

FOREST ARCHITECTURE. IN SEARCH OF THE (POST) MODERN WILDERNESS

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9

FOREST ARCHITECTURE

On Sundays we often gathered at the summit of the highest mountain. Peaks and gently sloping banks; pastures, herds of large animals, infinite horizons, flights of crows. We prepared for the future.
Le Corbusier, *L'art décoratif d'aujourd'hui*, 1925.

INTERMEDIACY

In his essay *The Forest Edge* (1982), Robert Geddes draws attention to how the clearing has represented in architectural theory both a mythical notion and man's first and ideal habitat, offering, to the same extent as the primitive hut, a place appropriate for human habitation †. The edge of the forest and its inherent spatiality, standing for both shelter and openness, due to the porous connection it establishes between inside and outside, points to specific spatial situations that are met with in the design project. As the latter fervently searches today for efficient ways to mediate between built and natural environments through intricate compositional operations, the notion of architecture as *in-between* comes to the fore. Threshold spaces are informed by forms and shapes found in the forest context: porous spaces such as “arcades and colonnades, loggias and porches, thresholds, cloisters, courtyards and peristyles – all of which resemble clearings at the edge of the forest” ‡.

The notion of an intermediate space resonates with contemporary design explorations into new alliances between humans and nature which re-conceptualize the *in-between* as a place in its own right. In these explorations, intermediate spaces increasingly represent multifaceted environments: witnesses of the constantly changing natural phenomena as well as “spaces at risk, paradoxical and contradictory, fragile and essential [which] celebrate the in-between, as they teach us the value of thresholds” ††.

In addition, liminal, interstitial, marginal spaces, filter zones and skins, spaces of passage and circulation areas, envelopes and porticoes register the transitions from forest to city, from the sylvan to the urban, and from the natural to the man-made.

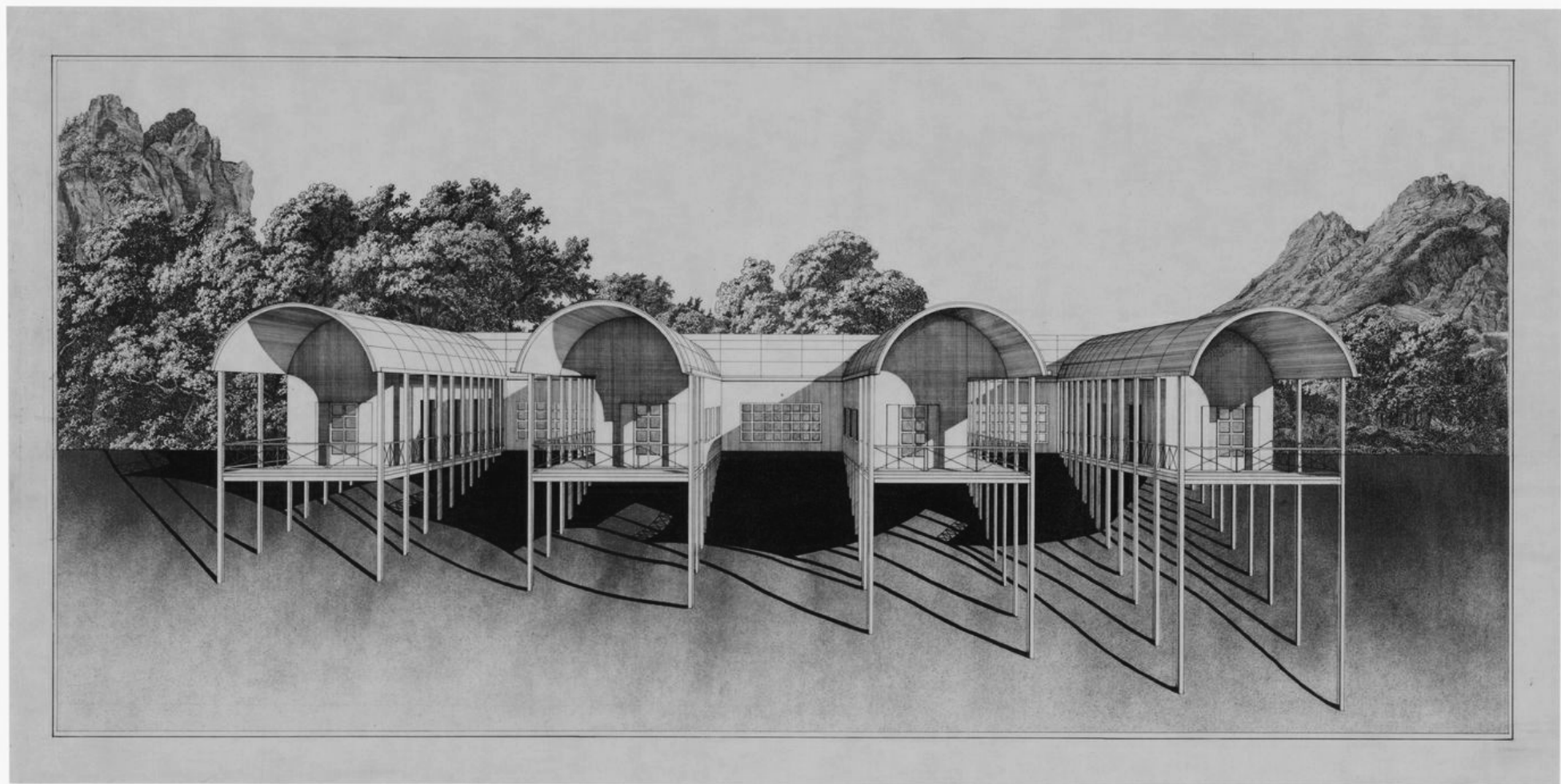
For instance, the intention to reproduce conditions of intermediacy through “areas of filtered light [compared to the ones found] under the canopy of large trees”^Λ, has been, for instance, a recurrent theme in contemporary design. Projects such as Kazuyo Sejima and Ryue Nishizawa’s (SANAA) proposal for the extension of the Instituto Valenciano de Arte Moderno (Valencia, 2002, unbuilt), Nieto Sobejano’s San Telmo Museum (San Sebastian, 2005-11) and Junya Ishigami’s Japanese Pavilion at the 11th Venice Architecture Biennale (2008) provide different conceptualizations of the idea of the *in-between*. The former by means of an additional envelope – a metallic skin surface which surrounds the existing building – envisioned to introduce an artificial forest environment: a semi-outdoor, shaded space punctured by a dense network of randomly placed stilts. Besides the formal analogy to trees in a forest^λ, the “careful study of the skin geometry and reutilizing excess conditioned air” reflected the aim of the project “to create microclimates within this space so that it can be used through extended times of the year”^ε. Whereas the latter consisted of four greenhouse units, different in size, perforated with openings and covered in a vegetated canopy of Japanese plants, in a way that “a constellation of relations [was generated] in which the traditional boundaries between work and landscape, nature and artifice, gradually fades until a new status emerges”^{*}. In both projects, spaces that organize sequences, transitions, and continuities between inside and outside emerge as relevant design subjects and suggest new possible relationships between architecture

and nature.

Contemporary design explores the character of intermediate spaces as new interfaces between built and natural environments, the forest and the city. It engages with the definition of spaces of cohabitation where the notion of the *in-between* emerges as a powerful conceptual and design tool for enhancing biodiversity and environmental sustainability. Recent research undertakings have demonstrated how the forest and the various processes, elements, and dynamics associated with it can serve as a model for the design project. For instance, in Jana VanderGoot’s book *Architecture and the Forest Aesthetic*, the forest emerges as “a prominent consideration in the language of design, thus recognizing [the former] as essential rather than just incidental to human well-being”[¶]. In so doing, it draws attention to how the “forest aesthetic opens designers to the forest as a model for an urban architecture of permeable floors, protective canopies, connected food chains, beneficial decomposition, and resilient ecologies”^λ. Representing an architectural stance characterized by the set of relations it establishes with its surrounding context, particularly valuable in today’s context of climate change and environmental crisis, it casts a fresh look on the relationship between the forest notion and the design project.

In this context, attention shifts towards the processes inherent to design – mediatory, adaptive, intensifying –, as “faced with any ideological and technocratic simplification, architectural culture has the duty to keep questions open and continue to question the rules and fundamental choices of the project”^{¶¶}. The sylvan is entrenched with the spaces of the city: it is interwoven with its networks, infrastructure, and substructure^{¶¶}. The limits between the urban and sylvan are folding in attributing a new character to marginal spaces. The city

Aldo Rossi, Perspective for Casa Bay, Borgo Ticino, Italy, 1971-1980.
AP142.S1.D25.P3.4. © Aldo Rossi Fonds. Canadian Centre of Architecture.



margins articulate the fragile relation between the built artifact and nature.

