae*’s “joyful trees” movement (Liverpool Biennial, 2008), other projects could be cited that represent “*life-enhancing*” architecture (Goethe cited in Pallasmaa, 2005), questioning the margins between built and natural world, real and virtual experiences, and encapsulating mind, body and architecture.

In 2002, the feeling of disorientation in which time was suspended, enabled the *Blur Building* (Yverdon-les-Bains, 2002) (Fig. 3) to enhance other senses of its visitors, drawing them to the decreasing temperature, the moisture in contact with the skin, the sound of the running water, and ultimately sustaining it as “*an architecture of atmosphere*” (Diller Scofidio + Renfro).

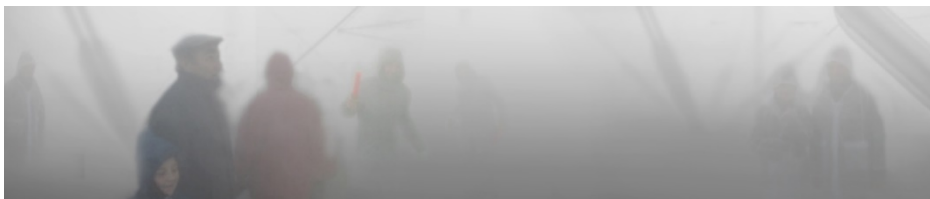


Fig. 3 *Blur Building* (2002), by Diller Scofidio and Renfro. Courtesy of Diller Scofidio + Renfro (<http://www.dsmy.com>)

The sensorial stimulation provided by the atmospheres created by Diller Scofidio and Renfro's works, is also present in other interactive design environments, like the changing lighting conditions according to the wind speed and direction at Toyo Ito's *Wind Tower* (Yokohama, 1986) or the exploration of different kinds of materiality through texture, color or light in Herzog & de Meuron's *St. Jakob Park* (Basel, 1996-2002).

Recently, kinetic experiences like Christian Moeller's *Daisy* (Singapore, 2008) - an arm like flower that faces the passing people - create interactive light, sound and movement environments. This connection between digital means and architecture happens currently at several levels, from the city, to the building or a particular space. Realities United, by Tim Edler and Jan Edler, also work within the boundaries of art, architecture and information technology. In *Transreflex* (Magdeburg, 2012) mirrored moving panels reflect the surroundings, and, by mimicking them, technological built environment becomes a part of the consolidated urban tissue.

The current experiments of dynamic architectural experiences that change positioning or physical conditions according to exogenous constraints, widely embrace and highlight life within them, by bearing with them the actual *living experience* in space in real time and considering it as a variable to be introduced from brief to use. These are examples where the digital is embedded in the actual core concept of the space triggering sensory experience, but that also artificializes our phenomenological relation with the environment through the use of technological means.

In other cases the spaces are impactful because they are empathic more than dynamic. These may happen not just by the use of technological devices and the expectancy of a particular reaction from the subject, but by the use of timeless tools of architecture: the raw light that reaches the volumes, color, texture and weight, emotionally engaging inhabitants.

Much remembering Le Corbusier's: "*Architecture is the masterly, correct and magnificent play of masses brought together in light*" (Corbusier, trans. 1960, p.31), for Tadao Ando the variations from light to shadow define space. But it is also his relation to matter, as a connection between the built space and the surroundings in which it grows, that arouse our emotional being.

The choice of materials and their assemblages provide different values and features to the space and modify and condition the way it welcomes people. According to Frank Lloyd Wright: "*Just as many fascinating different properties as there are different materials that may be used to build a building will continually and naturally qualify, modify, and utterly change all architectural form whatsoever.*" (Wright, 1943, p.37). And if for Tadao Ando materials are a means to relate architecture and environment, for Peter Zumthor the use of a particular one, a set of materials, or even the techniques for carving them, are ways to create a specific atmosphere and ultimately, a moving sensation caused by a spatial experience: "*Sense emerges when I succeed in bringing out the specific meanings of certain materials, in my buildings, meanings that can only be perceived in just this way in this one building.*" (Zumthor, 1988, p.11).

These concerns are differently embodied in works like Zumthor's *Brother Klaus Field Chapel* (Mechernich, 2007), Lewerentz's *St. Petri Church* (Klippan, 1963) or Siza's *Swimming Pool* (Leça da Palmeira, 1961-1966). Here people are taken aback by variations of light and texture, and overall their most unique material, light and haptic features arouse the senses.

Also, the use of vibrant and contrasting colors, in works such as Barragán's *Casa Gilardi* (Mexico City, 1976) or Aymonino's *Gallaratese* (Milan, 1967-74), are a powerful means to the senses. But besides sight and touch, also scent and sound play a defining role when aroused. The dominant scents of the Spice Market in Istanbul (Fig. 4) or the sound of the dripping water and the humidity steeped in the air of the Byzantine Basilica Cistern (Fig. 5) translate these senses onto spaces, much like the deep olive oil scent embedded in the stone vats of Joseph Beuys's *Olivestone* (1984) or Patrick Süskind's book *Perfume* (1986). Like the fruition of other art forms, our senses become alive with the slightest glimpse at the sensuous atmosphere.



Fig. 4 Spice Market, Istanbul



Fig. 5 Basilica Cistern, Istanbul

Assessing the *living experience* - a case study

The projects mentioned above are some examples of spaces that hold particular meanings and features and because of them, provide ways of engaging people while experiencing space. Clearly, these cannot merely be described and communicated by the classical architects' tools and concepts like scale, shape, weight or program, to express the materiality of their features, because they shake the boundaries of architecture and blur the binomials natural/artificial, design/use, shape/dematerialization (Fig. 1).

