

VEGETATION AS ARCHITECTURAL FORMS. SITE'S IRONY AND DESIGN PERSPECTIVES

KEVIN SANTUS

The project of architecture, susceptible to the issue of the environment – defined as the ecological sphere – hence embedding elements of sustainability, becomes an intermediary between cultural and political stances and the biotic system. This relationship is inherently part of the architectural project, whether it is a contextual necessity or a cultural stance, as recently stressed by Barber with the notion of “a longue-durée engagement with buildings as physical, conceptual, and cultural mediators of the environment.” Moreover, “The discourse [...] [recognize] that all architectural activity has registered, or directly engaged, environmental issues both by professional necessity and as an expression of cultural desire.” (Hochhäusl et al. 2018, p. 4). Reflecting on the contemporaneity, we could hazard to say that these two elements are nowadays become one. A form of new *zeitgeist* seems to meander through the words of many scholars and practitioners, which is nothing more than a mirror of the society, and an awareness of the climate crisis in which we live. Hence, a question can be opened concerning this condition and how it can affect the architectural project, touching not only the process of architecture but also its formal composition and inner meaning.

With a similar cultural background, a new exhibition opened in September 2023 at the Museum of Modern Art in New York, titled *Emerging Ecologies: Architecture and the Rise of Environmentalism*, organized by Carson Chan and Matthew Wagstaffe, as an initiative coordinated by the MoMa's Ambasz Institute. The exhibition moves from the standpoint of placing the climate crisis as a crucial topic to investigate, not only in terms of catastrophic dismay but also as a field of research and practice for architecture. Without focusing on specific authors, the exhibition is more of a collection of various projects that try to detect the roots of environmentalism in the '60s and '70s in the United States. Through this compendium, the retrospective overlooks the relationship between ecology and architecture, investigating and narrating some ideas from which it is possible to glimpse key design questions that still today – or perhaps especially today – could be central to the project of space. Even more, the collected projects in the exhibition seem to highlight what a series of researchers such as Daniel Barber, Barnabas Calder, Jeremy Till, and Dipesh Chakrabarty have pointed out, namely that the climate emergency opens up new design opportunities (in terms of form, narrative, scale, technology, etc.), and at the same time shows a new interpretation for design expressions of the past.

Based on that, detecting those experiences that stress a certain attitude of the project in entangling nature and architecture is not only the demand to establish the modern origins

of environmentalism in architecture. Indeed, studying those projects could reveal those utopian beliefs, enabling the drive and building of architectural modification in the face of climate breakdown. In other words, this is what Marco Biraghi called the necessity to find an ideality behind the project to contrast the often ideological attitude, which we can seize in many contemporary approaches. Going beyond the greenwash, or the use of vegetation as technocratic fixes, the relationship between vegetation and architecture can stimulate a debate within contemporary design culture, to envision a way of doing architecture that could enable more than the coexistence between the two, approaching a proper form of project in dialogue with the environment. In this context, the collection of projects at the MoMa's exposition could be distinguished by identifying two dialogue conditions between nature and architecture. The first could be synthesized in the concept of *technology shaping the space* as visible in the experiments conducted by figures ranging from Buckminster Fuller, where his domes define closed systems and create microcosms that are the spatial interpretation of a complex culture, ecology, and technology; to Murphy & Mackey's *Climatron* (1960), in which the lush vegetation is confined in a controlled space, where the microclimate it is regulated by human technology. A second condition of the project, instead, investigates the blurring border between artifice and nature, as exemplified by Ambasz's *ACROS Fukuoka* (1992) or even more by the work of James Wines and his office SITE, in which vegetation becomes a constitutive element of the project (Fig 01). Therefore, the relationship between nature and architecture is not transmitted based on technology but as an inner spatial bond. Vegetation in this condition it is not an added aesthetical apparatus but an element determining the character of the architecture itself. Focusing on this interpretation, SITE's work can renew a debate on some studio projects and suggest a fertile seed for the project through the irony* of the solutions adopted.