Through the various contaminations between the natural and the artificial, “[even] the garden (‘garden of passage’, ‘vertical garden’, ‘promenade plantée’),” as Francesco Repishti observes, “has been called on opportunistically to fill or to create a place, finding a manner consistent with the architecture, especially in the urban cases around or on the edges of infrastructures or buildings of large size, or to create a ‘threshold’ between the architecture and the contemporary city”¹⁸. Such phenomena of cross-pollination between the built artifact and nature – in projects such as the High Line in New York (Diller, Scofidio + Renfro, James Corner, Piet Oudolf, 2000-14), the Zollverein park in Essen (Agence Ter, 2005-06) and the garden of the Third Landscape for the roof of the submarine base in Saint Nazaire (Gilles Clément, Coloco, Jakob + MacFarlane, 2009-11) – are telling of “the desire expressed by the architectural object to absorb the larger whole that surrounds it through the attempt to hybridize and mix up the spaces, revealing the propensity of architecture to become highly ‘inclusive’ and characterized by the simultaneous presence of many elements and repeated inclusions of the variety of the world”¹⁹. The need to define filter spaces, thresholds, and areas of passage as transitions between the individual and the community, the sylvan and the artificial, architecture and the environment thus comes to the fore, suggesting new conceptual and operative approaches to the design project.

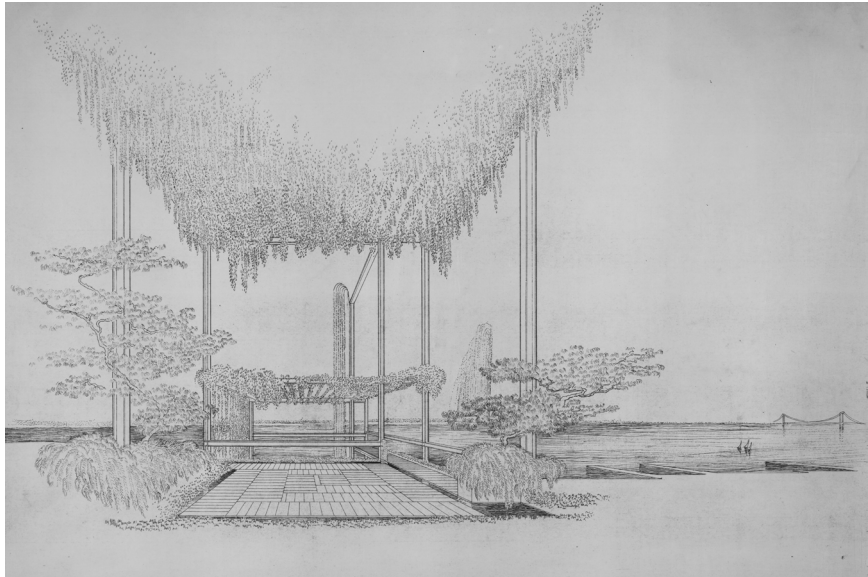
DOMESTICITY

The minimum living cell immersed in the woods is a powerful archetype that still manifests itself in the

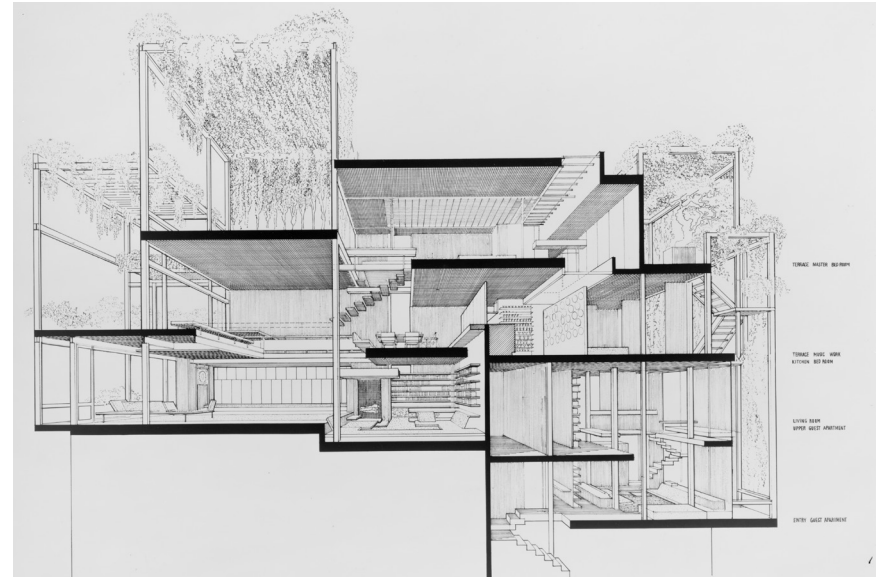
architectural imagination. Robert Pogue Harrison, in his book *Forests: The Shadows of Civilization*, notably argues that “a house is an architectonic of exteriority defined not so much by its walls but by its windows, its doors, its porch, its porous openness to the earth”²⁰. Across the twentieth century, manifold projects have envisioned the house as an artifact determined by feelings of openness, uncovering, and intermediacy. Aldo Rossi and Gianni Braghieri’s Villa borgo in Ticino (1971-80), for instance, expresses a seamless merge with the surrounding sylvan context. Divided into two parts, the building is envisioned to “grow on the sloping ground [by means of] an independent horizontal line,” adhering to the ground by means of pillars of different heights: “this suspension or aerial construction allows the house to live in the woods, precisely where the woods are most secret or unreachable, that is, among the branches of the plants”²¹. It articulates the fantasy of connecting the human habitat to natural ecosystems in which dwelling is synonymous to an exposure to the elements, to “paradise where spring breezes blow, zephyrs carrying the fragrant vapors of the fields and groves, granting their sweet harmony to the slight quivering of the foliage”²².

Several contemporary works continue to center on the understanding of ‘floors as grounds’, in an attempt to activate “strategies of the essential”²³. These build on and advance the glass pavilion typology, providing different ways of interpreting and engaging with the surrounding natural context. Two residential projects by architects Anne Lacaton and Jean-Philippe Vassal – based on the construction of an artificial soil superimposed to the one consisting of flora and fauna – are indicative of this approach. The small house at Cap Ferret (1998) is raised off from the ground by means of a system of stilts which mimics the forms found in the surrounding forest. The

Paul Rudolph, Penthouse apartment, 23 Beekman Place, New York City,
1977-95. Cross section. Photograph.
LC-USZ62-123771. © Paul Rudolph Collection, Library of Congress,
Prints & Photographs Division.



Paul Rudolph, Penthouse apartment, 23 Beekman Place, New York City,
1977-95. Terrace. Perspective, after 1956. Photograph.
LC-DIG-ppmsca-03526. © Paul Rudolph Collection, Library of Congress,
Prints & Photographs Division.



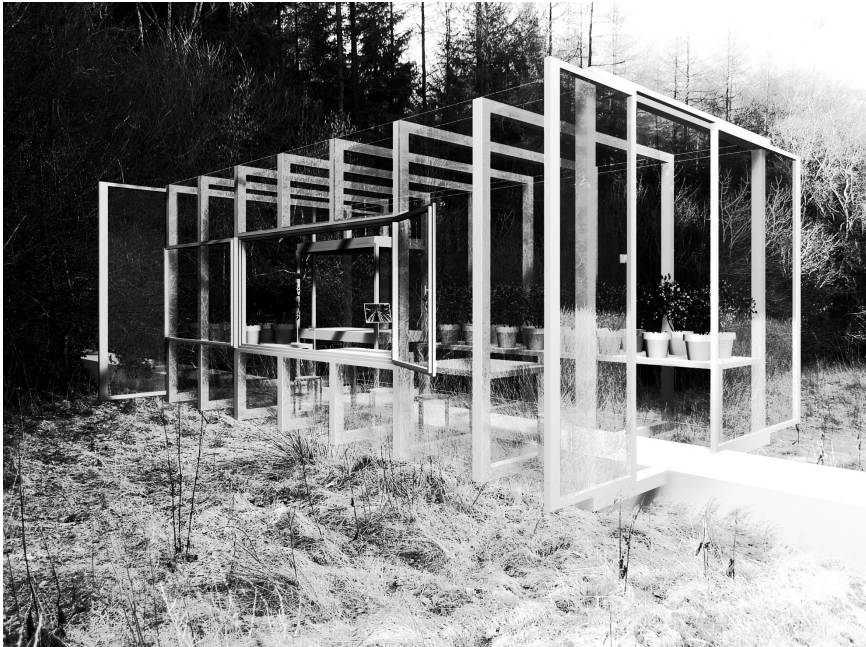
house echoes, reinterprets, and articulates preexisting naturalistic patterns and objects: its structure is notoriously penetrated by the existing trees, preserving them as integral part of the domestic space. The apartment buildings of the ecological neighborhood La Vecquerie in Saint-Nazaire (2009), in the homonymous competition project of Lacaton & Vassal situated at the edge of a wooded area, were similarly raised above the tree canopies. The project aimed at the preservation of the natural assets of the site (greenery, landscape, topography) and at “the maintenance and stimulation of the evolution of existing plant life, the minimisation of impermeable surfaces and finally reduction of the built footprint”¹¹. The interference with the natural habitat was aimed to be kept at a minimum; the property were to be left unfenced so as to allow for the growth of the vegetation inherent to the site, the passage of people and animals. As the project collages suggest, the façades were stratified, directing the gaze from the inside out and enabling the merging between architecture and nature. In both projects, the architects sought to define an alternative dimension of dwelling: the house does not oppose itself to the wilderness but organizes itself around it, it develops in parallel to the flows, rhythms, and processes of the existing ecosystems.

