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John Hejduk, Wall House, Bye House, construction, recreation.

ABSTRACT

The WallHouse 2 is a project designed by John Hejduk for Ed Bye urban architect and is therefore also known as Bye House. It is a wall house belonging to the so called Wall Houses series. Wall Houses are characterized by an ordering of units on each side of a wall. Hejduk designed the Wall Houses in the late sixties and early seventies, after the series of three projects called Diamond Projects. The WallHouse 2 was planned to be built in a wooden environment in Connecticut, in the south area of Ridgefield. Almost thirty years after, in 2000, the house was finally constructed in Western Europe, after Hejduk's design.

JOHN HEJDUK. STAIRCASES
IN THE WALL HOUSE 2


The Wall House was a house project by John Hejduk for an urban architect named Ed Bye ${ }^{1}$ (fig. 1). This house, which is also known as the Bye House, is one of a series of wall houses entitled Wall Houses.
The Wall Houses are characterised by the arrangement of the rooms on either side of a wall. The projects were begun in the late 1960s and early 1970s.


Later came a series of three projects entitled Diamond Projects. Fig 2 shows the floor plans for the houses designed by Hejduk over a twenty-year period. In this figure we see the research process for the geometric form of a square that is rotated and transformed into a wall. These drawings also show that the initial geometrical shapes for the Texas Houses (designed between 1954 and 1962), Diamond Houses (designed between 1962 and 1967) and Wall Houses (designed between 1964 and 1974) were a square, a rhombus, and a wall, respectively
This process culminated in the design of Wall House 2.
Wall House 2, designed in the early 1970 s $^{2}$, was intended for construction in a wooded area south of the city of Ridgefield in the state of Connecticut in the east of the United States (fig. 3).


In the year 2000, almost thirty years after the initial project began, the Wall House 2 was finally built in western Europe following Hejduk's design. Located on the outskirts of the Dutch town of Groningen (fig. 4) ${ }^{3}$, it is in a residential neighbourhood near Hoourse Meer.
The house comprises a kitchen, dining room, bedroom, living room, study, bathroom and small storeroom. The total area of the house is 12,000 square feet ( 1,115 square metres $)^{4}$. Outside, detached from the house, is a garage.


The project comprises 77 illustrations and one scale model ${ }^{5}$. The plans are published in Mask of Medusa ${ }^{6}$ (see fig. 1). As well as plans for the floors, elevations, sections and axonometric projections, there are illustrations (ink drawings, photographs of the model and early sketches) and written descriptions by Hejduk?. Fig 1. shows that in the designs for the Wall House the bedroom is located on the ground floor on one side of the wall. On the other side are the storeroom and the bathroom. On the first floor, above the bedroom, is the kitchen-dining room. A second bathroom is located above the one on the ground floor. On the floor above this one is the living room, which we enter by climbing the spiral staircase linking all three floors. A corridor separates this part of the wall from the entrance. Entry to the study on the second floor is gained via a staircase (without a landing) that begins at the entrance to the house.
Each of the main rooms on each floor has a different shape (fig.1). The bedroom is one room apparently partitioned to create corners at one side. At the other side the ends are curved. On the floor where the kitchen-dining room is located is a ledge that differentiates the two parts of the room: the dining area is longer and wider than the kitchen area. The living room is wider near the chimney and the study is shaped "like a musical instrument" ${ }^{8}$.
These differences between the floors, which compel us to relate the perimeter of the house to its individual parts, are also visible from the exterior, where each room has a different colour (fig.5). Whereas on the inside of the house each room on each floor is differentiated by the partitions that delimit each space, on the outside each room is differentiated not only by its shape but also by its colour.