THE EQUIVOCAL PROJECT OF VEGETATION IN SITE

It is interesting to note how the visionary experiments of SITE and the ideas of James Wines partially draw inspiration from the world of art and sculpture. The same name of the office, funded in 1970 together with Alison Sky, Emilio Sousa, and Michelle Stone, is an acronym for Sculpture in the Environment.

Indeed, the artistic attitude of Wines returns strongly in his works, as visible in some of the most celebrated proj-

ects for the BEST company². However, amid modernism and post-modernism architectures, SITE developed peculiar experimentation, which, observed nowadays, could reveal a new interpretative key to the project and its relationship with the vegetation. Indeed, among their projects, it is possible to note the intention of overcoming the functionalistic approach to architecture while searching for a deeper interpretative relationship with the contiguous environment, transforming the typological essence of architecture.

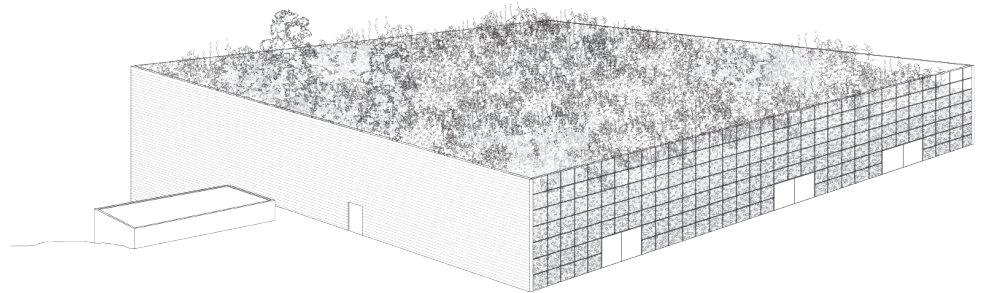
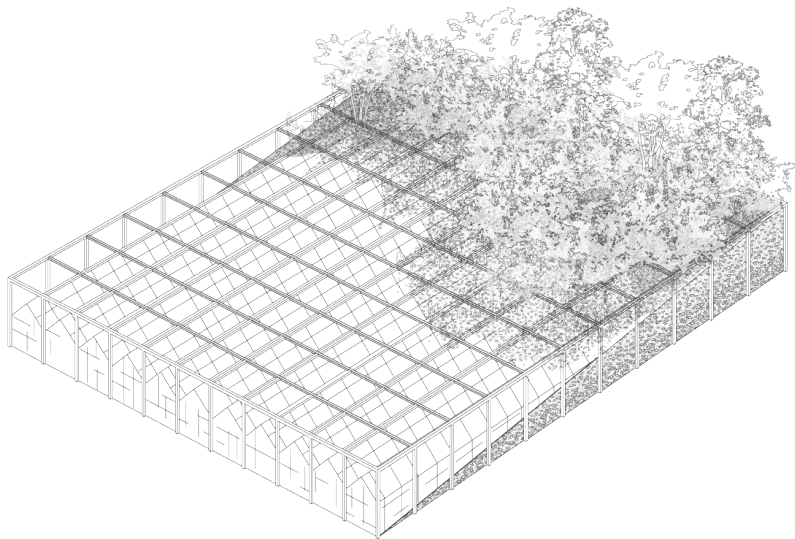
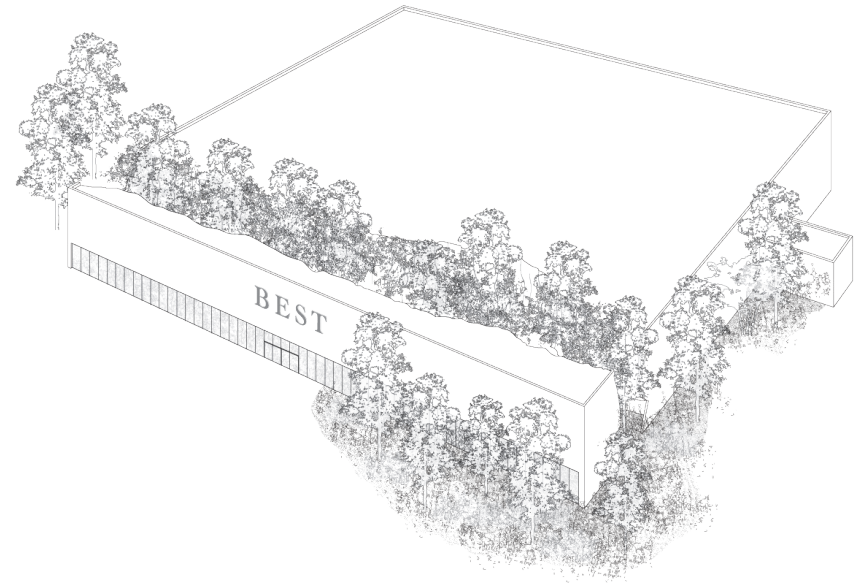
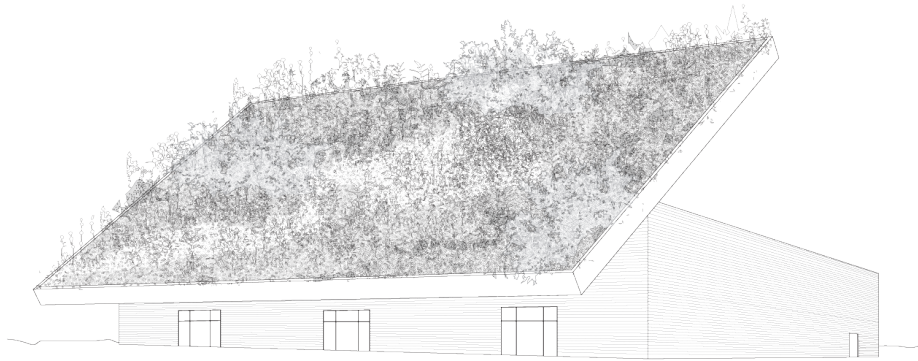
This attitude is particularly visible in the studio's explorations between the 70s and early 80s. Those were the years when the already-spread ideas of the utopian and anti-establishment Radical Architecture propagated in the US³, and the ecological awareness of man's actions on climate and environment was rising. Among the others, the 70s were the years when the Club of Rome published the *Limit to Growth* (1972), Ungers's *Kommunen in der Neuen* book to analyze utopian communities, and later in 1977 *The City in the City – Berlin a Green Archipelago* was developed; and again the concept of "deep ecology" was introduced by Arne Naess (1973), and Jane Drew and Maxwell Fry published *Architecture and the Environment* (1976). During this fervent decade, SITE was commissioned by the catalog merchant Best Products Company to design a series of showrooms in the suburbs of various American cities. Hence, between 1972 and 1980, SITE transformed those debates and ideas into architecture, where, through the irony of their buildings, they turned the project of space into a speaking manifesto. The showrooms turned the functionalist approach and showed how, in the suburbs, and despite the usage of the building, the architecture could establish a new discourse on the environment and form. An interesting attempt to blend vegetation and architecture is the *Landscape Parcel Preservation* (1978), where the crowning part of the building – which is a simple box volume – becomes a detached, diagonal element hosting a verdant green roof. The project has an inner will to preserve the existing soil, transforming the crowning into an open terrarium, where the green roof becomes a distinctive architectural element. Moreover, the idea that resides in this attempt to intermingle vegetation and architecture also shows a certain sensibility toward the conservation of the ground. Indeed, the whole surface covered by the building is then reproduced as an artificial ground, thus reflecting on soil consumption that was devouring the fields supplanted by new conurbations.

