JEAN PROUVE’S TROPICAL HOUSE

[or the Interest of Becoming a Paleontologist]
JEAN PROUVÉ’S MAISON TROPICALE OR THE INTEREST OF BECOMING A PALEONTOLOG

**Paleontology:** (origin: Greek *palaios* ‘ancient’ + *onta* ‘beings’) 1. The branch of science concerned with fossil animals and plants.

**Fossil:** (origin: French *fossil*, from Latin *fossilis* ‘dug up’) 1. The remains or impression of a prehistoric plant or animal embedded in rock and preserved in petrified form. 2. (Humorous) An antiquated person or thing.

(Oxford English Dictionary, 2009 ed.)

Fossilization is a recurring process that affects architecture. We could define this phenomenon as the fixation of the substratum, imagery and content of an architectural piece in a very precise state and time. There are significant differences about the way that fossilization affects to different architectural periods, even if the essence of the process remains the same. Differences have to do with the moment in which architectural objects are affected, the reasons of their fixation and the way we look at them. While this process could be considered as unavoidable when talking about modern architecture: time goes by and projects lose their predominant position in the architectural scene so they have to enter architectural imagery in a certain category and condition; the effect on contemporary architecture is more strange and symptomatic: projects and buildings are affected directly or few time after its materialization, reducing them to visual icons of an ephemeral and unimportant architectural production.

In the case of modern architecture, the building is submitted to the scrutiny of architects, historians or collectors (generally influenced by all the communal assumptions and prejudices created around them), responsible of finding a place for the fossil inside the common collection (also known as ‘History of Architecture’). The case of contemporary fossils is different due to their instantaneous condition: the ultimate responsible of the fossilization process is only its author and it is often due to their lack of interest and incapacity for generating any lasting or constructive discussion.

The kind of regard adopted is another important aspect to define the consideration that this fossils will have inside our collective imagery. The visual component is very important since it inevitably produces an initial fascination for the object contained. It is impossible not to celebrate images in a highly-visual society as ours, but the real value of the fossil lies on its capacity for generating new discussions and challenges. In fact we can make a very clear distinction between two different approaches when dealing with these architectural fossils: on the one hand a purely
visual and superficial one and, on the other hand, a deep and rigorous analysis that overcomes initial obnubilation to thoroughly reach the valuable content. These two approaches are equivalent to contemporary positions regarding architectural production, each of them signifying a certain sensibility and consideration.

“[...] our current obsession with the seductive image promotes a retinal architecture, which is designed to be appreciated and circulated as striking pictures, rather than confronted in an embodied manner through a physical, material, and fully spatial encounter. In fact, we can make a distinction between two architectures: on the one hand, and architecture of image, which gives less than its photographed imagery when actually encountered; and, on the other hand, an architecture of essence, which is always infinitely richer than any visual representation could convey. The first distances us from life, whereas the second reinforces and revitalizes our sense of life^1 [...]”

Jean Prouvé’s prototype for a Maison Tropicale, highly celebrated in recent times, is a clear example of this process of fossilization. There is nothing wrong with celebrating fossils. Many of them are of an incalculable value but they are useless if regarded only as beautiful and precious objects, dismissing their inner values; this is exactly the way that the Maison Tropicale has been traditionally approached: reduced to a couple of lines, as in the Prouvé’s complete works^2, or as a bucolic fond collection of photos, as in the Touchaleaume^3 guide. On the other hand, Rubin’s article about the exhibition of one of the prototypes at Harvard University^4 is an excellent, deep and rigorous analysis of the house, setting the basis of what should be a valuable and ethical approach. However, it also shows a certain melancholy due to the failure of the mass-production operation and an attachment to the reconstitution of the preliminary state of the prototype before being shipped to Africa. Again, the bucolic fascination of a paleontog that loves the way his latest discovery looks like.