The notion of the house as “an architectonic of exteriority” manifests itself in further visionary projects, centered on a seamless relation between inside and outside. In the House Dilation project in Ambleside (2006, unbuilt), Philippe Rahm speculates on the idea of separating the rooms of the house and dispersing them in the forest. Three different climatic settings, including a meadow, the boundary between field and forest and the forest itself, inform the arrangement of the rooms in the space and provide the basis for the design intervention. “Through this dilation, architecture’s outer skin or

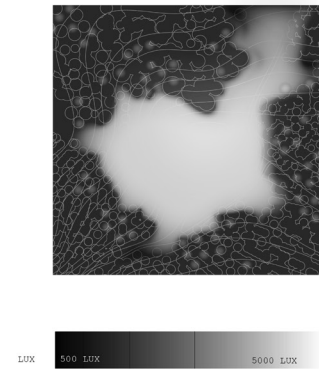
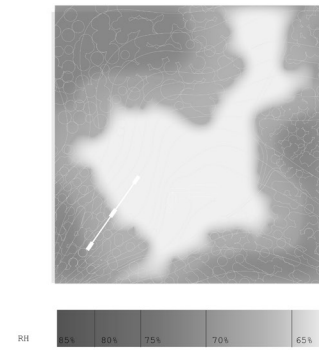
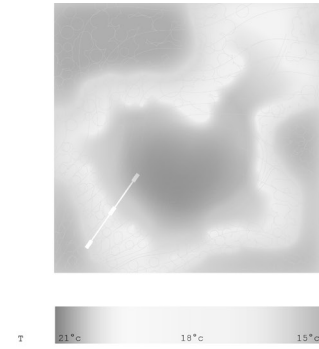
jacket is removed, and the environment takes over its protective role, becoming the last skin, filtering the light, containing or repelling moisture, heating or cooling”¹². Rahm specifies and goes on by mentioning that “activity in each dilation, will relate to the particular and required climate: the heat of the night forest, the warmth of the field in the winter during the day, the freshness of the forest edge in the spring”¹³. A new idea of domestic space is thereby introduced as the design of the house as a whole is guided by the thermal comfort conditions and requirements of each single room. The project seeks to highlight how the living spaces of the house are influenced by, and co-shaped with, their natural surroundings: they result in environments in perpetual change, in tune with the forest context¹⁴. It points to a shift of attention from the physical to the physiological qualities of space, from issues linked to built form to issues of experience, immersion, and comfort.

In the weekend house project in Matarraña (2012-17), Kersten Geers and David Van Severen, on the other hand, transform the liminal condition of the pristine forest site into built volume. The building materialises into a space-containing, inhabitable, fragmented ring, provoking an ambiguous impression regarding what lies within and without the house. “We felt a bit lost in this gigantic plateau overlooking at the edge,” the architects recount of their initial site visit, describing how “bothered by the emptiness in the middle, this walk became the house”¹⁵. The forest stands here for the mythical idea of dwelling, provoking a constant transgression of the limits between indoors and outdoors, nature and artifice. The only fixed elements of the house are the kitchen and bathroom appliances, while a network of steel columns designates, within the fixed building perimeter, the different rooms. In this way, the central court becomes the main living

Philippe Rahm architectes, House Dilation, Ambleside Cumbria, 2006.
External view. © Philippe Rahm architectes.



Philippe Rahm architectes, House Dilation, Ambleside Cumbria, 2006.
Temperature and light analysis. © Philippe Rahm architectes.



area, virtually open on all sides towards the landscape so that one can feel “autonomous in wilderness”².

VISIONS OF WILDERNESS AND THE MODERN HOUSE

In Le Corbusier's *Précisions sur un état présent de l'architecture et l'urbanisme*, the forest holds a central position in the discussion of modern techniques to address the problem of urban planning. “Here is the real view to the intense, the ardent modern city: a symphony of greenery, of leaves, branches, and lawns, and flashes of diamond through woods. A symphony!”³, the caption of an urban view of the Ville Radieuse project writes. The forest envelops architecture: it is depicted as a dense, thick, abundant woodland punctuated by glass-clad buildings raised off from the ground. The project is telling of a modernist stream which expressed interest in the notion of wilderness. On the one hand, this stream addressed a return to a natural state of living in the light of industrialised societies, standing for a reconciliation of man with nature. On the other hand, it conceived of the forest as a catalyst for new forms of living in the city: as both a *poetic* and a *biological* element⁴. It aligned with the early twentieth century architectural premise according to which “nature became no longer adequately representable as image or shape in the guise of motives adopted from the realm of plants and animals or as an evocation of the [natural] forces”⁵. Despite the fact that avant-garde architects “would not so much cultivate nature as they would cradle their buildings within it”⁶, a particular stream within modernism would strongly envision the integration of buildings with the sylvan landscape. At the building scale, several design instances would anticipate the contemporary dialectic relationship between architecture and the woods⁷, integrating

internal gardens, patios, roof gardens, verandas and planted loggias. These projects remind us that prior to “the invention of the Palm House, no garden was more wonderful and expensive than a hanging one”⁸. They built on earlier architectural models and on the premise that “the roof garden was a surrogate garden” in the context of the nineteenth-century hostile and inhospitable urban environment where impressions of picturesqueness and eeriness co-existed:

People look down from their small roof garden or from their window with a flower box onto the “Underworld” of the milling crowds of the large city with the same shudder as previously when looking into the Tartarus of the emotional garden.⁹

If “trees have been deliberately incorporated into modern houses since the moment they were granted status as a prominent part of spatial and environmental design”¹⁰, images and ideas of wilderness were a less frequent subject of modern residential projects. Although Modern Movement architecture did not put forward any new set of relationships to nature that are meaningful to itself, notions of wilderness, savage nature, the uncanny and the sylvan, nevertheless, underpinned specific modernist experimentations into the spaces of dwelling.

Le Corbusier's project for a villa for Madame Meyer (1925, unbuilt) featured a roof garden which, covered in lush greenery, represented “a small wilderness where, thanks to the woods of Parc St-James, one can imagine oneself far away from Paris”¹¹. Carl Koch's Cole house in Concord (1946) – exceptionally captured in the photographs of Ezra Stoller – stands for the abolition of the “boundaries between the building and the wilderness”¹², expressing one possible integration of an unkempt landscape into the domestic environment.

Bernard Rudofsky's \Downarrow patio houses (1943, unbuilt) encapsulated at their core a patch of dense tangled vegetation and trees growing on a grass-covered surface; to reinforce a feeling of domesticity, "[in] the middle of that wild patio, he drew a pair of chairs and a small table, as though it were a tearoom" \Downarrow 1. Whereas, Paul Rudolph's apartment extension in 23 Beekman Place, New York (1977-95) included the insertion, at rooftop level, of a metallic exoskeleton covered in abundant climbing vegetation: "a screened superstructure whose hanging vines made it into a literal 'living' room" \Downarrow 1.