In the same year as this drawing, SITE developed the so-called *Forest Building* in Richmond, Virginia (1978), presenting a

Fig 01 *SITE's explorations of vegetation as project character*

The drawings represent four projects of SITE, James Wines, produced for the BEST Company in the 70s and 80s. Landscape Parcel Preservation, 1978 (top left); Greenhouse Showroom in San Leandro, 1984 (bottom left); Forest Building in Richmond, Virginia, 1978 (top right); Terrarium Showroom, South San Francisco, 1979 (bottom right).

Drawing by Kevin Santus, 2024.



peculiar relationship between the project and vegetation. The site for the suburban construction saw the presence of an arboreal thickness composed of oak trees, which became, for SITE, an ecological and geographical presence that functioned as a pivot for the development of the project. Consequently, in the *Forest Building*, the vegetation runs through the architecture, simultaneously creating a constructed border that allows the flora to be perceived as a contained space of nature. The composition of the architecture is simple. The volume of the showroom is split into two parts, with the façade being physically detached, creating an architectural intermezzo of approximately 60 meters in length and 7 in width, where an oak's forest grows. To stress this idea of ambiguity, the freestanding façade presents glass windows and openings, accentuating the perception of this space as if the architecture built the perimeter of the wood. Containing this forest fragment transforms an ecological and environmental sensibility into an architectural feature that is not just a "green addition." As described by Gallanti in *Harvard Design Magazine* (2018) the *Forest Building* resonates with the presence of this contained wood: the treatment of the façade, which seems to be broken by telluric movement, plays with the rows disposition of bricks; the opposition between the flat and simple surfaces of architecture and the lust of the vegetation generate a contrast which highlights the presence of plants as a living matter of the project. This thickness is transformed into something more than a simple threshold between outside and inside; it becomes a space where one perceives nature and shifts the role of trees into the real protagonist of the project. In a certain sense, also in this project, the architecture generates an interpretation of the terrarium: a contained space for nature to grow, where humans can perceive a delimited ecological system. From this hint of entangling plants and architecture, Wines draws a further proposal for the BEST showroom as an extreme conclusion of this process: the *Terrarium Showroom* (1979) (Fig 02)▲. The drawing shows a completely integrated construction with the ground and surrounding vegetation. The architecture becomes a mound of earth, a box of vegetation. The project is again a simple box, where greenery is enclosed in glass facades filled with earth stones and growing shrubs. Larger and heavier stones appear at the base of the building, while a thinner soil layer constitutes the crowing element; on the top and surrounding the building, trees of various dimensions take the space, creating a complete merge between the surrounding environment and the green roof of the building. The construction vertical sequence recalls the typical arrangement of classical architecture,

here transformed into vegetation, where it is still possible to detect all the typological elements of the construction (base, body, and crowing), nevertheless interpreted through nature. So, the architecture appears to be reduced to a thick glass layer. Here, vegetation and architecture blend in an ironic construction that seems to be "a ruin" of modernity. The architecture as a whole reproduces nature, while the building becomes part of the Earth itself. Echoing Paul Virilio's *Bunker Archeology*, the project hints at remembering the "revelation that architecture can be found in unlikely combinations of mass and bulk in geological forms and 'allowed' to sink into their sites." (Wright 2021, p. 46). As a new ground thickness, the architecture hosts soils, plants, and a new biotic sphere. Blending with the Earth's crust, the object of architecture becomes part of a planetary architecture (Trévelo, Viger-Kohler 2021), a living machine itself. Moreover, in the *Terrarium Showroom*, SITE demonstrates a non-decorative way of using vegetation, at the same time displaying nature and making it the character of the building, moving beyond modernism and the stylistic dogma, and searching in the ecological sensibility the ideality to construct new forms of architecture. Again, Wines' experimentation shows irony and equivocality as part of the design process, dealing with the environment as a living, geological, and geographic fact.

If we could consider this project as a manifesto of an architecture entirely transformed into a terrarium, further experiences of the studio tried to develop the same idea of the contained nature and see the project of the building as the possibility to reproduce forms of naturality. In this regard, it is highly relevant to cite the *Highrise of Homes* (1981) (Fig 03). Here the architecture of a skyscraper breaks with the formal research of the object, preferring a utopian form in which each floor of the building composes a new urban ground. The project is a clear critique of the American sprawl, aiming to save hectares of land from the soil consumption of hundreds of new single-families houses. At the same time, *Highrise of Homes* takes to the extreme and reinvents the idea of the horizontal plane of architecture as a new urban ground, where each floor can become a new living environment. The new building constitute a self-functioning system, looked from the outside it seems an open structure, free to grow and transform.

