FROM THE MONUMENTAL LANDSCAPE TO THE MONUMENT

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"West out of Chandler, Arizona, even west of Interstate 10, the Williams Field Road turns south as if to avoid Phoenix South Mountain Park and the Salt Rilver Mountains, and over on the right, between the road and the mountains is a very queer site of modern archeology, a long curving mound above a dry wash. On the highest point of the mound is a mess of broken plaster fragments scattered over an area the extent of a middle-sized room. Elsewhere among the chollas and cacti there are areas of burn ash, holes containing broken porcelain insulators and what may be pieces of toilet fittings, broken china and other domestic detritus; and areas of compacted ground that may have been the site of small buildings " (Reyner Banham, Scenes in America Deserta, 1982)

Ocatilla

In January 1928 Frank Lloyd Wright traveled to the Arizona desert where he was drawn by a professional assignment. He remained there until May of that year and was devoted to that request. Wright had known the American desert landscape from continued train journeys to California, his home base for the works at the Imperial Hotel in Tokyo, and a trip to Scotty's Castle in Death Valley which was paid by his client Albert M. Johnson, president of the National Life Insurance Company. However, the desert was not to become a completely familiar image in his imagination until 1928.

A former associate of Wright's office (1907 to 1909) -Albert Chase McArthur-, called his old mentor to hire him as a technical advisor for a project that was being promoted in Phoenix by his two brothers Charles and Warren: the Arizona Biltmore Hotel. McArthur intended Wright to adapt the technique of the textile concrete block, which the latter had invented, patented and used in his California projects in recent years, specifically from 1920 in Hollywood.

Although Wright's role in this project was limited solely to technical advice, the study gave Wright the chance to contact the local tycoon Alexander Chandler during the months of March and April. Chandler proposed to build another luxury hotel that was to become Biltmore rival: the so-called San Marcos in the Desert. San Marcos never saw the light, and the Biltmore was wrongly attributed to Wright for years. With some drawings for the San Marcos Hotel, Wright launched in May to La Jolla and remained there until October, where he devoted himself to the design.

The order for the final making of the San Marcos proposal was restated in late 1928. In January 1929 Wright returned to Arizona with his new wife Olgivana and two children. The development of the final draft included the transfer of 15 assistants together with Wright's family to Phoenix for the executive design and on-site supervision of the construction works. The estimated budget for accommodation and meals for the family and assistants turned out to be excessive, so Wright ably proposed the construction of a temporary site for both accommodation and work: an experimental architectural station in the desert landscape which could divert the investment to maximize the initial budget and thus support the construction of one of his best works of architecture: Ocatilla. The camp was occupied for several Arizona winter months by himself, his family and his assistants and it was located at a short distance from the site which would have housed the San Marcos Hotel.

Despite the legend propagated by Wright in his autobiography -he explains how the camp was demolished by Ocatilla local Indians in order to build their own in the winter of 1929-, the camp burned during the summer of that year, immediately before the October stock market crash that wiped the San Marcos project and Wright's first adventure in Arizona.

Ocatilla was built in six weeks without skilled workers, and Wright's assistants made the construction of the camp under his direct supervision. All pavilions were completely assimilated to a settlement of military tents, the lifting of an Indian village or the circle of caravan-trails of West pioneers. They were mounted with redwood prefabricated slats, nails, screws, white canvas cloth, and rubber bands as framings and joints acting as a hinge between different materials. Among other possible images, Ocatilla does in fact refer directly to the town of tents.

"We made some progress on that day, although one of my boys, Donald Walter, slept that night in the open on a pile of wood, wrapped in blankets. The next night we had installed the first of the 'platform-base' of the 'tents', and put cots in it for three more boys. The next day we had a room to sleep, all but three people: my family and I. Reluctantly we returned to Mesa, to sleep in the hotel. But we came back early for breakfast in this wonderful living room, sixty miles wide, as long and high as the universe". (Frank Lloyd Wright, An Autobiography, 1943)

The wood panels were imported from California due to the exceptional performance conditions of this wood under sudden temperature changes typical of the desert. Transported by train to the site, it is a non-native or vernacular, but semi-industrialized technology. Therefore the criteria of efficiency, practicality and technological know-how prevailed at the time of the choice of material over the pre-existing, local traditions and vernacular techniques related to the thermal inertia of large masses of adobe rather than to the lightness of timber construction.