These projects, representing different yet intersecting understandings of the blending of urban and sylvan qualities, nurtured the fantasy of co-habitation between man and nature, house and forest in an explicit manner. They have anticipated contemporary projects that see unkempt green areas as an integral part of the domestic environment. The vision of immersive spaces that incorporate exotic, lush, dense vegetation lives on to the present day through projects that build on the modernist idea of assimilating the building in the sylvan environment, seeking a direct confrontation between nature and artifice so as to enhance the experience of architecture. The forest nowadays "represents a metaphor drawn from real dynamics, which in turn, as in a circle with no exit, is an image constructed and projected into concrete environments, into interiors designed and prearranged to expel it" \Downarrow *. The line between man-made and natural elements becomes blurred as design seeks a seamless relationship between architecture and the natural, touching upon notions of cross-pollination, contamination, and hybridization. Today, the diverse intersections between the urban and the sylvan give rise to the shaping of spaces, atmospheres, and landscapes, in which the boundary between

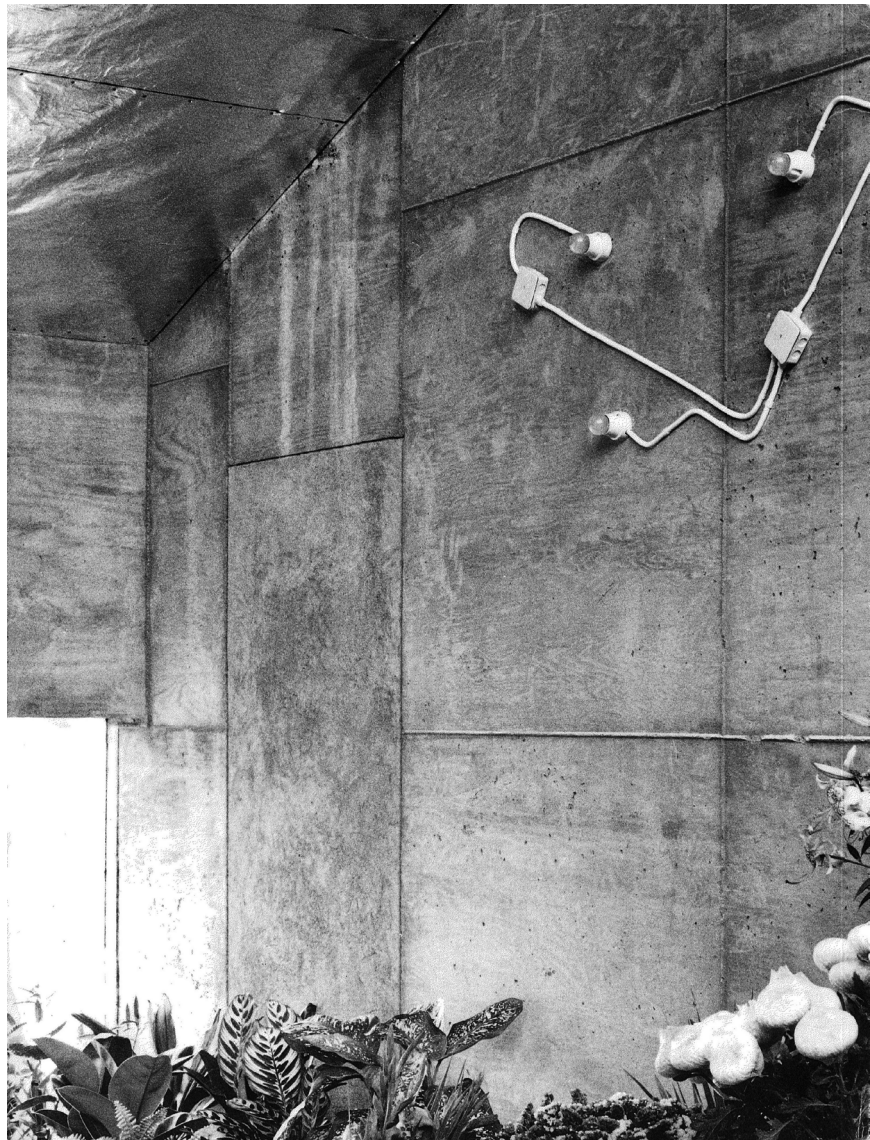
the artificial and the natural appears thin. As Philip Ursprung reminds us, two principal understandings of nature have guided modern architectural thinking and practice: the first notion refers to the borrowing – the "framing, imitating or transforming" – of forms and forces found in nature on the grounds of the design project, while the second one recognizes the inseparable relationship between architecture and nature, embracing the "proposition that the concepts of nature and architecture are not separable but interlaced inextricably" \Downarrow 1. Through this prism, Ursprung argues:

nature is just as designed as design is natural; life is planned in the same way that the plan is something alive. The assumption that nature and architecture cannot be separated calls for the question regarding their relationship to be argued anew. In such a context, architecture is not solely to be understood as the theory and practice of a singular building or the spatial design of our environment, but extends to encompass design, planning and visualisation of politics, economy, environment, future and human life in general. \Downarrow 1

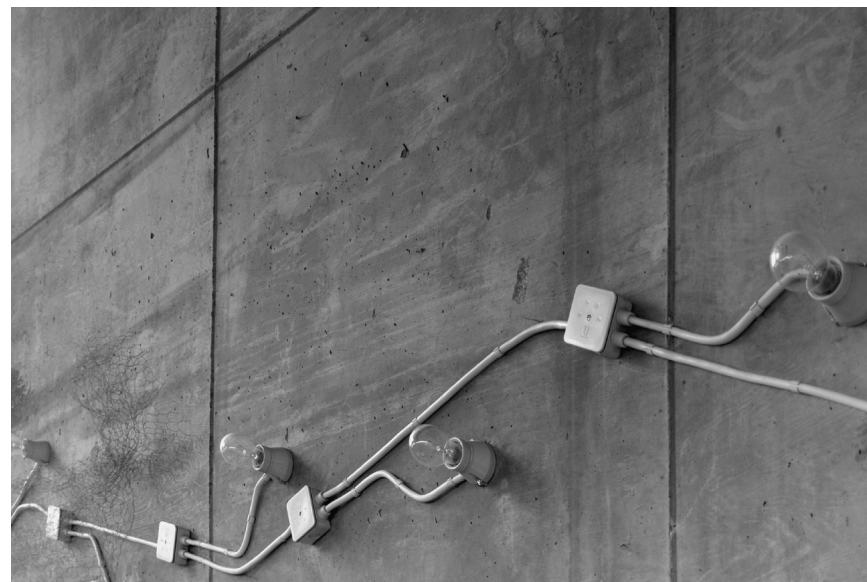
PERFORMANCE

In his book *The Ecological Context* (1970), John McHale compares Henry David Thoreau's hut in Walden Pond, Massachusetts to Buckminster Fuller's Dymaxion House. The basic, cost-efficient, minimum dwelling structure, in the example of Walden's hut, was reinterpreted as a model for ecological design; it aligned with the concept of ephemeralization, the process of progressively achieving more result with less resource consumption and means: a process, in brief, which "could be likened to a process of abstraction in which the spirit gains a better and better hold over

Sigurd Lewerentz, Flower kiosk interior space detail. Malmö Eastern Cemetery, Malmö, Sweden, 1969. © Photo by Karl-Erik Olsson-Snoogeröd. Courtesy of ArkDes Collections.



Sigurd Lewerentz, Flower kiosk, 1969.
© Photo by Seier + Seier. CC BY-NC 2.0 DEED.



matter”¹⁷. Walden’s hut was seen as a precursor to Fuller’s “grain-bin-inspired deployment units – a transposition of the balloon frame to the generic steel structure”¹⁸. “For McHale, Fuller was representative of a radical ‘change in the climate of ideas, not only in design’”¹⁹, as he saw architecture functioning as something more than the provision of shelter and as a complex system instead able to efficiently mediate between natural and man-made environments. The concerns about efficiency in the late twentieth century gave rise to a renewed attention to the natural world. Architecture sought to define tools for “better living,” drawing upon meanings, ideas and metaphors from elements and processes inherent to nature.

“These new homes,” Fuller wrote in 1928, “are structured after the natural system of humans and trees with a central stem or backbone, from which all else is independently hung, utilizing gravity instead of opposing it”²⁰. Despite the fact that Fuller’s architecture “does not adopt any natural shapes [...], his concepts all refer to systematic entities, power relations, as well as the relation between humans and their environment”²¹. Fuller’s housing prototypes drew upon these analogies so as to highlight architecture’s performance potential as opposed to its image, its ability to craft a new relationship to the natural environment.

Suspended from a single central mast, the Wichita House, part of the Dymaxion Dwelling Machines project, featured a hexagonally-shaped plan; it was intended to be mass-produced facing the housing shortage of the postwar period. The environmental performance of the house was of central importance to the project: the building had “a streamlined profile to reduce wind resistance and heat loss” while “a rotating roof vent resembling a big weathervane controlled the interior air flow”²². A drawing of the Wichita House

(1945) depicts its different possible variations according to certain climatic contexts (tropics/arctic), revealing a particular attention to the circulation of air, naturally or supported by mechanical means²³. The house becomes equated to a perspiring, living, regulating machine, adapted to its natural surroundings. In Fuller’s projects, “the building envelope was both a climatic filter as well as a climatic generator,” as he envisioned a combination of passive and mechanical means to regulate the interior environment in terms of thermal comfort provision. Crossing between the architectural and the planetary scales, his experiments on dome structures “are conceived of as being infinitely locatable, operating anywhere on Earth, bypassing the question of contextual specificity [offering] comfort in the most adversarial climates”²⁴.

