"Addressing Permanence. Housing polyvalence in the work of contemporary architects"

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ADDRESSING PERMANENCE

HOUSING POLYVALENCE IN THE WORK OF CONTEMPORARY ARCHITECTS

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INTRODUCTION

Architecture has always been acknowledged to be a permanent human artefact. This characteristic differentiates it from consumer goods and allows humans to dwell on a long-term basis. Yet this permanence is being challenged since inhabited spaces began to become obsolete at an increasingly rapid pace. This obsolescence is due mainly to the fast evolution of three factors, reflecting each principle of the traditional Vitruvian triad: *utilitas*, changing ways of life; *firmitas*, evolving construction techniques; and *venustas*, ever-changing aesthetic codes.

Different architectural approaches have been espoused on how to address this issue of constant changes. Some, such as Gerrit Rietveld and Kisho Kurokawa, seek in space flexibility a solution for the uncertain future uses of buildings. Thus adjusting to changes is made possible through the use of adaptable spaces. Moveable features, expanding devices, transformable structures… allow for varying functional demands. These strategies address primarily the unpredictable *utilitas* obsolescence.

Others, who practise mainstream sustainable design, focus on the *firmitas* changes, depicting obsolescence as a technological problem. In this case, architecture is mainly driven by technical or structural considerations such as innovative construction systems and materials, thermal insulation, HVAC issues and so forth. Consequently, what is generally recognised as an overall sustainable design only addresses one of the factors of obsolescence.

Thirdly, some, such as John Pawson and Andreas Ruby, argue that a counter tactic to obsolescence would reside in a timeless formal design. As such, this design could overcome ever-changing styles. This approach to obsolescence is primarily a *venustas* one.

Eventually, some architects, including Le Corbusier and Rem Koolhaas, regard obsolescence as an end in itself, advocating short-life buildings. According to them, regeneration should undergo a demolition process, recalling the modernist’s *tabula rasa*. Architecture is seen as a throwaway consumer product unable to pass the test of time. Hence, permanence is no longer regarded as one of architecture’s main attributes and superseded buildings should be torn down every twenty-five years when they are outperformed by more suitable ones.

PERMANENCE IN A WORLD OF CHANGE

Obsolescence is caused by changes in one or any combination of the *utilitas*, *firmitas* and *venustas* principles, jeopardising the equilibrium of the Vitruvian triad. The four approaches listed above try to address the obsolescence issue. But whereas the first three widely overrate one of the Vitruvian principles in resolving the issue while leaving the other two aside, the fourth one dismisses them all at once.

Another approach facing obsolescence would be to reassess its causes. Undeniably, changes lie within every principle of the triad. The approaches outlined above seek to understand and respond swiftly to those changes in keeping with their fast pace. Yet ‘the rapid obsolescence of all too specific solutions leads not
only to dysfunctionality but also to serious inefficiency. Therefore, instead of addressing immediate change, one could try to figure out what is resilient to change and what is permanent? The question that arises is whether it is possible to produce architecture relying on essential features that are permanent. If fast changes primarily affect secondary features, is it possible to produce an architecture discharged from functional, technological or formal contingencies? An architecture beyond contingency.

Architecture is made out of two things. On the one hand, essential elements – archetypes – are permanent and slowly evolving features. Archetypes can be considered as the underlying principles of architecture. Some, such as Auguste Perret and Bob Van Reeth, speak of them as the future ruins of architecture, what will be left once the unnecessary is gone. On the other hand, secondary elements – contingencies – are changeable and replaceable according to fashions and transitory cravings. Contingencies are the superficial features of architecture. By their very nature, contingencies are more vulnerable to change and tend to experience a quicker depreciation in time. Consequently, architecture that relies too much on the latter would be exposed to a swift and overall obsolescence.

As Wittgenstein declared, ‘the difference between a good and a poor architect is that the poor architect succumbs to every temptation and the good one resists it.’ The temptation for contingencies can be found within all three Vitruvian principles, recalling the first three approaches responding to change listed above. Functionalism seeks in function alone the driving force of design. Formalism tries to counterbalance this approach, yet falls for a blind fascination for aesthetics. Finally, technicism tries to tackle change through pure technological knowledge. All three monovalent temptations fail to give a balanced answer to obsolescence.