The fact that this *living experience* is taken to this extent implies expanding the traditional stages of the design process, the timeless hermetic architectural drawings for its communicability, and foremost acknowledges space as an active catalyst rather than a passive scenario or a blank container, therefore, redefining the design process and the design studio, the built space and the space use, the creative professionals' role and the range of stakeholders and inhabitants.

This paper happens within the context of a broader research for a PhD Thesis, which focus on *Life within architecture* and recognizes both participatory design processes and space use studies. It aims to define an original operative tool to identify and assess the *living experience*, specifically intended to the case study of the recently rehabilitated Portuguese school buildings that gather regular and music teaching in a cross-curricular pedagogical model.

Yet still under development, the main case study of this research, on which the mentioned tool will be applied on, is Quinta das Flores School, built in 1968, and rehabilitated in 2008-2009 into a Basic, Secondary and Music School in Coimbra. Besides its wide educational provision that bonds transversally the subjects of regular and music teaching, and due to a naturally creative profile of the artistic students and the spatial features of the school, music is not only confined to the classroom, but is also played in the several informal and non pedagogical spaces the school has, conveying these sensitive and emotional experiences to the whole school community.

In order to study this hybrid spatial set and broader range of inhabitants and actions, it is intended to assess the degree of adaptation of the space for a multi-layered *living experience* within a longer lifecycle. Hence, the study will focus on the spatial features that potentiate and stretch the *living experience* in schools, regarding their influence on the cognitive and social levels and respective interactions, and defining them as a main design concern, from the brief.

If solely plans and sections no longer define the spatial identity of a building, and if they are only fulfilled by the inhabitants' spatial fruition and, reciprocally, by the way space engages the inhabitants, then subjects within user research studies will better report them.

In fact, today, Usability Studies are a valued area for architectural research, by implying the direct understanding and assessment of space use in real situations, whose results can be subsequently introduced into other design processes, as systematic knowledge transfer of relevant and accessible data for architects. Therefore, the design process should embrace these outputs as a

way to acknowledge use and its changing conditions, adjusting expected and effective spatial fruition. Each subject's different methodologies and outputs, within a common conceptual framework on the relevance of user research, act as contributions to be considered in the design process, informing professionals while conceiving space, for a more comprehensive solution, along space's lifecycle: "*Action and intention are inextricably linked.*" (Evans, 1997, pp.16-17).

Indeed, there are diverse methods to analyze, describe and quantify (if needed), this relation between people and place, space and action, at different stages and with different purposes. The choice in method will be constrained by the way *experience* is portrayed and materialized, whether collective or individual, intellectual or sensitive. If the inhabitant is engaged by a dynamic, visual, haptic, olfactory or hearing experience, so the physical features of the space will play a crucial role to process the devices that generate that experience. On the other hand, if it provides a more intellectual experience, then the analysis will focus on how space is perceived mentally and emotionally.

Collective data will check for regularities, such as densities, uses and patterns, by means of quantitative methods, that can be transferrable to the practice. Analytical methods like space syntax, for instance, provide results based on spaces' morphological features, concluding on the kind and frequency of uses for each space and/or path. Also, post-occupancy studies will provide input on the current space use according to the actual circumstances and functional needs.

Likewise, information focused on the individual, will provide a detailed depiction on each one's actions and overall experience in space, *assessing spatial fruition* rather than *measuring space use*. This can be done by a neutral observer, whether or not supported by technological means, for quicker and accurate conclusions. Or else by *self-report methods* (Lippman, 2010) - such as interviews, narrative techniques, time sampling, diaries or any other way of individual expression - informing on a particular individual's engagement to space, translated into qualitative descriptions of his *experience*, regarding which senses does the space reach and by what means, and foremost acknowledging the uniqueness of each one's *living experience*.

This case study's output will then be expected to inform the practice on the actual spatial fruition the school promotes, proven by research in a real scenario, enclosing experiencing users and creative professionals in a more whole, informed and participated design process, blending life and space, from brief to use, similarly to what Aalto already conceived in Paimio's Sanatorium. In 1940, Aalto mentioned that the results from the studies applied to the Sanatorium contributed to the choice of materials, lighting, sound and heating conditions, for the well-being of the patients. Concluding that the technical aspects thought in combination with physical and psychological concerns would better fulfill the inhabitants' needs and idiosyncrasies and at last would "*humanize architecture*", which "*[...]can be accomplished only by architectural methods – by the creation and combination of different technical things in such a way that they will provide for the human being the most harmonious life*" (Aalto, 1940, pp.102-103).

Final remarks

"The lights go out. It's not gray, it's black. It is sad, rests. The buildings and objects and spaces, are not happy nor sad. They exist when people get there and they exist because of that and for that." (Siza, 2007, free translation)

This paper is expected to arouse the issue of *life within architecture* and the way it is envisaged by different study fields within its common disciplinary ground, and describe how it can be introduced from the initial brief definition and the initial design conception to the actual *living experience*, also reflecting on its potential *excepted* and *effective* experience overlapping.

As highlighted earlier, the *living experience* can be understood by numerous assertions, realms of study and authors. The way of assessing that experience, will then also vary according to its interpretation, but also, the purposes of that assessment, the nature of the design and the features of the space, the way it engages people, and how its feature are able to do it so.

Accordingly, this paper aims to provide a broader sight of the possibilities of considering experience at the multiple stages on both the design and the occupancy of space, assuming that enclosing distinct perspectives could also represent a thorough outlook on the subject and provide results derived from different fields in a more insightful report of that spatial experience.

The specific case study of the school space that blends artistic and regular curricula enables particular circumstances where space actively engages the teaching and learning processes, peer interaction and ultimately *life within architecture*.

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