Fuller’s project formed part of twentieth century theories that adopted a biocentric approach to design, influenced by technological advances rooted to the theory that “the prototypes of human technologies are to be found in nature”²⁵, as proposed by botanist and philosopher Raoul Francé. Among these theories, the theorization of space as membrane put forward by architect Siegfried Ebeling similarly drew upon the analogy of the tree and its inherent processes. For Ebeling,

architecture’s whole potential, its whole remit, does not go beyond the principle of the tree-bark or, framed in terms of the cell nucleus, the principle of the membrane. This envelope, however, means more for man than the bark does for the tree, since it must also perform the functions of the tree’s leaves and roots. To make these functions as complete and integrated as possible, we must recognise that optimum functionality and simplicity are both corollaries of beauty.²⁶

Interweaving concepts of nature with the built artifact, Ebeling drew attention to an expanded role of architecture that went beyond issues of aesthetic perception and form and intersected with notions of environmental performance. Priority here shifts from the visual perception of the built environment to the sensorial one, from envelope to void and from the tangible to the intangible traits of space. The conceptualization of space as an active field of forces and metabolic energies was rare at the time yet visionary as it resonates with contemporary debates on setting a new design agenda for sustainability, circular design, and materiality.

Architectural design increasingly drew upon natural operations, copying biological and natural processes as precise analogues for the functioning of man-made systems” as “the laws of nature and metabolism were displaced from the domain of wilderness to the domain of cities and buildings”¹⁷. Instead of biomimicry, which would eventually lead designers “toward formal solutions that resembled nature,” the attention was on practices which increasingly explored “(the coining of) technical processes that worked like nature”¹⁸. Beginning in the late twentieth century, the vision that buildings can mimic the biological processes of breath, growth, and photo-synthesis was put forward, mixing together “things that work biologically as ingredients of the biosphere and those that belong to the technosphere”¹⁹. Attention was drawn to issues of agency in architecture, to how a building functions in connection to nature, to its inherent processes and actions, rather than to the symbols and expressions attached to it.

Contemporary design practices tend to encompass the ‘natural’ dimension of architecture through interventions that are founded on natural, biogenerative,

organic materials and allude to natural processes²⁰. They nurture a cultural understanding of nature by rehearsing its affinity to the design project. They call attention to the notion of architecture as an ecological assemblage, an amalgam of organic and inorganic elements, the human and the non-human. Architecture envisions to construct a system which performs like a natural object rather than merely mimicking its form and structural principle. The emergence of “an intermediate space, which is neither inside nor outside”²¹ can be therefore observed, representing an interface between the organic and inorganic, building and nature, the city and the biosphere. “This project is both theoretical and practical,” sociologist Saskia Sassen points out, “it is predicated on the importance and necessity of using the multiscalar and socioecological properties of cities and recognizing the need to recode these properties as potentials that can be made to work positively”²². The limits between artificial and natural, inside and outside, organic and inorganic are increasingly folding in.

DECAY

In the Modern Movement, the embracing of plants as ornaments distanced itself from a romantic expression linked to an ‘unspoiled’ nature. In projects such as Mies van der Rohe’s Gericke house (1930, unbuilt), which emanated “a romantic sense of pleasing decay” as it featured brick walls covered with ivy, in contrast to the “fossilized vegetation that [appeared] as real or virtual images in the marble and plate-glass walls,”²³ and Sigurd Lewerentz’s Flower Kiosk at the Malmö Eastern Cemetery (1969), which alluded to a process of “[celebrating] the weather and the seasons, the story of its construction and decay”²⁴, this distance becomes

manifest. Further modernist projects cast attention on processes of weathering, through which “nature reforms the ‘finished’ art work”¹¹, and the aesthetic connotations attached to them. They revealed the communicative role of patina, understood as the incursion of nature which “softens the artificiality of new surfaces through plant growth and other natural alterations, enlivening them and linking surfaces with one another, as well as with the surroundings, through unifying influences”¹². The envelope becomes a mediatory element between the forest and the building, natural and artificial objects, registering the effects of environmental phenomena and the passage of time. The materic surface recounts the dynamic relationship between the building and the sylvan context.

The moisture and frost accumulation, due to rainwater runoff, in the side facade of Herzog & de Meuron’s Ricola Production and Storage Building in Mulhouse (1992-93), the traces of dry climbing plants in winter on the outer surface of Renzo Piano’s Fondation Beyeler in Riehen (1991-97) and the overgrowth vegetation interlaced with the honeycomb structure of Berrel Berrel Kräutler’s Water reservoir in Basel (2006-08) are telling of this process. In the latter, the building envelope consists of two skins in a way that “the outer façade consists of prefabricated concrete elements with a perforated appearance inspired by grass pavers. The gap between the façade and the inner core is filled with plant substrate. As time passes, as on dry walls, wild flowers will grow out of the stone, allowing the new building to merge with the park at an increasing degree over the years”¹³.

As David Gissen observes, in his book *Subnature: Architecture’s Other Environments*, these are not polished, groomed, embellished representations of nature: they are connected with notions of time, growth, and decay.

They make reference to “another possible form of nature in which we can be something more or less than is currently possible within our conceptions of nature”¹⁴. In the past, such concepts were mainly associated with the close relationship between natural and built components to highlight a symbiotic decay which intensified the process of a perpetual transformation of the artistic object. Nowadays, processes of hybridization and contamination between the natural and the artificial are expressive of the fragile state of our relationship to our natural surroundings.

The project for a house by R&S(I)E titled *I’m lost in Paris* (2009) is a telling example. It has aimed to “[exude] the mystique of a house in an enchanted forest;” the built artifact is enveloped in a dense green seath composed of hydroponically-maintained ferns “nourished by a mixture of bacteria, nutrients and rainwater, which can be adjusted in response to climate and light”¹⁵. A cultivated, seemingly uncontrolled and savage vegetation, surrounds the building, nearly taking over its volume with the passage of time. The perception of the project has been twofold: following François Roche, “the neighbourhood is attracted by the green aspect yet repulsed by the processes of fermentation”¹⁶. Such an aspect confronts us “with the complexity of the negotiations, the ‘natural’ conflicts and adaptations, while helping to identify the many niches in which to cultivate new design research”¹⁷. An additional reading of concepts of decay and corrosion associated with natural elements may then be deduced. In returning to the Ricola Production and Storage Building in Mulhouse by Herzog & de Meuron, we are reminded how the vegetal patterns – in this case a leaf pattern by photographer Thomas Ruff embossed on the surface of its main translucent façade, – extend on long-established romanticised

Berrel Berrel Kräutler Architekten, Water Reservoir,
Bruderholz, Basel, 2006-08. Detail view during the construction phase.
© Photo by Eik Frenzel.



symbolisms of nature. Beyond its allegoric function, in alluding to the products of the company hosted in the building, the pictorial representation of the repeated leaf pattern emerges as a symbol of the contemporary environmental and ecological fragility, of the “incur-sions of industrial society into the natural world”¹¹. In this context, “the green aura of the plant motif in Ruff’s photograph suggests an uncanny source of radi-ation, like those ‘toxic substances, hostile to life’, that Herzog sees in the waste produced by Western con-sumer society”¹².

Anthropologist Tim Ingold puts forward the hypothe-sis that the “conical lodge of northern forest-dwellers, fashioned from wooden poles covered with the hides of reindeer or caribou” alludes to a boat which “[floats] in the earth like “a boat in water, under the same, over-arching sky”¹³. The building is conceived of as in tune with and shaped by “the aerial fluxes of wind and weather” and the “formal integrity of the building have continually to be won against the forces of the ele-ments”¹⁴. The building is under constant change, not only does its perception differ, according to the specif-ics of the day, the season, the weather, but also its structure is subject to transformation, to erosion, crack, leak, moisture, decay. If, on the one hand, this points to degeneration, on the other hand, it suggests a co-transformation of the building with nature.

“Weather,” Ingold reminds us, “is also weathering,” and this “is a process of not only deterioration but also re-newal, a ‘continuous metamorphosis’ that lends the building an ever-changing finish”¹⁵.

FROM *OIKOS* TO NEW ECOLOGIES

Today, the design project addresses and encompasses the notion of the forest but the declinations of the

latter are significantly different to, and more broad from, nineteenth century romanticised notions of wilderness. The negotiation between man-made and natural, artificial and sylvan qualities continues to register on multiple levels within the contemporary city. Abandoned buildings, structures, and sites in the urban margins become overgrowth with trees and shrub vegetation, forming new multi-species habitats. In turn, sylvan elements enter the vast territories of the city, claiming its parks, lots, buildings, settlements, and infrastructure, fostering new definitions of convergence between forests and cities. Following Antoine Picon, marginal urban areas increasingly grow into “a landscape saturated by man’s technological endeavors, a landscape where wild grass exists only between strips of asphalt, where abandoned warehouses and rusty carcasses replace Poussinesque ruins”¹⁷. Accordingly, uncultivated, vacant, untended buildings, landscapes, and urban infrastructure unfold as experimental grounds for the design project, as the quest for setting a new agenda for sustainability, calls for new relationships between the sylvan and the urban.