Choosing imported wood, canvas and rubber tapes implies an attitude towards nature as a provider of meaningful resources. Nature is seen as a source of raw material, as a territorial large factory, still as a place. In a climate of pioneering experimentalism, technology was valued above tradition, which would result in the final withdrawal from the camp towards the month of May, when high temperatures made Ocatilla uninhabitable and the San Marcos project faded completely.

However, both the construction itself (effective, concise and deliberately ephemeral) and the layout of the camp on the landscape (asymmetric. topographic and organic) give away a great sensitivity to the desert landscape as a source of architectural stimuli. Moreover, it is vital that Wright himself mentioned in his autobiography how Ocatilla was published two months after its construction in European magazines (German and Dutch), allowing the survival of the project beyond its materiality thanks to the media, in absolute parallel to the strictly contemporaneous Barcelona Pavilion by Mies van der Rohe. Wright believed the Arizona desert as a landscape was architectural per se and required therefore minimum building. In Wright's words the desert is "odd, linear, well equipped and abstract", and "no man is gualified as director of the desert landscape until his system has not been soaked by the desert".

The geometry of the settlement followed two fundamental premises. The first was to locate every cabin at the same height, creating a topographic surface that enclosed the hill freed only at its center, the highest point from which the panoramic vista of the desert was unbroken. From the cabins the view beyond the enclosure was also uninterrupted but partial, and cross views between cabins were hampered by the hill itself, creating a very sharp sense of privacy without using any built barriers whatsoever. The second premise was to connect the shape of the booths with the geometry of the enclosure: both responded to a lack of symmetry and triangulation at 30/60 degrees which Wright had identified in the landscape of the desert. Not by chance, they are also the angles of a bevel.

Plan, section and elevation repeatedly display these angles and their multiples, which appear to be the same angles of the mountains and the natural land slope, whereas the zigzag fence that protects against snakes and links every cabin in a treadmill fashion is strongly defined as a horizontal line, which is also the base of the desert and the marine landscape. Thus, canvas and wood triangular shapes echoed the surrounding mountains forms standing out over an angled horizontal treadmill that zigzagged on a topographic level. In his autobiography Wright spoke consequently of a fleet of ships or butterfly pupae in mid-air to describe his camp through analogies.

The wood was painted pink to mimic the color of the earthy sand, while the triangular gables were painted scarlet as occasional stains of color –the same color of the ocatillo flower, the cactus which named the camp. Technology is used with great confidence to address extreme living conditions, but it is at the same time tamed without the need to completely mask it in order to adapt its expression to the specific site of application.

On the south-north entrance shaft at the very camp threshold stood Wright's office: a cabin and a welcome pavilion. Just behind the cockpit was the elongated cabin for the draftsmen with seven working tables, and an annex patio for experiments with models was connected to the parking area. Turning 120 degrees and through a terrace there was the access to two bedroom cabin for the assistants. One for the two senior, divided into two rooms, and the other a unique space for 6 junior, separated by a tiny courtyard. Turning 90 degrees through another courtvard were the dining room, kitchen and the cabins of the two service people and cook. After another yard and a new 90-degree turn another cabin stood for Will Weston and his wife, the only assistant with family; and now turning 210 degrees and separated from the rest by a long stretch of fence, a guest cabin with a private patio. A final 150 degree turn led to the cabin for Olgivana and Wright, another small cabin for the two children and the cabin music room with a piano.

The camp was leaving the center free, not only as a privileged observatory of the landscape, but as a place of assembly. Living and working cabins were grouped around this center also freeing space for the camp fire in a completely analogous way to the fireplace of a typical American home. The fire center also incorporated a large bank for several people and a plaster model of a portion of the project being developed there, the Hotel San Marcos, which was the only sticking point in height in relation to all others. The camp was structured, therefore, as a large house, with a compound of cabin rooms scattered around a fire, an embodiment of the thermal space that draws fire, actually or symbolically, in concentric waves that are constantly changing shape by the wind.

Un-house

Reyner Banham wrote some interesting notes on the official centenary of Wright's birth in 1969 for the journal of the Royal Institute of British Architects. Wright was actually born in 1867, but he quite often gave 1869 as date of birth. Banham mentions two events in American history after Wright's assumed birth, which "intersected with Wright's career and changed it." The first was the completion of the intercontinental railroad that linked the two coasts; the second, the publication of the book The American Woman's Home by Catherine E. Beecher and Harriet Beecher Stowe.