Distinguishing permanent archetypes from contingencies is therefore fundamental. Once that is achieved, designing architecture beyond contingency would allow considering all three Vitruvian principles with a maximum chance of evolution. A design based beyond contingency maximises its future uses, technical evolutions and formal expressions, providing a sustainable way to challenge obsolescence altogether. The intention of this paper is to bring to light this particular position regarding obsolescence in the case of contemporary housing design.

A PRIMAL DIMENSION: THE ROOM

Among permanent things in architecture, the room stands out as having been central ever since the first primitive hut. Louis Kahn saw the room as ‘the beginning of architecture… Architecture comes from the making of a room.’ The room is the primal artefact in any human dwelling. It can therefore be considered as the minimal dimension from which the idea of permanence can be questioned. Yet, rooms are not equivalent. Uses, formal expressions and technical implementation vary a lot between a monastic cell, the interior of the Pantheon or the Piazza San Pietro in Rome.

In this paper, the room is looked upon in its most fundamental sense, as human dwelling. Hence, the basic domestic chamber can be regarded as the primal architectural space. In a quest for permanence, one could try bringing to light the fundamental characteristics of the room, its archetypal character. Throughout domestic architecture history, a room stands out as an acknowledged archetype: the four-by-four-metre room. As a matter of fact, this room seems to be a genuine polyvalent structure.

Such rooms are illustrated in early domestic treatises by Serlio, Le Muet and Durand. Treatises, although theoretical, are always based on real case studies. They provide us with insight into how architecture was thought and built at the time. Interestingly, those treatises present non-contextual housing plans. They

1 Hertzberger, Herman, and Marieke van Vlijmen, Lessons for Students in Architecture, 010 Publishers, 2001, p.146
provide us with an inventory of floorplans and sections that illustrate primarily internal levers of architecture. Those domestic treatises focus on space and spatial relationships before addressing amenities. They investigate directly the inherent characteristic of architecture: the production of space. Only space dimensions, hierarchy and topological relations are at stake.

In those treatises, the smallest abodes display at least one room encompassing a four-by-four-metre surface. Moreover, in the case of Le Muet, the drawing boards begin with la première place, the presentation of a twelve-foot-wide house (four metres). It reveals a room of four metres by four-and-a-half metres on the first floor. For his part, Durand focuses directly on the four-by-four-metre space as he develops la maison à neuf cases in the first volume of his Précis.5

In those theoretical examples, the smallest dwellings ‘have provided a place of about four by four metres in size where people can get together.’6 This consideration is confirmed by an analysis of various historic types.7 The interest of those types lies in their very nature. Indeed, they are the result of a long sedimentation process of uses and techniques in order to attain the quintessence of local dwelling needs. This process leaves aside all contingent elements to retain only the essential, the underlying structure of housing. Therefore, the persistence of the four-by-four-metre room illustrates something permanent about domestic dwelling.

Such a room demonstrates polyvalence in every facet of the Vitruvian triad. On a functional level, it can accommodate all dwelling functions without any spatial change.8 According to Kiyoyuki Nishihara,9 six basic human functions take place in a human home: eating, cooking, bathing, sleeping, getting together and working. The four-by-four-metre room seems to be able to accommodate all six. The standard designation of all rooms by the generic term ‘chamber’ in domestic treatises reinforces this idea of functional polyvalence. On a technical level, it is abstract enough not to engage in the field of technicity. Durand’s work is instructive in that regard. Indeed, the plan of la maison à neuf cases does not undergo any variation although four different construction techniques are ventured. Finally, on a formal level, it is conceptual enough to accommodate any kind of appearance. Hence, the permanence of such an archetypal dwelling space relies on its ability to accommodate changes on a functional, technical or formal level.

CONTEMPORARY ARCHETYPES – PEZO VON ELLRICHSHAUSEN

Interestingly, architectural archetypes have regained attention among contemporary architects in their quest for essentials. This is effective both in collective and individual housing. As was the case with historical types, the persistent use of the four-by-four-metre room is sometimes a key design element nowadays. However, technical issues relating to water and heating often seem too specific to push polyvalence to its epitome. In that regard, the 1920s were a turning point in housing design, switching from traditional polyvalent types to specific modernist plans. This shift coincides exactly with the generalisation of water technologies (water supply and sewer connection) in domestic buildings.

In the field of individual housing, archetypes and the archetypal room have also been resurgent themes for contemporary projects. Some of those directly recall la maison à neuf cases of Durand. Remarkably too, the floor plan drawn by the French architect could be seen as one of the proposals for the Nine-Square Grid problem exercise taught by John Hejduk10 in architectural studios from the mid 1950s.