Another characteristic discernible from the designs of the house is the independence of the rooms. On the ground floor, the staircase is separated from the other side of the house, where the bedroom is located. On each floor each room is autonomous. There is no partition between the storeroom and the bedroom or between the bathroom and the dining room. Each room is isolated; it appears non-integrated, distanced from the next room. This characteristic is evident not only from the floors but also from the axonometric projections, the elevations and the exterior of the finished construction (fig. 4). Each room is delimited above and below by a slab on the floor and ceiling that is independent of the room above or below it. The house appears dismembered, non-integrated, defined by rooms that are detached from each other.
This independence is defined not only by the shapes and profiles of the rooms as seen from the floor, elevations and axonometric projections, but also (as is mentioned above) by their colours. Each room has a different colour. As Hejduk says: "The left of the wall is blue, for evacuation, for bathing, for water. The storeroom is yellow and the study is red. These are the primary colours (red, yellow and blue). Moving to the other side of the wall, we see the other colours (orange, green, violet and purple)".
The bedroom is green. In the kitchen-dining room there are two colours: purple for the kitchen and violet for the dining room. The living room is orange. On the other side of the wall, the bathroom is blue, the storeroom is yellow and the study is red.
Each room externalises one part of the pro-ject and demonstrates its independence. Green is the colour for the sleeping area, purple is for the cooking area,
violet is for the dining area, orange is for the living area, red is for the study area, blue is for the washing area, and yellow is for the storage area. The grey colour of the wall is similar to the colour on the staircases and in the corridor.
Hejduk said of the Bye House: "On each floor we have the wall and on either side of it we have the activities. On the right hand side of the wall we have the utilitarian functions: the stairs, the storeroom, and the bathroom. On the left hand side of the wall we have the life functions: eating, living, and sleeping. It is a very small house and on stepping off the staircase on the right we reach the study, which I think is shaped like a musical instrument. Leaving the hall and crossing over to the other side of the wall, we find the living room and kitchen. On the top floor is the living room, which has a chimney".
It seems as if the rooms, defined in this way by their different colours, are intended to indicate the house's project, like objects in a still life-as if the house were a work of art depicting not only the rooms but also the space between them. The wall is thus a canvas on which the parts of the work of art are painted in three dimensions; these parts refer to the project for the house.

## II

The aim of this section is to describe the relationships between the rooms by focusing on the space between them and the objects that give the rooms these relationships.
To do so, we will visit the house. We will wander through its interior, concentrating on the relationships between the rooms. We will discuss both the opaque cylinder that is the spiral staircase and the staircase at the entrance to the house on one side of the corridor (fig. 6). We will see what happens when we enter the door of the house on the far side of the corridor.


On approaching the door, and before entering the house, we observe the distance between the door and the wall, where the kitchen and dining room are located, and the height between the floor and the top of the first floor (fig. 7)
This door is the only entrance to the Wall House. The space for passing through this door is the same as the width of the staircase.
As soon as we cross the threshold, we meet the staircase. The first step is almost at a tangent to the sweep of the door as it opens. The staircase has a 45 -degree slope and has no landing (fig. 8) ${ }^{18}$.
If, on entering, we should look upwards to gaze at the interior of the building, we would probably fall. It is difficult to remain motionless once one has entered. For one thing, to remain motionless would entail remaining within the space of the sweep given by the door's vertical axis. This entrance is a transitory space. The door's movement forces the visitor to shift. As the steps are right next to the circumference drawn by the door's movement, as soon as we enter the house we are forced to climb the staircase all the way to the top.


On entering the Wall House, we are immediately obliged to move. To enter the house is to begin and to take on a longitudinal upwards movement to the first floor, where the study and dining room-kitchen are located.
The slope of the staircase obliges us to pay attention to the top of each step. As we begin the climb, it is difficult to take our eyes off each and every one of the seventeen steps. The staircase obliges us to acknowledge its presence and prevents us from contemplating the rest of the interior. As Josep Quetglas has said: "A staircase enforces a discontinuous, constantly interrupted perception: it cannot be used if our attention is fixed on something that is situated straight ahead. To avoid tumbling all the way down, we occasionally have to interrupt our gaze and direct it at our feet. This produces a nervy, interrupted, discontinuous perception in which our fleeting glances at the steps are interspersed impertinently, jumpily, with views of what we are trying to see".
Looking at the steps on entering the Wall House is not only a way to avoid tumbling down but also a way to see and to realise that we are moving. The movement involved in advancing with one foot in front of the other to climb one step after another is connected with the lighting conditions.
The upstairs window, once the door is closed and the stairs are being climbed, projects light onto the steps in front of us. What we see as we climb and look at the steps is a combination of moving lights, reflections, spectra and shadows our body produces as we move. The light enters from above. It penetrates a gap above the door. It does not shine directly but is dispersed through the space and is reflected at the edges and on the body of the person who climbs. The place determines our perception of our body's movement as we glimpse the
shadows breaking on the steps. We notice the movement of our body as we climb the stairs thanks to the flashes of light projecting onto it.
The boundaries of the stairwell were not designed to show us the interior of the house (since climbing it requires that we look at the steps). Our view, the image that we see, is subordinate to the act of climbing. The space is defined for the act of climbing to reach the floor above and, as this happens, the task of climbing is presented to the gaze of he or she who enters.
Climbing up to the first floor requires a series of actions. Opening the door, looking at the step so we do not trip over it, closing the door and starting our ascent are akin to the actions of a tightrope walker. Here I am referring not to the risks involved in putting one foot in front of the other on a tightrope but to the fact that contemplating our immediate surroundings is impossible because we need to pay attention to where we tread
Moreover, climbing the staircase produces a certain disequilibrium. As we move, we shift from side to side. As we go up or down a step, we have to shift all our body as we transfer our weight from one side to the other, from one step to the next. In the time it takes to shift our weight from one foot to the other, our body sways, we lose balance, and appear to fall. If we were not so used to seeing people climbing up and down stairs all the time, we would instinctively try to grab hold of them to stop them falling to the ground.
As Jose Luis Pardo says: "When a man falls, this doesn't happen because he has "lost ba-lance, or equilibrium", as is usually said, but because he has lost disequilibrium and become, on collapsing to the floor, a perfectly balanced being".