The railway -which finally saved the barrier of the central mountains and the desert and linked the Atlantic and Pacific coasts-, ultimately built American geographical unity, turning the insurmountable vastness of Walt Whitman into a literary myth defeated by the reality of railway engineering. The Home for Christian American families was born as a female engineering work that was to settle on the vastness of the territory conquered by the railroad to inhabit it. It had been defined in Beecher's book, according to Banham, as "a lightweight balloonframe structure surrounding a heart of services".

Banham also mentioned that this ideal home is the ancestor of Usonian houses, the Eames house in Pacific Palisades or the Philip Johnson's house in New Canaan. The idea of Usonia as an acronym of the U.S. appeared in Wright's vocabulary sometime between 1927 and 1930. In her 1869 book Catherine Breecher wrote on housing as a possible and uniform prototype suitable for the entire American territory: "In the following drawings are presented modes of economizing time, labor, and expense by the close packing of conveniences. By such methods, small and economical houses can be made to secure most of the comforts and many of the refinements of large and expensive ones. The cottage at the head of this chapter is projected on a plan which can be adapted to a warm or cold climate with little change". The type plan of the Christian family house had a central core surrounded by two large rooms. One of them could be subdivided by a wheeled movable partition that presented a scrim wall in one of its faces and a closet in the other. The house was, therefore, a completely mechanical and elastic space.

1969 was also the year The Architecture of the Well-tempered Environment was published. In it Banham offered a parable to explain architectural space determining a thermalenergetic source instead of a mechanical construction source for architecture.

Banham's parable is simple: a tribe decides to camp on a site provided with timber, towards which it can act in two ways: either by building a protective fence or by lighting a fire. Banham removed one of the approaches by indicating that the construction of the fence is almost unanimously regarded as the best option. The building factor is thus a pre-technological reason greatly underpinning architecture as a cultural component. However, Banham opposed to it the behavior of fellowships who chose to light the fire, to organize their "significant structures" around a core, "a water hole, a shade tree, a fire, a great teacher" and are thus not assigned to a defined and limited space, but rather outspread and mobile, energetic. At this respect it echoes again Catherine Breecher in 1869: "There are two ways to nourish the body, one is food and the other fresh air."

Along with the parable Banham provides a vital alternative. Faced with defying weather conditions there are not two but three possible reactions: coat, tent or construction, and fire. Coats exclude any social dimension, tents offer no privacy, fire neither offers privacy nor is it effective under the rain. This would explain the preference for the tent-like original ideal, but it does not eliminate the undeniable interest of the remaining models Banham sought to recover for his draft of the Un-house. The camp fire, the primal expression of thermal space for which Banham showed a great interest, haunts the image of concentric rings of comfortable space around it. The wind deforms these ideally circular rings into changing elliptical shapes. According to Banham, architecture has completely ignored the thermal space as a form-giving principle, built solely on the basis of "massively structural methods of environmental management" such as thermal inertia.

However, energy management is becoming an added value of great importance and presence, and space is largely modeled from that premise. Air conditioning, heating, hydro and lighting thus become generators of architectural space in the same way as structure and construction. Banham intended to review the history of modern architecture from these four purely technical approaches in his analysis of this book, towards an autre architecture.

While preparing the book and as condensation of his theory on architecture as a strictly technological product, Banham published his famous essay A Home is Not a House, which contained many of these issues; a unit of central air conditioning and energy surrounded by an inflatable plastic membrane was also presented. First published in 1965 with the well-known drawings by the French-Moroccan architect and artist François Dallegret, the essay already included an almost fully developed discussion on the campfire.

The assessment that this text makes of the ideal of American "monumental space" as "great outdoors: the porch, terrace, the plain of Kerouac" is central to Banham's proposal of the environmental bubble. For the Englishman, "humbler Americans had been slipping into a way of life adapted to informally planned interiors that were, effectively, large single spaces", in contrast to European domestic space subdivision. This difference provides an energetic ideal in two very different traditions that lead to two different ideal domestic spaces (waste and containment), linked to a different enjoyment of the natural environment: continuity and insulation.

Basically, Banham (in his anti-monumentalism) is betting on a new monumental ideal tied to the American tradition of the continuity of nature and architecture, as opposed to the course that American architecture was actually following at this time – the mid-60's. Ocatilla as environmental bubble compound would have been a brilliant counter-paradigm. In fact, from what Banham published about Wright a hundred years afterwards, it seems 1869 was also a critical year for him –maybe even more than it was for Wright.