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7 Ledent, op. cit.
8 As suggested by Bernard Leupen in his dissertation (Leupen, op. cit.).
In that regard, the work of Mauricio Pezo and Sofia von Ellrichshausen is remarkable. Not only have they produced a consistent reflection about archetypal dwelling, but the archetypal room itself seems to have become the basic element in their dwelling compositions. In their work, archetypes have become a generic theme acting beyond functional, technical or formal contingencies.

ARCHETYPAL DWELLING

Regarding their reflection about dwelling, the work of Pezo von Ellrichshausen goes beyond the specific demands of each context (where context is understood as a combination of site and programmatic demand). In that sense, the idiomatic structures they produce seem archaic. This approach recalls that of Rudolf Wittkower, in his studies of Andrea Palladio’s villas, which were drawn according to a constant underlying grid which was adapted to local contingencies. To define their work, the architects themselves speak of format as the ‘definition of a generic outline; a schematic plan traced according to basic variables, such as extension, direction or proportion. Non-referential, non-contextual, non-constructive, the format is a marginal line without thickness. It is a silent general sense of an architectural structure; its meaning can only be found in the precise alignment of size (and therefore scale) in a specific location.’ This format can be likened to Palladio’s underlying grid mentioned by Wittkower.

Hence, Pezo and von Ellrichshausen produce a set of general rules for their projects:

First, the volumes produced are austere. With a composition method ‘primarily based on rational and abstract models of space,’ Pezo von Ellrichshausen produces silent and almost mythical monoliths, where parts are so strongly intertwined they can hardly be separated. Second, composition wise, the operative spatial structures are plain and straightforward. Pezo and von Ellrichshausen use ‘elementary mental figures that we occupy to depict spatial relations (crossed, central, peripheral…).’

Third, the dwellings designed by Pezo von Ellrichshausen, although nurturing an elemental bond to landscape, are detached from their immediate setting. This is noticeable in two respects. On the one hand, all their buildings present an artefact detaching them from the ground. This feat is managed through a plinth (Casa Cien, Casa Solo, Casa Guna, Casa Arco etc.) or an artificial podium (Casa Meri). Interestingly, the Buggenhout villa by Office KGDVS presented above displays a similar attitude regarding its setting. Here too, the dwelling acquires independence from its surroundings through a peripheral fence. This environment independence recalls architectural treatises where site contingencies were not a design issue. On the other hand, most of the houses built by the Chilean architects are oriented according to the points of the solar compass, as if referring to a horizon far beyond their immediate environment. Most compositions being quadrangular, this arrangement gives each façade and the rooms they relate to a specific relation to the sun. This recalls ancestral dispositions where the relation to the sun was fundamental.

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14 Ibid., p.54
Finally, this quest for archetypes is also illustrated in the way Pezo and von Ellrichshausen communicate about their work. Indeed, they document it in such a way that it can almost be regarded as a typological catalogue. All buildings are drawn precisely, with the same minimal graphic codes, starting with a split axonometric drawing. What is more, those representations seem de-personified and thus universal. As Perez mentioned, ‘akin to the strategies of a handbook, the elimination of differences favours comparisons and refers more readily to types; that is, to categories of an objective, supra-individual order.’

ARCHETYPAL ROOM

In addition to this quest for dwelling archetypes, the archetypal room constitutes the keystone of most of Pezo von Ellrichshausen’s individual housing projects. A first indication of this propensity is their relation to circulation spaces. In some houses, circulation acts as a transition between in- and outside. Sometimes, it even disappears in the thickness of the walls along with the service spaces. In other cases (Casa Gago), the transition between rooms is limited to a couple of stairs. While some rooms are directly connected to each other by a few steps, others communicate through a staircase with no vestibule. In most cases however (Casa Meri, Casa Solo etc.), circulation spaces vanish completely, all rooms being connected as in the Renaissance enfilades. In those houses there are no corridors, the chambers are linked through passages or connecting doors. When circulation spaces disappear entirely, the house becomes a basic ‘matrix of interconnected chambers.’ All attention is drawn to the chambers’ constituents.

Second, the archetypal four-by-four-metre room has explicitly become a cornerstone in Pezo von Ellrichshausen’s housing projects, often leading to a ‘set of identical rooms that only vary in their relationship to the outdoors.’ Their simplest house so far, the Casa Arco is a clear example of that reflection, being built on the base of two adjoining chambers. In all other houses, the four-by-four-metre room is a persistent component. This persistence is not only present in their design work but also in their graphic works.