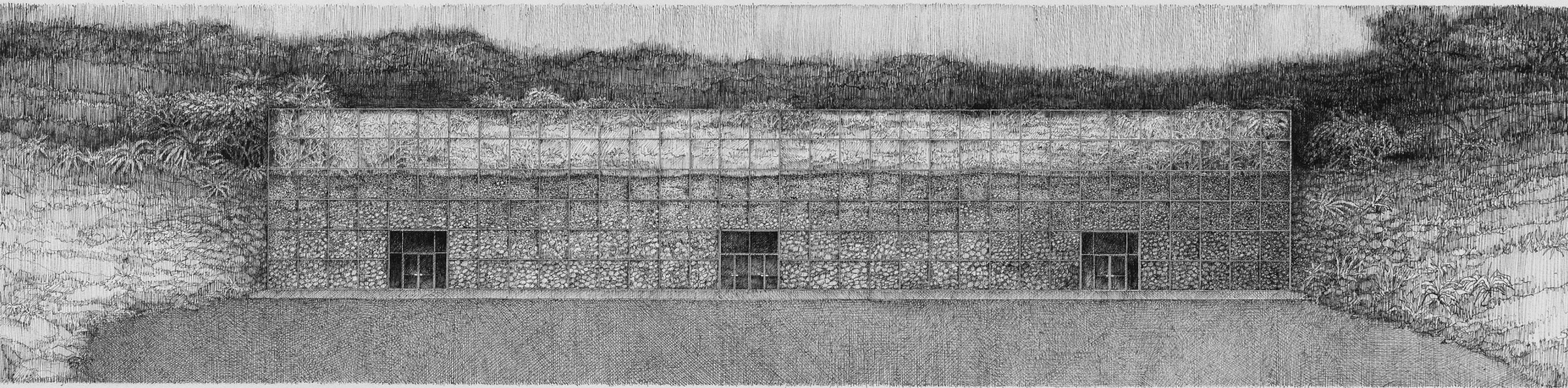
Also, in this case, Wines proposed the presence of vegetation as a complementary element of the living, which still finds a functional and integral character for the whole architecture.

Not a mere decoration but a fundamental feature of the project. As Wines stated in a conversation:

Fig 02 Terrarium Showroom, Elevations

Drawing by SITE, James Wines, 1979. Credit Best Products Company Inc.

Architecture Fund, Object number 582.1981. © 2024 James Wines.



SITE's work is always involved with some kind of dialectic; often a dialogue between natural and artificial oppositions. There are a lot of buildings now constructed as attractive objects, encrusted with plants and trees. If the whole ensemble idea seems to invite nature as an intrinsic element – either through function or aesthetic imperatives – I tend to feel comfortable with this kind of structure. On the other hand, I don't like vegetation used as some kind of applied décor. This reminds me too much of all that decorative excess in Post-modernist architecture. In the hard line view, vegetation is deemed an 'intrusive diversion', or, even worse, as evidence of 'pastoral sentimentality'. (Rapanà 2009, pp. 156-157).

If these explorations done by SITE are certainly positioned into a stream of architectural research that tried to see the object of architecture over the discipline, combining sculpture, environment, and construction, reading these projects nowadays can reveal a further layer of interpretation. Moving away from the possibility of salvation made by a heroic figure of the architect, SITE's architectures show us a potential relationship between architecture and vegetation, working on that border between what is nature and what is artifice. Architecture and environment become a unique space, a complex form of dialogue that constitutes a rich potential for the architectural language and even for its typological transformation; in a way, answering a question posed by Howe and Pandian, who referring to the impact of the climate crisis wonder if could be possible to "learn new ways of being in the face of this challenge, approaching the transmutation of the ecosphere in a spirit of experimentation rather than catastrophic risk" (2020, p. 22).