As we reach the final step, after having repeatedly put one foot in front of and above the other, our eyes will no longer be looking at the ground. We will have to raise our heads and stand up straight and, when our eyes refocus, we will be astonished to perceive the scene just as it changes. We tend to extend our gaze to beyond the far end of the corridor (fig.9).
Once we reach the end of the staircase to complete our ascent, we no longer resemble the tightrope walker. The tightrope walker turns around on reaching the end of the tightrope to observe the space that was behind him and realise that he has overcome great danger; when we reach the end we will do the opposite. There is continuity towards the corridor. Just as our senses perceived the ascent, our interest is now in discovering what comes next. What we have just overcome is but a memory. We have left it behind-it belongs to a very recent past that has no more relevance than the fact we have climbed the stairs. The boundaries of these spaces-the staircase and the corridor-comprise the continuity produced by the walls and ceiling and the discontinuity produced by the staggered floor and the horizontal surface. This area is defined by a vertical directionality established by the rising staircase followed by a horizontal directionality that reaches the end of the corridor. The horizontal directionality defined by the length of the corridor and the vertical directionality defined by the steps present a spatial movement that is coordinated with the physical movement of the body as it penetrates further into the house.
Once we are on the first floor, after climbing the steps, we turn our attention to what lies in front of us. From gazing at the boundary of the steps at our feet, we now gaze at a specific point at the end of the corridor.
On looking towards the end of the corridor, on passing our gaze all the way along it, we are drawn to the exterior of the house on the other side of the wall.

One of the gaps in the living room on this second level is in front of us in this corridor. It reveals a background that is part of the sequence involved when we walk along it. Our gaze tends to become fixed. The dominant image is one directed towards a background located in front of us. The figure that appears, the outline of the window on the other side of the wall, generates an interest that makes us want to reach it and see it.
The conditions of the corridor space invite us to keep moving to the end.
Climbing the stairs and moving along the corridor imply two different visual conditions. On the staircase, the image we see as we climb is that of our reflections and shadows projected onto the steps. In the corridor this image changes towards a background located outside the house. This image emphasises both the distance and the path we must take to reach the dining room-kitchen.
To enter the dining room from the corridor, we must cross to the other side of the wall.
Once inside we are subject to its boundaries: the perimeter of the floor, the framed views of the exterior, the profiles of the interior, and the frameworks (fig. 10). The room is designed for eating and cooking. Entering the room is easy: as we have seen, the sight of the frame invites us to enter. Once inside, we are subject to the project, to the actions taking place within it. This subjection hinders our exit. The room invites us to stay. It is difficult to leave and if we go out, it is either to go to the bedroom downstairs or to the living room upstairs. Leaving the room implies stopping doing one thing in order to begin doing another; it implies movement.
Once we manage to leave the dining room, after crossing to the other side of the wall where the corridor is located, it is impossible to stop moving. It is a nuisance to stop mo-ving. Except for the study, the spaces located on the other