16 Ibid., p.12
ARCHETYPES TO ALLOW CHANGE

This persistence of archetypes and of the archetypal room is interesting on three levels for its capacity to allow change. On a formal level, the abstraction of geometrical figures (such as the square) focuses on the essentials. It suspends any secondary consideration. Interestingly, the work of Pezo von Ellrichshausen for the Chilean Pavilion of the Venice Biennale of 2008 was based on the same idea.

Moreover, the question of wall openings reinforces this stance. Three kinds of wall openings can be found in Pezo von Ellrichshausen’s work: square, gold rectangle windows or plain openings. As such, they are the bearers of no particular meaning. They act as holes without direction, as if they had always been there (See Figure 3A: Casa Poli, Casa Arco, Casa Meri.). Finally, materiality does not seem essential. It is either absent or blunt. Indeed, their communication drawings display neutral and immaterial buildings. Furthermore, their projects are always constructed in rough materials (wood or concrete). In the same vein, while the Buggenhout Villa is uncompromisingly coated with bitumen, Shigeru Ban’s proposal is almost ethereal.

On a functional level, the four-by-four-metre room can accommodate all kinds of programmatic needs, making the chambers interchangeable. In some cases also, exterior spaces could easily evolve according to the changing needs of the inhabitants (Casa Solo). Moreover, the furniture is designed in such a way that no functions are foreordained. Furthermore, most of the function-defining furniture (tables, beds etc.) is moveable. Interestingly, Shigeru Ban dismissed this problem altogether in his Nine-Square Grid House by placing all the furniture in two service slabs on the sides of his building. Casa Poli is designed in this way but in a spiral arrangement. (See Figure 3B: Casa Poli; Shigeru Ban, Nine-Square Grid House.)

On a technological level, two nagging questions are treated: water and heating. They have been specifying spaces ever since the turn of the twentieth century. In Pezo von Ellrichshausen’s work, the water issue is not treated as an ostentatious feature. Their design is barely modified by water supply or sewage issues. On the contrary, as one can note in the Casa Meri for instance, the entire chamber becomes a bathroom with a tub in the middle.

The Villa Buggenhout by Office KGDVS displays the exact same disposition. In the latter, the systematism is pushed even further: a service room on the ground floor is no different from the other rooms, while it gathers all service devices (toilet, furnace, meters etc.). Nevertheless, the architects designed a far more traditional composition for this chamber in their earlier sketches. (See Figure 3C: Casa Meri; Office KGDVS, Villa Buggenhout; Shigeru Ban, Nine-Square Grid House.) When it comes to heating, the devices are mostly invisible. When there is a stove in the room, it is treated as an independent piece of (almost) moveable furniture. Moreover, some rooms do not have a genuine window but are closed off by a sole curtain. Others, like the central room of Casa Solo, do not even have a roof.
DESIGNING BEYOND CONTINGENCIES TO ALLOW FOR FUTURE CHANGES

We live in a world of rapid changes. Adjusting to those changes would mean perpetual adaptation. But a shift of paradigm could also be sought: one could investigate what is resisting change, what is permanent. This quest for resilience is in deep contrast with today's consumer era. In architecture, archetypes summarise those resilient features. As such, they are primordial schemes that allow for polyvalence on a secondary level. First, they allow for various formal expressions and interpretations. Second, they allow for functional evolution. Third, they allow for technological adaptability.

Archetypes involve abstraction. Archetypes are, by nature, beyond contingency. In architecture, their motives rely on spatial determination rather than on technological, formal or functional qualification. As they depend primarily on internal relationships, they are autonomous designs. Yet, they do not aim for universality as modernist designs did. On the contrary, within this primary framework, secondary elements can be articulated. On the most rudimentary scale, the room is the root of architecture. Archetypal rooms form the core of permanence. Such rooms, designed beyond contingency are a promise of future development.

This view regarding obsolescence has been widely implicit until the twentieth century and is now supported by contemporary architects such as Pezo and von Ellrichshausen. Their individual housing design relies strongly on archetypes allowing contingent variations on a formal, functional or technological level. Within those archetypes, their designs revolve around a basic room, a four-by-four-metre space, which has demonstrated though history its capacity to be polyvalent on all three levels. Far from being some kind of formal mannerism, this attitude towards the production of archetypes rather than direct answers to contingent elements can promote a new form of sustainability.
BIBLIOGRAPHY


