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The sociological dimension of concrete interiors during the 1960s

Angelique Campens[1]

ABSTRACT Almost all architects today have abandoned making prescriptions for how people should live. They have learned from the mistakes of Modernism, when architects sought to construct the ideal home for the family. The now nearly universal judgment is that they inhibited the very thing they promised because their ideals failed to understand that living is a continual process of growth and adaptation. Nevertheless, many modernist homes still exist, and many are strikingly beautiful, with unique aesthetic and sculptural qualities. Of particular note are homes built in the 1960s, when a series of architects used the booming trade in concrete to create buildings of the most imaginary shapes and forms. But how can the modern family make their everyday lives in a space that is itself a work of art? How are inhabitants making homes in these complex, concrete structures? How did the family unit grow and evolve in them? To answer the questions, the most proscriptive designs are the most interesting to study. They take us beyond formal analyses and into the praxis of art, where we must rely on sociology and psychology as much as aesthetics. This article will engage these broader questions through a specific focus on homes designed by Juliaan Lampens. The research draws from archival work, literature study, on-site visits and interviews. Lampens is significant not only for the boldness of his forms but for his insistence on limiting walls and creating extremes of openness within the home. This article argues against a pure ideological critique of Lampens' homes and focus instead on an understanding of how the homes were actually inhabited. In this way this article seeks to restore to modernism its complexity as a lived reality rather than criticize it in terms of its own formalism. These are considered alongside other architects, contemporary to Lampens, who shared similar ideas about living and building. Together these dwellings constitute a constellation that highlights the international scope and variation of Brutalism and, furthermore, brings to light the often overlooked unique sculptural qualities, forms and characteristics that emerged within Brutalist architecture. The essay focuses on two homes: the Vandenhaute home, built for a family of six, and the Vanwassenhove home that had a solo inhabitant. Lampens proposed strict regulations for those in his homes. The essay traces how Lampens developed this position to the extreme, and, in so doing, really did change how people lived. At the same time, this paper insists that architecture is part of a social world, and we need to evaluate both its successes and failures in order to better understand the potentials for future utopian design. This article is published as part of a collection on interiorities.

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> Gradually a recognized differentiation developed: sculpture is three-dimensional art to be experienced from outside; architecture is three-dimensional art which one can also experience from inside.[1] - Marcel Breuer

Introduction

Despite the general turn against modernism[2] it is widely acknowledged that many modernist homes are strikingly beautiful masterpieces, with absolutely unique aesthetic and sculptural qualities. Of particular note are homes built in the 1960s, when a series of architects used the booming trade in concrete to create buildings of the most imaginary shapes and forms. Are we to think of these structures as houses with strong sculptural sensibilities or as sculptures with dwelling potential?

But the real question we want to ask is: how can modern people weave their everyday lives inside a work of art? How are inhabitants today responding to living in these complex, concrete structures that were themselves responses to living in homes during the 1960's? How did the family unit grow and evolve in them? In a way, the most prescribed designs are now the most interesting to study because they take us beyond formal analyses and into the praxis of art, where we must rely on sociology and psychology as much as aesthetics.

In what follows I discuss examples of 1960's concrete architecture from private dwellings with sculptural characteristics derived from brutalism and the architecture of the post-war bunker. Particular attention is paid to the way inhabiting these buildings has changed over time. I locate this change in relation to the broader transformations in the concept of the house in the 20th century and the shift towards a concept of the house as an ideal construction for family life.

The key example of the essay are the private dwellings of the Belgian architect Juliaan Lampens. These are considered alongside other architects, contemporary to Lampens, who shared similar ideas about living and building (the family nucleus, living together as community). These foregrounded examples are placed against their modernist period background.

Domesticated brutalism[3]

Brutalism and the concrete house. In the 1960s, the functional, abstract and rigid building of the past was counterbalanced with a more sculptural sensibility in building with concrete. Paul Rudolph (2008) noted in an interview in 1969:

> From the Bauhaus and the so-called 'International Style' came a certain rigidity of thinking that was so barren it didn't leave us with much of anything. It tore down everything and it didn't build up enough. Slowly but surely, the concepts are being widened. (Rudolph, p.105)

New Brutalism was part of this conceptual widening, especially insofar as it was trying to deal with the challenges posed by the rapidly changing housing needs of 20th century people. Cities were now bigger, denser, faster and noisier and this meant houses increasingly became thought of as structures that afforded protection from the outside world. The ethos of New Brutalism was expressed by English architects Alison and Peter Smithson:

It can be said that we always need protection—a protection different for every tribe in every time. There is now in Western Europe a pressing need for protection from a glut of noise, movement, things … we need to protect our territory more urgently and very differently than Mies can have imagined in the thirties"(Smithson and Smithson, 1994: 47).

Concrete architecture in the 1960s is usually associated with public buildings in Europe, the United Kingdom and the United States. This leaves whole groups of significant private houses more or less unstudied by architectural historians. Examples of concrete private dwellings merit study because they explore conceptual and formal question integral to 20th century ideas about home living. The dominant focus on public building in the 1960s is noted by Elaine Harwood in a chapter on private houses in her book on post war 1945–1975 English architecture: *Space, Hope and Brutalism:*

> In an era dominated by public works, it is easy to overlook the building of private houses. Yet, though eclipsed by the increasing scale, range and prestige of other commissions, the house remained a perfect vehicle for experimenting with new ideas, and many small practices specialised in the genre. (Harwood, 2016: 117)

Although the focus lay on public housing she stresses that "In the post-war years it became possible to design a house in any style using any material" (ibid.). These material possibilities allowed architects to experiment more than even before in the relations of outside to inside of building.