Furthermore, it is crucial to spotlight the intention of SITE, embedded in the irony of their work, to present the architecture project as a political and ecological message, where the responsibility is translated into the forms and relationship of architecture, not as a technical solution but as a cultural position. As Wines said during an interview to DOMUS in 2018:

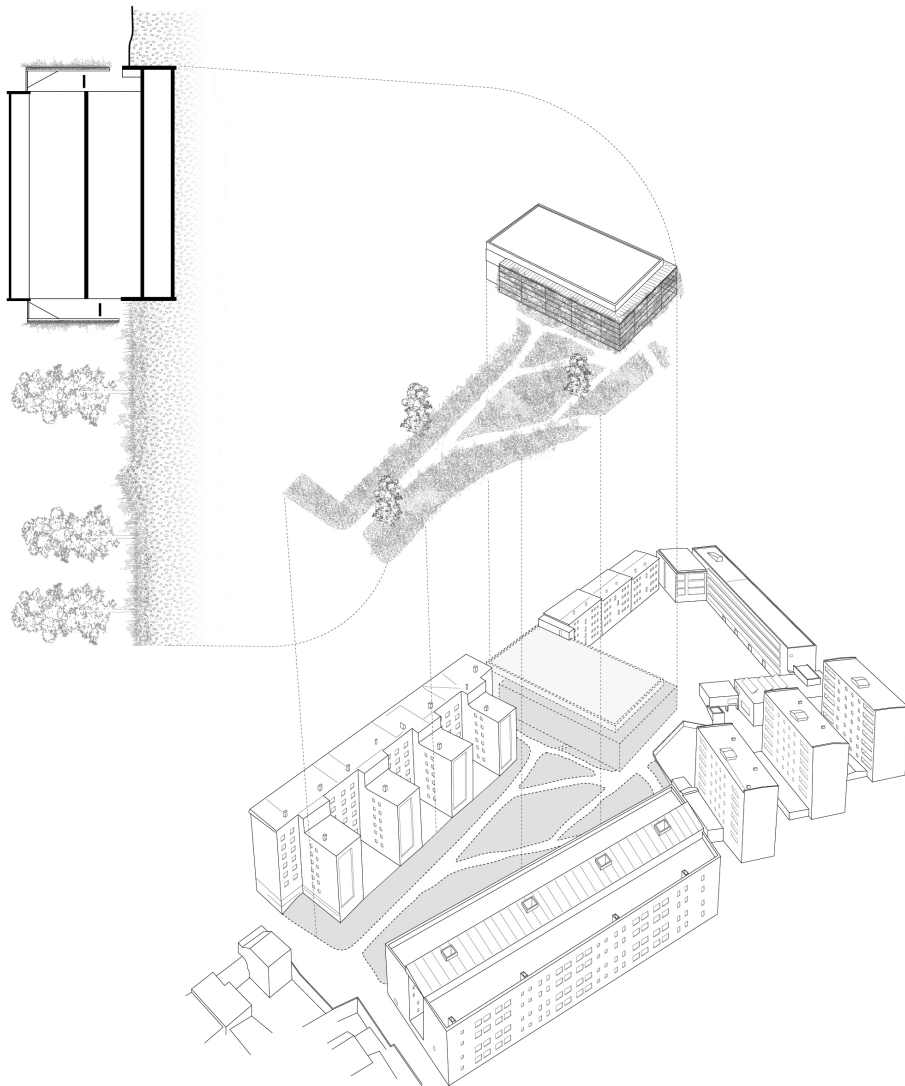
The recent surge in interest for that period in time – for the Radical movement and its ideology – is justified by the need to experiment. For me, the priority has always been art over technique. If the technical execution is perfect, but there is no idea guiding its meaning, then there is no interest, because art is lacking.

Fig 03 *Highrise of Homes, Project (Exterior perspective).*

Drawing by SITE, James Wines, 1981. Credit Best Products Company Inc. Architecture Fund, Object number 581.1981. © 2024 James Wines.



Fig 04 *Sport Center in Turo de la Peira*.
Drawing by Kevin Santus, 2024.



If, on the one hand, it is clear the link between Wines' projects and the concept of a terrarium as a reproduction of nature – a halfway between exhibiting nature and making vegetation a living and typological element of architecture – it is also crucial to detect how his approach could be of interest for the contemporary elaboration of the project. SITE's experimentations present a radical position as dramatic plant-building blends and as constituent elements of some of his utopias. Chan and Wagstaffe proposed that looking at these projects shows how they are

wryly critical—of suburban retail stores and the anonymity of conventional urban high-rises, respectively—neither looks with scorn on their intended users. Instead, these buildings generously deploy humor and surprise to provoke the public into rethinking some of our standard ways of drawing the boundary between the built and natural environment and even more spotlight that architects interested in the environment can't simply rely on technocratic solutions and “finger-wagging”; they must also produce interesting buildings with which people will want to engage. (2023, p. 197).