side of the wall are designed for movement, either in the horizontal direction as defined by the corridor or in the vertical direction as defined by the stairs that allow us to climb up or climb down.
The spiral staircase is next to this room, next to the dining room (fig.11) In this house we leave one room and enter another via this staircase.
The steps of the staircase are circular. Light bounces off the opaque wall of the stairwell zenithally.
The staircase is designed for ascending or descending to reach the rooms in which the various activities take place. By ascending or descending, the main events taking place in the house are related. In order to move from cooking or eating to sleeping, or from eating to living, we have to climb onto the staircase and use it.
Using the staircase involves making a circular spiral movement around a central axis. If we decide to climb up or down, we have to enter the interior of the cylinder. Once inside this interior, we are consumed by the spiral movement generated around the axis.
What happens when we enter the staircase? From how the staircase is configured in relation to the corridor, we can see that it is easier to climb up than to
climb down. To climb down, we have to turn left and take the steps down to the ground floor (fig. 12).
Moreover, when we get off the stairs we do not enter the room directly. Instead, we come face-to-face with the wall and have to again turn left if we want to enter the room. To climb down the stairs is to confront the problem of turning on two occasions, thus somehow interrupting the continuity between starting off on the stairs and climbing them, or climbing the stairs and getting off them. It is a chain via which we are able to move from one place to another in an interrupted way.
Climbing up the staircase is facilitated merely by entering the cylinder from the corridor because our starting movement, the direction in which we enter the staircase, is continuous to the spiral movement.
Once we reach the last floor, the spiral movement generated by the staircase is also continuous to the landing action with which we gain entry to the living room.
A certain continuity is established by the way in which one space, i.e. the corridor, connects with the staircase on the second level and the staircase on the second level connects with the landing on the third level.


As soon as we enter the staircase, without really intending to we take the curve of the ascending spiral staircase. Then, around the vertical support, a centrifugal force is generated around the axis that could disorientate us or make us go round and around incessantly, as this type of stairway is wont to do. When we climb up the staircase from the ground floor to the top floor, the circular movement around the axis establishes a continuity that makes it difficult for us to step off it.
Once we enter the spiral staircase, we face the difficulty of not being able to get off it because we constantly need to go around it in a spiral, vertical movement without seeing where we are going. This type of movement is bound to make us feel disorientated.

The inside of the cylinder, comprising the steps of the staircase and its central support, is illuminated from above by a skylight. Because of the steps, the light along the cylinder from the top floor downwards is not uniform. The light that filters through the circular area of the upper section floods the cylinder and becomes gradually less intense as it reaches semidarkness at the lower level. The way the staircase is laid out invites us not only to climb up but also (as we saw earlier) to climb down (the illumination invites us to do so). The light on the stairs becomes less intense as we descend. Paradoxically, light is more of a bother when it is more intense. More intense light causes the pupils of our eyes to contract in order to avoid the blinding light. It causes them to prevent this from happening. Our eyes are wary of the light and stop it from easily reaching the retina. Normally as a precautionary measure, the light is rejected.
When climbing down the stairs, the pupils of our eyes dilate. When climbing up, they contract.
However, the rooms are not going to be linked or better arranged because of how the stairs are mounted or dismounted, or because of the directionality towards the corridor and living room, or because of the conditions of light on the staircase. After all, to leave the kitchen-dining room and enter the living room, we have to adopt a movement that restricts the relationship between the two rooms. Although the rooms are adjacent to each other, they are connected by a path that leads us to confusion we when walk along it. Stepping onto the staircase and adopting the spiral movement disorients us-we get the relative positions of the upper and lower rooms confused.
Inside the cylinder that is the staircase, we become disoriented. We lose all points of reference that might enable us to find our location. This is an uncomfortable situation and when it happens we look for a familiar object that might help us to reorient ourselves and escape such confusion.
The point of reference that allows us to orient ourselves is located on the outside and is visible from any of the rooms (fig. 13). The exterior objects seen from, say, the bedroom are the same as those seen from, say, the dining room or living room (fig. 14). The lake, the trees, the horizon and the ground are visible from the gaps in each room. However, our viewpoint changes. The vertical path changes the position of the observer but inside the cylinder we see neither the lake nor the trees, nor the horizon, nor the ground. On the staircase, we move but we do not see what lies behind the curved wall, behind the cylinder. To see outside the Wall House, we have to enter one of the rooms and look out from a fixed position. The moment our gaze is directed towards the space outside (after we have become disoriented by the staircase and climbed off it), it is defined by our memory of the image we had on the previous floor.