Simultaneously the use of the bunker motif emerged in late 50s, 60s, and 70s domestic architecture. These homes conflated the formal features of the bunker prototype with the design styles of a consumer culture premised on rugged individualism (see below on the shape of the bunker paragraph A home is a bunker). This was achieved, for instance, by being closed to the public street on one side, but completely open and transparent to nature on the other. Though not directly associated with brutalism, the architecture of Juliaan Lampens stands as a significant variant of this style: materially in his use of raw concrete and formally in his allusions to bunker-typology. He experimented for some time with raw concrete in order to form his style of bunker-like exteriors combined with open vistas and sculptural motifs. The transparent extreme can be seen in his Vandenhaute House and the tendency towards closure is strongly manifest in his Van Wassenhove House.

Circling back to this essay's central inquiry, the question now arises, firstly: how were the concepts of Brutalism applied to these concrete private houses? And secondly: what was it actually like to live in one of them?

The first question arises because Brutalism was based more on ethical than aesthetic concepts and were therefore was considered more applicable to social housing. Brutalism was in many ways a reaction against rigid modernism.

Laudable though these utopian ambitions were, the now nearly universal judgment is that they inhibited the very thing they promised by omitting the essential fact that living means room for growth and adaptation. As a result of this concern, architects are more consciously attentive to what they can learn from the inhabitants who use the space. Instead of building ideal spaces with prescriptions for how to live, architects are now more attentive to how inhabitants make do with what is already there.

This re-orientation of architectural values towards inhabitation was taken up by theorists Theodor Adorno and Henri Lefebvre. Both criticize the dominant role of the architect and both agree that architecture should start with the needs of the inhabitant. Adorno speaks of an architecture that is *for* people, as something that articulates "space purposefully" (Adorno, 2010: 14)[4] and organizes space in a way that is fitted to need. Lefebvre always thinks about space in relation to everyday living. He criticizes architects for their abstraction from the reality of everyday life:

> "The user's space is lived—not represented (or conceived). When compared with the abstract space of the experts (architects, urbanists, planners), the space of the everyday activities of users is a concrete one, which is to say, subjective. As a space of 'subjects' rather than of calculations, as a representational space, it has an origin, and that origin is childhood, with its hardships, its achievements and its lacks." (Lefebvre, 2010: 362)

By re-thinking architecture as the creation of neutral space which inhabitants define by use, *New Brutalism* can be seen as a response, albeit indirect, to the work of thinkers like Adorno and Lefebvre. Alison and Peter Smithson announced in a essay from 1952–1953 a" turn towards an architecture of 'ordinariness'" "Ordinariness" was "defined as creating neutral spaces for clients to personalize, or what they called "inhabitation" (Harwood, p. 124). The Smithsons refer to a *new aesthetic* that is a rupture with modernism:

> The magnificent, intensely intellectual architecture of the twenties, the architecture of lyrical, polychromatic geometry, showed no interest in material as such. The new aesthetic starts again with life and with a love of materials. It tries to sum up the very nature of materials and the techniques with which they are put together, and, in an altogether natural way to establish a unity between the built form and the men using it. (Smithson and Smithson, 1970:113)

But there are actually not that many examples of so-called *pure Brutalism* in private dwellings. This is partly to do with Brutalism's critique of bourgeois architectural values and partly to do with a general consensus that concrete structures made for cold domestic environments and were suitable only for public buildings. Because concrete interiors were considered harsh, the concrete houses that were built seem to be more derivations of Brutalism than pure examples of it.

These derivatives (see below examples paragraphs Two houses of Juliaan Lampens and In the light of Le Corbusier – Other International examples.) were softer, often with sculptural features and a concern (or at least the appearance of a concern) for livability. These structures broke completely with the glass box style and its idealistically open interface with the outside landscape, turning instead towards a realism that accepted the main thing to do was turn your back on the outside public and open up everything in the private interior.

We will now address our main questions (how were the concepts of Brutalism applied to these concrete private houses and what was it like to live in one of them?) to the homes designed by Juliaan Lampens and also to his contemporary architects with similarly radical ideas about building. Lampens is significant figure for both the boldness of his forms and his insistence on limiting walls and creating extremes of openness within the home. In this essay I don't follow the ideological critique of Lampens' homes (that is, they are high modernist formalism for rich people) and instead focus on an understanding of how the homes were actually inhabited. In this way I seek to restore to modernism its complexity as a lived reality rather than criticize it in terms of its own formalism.

Two houses of Juliaan Lampens. If the question is whether an artwork can be a good house, then the domestic architecture of Juliaan Lampens has provided an affirmative, albeit particular, answer. (Figs. 1–7) The answer is affirmative because his houses are largely still inhabited by the clients who commissioned the house and many have inhabited them until the end of their lives. Families who have lived and grown up in his buildings report that his architecture has a unique sense of space that creates a special atmosphere for living together.