The assets of the natural environment being at stake, the consequences of the Anthropocene era¹⁸, climate change and environmental crisis are among the reasons that the design project is called to reinterpret, conceptually and practically, the relationship between the city and the forest. The need to build on and redefine architecture’s relationship to the various manifestations of nature sustains and lives on in the context of the contemporary city. In the words of David Gissen, “the ambitions of postnaturalism are to present a true crisis of nature not by using cultural practices to reconnect buildings into new ecologies or to remake nature in some pure form, but by lifting the veil on our understanding of nature as a category

Berrel Berrel Kräutler Architekten, Water Reservoir,
Bruderholz, Basel, 2006-08. External view during the construction phase.
© Photo by Eik Frenzel.



Herzog & de Meuron, Ricola Production and Storage Building, Mulhouse,
1992-93, photo 1994. 3560-B. Architekturzentrum Wien, Collection.
© Photo by Margherita Spiluttini.





outside social determination” * ♁. Our relationship with nature calls for new definitions, operational approaches, tempos and modes of symbiosis: we need to make room for new concepts of nature, the forest and wilderness, the savage and the eerie expanding our current anthropocentric perspective towards architecture’s relational dimension * ♁.

From the urban to the architectural scale, numerous contemporary design interventions are founded on notions of the forest. The definition of inhabitable space is identified with the shade cast by a tree, as the climatic qualities of the latter “precede[d] the public function” * ♁ of open spaces; “the lime tree was there before the court, it is the shade of the tree that transforms a place into an attractive public space. The social and political bond originates from a meeting of men and women who came to protect themselves from the sun in the shade of a lime tree, an elm or a plane tree” * ♁.

At the scale of the city, projects such as Dominique Perrault’s National Library of France in Paris (1989-95), Michel Desvigne’s urban forest projects in Paris (Square des bouleaux, 1989-92) and Tokyo (Otemachi, 2009-13) * ♁ and Klaus K. Loenhardt’s Austrian pavilion “Breathe” in the 2015 World Expo in Milan recognize and draw upon this genealogy. More precisely, the latter created an interface between “seemingly irreconcilable elements – technology and natural diversity” * ♁: it introduced a temporary ecosystem in the city, sustained by species typical to the ecotypes of the Austrian forest, designed to promote a specific climatic effect and thereby a shared, cognitive-sensory experience. Immersed in the tree grove, pavilion visitors were exposed to a collective experience of noise and scent, rhythms of movement, a heightened oxygen level and concentration of cool air – of invisible, yet perceptible,

media* ¶ – which highlighted the importance of environmental quality through a “conceptual interplay between technology and natural living environments” * λ.

At the scale of the building, contemporary design interventions similarly recognize in the theme of the forest an opportunity for new confluences betweenylvan elements, program, and building. They explore issues of environmental performance and functioning, effect and delight, behaviour and ecological well-being. From Lacaton & Vassal’s Management Sciences University in Bordeaux (2008) to Baukunst and Bruther’s project for the ZHAW campus in Winterthur (2018), from Bruther’s Super-L – 160 Housing Units in Eysines (2013, not completed) to Atelier Kempe Thill’s winter garden housing project in Amberes (2015), recent design projects see the integration of the building envelope with greenery, in a way that the latter engages with human activity.

Through such an integration, these projects propose a connection between architecture and context that deviates from critical phenomena linked to the ongoing proliferation of vertical forests which engender considerable criticism. With reference to the latter typology, Daniel Barber and Erin Putalik highlight that

[the] vertical forests indicate hopeful aspirations for living differently relative to environmental patterns and environmental knowledge, but their realizations remain largely superficial. The architectural challenge – the global cultural challenge is to imagine living with a forest that somehow exceeds both nostalgia and instrumentality. It is a difficult goal, one requiring a new orientation to architecture and its relations. ¶ ¶

The integration of buildings with nature has recently intersected with architectural discourses on

ecology, performance, and aesthetics. The relationship between form and sustainability requirements has been central to these discourses, calling for its further redefinition ¶ ¶. “If in the past,” Penelope Dean argues, “green (through landscape and nature) served as a medium for larger ideas and scenarios, the question to ask today, perhaps, is whether the pervasiveness of an updated green design culture inversely offers the means through which to smuggle bigger, conceptual ambitions back into architecture and urbanism” ¶ ¶.

In approaching the design project today, it becomes essential to think of the human habitat as part of an interconnected network of natural systems – the human and the non-human, the tangible and the intangible, the proximal and the distant – bridging the gap between the technologies of *oikos* and notions of ecology. As James Corner has pointed out, “ecology, creativity, and landscape architecture, must be considered in terms other or greater than those of visual appearance, resource value, habitat structure, or instrumentality”, exceeding their mere metaphoric or ideological potential to foster, through the design project, new “alternative forms of relationship between people, place, and cosmos” ¶ ¶. In particular, Corner reminds us that

The word ecology carries with it the union of *oikos* with which allows it to be loosely translated as the “relations of home”. [...] This relation – or network of relations – is something that people make; it is an excess (of which landscape architecture is a part) within which a culture dwells. As such, human dwelling is always an estranged construction, one that can be as destructive and parasitic as it can be reciprocal and symbiotic. ¶ ¶

A holistic, responsible, and systemic approach to these systems in and through the design project is all the

more crucial today, in shaping the character of our relationship to the natural world at large.

FOREST-ARCHITECTURE. IN SEARCH OF THE (POST)MODERN WILDERNESS

The focus of the present volume is to consider the relationship of architecture to the sylvan notion, element, and context. In paraphrasing the title of Kenneth Frampton's essay "In Search of the Modern Landscape" (1991), published in the seminar transcripts *Denatured Visions. Landscape and Culture in the Twentieth Century* (MoMA, 1988), the volume aims to scrutinize the manifold ways in which the forest, understood as an image and as a reality, has been conceptualized, represented, spatialized, and hybridized in the architectural project. "To write of the modern landscape as though it were nothing more than a cultural discourse would be to trivialize values that are essential to our survival," Frampton points out, setting out to explore the spectrum of modern landscape design beyond the limits of its cultural discourse. He goes on to underline that "to write of the modern is to entertain the hope of the postmodern; to evoke that which is not yet built, transformed, laid waste, or irrevocably ruined; and to conjure up that ineffable 'other' world that lies beyond our present proliferation of useless objects" ¶ 1. As the issues of limited global resources and rapid urbanization become all the more pressing and as architectural attention shifts from objects to processes, from artifacts to systems, casting a fresh gaze on cities, this statement rings even more crucial today. The essays comprising this volume seek to expand on the discourse around the forest as an aesthetic-perceptual, conceptual-symbolic, and operative subject matter theme, as utopia and modernist notion alike, across a broad range of scales and contexts in order to

explore its contemporary relevance for the design project. The image of the forest, the woods, the woodland has been an eloquent reference for architecture and its wide range of connotations. The forest as ancestral and spiritual site, as wilderness, as natural resource, as ecological condition, as community, as biodiversity, as microclimate, as tactility, as sonority, represent conceptual notions that have intersected with the architectural project and imaginary, articulating the search of new approaches towards the relation between the natural and the man-made.

Architects, urban designers, and artists have been increasingly concerned with the 'sylvan' dimension of architecture: they have extended past the realm of metaphor to investigate and to re-imagine analogies, intersections, hybridizations between architecture and the forest: oscillating between allegory and function, "the building finds itself taking on a role, acting a part that is not its own [...] as much a metaphorical as a practical performance" ¶ 1.

How can wilderness, the forest, the sylvan be reimagined and conceptualized in architectural design? How could these notions engage with new aesthetic, functional, cultural, and social meanings? In which ways different notions of the forest and the sylvan are being articulated, embodied and presented in, with, or through the architectural project? In which ways do new alliances and confluences between architecture and the forest lead to new typological models? Which architectural stance is required for the different manifestations of the sylvan in the contemporary context? In conjunction with the ongoing research project "SYLVA – Rethink the Sylvan. Towards a New Alliance Between Biology and Artificiality, Nature and Society, Wilderness and Humanity" (PRIN – Progetti di Ricerca di Rilevante Interesse Nazionale 2017), and in

Bruther architectes (Stéphanie Bru, Alexandre Theriot), 160 Housing Units
and One Parking, (Super-L), Eysines, France, 2013.
BRUTHER © Photo by ArtaFactory Lab.