Therefore, looking at this experience of fifty years ago could inform the contemporaneity in a method of using vegetation as a mix of environmental interpretation and composition tools. However, we could try to take a step forward. Indeed, nowadays, due to the climate crisis and the urge to bring back vegetation in fragile contexts where anthropic action has deleted it, the same projects could reveal something new. Not only architectural terrariums of vegetation, but climate machines capable, through nature, of influencing the urban microclimate and, therefore, operating actions of mitigation and adaptation to climate risks.

In a way, Wines' visions can be considered antecedents of an architecture capable of bringing morpho-typological reflection into tension with environmental care and action.

Similarly to James Wines' experimentation, in 2018 A. Noguera and J. Fernandez designed the *Sport Center in Turo de la Peira* (Fig 04), in the outskirts of Barcelona, where an interior urban block in Barcelona was renovated, hosting an enclosed vegetation space. Here the project is trying to knit vegetation into the very essence of the building (Cook 2014), defining its substance and character. Also, in the sports center project, the role of greenery acquires a typological relevance, without any mimic intention, rather a proper “reconstruction of nature” – to use the words of David Gissen (2009) – characterizes the intervention.

Avoiding the decorative mannerism, the project traces the lines of a closed ecosystem through architecture. The former impermeable soil has been transformed into permeable ground, with a garden that helps drain water during storm events and supports biodiversity. Moreover, the vegetation takes part of the building definition, composing three of the four facades of the sports center. In this way, the building also becomes part of the garden, with climbing plants defining a threshold between the outside and inside. The whole project rises inside the built block, protected and isolated from the city, but at the same time, becomes a climate agent, a machine (Barber, Putalik 2018) for the local micro-climate to mitigate the heat-island effect, and defining the character of the building.

Learning from these cases could enlighten a cultural depth and a typological consistency of using vegetation as an architectural feature. In a way, both the work of Anna Noguera and Javier Fernandez in Barcelona and the ones of James Wines could be described as terrariums, not only in the aesthetic assumption of it but as a form of space in which the vegetation and architecture work as a living system. Considering the emergence of climate risks and the inescapable need to structure a new reflection on architecture, SITE's irony could serve as a revelatory key to interpreting the environment and the ecological crisis. Perhaps looking at their projects, we could already see a glimpse of that concept of "*architecture as form* that climate has yet to change radically" (Andraos 2016, p. 299). Lastly the architecture as a terrarium could reveal an approach to architecture, blurring the project's contours, physically embedding vegetation in the typological and changing form of architecture.



In SITE's architecture, the concept of irony could be described as an attitude of humor and distance from the world (Petit 2013) that, at the same time, becomes a way to express a critique of the same, imagining a vision of unexpected constructions. Therefore, irony becomes a physical characteristic that constitutes provocative architecture, going beyond the stylistic features of post-modernism and embedding elements of criticism.



Among the others: *Peeling Building*, Richmond, Virginia (1972); *Inside-Outside Building*, Milwaukee, Wisconsin; *Tilt Show Room*, Towson, Maryland (1978); *Best Products Showroom*, Miami, Florida (1979).



Exemplary are *The Twelve Ideal Cities* by Superstudio, Cristiano Toraldo di Francia, Alessandro Magris, Roberto Magris, Gian Piero Frassinelli, Adolfo Natalini in 1971, but also the *Cubo di Foresta sul Golden Gate (Cubic Forest on Golden Gate)*, from *L'Architettura Riflessa (Architecture Reflected)*, 1972, in which the relationship between Architecture and nature is questioned and become a semantic feature of the project.



From this drawing was later developed the *Rainforest Building* built in Hialeah, Florida, still for the BEST showroom, where a glass wall thickness contained a terrarium.



From an interview by Giulia Ricci for DOMUS, 2018.
See: <https://www.domusweb.it/en/architecture/2018/10/22/james-wines-modern-day-radical.html> [accessed 5 January 2024].