How inhabitants dealt with this unique sense of space will be explained through two examples: the Vandenhaute home, built for a family of six, and the Van Wassenhove home, built for a single inhabitant. As usual, Lampens proposed strict regulations for these homes. First of all, he designed the homes based on a completely open plan without pillars or walls. All the rooms were placed to practically conjoin with each other—the kitchen, living room, bedroom and bathroom all in one open space. Against the bourgeois insistence on individuality, privacy, and patriarchy, Lampens' design privileged community and equality in the living space. This should be seen in the spirit of the time that architects were still interested in with architecture's life-enhancing potential. Lampens ideas of open plan come close to the modernist desire to create environments focuses on childhood development, as the

Figure 1 | Juliaan Lampens 1967, House Vandenhaute-Kiebooms, Huise (Zingem). Photograph Archive Juliaan Lampens. Reproduced with permission. Copyright (© Juliaan Lampens Foundation). This figure is not covered by the Creative Commons Attribution 4.0 International.

Figure 2 | Juliaan Lampens 1967, House Vandenhaute-Kiebooms, Huise (Zingem). Photograph Archive Juliaan Lampens. Reproduced with permission. Copyright (© Juliaan Lampens Foundation). This figure is not covered by the Creative Commons Attribution 4.0 International.

Figure 3 | Juliaan Lampens 1967, House Vandenhaute-Kiebooms, Huise (Zingem). Source: image reproduced by permission of Jan Kempenaers. Copyright (© Jan Kempenaers (School of Arts Ghent). This photograph is covered by the Creative Commons Attribution 4.0 International license.

Figure 4 | Juliaan Lampens 1967, House Vandenhaute-Kiebooms, Huise (Zingem). Source: image reproduced by permission of Jan Kempenaers copyright (© Jan Kempenaers (School of Arts Ghent). This photograph is covered by the Creative Commons Attribution 4.0 International license.

Figure 5 | Juliaan Lampens 1974, House Van Wassenhove, Sint-Martens-Latem. Source: image reproduced by permission of Jan Kempenaers. Copyright (© Jan Kempenaers (School of Arts Ghent). This photograph is covered by the Creative Commons Attribution 4.0 International license.

Figure 6 | Juliaan Lampens 1974, House Van Wassenhove, Sint-Martens-Latem. Source: image reproduced by permission of Jan Kempenaers. Copyright (© Jan Kempenaers (School of Arts Ghent). This photograph is covered by the Creative Commons Attribution 4.0 International license.

Figure 7 | Juliaan Lampens 1974, House Van Wassenhove, Sint-Martens-Latem. Source: image reproduced by permission of Jan Kempenaers copyright (© Jan Kempenaers (School of Arts Ghent). This photograph is covered by the Creative Commons Attribution 4.0 International license.

MOMA, 2016–2017 show *How Should We Live? Propositions for the Modern Interior* made clear:

> There was general consensus, however, that the interior environments in which children were raised were a crucial formative influence on their physical, emotional, and intellectual development. Playrooms and open-plan family rooms became increasingly important features of affluent postwar homes, reflecting more casual lifestyles and greater informality between adults and children. (…)" (MOMA Wall text, 2016)

Lampens stringency against bourgeois norms in his homes also extended to consumption, as he requested inhabitants to refrain from adding decoration. The Vandenhaute family abided by his strictures while Van Wassenhove house was filled with the clutter of life.

Lampens worked almost exclusively with concrete, wood and glass. Formally, his homes were designed to showcase an interior and exterior harmony with their surrounding environment and nature. Borders, cardinal orientation and lines of sight were all central to the placement and construction of the home. Typically Lampens's houses are closed to the public on one side but are otherwise completely open to the environment, with the result that there is always a formal exchange between transparency and closure. For some time he experimented with raw concrete in order to develop his style of bunker-like exteriors combined with open vistas and sculptural motifs. Lampens' idea of living was completely open plan, without pillars or walls, and all rooms placed so they conjoined one another (the kitchen, living room, bedrooms and bathroom were all in one open space) (Campens A., June 2010: 27). Breaking with the spatial insistence on individuality, this style privileges basic togetherness within the living space.

In 1950, Lampens started his own business in Belgium (in Eke, a village in the neighbourhood of Ghent) as a more or less conventional architect. After going to the 1958 World's Fair in Brussels, he radically changed course and decided to build a home for himself in 1960. This construction proved to be a turning point in his career. Indeed, Lampens was profoundly influenced by the fair. As he once stated: "Every healthy Belgian visited the world's fair. It was due in part to the world expo of modern architectural styles that such work became accepted and established in Belgium. The masses saw the possibilities of technology and started to believe in modern architecture, and I felt that the climate was ready to build in a modern way in Belgium" (Campens A, June 2010: 27).

For the majority of his career, Lampens had to translate his unconventional architecture in more everyday concepts, and these are mostly unremarkable residential buildings and residential conversions. Beyond his generic work Lampens has built about 35 residential houses in his unique style in addition to a library and a chapel. [5]

The period between 1960 and 1975 was the period of activity when his ideas reached their apogee. It was during this time that Lampens realised the house Vandenhaute-Kiebooms (1967), in addition to other important projects, such as his own house (1960), Our Blessed Lady of Kerselare Pilgrimage Chapel (1966), and the Van Wassenhove house (1974).