Our view of the exterior, observed from the various viewpoints provided by the house, is associated with our movements as we change location.
To change location is to interrupt our gaze and resume it with another one that is related to the first and made up of fixed but separate images created by distinct still photographs taken as we reach the interior of each floor.
The image we observe from the inside of a room may be related to the image we observed from the inside of the previous room. If the exterior image seen from, for example, the dining room is imprinted in our minds, when we leave the living room and climb down the stairs to enter the bedroom, the new image that is also imprinted on our minds is related to our memory of the previous image (figs. 13 and 14).

The change made to the image when we change our viewpoint must therefore be cons-tructed within our minds. The passage from one image to another is not a given: we need to discern the changes undergone by the images between one location and another.
The Wall House conditions its occupants to construct, in their inner selves, the image's movement. Any space in the house allows us to create and construct the movement from two separate images.
In the context of our disorientation caused by our revolving around an axis or our disequilibrium caused by our putting one foot in front of the other, or in the context of the not doing or of what is not specified in the project, the space between one room and another-the space between stopping doing one thing and starting another-enables movement to be constructed in an interior that must be defined and is therefore not a given.
The house is generated from its relationships and these depend on all involved. If we bear in mind the moving images cons-tructed by each occupant, we could say that the Wall House is a filmmaker's house because it is similar to what happensin filmmaking: from several fixed images superimposed onto each other, the filmmaker creates movement.
At the cinema, if we want to see the images imprinted on the celluloid, the celluloid needs to be developed and exhibited using a projector that gives movement to the fixed images. The Wall House is similar to the cinema because movement has to be constructed out of several fixed images. The occupant does not share in the moving image that reaches him from outside, from what he is given. The Wall House 2 obliges the occupant to transform and to construct the external image seen from the private space. It conditions its occupant to construct, in his or her inner self, the movement of the image. Processed as it is inside the mind of the occupant, this is an intimate movement.

September 2008.

## NOTES

Alexander Gorlin writes: "Hejduk had originally designed the Wall House 2 in 1973 (the first was done in 1968) for Ed Bye, a landscape architect and fellow faculty member. Plans for building the modestly sized primary residence, on a forested site in Ridgefeld, Connecticut, were abandoned due to concerns over the cost of build

2 In the series of diagrams for houses planned by John Heiduk is Bye House, dated between 1972 and 1974. J. Hejduk, Mask of medusa: works 1947-1983, Rizzoli, New York, 1985, p. 285.
${ }^{3}$ The house is located at A.J. Lutulistraat 17, Hoornse Meerwijk, Groningen, Holland.
${ }^{4}$ J. Hejduk, Dos conferencias, Universidad Politécnica de Valencia, Valencia, 2001, p. 32
${ }^{5}$ In the possession of the Canadian Centre for Architecture in Montreal, together with 141 reprographic copies..
${ }^{6}$ J. Hejduk, Mask of medusa: works 1947-1983, cit., pp. 298 - 307.
${ }^{7}$ J. Hejduk, Mask of medusa: works 1947-1983, cit., pp. 60, 67 y 76.
${ }^{8}$ John Hejduk lo cita asi en una conferencia que dio en la Escuela de Arquitectura de Valencia en 1980. J. Hejduk, Dos conferencias, cit., p. 18.

## IMAGES

John Hejduk, gound plans of the Wall House 2
${ }^{2}$ John Hejduk sketches of the Texas Houses, Diamond Houses and Wall Houses.
John Hejduk, situtation plan of the Wall House 2.
${ }^{4}$ Carlos Barberá, External image of a construction of the Wall House 2.
${ }^{5}$ Carlos Barberá, External image of a construction of the Wall House 2.
${ }^{6}$ Carlos Barberá, External image of a construction of the Wall House 2.
Carlos Barberá, External image of a construction of the Wall House 2.
${ }^{8}$ Carlos Barberá, External image of a construction of the Wall House 2.
${ }^{9}$ Miguel Pellicer, Image of the corridor of a construction of the Wall House 2..
${ }^{10}$ Carlos Barberá, Image of kitchen-dining room of a construction of the Wall House 2.
${ }^{11}$ John Hejduk, plan of the kitchen-dining room of the Wall House 2.
Carlos Barberá. Image of the stairs of a construction of the Wall House 2
${ }^{13}$ Carlos Barberá. Image of the living room of a construction of the Wall House 2 .
${ }^{14}$ Carlos Barberá. Image of the bedroom of a construction of the Wall House 2.

## JOHN HEJDUK.

STAIRCASES
IN THE WALL HOUSE 2
Carlos Barberá Pastor