Because of its richness, unawareness and peculiarities (restoration, exhibition and auction), the analysis of Prouvé’s prototype fossilization process offers valuable material for drawing conclusions about the drift of the architectural critique but also about our own architectural assumptions and clichés.
La Maison Tropicale is one of the best-known prototypes developed by Jean Prouvé, always in search for new ways of producing quality, light and inexpensive pieces of Architecture. The ideal of building better livable spaces, change reality and incorporate the latest fabrication technologies to architectural design were continuous concerns on the work of Jean Prouvé. Despite the extremely practical and realistic approach of his ideas, Prouvé often shocked the conservative society of his time and never managed to put any of these prototypes into industrial production. In the case of the Maison Tropicale, only three prototypes were produced: one commissioned by the Ministère de la France d’Outre-mer (Ministry of Overseas France) and installed at Niamey (Niger) and another two for the office of the Regional Bureau of Aluminum Information and his director’s residence at Brazzaville (Congo).

Jean Prouvé dealt with both design and production as inseparable parts of a continuous research for the improvement of life conditions. Les Ateliers Jean Prouvé were integrated between 1947 and 1953 in the factory that Prouvé himself built in Maxéville (France) as a way of directly test designs and prototypes. Jean Prouvé received the commission for prototyping and producing prefabricated houses for the French colonies in Western Africa In 1951, a project with a series of very precise constraints and whose constructive elements had to be produced in France and transported by cargo plane to the site but these constraints were quickly converted in an opportunity for testing the validity of an architecture based on prefabrication, lightness, mobility and adaptation.

- **Prefabrication**

  Due to the lack of industrialization of the French colonies at that time, the totality of the elements had to be produced in the Maxéville factory and, therefore, the size of the different parts was defined by the maximum dimensions that the machines could treat safely. Furthermore, the prototype had to be designed so it could be assembled easily by unskilled workers. This fact reduced the number of elements to the essential minimum and simplified the solutions adopted.

- **Lightness and Mobility**
The prototype was almost fully produced in aluminum except the main structural elements, which were made of steel in order to assure a reasonable resistance and security. The malleability and ductility of aluminum allowed the creation of very light elements with an acceptable resistance. In fact, all the elements were able to be decomposed on different parts that individually never had a weight of more than 100 kilos (220 pounds; the maximum that two people could handle comfortably without mechanical aid) and were as flat as possible so they could be easily accommodated inside the main deck of the transporting plane. This combination of lightness and bulkiness makes of the Maison Tropicale a sort of IKEA-packed auto constructible house with a very high degree of potential mobility.

- Adaptation

This is probably one of the most inspiring aspects of the Maison Tropicale, since its technical solutions are based on very simple principles but result extremely effective. Probably the most eye-catching elements are the surrounding sun-faders that protect the inner veranda from the direct solar radiation: a reinterpretation of the traditional straw blinds, a less sophisticated though very effective way of sun protection in the traditional Western African constructions. However, it is the double roof and the ventilation system that constitute a veritable advance due to its efficacy, simplicity and discretion. Prouvé uses the space between the thin aluminum panels of the roof - which quickly reach very high temperatures due to their sensitiveness to heat conduction - and the dropped ceiling of the inner spaces to create a stack effect by pressure differential. Then, the hot air accumulated beneath the roof exits through the openings of the veranda and the ridge producing a new income of fresh air that functions as a natural cooler.

Many of the issues that Prouvé engaged with the Maison Tropicale are real concerns of our time and his use of technology represents an alternative to the way architects see the latest breakthroughs nowadays: more worried about how they will produce fantastic effects or astonishing images than considering the actual improvement of the living condition of our spaces. Far from any kind of technological fetishism, the Maison Tropicale shows how vernacular architectural knowledge and low technology solutions can be combined in the search of new forms of inhabiting.
The two Brazzaville prototypes have had similar fates and followed parallel trajectories since their production in the early 50's. Both examples represent similar approaches to the problem of recovering and studying a modern piece of architecture. Despite the different connotations of their ultimate destinations (one donated to an institution, for common enjoyment; the other one in a private property as a pseudo-reconstruction of its original condition), both arise the same problems about the bucolic visual fascination that many examples of the past produce nowadays.