Lampens' clients were largely from middle class backgrounds: academics, teachers, doctors, small businessman. Lampens executed his most conceptually daring open plan for Gerard Vandenhaute, A Germanist and high school teacher, and his wife and family of 4 children.

House Vandenhaute, Kiebooms, Huise (Zingem) (1967), is positioned in the middle of the landscape. The site is a long narrow lot running parallel to and 5 ft deeper than the street. A row of trees creates a visual barrier between the street and the house. The house is reached via a ramp. The overhanging roof serves as a carport and forms a buffer zone between inside and outside. With this house, Juliaan Lampens pioneered his most radical open plan. The house is constructed completely of concrete and glass and covers a square area of 14 m by 14 m. The north side is fully closed-off, while the other sides are entirely of glass. In the squarespace, three cylindrical shapes rise from the floor without reaching the ceiling. They contain the bath, the toilet and the staircase to the cellar. Their fixed locations define the sleeping, living and entrance areas. Vertically opposite these—as if falling down from the ceiling—is a suspended concrete square that reaches shoulder level and demarcates the kitchen area. These remarkably sculptural components are integral parts of the structure that also define its spatial mood. The sleeping units are composed of beds with adjoining cabinets. This creates a kind of "sleeping niche", but since these units are not fixed to the ground, it allows for the continual re-shaping and re-imaging of the space and its degrees of privacy.

The Vandenhaute house can be usefully compared with the Farnsworth house designed by Mies van der Rohe. Although the Farnsworth house was built as a second residency for a single inhabitant and thus[6] doesn't include a domestic program for a family, the house was really the first chance for van der Rohe to present in the United States his radical ideas for living space. It was his first bold statement about the house in the twentieth century. For van der Rohe "the house was a place for contemplation, an ordered space free of distractions" (Ibid., p. 139). Activities that humans do privately came second to the free space of contemplation.

The contemplative ethos was certainly a radical idea, but it was a radically idealistic one that provided no answer to the question of "how a glass-walled modern building can be usable home and not simply an architectural object in an ideal landscape" (Friedman, 1998, p. 130). The tension between idealism and inhabitation comes out in the disputed concept of "free space":

> Mies talks about 'free space': but his space is very fixed. I can't even put a clothes hanger in my house without considering how it affects everything from the outside. Any arrangement of the furniture becomes a major problem, because the house is transparent, like an X-ray" (Ibid., p. 141.).

For van der Rohe, "free space" appears to mean a fixed empty box into which the mind is unobstructed in its contemplation. For Edith Farnsworth, "free space" means being able to organize and arrange material objects functionally. This apparently major difference in the concept of free living space did not stop Dr Farnsworth inhabiting the residence for 20 years.

The Vandenhaute house has a strong meditative, almost ascetic quality to it, and the perception of interior space shares similiarities with van der Rohe's ideal of free space. The big point of difference is the total visual closure of the Vandenhaute house on its street facing side.

Wouter Vandenhaute (a former Belgian sports journalist, programme maker and managing director of the production company Woestijnvis) spent his childhood and adolescence in the house built by Lampens and explains its advantages and disadvantages in the following way:

> We four, that is to say, my brother, my sisters and me all have very different characters and I think that living in an open plan house is easier for those who are naturally more sociable. Since I'm an open and sociable person,

> I've perhaps experienced more advantages than disadvantages. But there are definitely downsides to open plan living, things that we discovered especially during our teenage years. If my parents received visitors in the evening, for example, I was often annoyed by the noise. Not that it was so very noisy, but I slept in a sleeping-container that was open at the top and so was susceptible to light and noise. As a child, I rarely experienced the open plan space as a disadvantage, but of course, that's not necessarily the case. If one of us was ill, for example, then the whole house was ill. These are things to be reckoned with. In our house, we opted to close off the rooms. I would still be able to live in my parents' house now, but preferably as a single person, or as a couple without children. (Campens, 2010: 75)

Mister and Misses Vandenhaute—Kiebooms have been living in the house for 50 years, first as a young family and now as a retired couple. They evidently love living in the house. Indeed, because of the house, Gerard Vandenhaute became a lifelong friend of Juliaan Lampens and visits him every week in the retirement home where he resides. [7]

House Van Wassenhove, Sint-Martens-Latem (1974). This house, built entirely out of concrete, is located in a residential neighbourhood in Sint-Martens-Latem and has the bunker shape. Surrounding the house is an area of cultivated land that is going wild. The driveway ends at the carport, where the entrance of the house is located. Owing to the topography, the house is positioned 1.2 m above street level. Only the entrance area was excavated, to bring it down to street level. The rhythm of the roof was determined by the topography of the land and the same principle was applied to the different levels in the house, connected by a staircase. Here too, the living room, kitchen, bedroom and offices are worked into one open space. The light enters through a large glass area on the east side, a skylight above the living room, and a vertical glass strip on the west side. There is a doorway in the large glass wall on the east side. From the house, one can look out on a massive spout that spills into a water feature. The house is built entirely of concrete. In the interior, pinewood has been used for the flooring. The cabinet elements and sleeping hutch are also of pine. The suspended table and the cooker extract are of concrete. All these elements counter the highly sculptural character of the building.