Bruther architectes (Stéphanie Bru, Alexandre Theriot), 160 Housing Units
and One Parking, (Super-L), Eysines, France, 2013.
BRUTHER © Photo by ArtaFactory Lab.



response to a call for papers within the research unit of the Politecnico di Milano, the essays in this volume set out to address these questions and, in so doing, attest to the manifold intersections of the forest – in its expanded definition which embraces the woods, the sylvan elements and landscape, the wilderness, the savage, the primitive, the unkempt and the eerie – with the architectural project and imagination. They look at the histories and futures of thinking architecture in relation to the forest, revealing ways in which such thinking has been blended with notions of modernity and may inform forthcoming contributions to the promotion of new human-sylvan alliances. In their entirety, the essays that follow call for a reflection on how a more thorough conception of the sylvan may allow for a renewed understanding of architectural agency in the context of establishing a new agenda for environmental sustainability in close connection with the social and ecological milieu.



R. Geddes, *The Forest Edge*, in “AD. Architectural Design Profile,” 1982, pp. 2-23.



Ibid.. See also: R. Geddes, *The nature of the built environment*, in “Progressive Architecture,” June 1974, pp. 72-81.



C. Hailey, *The Porch: Meditations on the Edge of Nature*, Chicago University Press, Chicago 2021, p. 105.



K. Sejima, R. Nishizawa, *Kazuyo Sejima + Ryue Nishizawa: SANAA works 1995-2003*, TOTO, Tokyo 2003, n.p.



In contemporary projects, the irregular disposition of structural elements has been compared to the organicity of trees in a forest: from Toyo Ito’s Médiathèque project in Sendai (2001), where the design process aimed at the “production of an artificial nature rather than architecture” to Junya Ishigami’s Kanagawa Institute of Technology (2019), where “the columns are arranged within the architecture as trees placed on a landscape.”



K. Sejima, R. Nishizawa, *op. cit.*, n.p.



N. Navone, *Gli spazi ambigui di Junya Ishigami / The ambiguous spaces of Junya Ishigami*, in Id. (ed.), *BSI Swiss Architectural Award 2016*, Mendrisio Academy Press; Silvana Editoriale, Mendrisio; Milano 2016, pp. 17-47.



See J. VanderGoot, *Architecture and the Forest Aesthetic. A New Look at Design and Resilient Urbanism*, Routledge, Oxon 2018, p. 11.



Ibid.



A. Rocca, *L'ambiente dell'architettura*, in Id., A. Rogora, L. Spinelli (eds.), *Architettura ambientale. Progetti, tecniche, paesaggi*, Wolters Kluwer Italia, Milano 2012, p. 145.



A. Picon, *Nature, Infrastructures, and the Urban Condition*, in M. Mostafavi, G. Doherty (eds.), *Ecological Urbanism*, Lars Müller Publishers, Zürich 2016, pp. 534-535; A. Picon, *Nature, Infrastructures and Cities*, in P.S. Cohen, E. Naginski (eds.), *The Return of Nature: Sustaining Architecture in the Face of Sustainability*, Routledge, London-New York 2014, pp. 172-180.



F. Repishti, *Green Architecture. Oltre la metafora / Green Architecture. Beyond the Metaphor*, in “Lotus,” 135, 2018, pp. 34-41, here p. 40.



Ivi, p. 40.



R. Pogue Harrison, *Forests. The Shadow of Civilization*, The University of Chicago Press, Chicago; London 1992, p. 234.



Progetto di Villa e Padiglione, Borgo Ticino 1973. Fondazione Aldo Rossi.



P. Rahm, *Histoire naturelle de l'architecture. Comment le climat, les épidémies et l'énergie ont façonné la ville et les bâtiments*, Pavillon de l'Arsenal, Paris 2021, p. 65 – my translation.



A. Lacaton, J.-P. Vassal, Lecture at Columbia University Graduate School of Architecture Planning & Preservation, Wood Auditorium, Avery Hall, September 14, 2017, <https://www.youtube.com/watch?v=Twiz-dw9-e4&tr=742s>, accessed 06 January 2023.



Lacaton & Vassal, Lecture at Columbia GSAPP, 2017.



P. Rahm, *Form and Function Follow Climate*, in “AA Files,” 55, Summer 2007, pp. 2-11.



Philippe Rahm architectes.



Contemporary design stances advance the interplay between nature and artifice through the lens of environmental criteria. Along with issues connected to structure, space and form, these stances draw attention to the non-spatial aspects of architecture: to the effect of temperature, humidity, air movement and solar radiation, the definition of atmospheres, the creation of microclimates.



K. Geers, D. Van Severen, Lecture at Columbia University, Graduate School of Architecture Planning & Preservation, Wood Auditorium, Avery Hall, September 14, 2015, <https://www.youtube.com/watch?v=Ndr4CytL7dw>, accessed 26 January 2023. See also: El Croquis, *OFFICE Kersten Geers David Van Severen (2003-2016)*, 185, 2016, pp. 218-219.



Ibid.



Le Corbusier, *Precisions on the present state of architecture and city planning (1930)*, Park Books, Zürich 2015, or. ed. The MIT Press 1991, p. 157.



“It is evident that the modern city will be covered with trees. It is a necessity for the lungs, it is balm to our hearts, it is the very spice of the great geometric aesthetic introduced into contemporary architecture by steel and reinforced concrete.” Le Corbusier, *La Ville Radieuse: éléments d'une doctrine d'urbanisme pour l'équipement de la civilisation machiniste*, Éditions de L'architecture d'aujourd'hui, Boulogne 1933.



P. Ursprung, *Nature and Architecture*, in J.L. Mateo (ed.), *Natural Metaphor. An Anthology of Essays on Architecture and Nature*, ETH; Actar Publishers, Zurich; Barcelona 2007, pp. 10-21, here p. 15.



“While Le Corbusier displayed little interest in the niceties of garden design he was nonetheless deeply susceptible to the evocative power of landscape.” K. Frampton, *In Search of the Modern Landscape*, in S. Wrede, W.H. Adams (eds.), *Denatured Visions, Landscape and Culture in the Twentieth Century*, The Museum of Modern Art, New York 1991, pp. 42-61. See also C. Giro, A. Kirchengast (eds.), *Nature Modern. The Place of Landscape in the Modern Movement*, Jovis, Berlin 2018; R. Devesa, *Outdoor Domesticity: On the Relationships between Trees, Architecture and Inhabitants*, Actar, New York-Barcelona 2022.



“The Villas propose a new formula for urban dwelling. Each apartment is really a small house with a garden, located at any height above

the street. But the street itself is modified; it spaces the buildings, trees now invade the city; the density of the residential quarters remains the same as today, but the buildings are higher, opening enlarged perspectives." Fondation Le Corbusier.

☿ C.A. Wimmer, M. Niedermeier, *Hanging gardens, eerie grottoes*, in "Anthos," 31, 1, 1992, pp. 32-39, here p. 32.

⇓ Ivi, p. 39.

⇓ R. Devesa, *op. cit.*, p. 15.

⇓ "Ville Meyer, Paris 1925 (1er projet): Madame, [...] Nous pensons que l'unité est plus forte que les parties. Et ne croyez pas que ce lisse soit l'effet de la paresse; il est au contraire le résultat de plans longuement mûris. [...] Ce jardin n'est point à la française mais est un bocage sauvage où l'on peut grâce aux futaies du Parc St-James se croire loin de Paris... Les services reçoivent le plein soleil, tant mieux. Par les fenêtres, haut placées, sous le plafond, on voit du ciel et des arbres... Tant mieux. (Lettre de Le Corbusier à Mme. Meyer, avec croquis)." Le Corbusier, P. Jeanneret, *Œuvre Complète, Volume 1: 1910-1929*, Editions Girsberger, Zürich 1935, p. 89.

⇓ R. Geddes, *The Forest Edge*, p. 10.

⇓ B. Rudofsky, *The Conditioned Outdoor Room*, in Id., *Behind the Picture Window*, Oxford University Press, Oxford 1955. "Notes on Patios" and "Three Patio Houses" New Pencil Points.

⇓ R. Devesa, *op. cit.*, p. 69.

⇓ Casa Rudolph, *New York 1977-1997*, in "Casabella," 63, no 673-674, pp. 138-149, pp. 171-172, here p. 144.

⇓ S. Marini, *Il ritorno della selva*, in Id., V. Moschetti (eds.), *Sylva. Città, nature, avamposti*, Mimesis, Milano 2019, p. 20 – my translation.

⇓ P. Ursprung, *op. cit.*, p. 15.

⇓ *Ibid.*

⇓ A. Picon, M. Robbins, *Fuller's Promised Land*, in "Any Architecture New York," 17, 1997, pp. 28-30, here p. 29.

⇓ A. Vidler, *Whatever happened to ecology? John McHale and the Bucky Fuller Revival*, in "Log," 13/14, Fall 2008, pp. 139-146, here p. 144.