In the mobile bubble, the first formulation of environmental bubbles, these would inevitably be linked to the automobile as a source of energy for their mechanical hearts: a slab-floor (clear in Dallegret's drawing) would be the equivalent of the traditional American home fireplace in the fix bubble, which should become a "warm dry... hemisphere" for experimenting, -Banham goes on- "spectacular ringside views of the wind feeling trees, snow swirling through the glade, the forest fire coming over the hill, or Constance Chatterley running swiftly to you know who through the downpour". This monumental ideal is however quite older than "this crazy dream of the modern movement of the interpenetration of interior and exterior" referred to by Banham, as it approaches the romantic ideal of the individual confronted to the sublime natural landscape (Schinkel's or Friedrich's) that reshapes the individual and the slippery modern subjectivity when faced with the only seamless certainty: landscape and natural (atmospheric) phenomena.

Banham's Bubble house shares many and almost all features with Wright's camp in the desert, as it is clearly indebted to the house proposed in 1869 by Beecher. Both refer simultaneously to two architectural paradigms: an energetic paradigm and a symbolic-cultural one. The energetic paradigm is identical: the spherical or elliptical thermal space. The symbolic-cultural paradigm is apparently very distant, because in the case of Wright it is the House on the American Prairie, heir to the Christian family home by Beecher, and in the case of Banham the origin is the car or motor home as a house for the individuals or couples who have left behind the institution -the (Christian) family-, thus venturing into the new subjectivity of nomadic rootlessness of late capitalism.

However, Banham elliptically identifies both apparently departed cultural origins if we look at his sharp analysis on the American master. For Banham the environmental bubble is not possible without the previous existence of Usonia, a parceled-up territory dotted with prefabricated homes with a hard technological core and a lightweight membrane, which is made possible thanks to the decentralization caused by the automobile.

As well as in Banham's Un-house, in the Usonian house the core is made of concrete and anchored to the ground in a single point containing all the mechanical services of a home, while the enclosing membrane is flexible, light-weighted, made of wood (in this case), and may virtually take any form.

As for the home limits, in both cases it is not a built wall but a visual, sensual and modifiable boundary, the landscape itself as a horizon in the case of the isolated house and a visual vegetal border in the case of bubble compounds. In Ocatilla privacy was a problem between the different cabins in the context of the camp as a large house, and was solved by mere topographical location which made crossed views impossible. In Usonian houses the lounge always incorporates the garden as a room facilitating gardening as a visual occlusion; and finally, in Banham's environmental bubble privacy would be solved, in his words, with "a more sophisticated landscaping", i.e. palisade fences or vegetal enclosures.

Sun-Trap

As a final intermediate between Ocatilla and the environmental bubble there is a building in the desert that belongs to Wright's production and is even less known than Ocatilla. The home Sun Trap in Scottsdale, Arizona, was built in 1937 by Wright for himself, his wife Olgivana and their daughter lovanna, and transformed in 1948 into a real house called Sun Cottage. This is another example of a temporary building that consists only of three boxes for sleeping grouped around an outdoors courtyard, with a fireplace for heating at night and cooking during the day.

As an inhabitable box compound it is once again the architecturization of the nomadic village, where for each cabin the scheme of core services and light skin envelope is repeated at an appropriate scale. Each box contains a double bed, a wardrobe and a rigid core with a desk. The three cells are identical, and between them a number of livable specialized patio areas are left as outdoor rooms.

The central courtyard allots the space, backyards are a toilet and a music room, and the entry courtyard serves as an outdoor living room with fireplace and furniture for lounging. Construction materials were identical to Ocatilla: flat strips of wood and canvas for covers. However, the geometry of the triangle disappears due to the roof tarps in overlapping horizontal planes and the mobile channels that allow natural ventilation. Also, windows are made from glass, a material completely absent in Ocatilla.

According to Reyner Banham the environmental bubble would have found its most perfect realization through the attempt to overcome the dream of Broadacre in Johnson's home in New Canaan, "a heated brick floor slab forming a floor and a standing unit which is a chimney/ fireplace on one side and a bathroom on the other". However, persistent monumental interpretations (read European for Mies' Schinkel-schule classicism) of this house show what Banham called the "sentimentality of the tough", which cannot under any premises be attributed to Ocatilla. In fact, a few years later the camp took a new and improved short life in Arizona, the home Sun Trap, before petrifying in Taliesin West and becoming, for all purposes, a monument confronted to the landscape.