Mister Van Wassenhove lived in the house until his death in 2012 and Van Wassenhove donated the house in his will to the University of Ghent who in turn leased it long term to the museum Dhondt-Dhaenens thus giving it a public function. Unlike the Vandenhaute house (who only hung one painting on the wall) the Van Wassenhove house was full of the traces left by Van Wassenhove himself. For example, he placed cupboard in front of the overhanging wall coming from the staircase culminating in the hanging tablet. The alteration to the space caused by the cupboard was a point of friendly quarrel between the lifelong friends. Lampens felt the space had achieved a high degree of architectural honesty which the alteration diminished.

Van Wassenhove's style of living in the space was accumulative. There were paintings on the walls, paintings sitting on the ground against walls, partitions, books, piles of clothes and interior design furnishings (among them a nice collection of furniture by Emile Veranneman and paintings and graphic work by Raoul De Keyser, Jozef Mees and Roger Raveel). What's interesting about Van Wassenhove's way of inhabiting the house is that the traces and layers of accumulative human inhabitation did not compromise the sense of the buildings integrity. Although Lampens would prefer that it was not the case, he acknowledges that the house is capable of absorbing the mess of human life without losing its sculptural character.

In the light of Le Corbusier—other international examples. The idea of living in a space without walls was part of progressive architectural thinking when Lampens was building his concrete houses in the 60's. He was one example of the tendency to combine external closure with extreme interior openness. Architects all over the world were working with the similar concepts: block-shaped forms, the use of material, scale, colour and roughness as an aesthetic value for both the exterior and interior of the building.

Juliaan Lampens, along with a whole range of lesser-known architects working on the periphery were applying these concepts with particular attention to the form of the bunker. It must be emphasized that for all their similarities and overlaps, each of these examples have regional specificities that differ significantly from context to context. This locally- processed universality is a central motif of many of these houses.

The most consistent feature of bunker-inspired architecture is the near-total closure on the street-facing exterior and totally open plan interiors. Approaching these houses is like encountering a sculpture that has turned its back on the viewer. A sculpture that furthermore gives the impression that it is looking at you rather you looking at it. In the main these bunkers were an inward-facing architecture that wanted to be able to see everything on the inside. If something was wanted from the outside—like a garden—it was brought into the interior. These private houses resemble the Brutalist style in their open display of their structural bones but diverge from pure Brutalism in their aesthetic use of the rough, sculptural qualities of raw concrete which created more playful forms than the typical post-war public buildings.

The 1967 Casa Bunker in la Maddalena, Italy, by architect Cini Boeri is an example of this type of bunker aestheticism. Likewise the Zurich house that Hans Demarmels (1932–2010) build for his own family in 1965. The Demarmels house combined exposed concrete with an open floor plan as well as open view over the city and the lake. Another example is the French—Moroccan architect Jean—Francois Zevaco (1916–2003) known for his reconstruction of Agadir in the 1960's. Heavily inspired by Brutalism, this important contribution included a head post office (Fig. 8), a fire station, a school and a number of *villas en bande* and courtyard houses, for which he was to be awarded the prestigious Aga Khan Award for Architecture in 1980. [8] Arguably the most sculptural of his buildings is the striking Villa Zniber in Rabat (1970). (Fig. 9)

Figure 8 | Jean-François Zevaco 1963, Postoffice, Agadir. Photograph: Angelique Campens. This photograph is covered by the Creative Commons Attribution 4.0 International license.

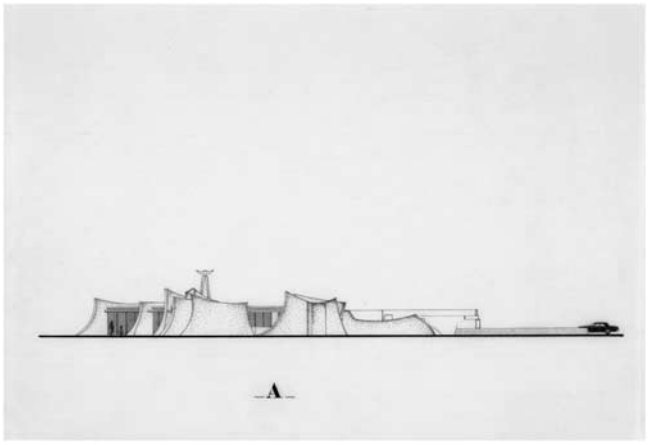

Figure 9 | Jean-François Zevaco, 1970 Villa Zniber, Rabat. Ink drawing on tracing paper. Source: image reproduced by permission of Frac Centre-Val de Loire Collection. Copyright (© Frac Centre-Val de Loire Collection). This figure is not covered by the Creative Commons Attribution 4.0 International license.

Alongside these examples are many more that are, as Joseph Grima says, *condemned to eternal anonymity:*

> The history of architecture is littered with the corpses of unknown renegades and unsung revolutionaries, the majority of whom are condemned to eternal anonymity, while a lucky few of these rebels achieve posthumous glory à la Erno Goldfinger (…) (Grima, 2010: 59)

Although more a problem of historiography and its geographic focuses than of architecture, if we were to re-animate some of the corpses of concrete architectural history then we would include the following figures: Willy Van Der Meeren (1923–2002, Hans Demarmels (1932–2010)" or Austrian architect Gerhard Garstenauer (1925–2016).