⇓ "This change employs, on the one hand, the Occam's razor of concept economy, and, on the other, the idea that any formulation is acceptable which serves this economy, or identifies a situation in which action is possible," and he cites Fuller's maxim: 'A problem adequately stated is a problem solved. McHale traced the origins of this philosophy to Fuller's inherited transcendentalism.' Vidler, *op. cit.*, p. 143.

⇓ Buckminster Fuller cited in S. Yelavich, *Safety nests*, in P. Antonelli (ed.), *Safe: Design Takes on Risk*, Museum of Modern Art, New York 2006, pp. 17-25, here p. 18.

⇓ P. Ursprung, *op. cit.*, p. 19.

⇓ C. Davies, *Key Houses of the Twentieth Century: Plans, Sections and Elevations*, W.W. Norton & Company, New York 2006, p. 104.

⇓ "The domes were intended to be the sole source of nurture for their residents – self-sufficient, with no connection to municipal utilities. [...] The rhetoric around Fuller's domes – that they were dust-free, sealed with silent pneumatic doors, designed with a self-contained waste-management system – could easily be construed as science fiction." Yelavich, *op. cit.*, p. 18.

⇓ L. Moffitt, *Architecture's Model Environments*, UCL Press, London 2023, pp. 137-138.

⇓ R.H. Francé, *Die Pflanze als Erfinder* [Plants as inventors], Albert and Charles Boni, New York 1923.

⇓ These projects build on the tradition of earlier visions that saw architecture functioning as something more than the provision of shelter and as complex systems able to intervene in the relationship/ to efficiently mitigate between natural and manmade environments. S. Ebeling, W. Scheiffele, S. Papapetros (eds.), *Space as Membrane*, trans. Pamela Johnston, Architectural Association, London 2010, p. 8.

⇓ L. Kalipolliti, *No More Schisms*, in "AD – Ecoredux," 208, November/December 2010, pp. 14-23, here p. 19.

⇓ R. Ingersoll, *The Ecology Question and Architecture*, in C. Greig, Crysler, S. Cairns, H. Heynen (eds.), *The SAGE Handbook of Architectural Theory*, SAGE, Newcastle upon Tyne 2011, pp. 575-591, here p. 587.

⇓ Ivi, pp. 587-588.

⇓ "The success of a certain infrastructural approach to architecture in recent years suggests a similar process of multinaturalization of the human environment. The treatment of large-scale roofs as a new natural ground seems to have become a default solution for buildings today as green credentials and 'organic' features have become a favorite with both politicians and urban activists." A. Zaera-Polo, *The Politics of the Envelope, Part II*, in "Log," 16, Spring/Summer 2009, pp. 97-132, here p. 101.

⇓ S. Sassen, *A Third Space: Neither Fully Urban nor Fully of the Biosphere*, in J. Graham (ed.), *Climates: Architecture and the Planetary Imaginary*, Lars Müller Publishers, Zürich 2016, pp. 172-80, here p. 172.

⇓ *Ibid.*

⇓ "This play between fossilization, reflection, and transparency is key to the aesthetic of Mies's Tugendhat House (193) in Brno, where the winter garden seems to serve as a third term, mediating between the fossilized form of the onyx plane in the center of the living room and the natural verdure lying beyond." Frampton, *op. cit.*, here pp. 45-46.

⇓ J. Hill, *Weather Architecture*, Routledge, Oxon 2012.

⇓ D. Leatherbarrow, M. Mostafavi, *On Weathering. The Life of Buildings in Time*, The MIT Press, Cambridge, Mass. 1993, p. 64.

⇓ A. Janson, F. Tigges, *Fundamental Concepts of Architecture: The Vocabulary of Spatial Situations*, Birkhäuser, Basel 2014, p. 218.

⇓ H. Adam, H. Wirz (eds.), *Berrel Berrel Kräutler*, De Aedibus, Quart Verlag, Lucerne 2015, p. 35.

⇓ D. Gissen, *Subnature. Architecture's Other Environments*, Princeton Architectural Press, New York 2009, p. 023. "Aspects of what I term *subnature* have been partially labeled by recent historians and theorists. They are found in what Antoine Picon refers to as *anxious landscapes* and what the landscape architect Gilles Clément terms the *third landscape*. Both terms often describe postindustrial spaces at the peripheries of cities, where rusting buildings, weeds, and industrial debris coalesce. It may be identified in what architect François Roche terms *corrupted biotopes* to describe, among other things, the polluted water and air that produces hermaphroditic fish and polar bears," p. 22.

⇓ C. Slessor, "I'm lost in Paris' House by R&Sie(n), Paris, France," *The Architectural Review*, October 1, 2009. Available at: <https://www.architectural-review.com/today/im-lost-in-paris-house-by-rsien-paris-france>. Accessed June 25, 2023.

⇓ *Ibid.*

⇓ G. Corbellini, *Bioreroot: the architecture of R&Sie(n)*, Princeton Architectural Press, New York 2009, p. 159.

⇓ P. Ursprung, *Herzog & de Meuron: Natural History*, Montreal; Zurich, Canadian Centre of Architecture; Lars Müller Publishers, p. 307.

⇓ P. Ursprung, *Herzog & de Meuron*, p. 307.

⇓ T. Ingold, *Imagining for Real. Essays on Creation, Attention and Correspondence*, Routledge, Oxon 2022, p. 149.

⇓ Ivi, p. 150.

⇓ See D. Leatherbarrow, M. Mostafavi, *On Weathering. The Life of Buildings in Time*, 1993.

⇓ A. Picon, *Anxious Landscapes: From the Ruin to Rust*, in "Grey Room," 1, September 2000, pp. 64-83, here p. 65.

⇓ See E. Turpin (ed.), *Architecture in the Anthropocene: Encounters Among Design, Deep Time, Science and Philosophy*, 2014.

⇓ D. Gissen, *Nature's Historical Crises*, in "Journal of Architectural Education," 69, no. 1, March 2015, pp. 5-7, here p. 6. "Those of us interested in a project that rejects naturalism, but that still

utilizes nature as a referent, have examined the disciplinary tensions that produce concepts of nature and architecture simultaneously." "labeled with terms such as postnaturalism, posthumanism, or subnatural architecture [...], has offered an approach to engage or entangle architecture and nature outside of green, sustainable, or other environmentalisms that view nature as a category outside culture itself," p. 5.

⇓ Recent exhibitions and symposia addressing the topic include: *Genders of the Forests*, Institute Art Gender Nature, Basel Academy of Art and Design FHNW, 24–25.05.2023, *Siamo Forest. We Are Forest*, 22.06.2023 – 29.10.2023 Fondation Carrier Paris, Triennale Milano; *Garden Futures: Designing with Nature*, 25.03.2023 – 03.10.2023, Vitra Design Museum Weil-am-Rhein.

⇓ P. Rahm, *Histoire naturelle de l'architecture. Comment le climat, les épidémies et l'énergie ont façonné la ville et les bâtiments*, Pavillon de l'Arsenal, Paris 2021, p. 65 – my translation.

⇓ *Ibid.*

⇓ "I like poplar groves, orchards, artificially planted forests. I like to perceive these spaces whose conventional order is forgotten so that they are only densities, variations on density. Neither full nor empty, these squared spaces are sieves of a sort, where paradoxically life moves in – traps for an intermediate future." M. Basdevant (ed.), *Intermediate Natures: The Landscapes of Michel Desvigne*, Birkhäuser, Basel, 2009, p. 13.

⇓ *Ibid.*

⇓ The vegetation featured 50 trees, each up to 12 meters high, more than 15,000 shrubs perennials, and 120 m² of moss, thus producing 62.5 kilograms of fresh air each hour, meeting the needs of 1,800 exhibition visitors. *Ibid.*

⇓ *Ibid.*

⇓ D. Barber, E. Putalik, *Forest, Tower, City: Rethinking the Green Machine Aesthetic*, in "Harvard Design Magazine," 45, 2018, pp. 234-243, here p. 243.

⇓ On this topic see: P.S. Cohen, E. Naginski (eds.), *The Return of Nature: Sustaining Architecture in the Face of Sustainability*, Routledge, London 2014. S. Lee (ed.), *Aesthetics of Sustainable Architecture*, 010 Publishers, Rotterdam, 2011.

⇓ P. Dean, *Under Cover of Green*, in D. Cuff, R. Sherman (eds.), *Fast-Forward Urbanism. Rethinking Architecture's Engagement with the City*, Princeton Architectural Press, New York 2011, pp. 62-74, here p. 69.

⇓ J. Corner, A. Hirsch (eds.), *The Landscape Imagination: Collected Essays of James Corner 1990-2010*, Princeton Architectural Press, Princeton NJ 2014, p. 258.

⇓ Ivi, p. 270.

⇓ K. Frampton, *op. cit.*, p. 61.

⇓ "In its workings the building is what it was