The first of the prototypes installed in Brazzaville was recovered and restored by Robert Rubin in 1999. The house was then installed in Harvard University for a long time before Mr. Rubin decided to donate the house to the Pompidou Centre in Paris. The second Brazzaville prototype was bought by a French art collector twenty years ago and shipped back to France for restoration works. Once repaired, polished and repainted, the house was exhibited in numerous cities and museums before being sold to a famous hotelier in a $5 million auction. This house is planned to be installed in a private tropical garden in Miami, Florida.

These operations, that could seem just another example of a perfectly achieved art trade preceded by a generous exhibition of the masterpiece, are critical for understanding the state of complacency and self-satisfaction that architecture has reached nowadays. The second Brazzaville prototype, completely decontextualized, becomes just an object of a private collection, out of place, dispossessed of any valuable lesson that could contain. Nonetheless, the Maison Tropicale is not only an appealing and beautiful example of the Prouvé’s efforts to reach a high degree of industrialization of the Architectural product but also an extremely interesting collection of devices and low technology techniques. Prouvé’s interests went far beyond the simple design of shapes and forms: he was extremely concerned about the improvement of our livable spaces by using the latest fabrication technologies and their incorporation to a valuable architectural discussion. This is the reason why the current reduction of the Maison Tropicale to a simple picture card is so relevant: it perfectly represents the degree of banality and purely visual fascination that architecture has reached nowadays.

The final image of the prototype is just a possible materialization according to the latest fabrication techniques of the moment. The aspect is an eventuality defined by the moment it was designed and only relevant as an evidence of
the technologies of that time and if Prouvé would have designed the house at other time, the systems and decisions adopted would probably include the same concerns and the same solutions, but just look differently. This is the reason why contemporary fascination towards its fossilized image is so dramatic: while celebrating its appearance and dismissing the valuable material that this kind of examples may contain, a trivialization of the architectural production occurs. Architecture seems to scorn one of its own most valuable examples by decontextualizing such a responsible exercise of modern ethics, and converting it on a collector’s piece. Despite the evident benefits of restoring and rescuing the Maison Tropical from its former state of neglect, the operation conducted by Eric Touchealaume seems more a calculated trade operation than an altruistic service to the world’s architectural community. It is easy to doubt the use that a millionaire hotelier could find for the Tropical House nowadays.
SCAPING FROM IMAGERY FETISHISM: ARCHITECTURE AND THE SCIENTIFIC APPROACH OF A PALEONTOLOG

A fossil is not only interesting for the beautifulness of the rests that it contains but also because, properly interpreted, offers valuable information for the understanding of species and evolution. Paleontology is the branch of science dealing with the analysis and interpretation of fossils. As a scientific domain, its scope goes beyond the eventual beautifulness of the rests. This not-only-aesthetical interest is what differentiates paleontologists from antique dealers. Contemporary architects show towards imagery the same attitude than the last ones, fascinated by the visual power of any architectural example.

Architecture is subjected to the passage of time and trying to preserve it as a kind of man-made fossil is unnatural and affects its condition as a serious response to a problem of a certain time. Nothing can last forever, and in a discipline where engagement and commitment with the problems of the time scarcely occurs, architects seem to be more interested on conserving their bucolic images than understanding the real essence of past examples.

Jean Prouvé’s tropical house contains a big amount of interesting lessons but it requires a certain attitude to go far beyond an appealing image and dare to challenge our architectural prejudices; exactly, the same attitude that a palaeontologist would adopt while studying fossils: ready to question any assumptions formulated before.


IV. Rudofsky, B. ‘Architecture without architects, an introduction to nonpedigreed architecture’ Museum of Modern Art, New York (1964)


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