Another more known figure is the Brazilian architect Lina Bo Bardi (1914–1992). Bo Bardi's most striking public example is the São Paulo Museum of Art (1968) although her private architecture tended to soften and lighten the rough and heavy features of her public work. Another example is the French architect Claude Parent, known for his buildings inspired formally by the Nazi bunkers along the Atlantic Wall. This influence is most noticeable in his church Saint-Bernadette-du-Banlay in Nevers (1966), in the house Andrée Bordeaux Le Pecq in Bois le Roy (1966) or even earlier in the Villa Drush built in Versailles in 1963.

Together these dwellings constitute a constellation that highlights the international scope and variation of Brutalism and its overlooked sculptural qualities, forms and characteristics. These features found their highest degree of articulation in the private house. The diversity of examples show that this was a global style simultaneously occurring at different places among figures who had no direct contact with each other. The style appeared at the same time in parts of the world (continental Europe, the Middle East until South America) that were too divergent to be direct influences on one another.

What linked all this regional diversity into a global trend is reinforced concrete, as architecture historian Carlos Eduardo Comas (2010) pointed out use in his essay *Reinforced Concrete and Modern Brazilian Architecture*:

> "Reinforced concrete construction was the handmaiden of modernization in the beginning of the twentieth century for many nations lacking a steel industry. Originating in France, Great Britain, Germany, and the United States, it was a global affair from the outset, involving the licensing of techniques and the establishment of subsidiaries in South America by firms such as Hennebique from France and Wayss & Freytag ingenieurbau from Germany. Expertise was rapidly achieved in Brazil, where reinforced concrete construction was associated with modern architecture since the mid-1930s." (Comas, p. 61).

Figure 10 | João Batista Vilanova Artigas 1974, casa Martirani, São Paulo. Photograph: Nelson Kon. Source: image reproduced by permission of Nelson Kon. Copyright (© Nelson Kon, 2017). This photograph is covered by the Creative Commons Attribution 4.0 International license.

Figure 11 | João Batista Vilanova Artigas 1957, Casa Olga Baeta, São Paulo. Photograph: Nelson Kon. Source: image reproduced by permission of Nelson Kon; copyright (© Nelson Kon, 2017). This photograph is covered by the Creative Commons Attribution 4.0 International license.

The Brazilian architect João Batista Vilanova Artigas (1915–1985) (Fig. 10) is an interesting figure to add to the discussion at this point. Although Artigas' political commitments (as a communist party member and architect for public projects)

come from a different milieu than the private market modernism that Lampens worked in, after the "Casa Olga Baeta" (1956–1957) (Fig. 11), Artigas' private architecture becomes heavier, closed and more protected. "House Elza" (1967) (Fig. 12 and Fig. 13) represents his peak work in protected architecture.

Alongside the formal relations of their private houses, Artigas and Lampens shared an affinity for doing away with walls. Artigas was already thinking about this as early as 1942 in his weekend house "Casinha". Initially influenced deeply by Frank Lloyd Wright (who he considered one of the most radically modern of architects), Artigas in his mature phase, like Lampens, would seek to distance himself from his precedents (Wisnik, 2010: 12), but as Kenneth Frampton explains, a cluster of strong influences are clearly identifiable:

> As we known, the Brazilian Modern Movement in architecture stemmed from tropes drawn from the syntax of Le Corbusiers' Purism, above all the development of piloti and the use of ramped circulation. Both of these strategies were to play prominent roles in the evolution of Vilanova Artigas's architecture, once he had distanced himself from Wright (…) (Frampton, 2010: 5)

Figure 12 | João Batista Vilanova Artigas 1967, Elza berqo, São Paulo. Photograph: Nelson Kon. Source: image reproduced by permission of Nelson Kon. Copyright (© Nelson Kon, 2017). This photograph is covered by the Creative Commons Attribution 4.0 International license.

Figure 13 | João Batista Vilanova Artigas 1967, Elza berqo, São Paulo. Photograph: Nelson Kon. Source: image reproduced by permission of Nelson Kon. Copyright (© Nelson Kon, 2017). This photograph is covered by the Creative Commons Attribution 4.0 International license.

Some of the examples named in this essay could be added to the list of influences for the Brazilian Modern Movement. Artigas, as Frampton points out, was always very ambivalent about private housing:

> Despite the various attempts he made to scale down the megaform concept to the size of a domestic dwelling (as in his Domschke House of 1974), Vilanova Artigas would never quite find an appropriate format by which to render the private house as an anti-bourgeois, quasi-public institution—this curiously subversive idea would perhaps receive its most convincing formulation in Mendes da Rocha's own house, built in Sao Paulo in 1964. (Ibid., p. 9)

Largely by shunning luxury, Lampens struggled against both the bourgeois and consumer culture attitude. The effect of this struggle contributed to a shift in the general situation, where entire groups of architects who built in the modern glass style switched to more protected and closed structures.

What we refer to as Le Corbusier's second period can be thought of as a key site in which this dynamic of struggle played out and from which the modern concrete building style began. Another key example is the New Brutalism of Alison and Peter Smithson, in particular their ideas of post-war British architecture characterised by "under-design".

However much architects would like to distance themselves from their precedents, it's very clear that all of the examples cited in this essay share core formal features with the structures that emerged from second period Le Corbusier. From "L'Unité d'Habitation" (built in Marseille between 1947–1952) on, the

Figure 14 | Le Corbusier, Villa Shodhan, Ahmedabad, India 1951–1956. Photograph: Dirk De Meyer. Source: image reproduced with permission of Dirk De Meyer. This photograph is covered by the Creative Commons Attribution 4.0 International license.

aesthetic use of rough concrete becomes visible in his private architecture. "Villa Shodhan" (built between 1951–1956 in Ahmedabad, India) is one of the clearest examples, built in raw concrete with wooden formwork fortified at the front and open at the rear. (Fig. 14 and Fig. 15) After Le Corbusier, the Hungarian-born American architect Marcel Breuer (1902–1981) is probably the one who achieved (alongside his public buildings) the most private realization of this style. Breuer, like Le Corbusier, developed a distinct second period style that used concrete architecture with a sculptural sensibility (Driller, 2000: 216), the best example being "Koerfer House" in Switzerland at the Lago Maggiore (1963–1967).

The love of concrete as a building material that is everywhere evidenced in his later work can understood as a function of this insight. Breuer writes: "Reinforced concrete appears to be flexible enough to give not only strength but form to a structure. The material demands a three dimensional approach whereby integral parts of structure become sculptural".[9] (Driller, 216) Many of his buildings had sculptural qualities in ways epitomizes the ideas that most dominated his later work, namely, the importance of the interconnection of sculpture and architecture through the use of rough concrete.[10] While there was always a connection between architecture and sculpture, in a 1963 lecture he defines the fine interplay between both design forms thus:

> Gradually a recognized differentiation developed: sculpture is three-dimensional art to be experienced from outside; architecture is three-dimensional art which one can also experience from inside.[11] (Driller, 216)

A home is a bunker. The need for a protective shell, connected to the use of concrete materials, meant that housing took on more bunker-like attitude in relation to the street outside. The variety of examples all show that, consciously or unconsciously, the post-war obsession with an architecture of visual security. Jay Swayze's "Underground World Home" (1964–1965), a self-contained fallout shelter, demonstrates clearly the different layers of effect the history of bombing had on the imagination of modern architecture.

In this post-war context, Jane Pavitt (2010) speaks of the rise of existenzfragen, or the consciousness of survival needs in the nuclear age:

> "The image of the crypt, cave, or bunker was often evoked in architectural schemes after the Second World War, albeit often as a kind of unconscious symbol." (…) "In the nuclear age, the sheltering cave looked less like fantasy and more like a necessity." (Pavitt, p. 113).

To speak about the bunker's effect on modern architecture is to speak about the second World War and atom bomb anxiety. It means reflecting on the general nervousness of a civilization that had just crossed the threshold of capacity for total self-destruction. Consumerism, is, in a sense, the world's answer to the question of how to stabilize global human relations outside of total war. Or rather, mass consumerism is where the explosive energies produced by the war translated into productive economic energies. In short, destructionism was turned into consumerism. For modern architecture this meant becoming embedded within the 'total package' of consumer desire, that is, operating within the envy-driven economy that seeks status in cars, fashion and designer houses. As Beatriz Colomina puts it in her book, Domesticity at War:

> Post-war architecture was not simply the bright architecture that came after the darkness of the war. It was aggressively happy architecture that came out of the war, a war that anyway was as ongoing as the Cold War. (Colomina, 2007: 12)

This strange co-existence of a global landscape of fear and a consumer culture based on individual stature is apparent in the era's architecture through the formal exchange between transparency and closure. Part of the genius of the Brutalist movement was to understand the importance of closure as security, and openness as freedom and utopia, and then to combine these elements in architectural construction. The ideas of Paul Virilio and Claude Parent reflect this understanding, as do those of Alison and Peter Smithson who in 1956 imagined the ideal family dwelling of the 1980s in "The House of the Future" where, among other features, the house functioned as a bunker. (Fig. 16 and Fig. 17)

Within this general situation, the private houses of Lampens and others form a curious subset, combining the concrete

Figure 15 | Le Corbusier, Villa Shodhan, Ahmedabad, India 1951–1956 exterior, swimming pool, ca. 1965 exterior, detail of western façade, ca. 1965. Photograph by G. E. Kidder Smith. Source: image reproduced by permission of Massachusetts Institute of Technology. Copyright (© Massachusetts Institute of Technology, 2017). This figure is not covered by the Creative Commons Attribution 4.0 International license.

Figure 16 | Alison and Peter Smithson, architects. Unknown photographer. House of the Future, Daily Mail Ideal Homes Exhibition, London: interior view looking down from the viewing platform March 1956. Gelatin silver print. 57.1 × 79.2 cm DR1995:0042. Reproduced with permission. Copyright (© Collection Centre Canadien d'Architecture / Canadian Centre for Architecture, Montréal). This figure is not covered by the Creative Commons Attribution 4.0 International license.

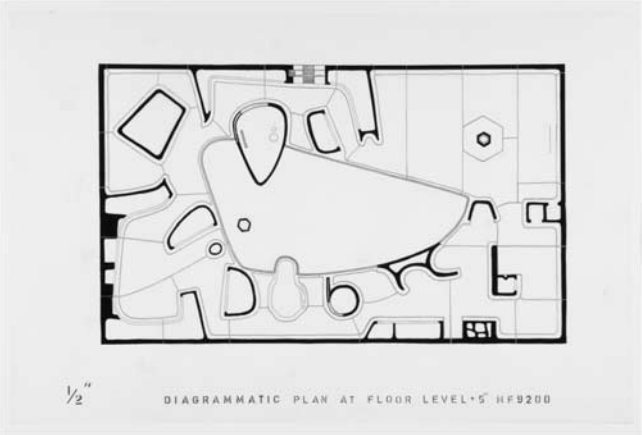

Figure 17 | Alison and Peter Smithson, architects. House of the Future, Daily Mail Ideal Homes Exhibition, London: Plan for five inches above the floor level. 1955–1956 pen and black ink on drafting film. 55.8 x 83.9 cm. DR1995:0039. Reproduced with permission. Copyright (© Collection Centre Canadien d'Architecture/Canadian Centre for Architecture, Montréal). This figure is not covered by the Creative Commons Attribution 4.0 International license.

aesthetics of military architecture with the sculptural features and the utopian values of modernism.

Conclusion

The sculptural bunker house appears for divergent reasons in different parts of the world at the same time but breaks definitely with the open glass box. All these examples show a radical approach to sculptural architecture design.

The two Lampens houses show that 60's sculptural concrete architecture continues to be livable in the twenty-first century, even as they stand increasingly as historical representations of the style of its time. Juliaan Lampens' houses have mostly resisted conversion, so far, largely because clients who commissioned the structures inhabited the structures for the rest of their lives. That they have and will live the rest of their days in the houses demonstrates its success as a domicile.

The residents of these houses, in all their diversity of actions and living patterns, in all the traces and layers they have made on the spaces, still have never altered the sculptural integrity of the buildings. Dwellers will always set architecture to their own hands and it will be interesting to see what the next generation of residents will make of these spaces, and whether they will feel a high degree of commitment to the values of the architecture.

Together these dwellings constitute a constellation that not only highlights the international scope and variation of Brutalism, but also brings to light the often overlooked unique sculptural qualities, forms and characteristics that emerged within Brutalist architecture.

Notes

1 Marcel Breuer cited in Joachim Driller, *Breuer houses*. Phaidon Press Limited: London. pp. 216, 218.

2 For the purposes of this essay, Modernism will be defined as the formal architectural language that evolves from the work of Mies van der Rohe and Le Corbusier in the 1920s.

3 Brutalism has come to be associated with a number of definitions and loaded with a plethora of diverse connotations when applied to architecture. The difficulty in setting out a coherent narrative for the movement and its development is twofold. First, the meaning of Brutalism has come to be somewhat taken for granted as a formal style in the architecture of post-war institutional buildings. At the same time, the words "Brutalism" and "Brutalist" have been used for a range of diverse architecture, each underpinned by different approaches to both form and ethics, and with a different geographical mapping. Second, Brutalism is associated to the "New Brutalism,"a school of post-war British architecture that is characterised by "under-design" and usually associated with the architects Alison and Peter Smithson. Here the theoretical work on Brutalism stems from the seminal work of Reyner Banham, who offered the first impressively comprehensive – though also geographically and historically limited—appraisal of Brutalism in the context of his discussion of the "New Brutalism" movement, and whose critical analysis continues to be an important frame of reference for any work on Brutalism today (cf. Reyner Banham, *The New Brutalism: Ethic or Aesthetic?*; London: Architectural Press, 1966).

4 trans. Newman J and Smith J (1979). *Functionalism today*. Oppositions. no 17; 30–41.

5 For more information on the Belgian situation cf. Francis Strauven (2010): *Juliaan Lampens, an authentic modernism produced on Flemish soil*. Strauven talks about how Lampens is an einzelganger in the Belgium context:"While modernism was blossoming in the neighbouring countries, particularly in the Netherlands, it remained a marginal phenomenon in Belgium. This was particularly the case in East Flanders. Taking everything into account, the house that Lampens completed in 1960 is one of the first modern houses to be built there after 1945. (Strauven, p. 49).

6 The function of the second residence as an entertainment space gave further scope for modernist expression freed from domestic concern. Here the emphasis shifts from dwelling to event space. Considering the fate of modernist houses to become performative events, the Smithsons place the Farnsworth house among a group of striking houses influenced by the idyllic impulse of the pavilion.

7 Conversation 22/11/2016 between Lampens and author.

8 The courtyard houses were state-owned affordable houses designed specifically for middle-class civil servants. The scheme under which they were constructed ensured that housing was kept in the hands of the state, with rent calculated on the basis of the worker's income. "The Aga Khan Award for Architecture: Courtyard Houses Project Brief," *Aga Khan Development Network Website*, http://www.akdn.org/architecture/pdf/0155_Mor.pdf (accessed 20/05/2015).

9 Marcel Breuer cited in Joachim Driller.

10 It is telling that Breuer did not favour raw concrete until later in his career; prior to the late fifties it was only used for fireplaces in his projects for private houses.

11 Marcel Breuer cited in Joachim Driller.

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Data availability

Data sharing is not applicable to this article, as no datasets were generated or analysed during the current study.

Additional information

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