In a time before the liberalization of the land, there was a period when architects believed that an alternative model to the countryside and the city could be designed. In this essay, we see an unknown project by Lina Bo Bardi suburban development project that allows us to understand how this great architect thought about the relationship between architecture and nature.

The environmental issue has reinserted nature at the center of the architectural debate, forcing a dialogue with other fields of knowledge such as engineering, biological sciences, and even human sciences, as in the case of recent environmental history. But such dialogues are also an opportunity to reinforce and renew disciplinary perspectives, especially in the historiography of modern architecture. In *L’invention du paysage* [The Invention of Landscape] Anne Cauquelin drew attention to a formal dimension of environmental issues that is not at all negligible. If often the set of economic operations, scientific discourses, and environmental policies form a complex fabric, which tends to consider the idea of landscape as a “useless aestheticism,” she argues that “the superior artifice of visualization and of the staging of natural elements” should not be underestimated, because, “more than an aesthetic label,” landscape could confer what she calls “vision unity to the different aspects of an environmental policy” (Cauquelin, 2008:9).

We will analyze these questions through the Conjunto Itamambuca (FIG. 1), developed in 1965 by Lina Bo Bardi (1914-1992). Never executed – and, perhaps for that same reason, little known – Bo Bardi’s study for this project remains a contribution to that debate, by confronting the scale of the territory and the landscape according to a very particular vision of the relations between architecture and nature.
Nature as a Historical Issue

Aby Warburg (2010:3) said that the “act of interposing a distance between itself and the outside world,” as a symbolic consummation of the separation of man from nature, was the “founding act of human civilization.” Although founding, the cultural relationship of man with nature did not produce homogeneous and stable conditions, but rather heterogeneous and dynamic ones. In the famous article “Ideas of nature,” Raymond Williams (1980:67) stressed that, as with other essential ideas through which mankind was constituting a vision of the world and its place in it, the idea of “nature,” although endowed with a “nominal continuity,” usually assumes meanings as complicated as mutable.

That distance between human beings and the world – the ambiguity between man as a natural being and...
as a cultural subject that uses nature – has, therefore, a variable and sometimes contradictory history. The Mexican poet Octavio Paz agrees with Warburg when writing about human nature and asking “if you can talk about nature when referring to man, the being who, precisely, has invented himself by saying ‘no’ to nature” (Paz, 2011:341). On the other hand, the nostalgia of nature or the position of being a circumstantial “guest” of “civilized life,” as Henry David Thoreau wrote in Walden (2011:17), are equally widespread in the machine age. In the classic Nature and Culture. American Landscape and Painting 1825-1875, Barbara Novak (2007:4) pointed out the coincidence, in the mid-19th-century culture, between the advance of industrialization and the idealization of nature. In fact, the development of the American landscape painting coincided with the indigenous genocides and the incessant conquest and massive destruction of vast rugged territories (Fig. 2).

As Williams himself has observed, although the most popular incarnations of the idea of nature “seem to depend on a suppression of human labor history,” a considerable part of what we call “natural landscape” is, indeed, a product of human action (Williams, 1980:78).

**The Shape of the Territory as a Matter of Architecture**

The transformation of nature is a consequence of architecture as a technique, although the ways in which the discipline has understood its role in this transformation are not uniform. As Vittorio Gregotti explained in ”The shape of the territory,” first published in Edilizia Moderna in 1965: “To fight nature or adapt to it at the point of integration; [...] organize it geometrically or tame it according to a chosen ideal; [...] the ideal nature for human life facing wild nature; these are attitudes that always demanded precise and diverse answers at the architectural level” (Gregotti, 2009:20).

Gregotti’s ideas can be looked at in relation to the almost contemporary L’architettura della città (1966) by Aldo Rossi, to the extent that they expand the range of disciplinary issues beyond the historic city matrix. If Rossi highlights the architectural dimension of the city, Gregotti claims the architectural dimension of the territory as a geographical environment that has a materiality that can be modeled and oriented towards certain ends (Gregotti, 2009). These ideas have continuity in more recent positions such as Iñaki Ábalos’s Atlas pintoresco, which begins from the premise that nature is also a cultural construct, being that construct “decisive in defining landscape’s technical and imaginary limits as project material” (Ábalos, 2005, 2008). If so, then the revision of the ways in which this construct was organized and is organized today is fundamental to contemporary practice, with a special importance in that revision, of modern references for the formation of a new disciplinary body. Among the Latin American authors mentioned by Ábalos are obviously Roberto Burle Marx and Luis Barragán, but also Lina Bo Bardi (Ábalos, 2005:90).
In fact, Lina Bo Bardi’s written work announces an explicit awareness of environmental issues. Her text *Propaedeutic Contribution to the Teaching of Architecture Theory* was written in 1957 with the intention of being submitted to the chair competition for Architecture Theory of the Faculty of Architecture of the University of São Paulo (Fig. 3). The relationship between architecture and nature is important in that essay’s structure. Bo Bardi expresses her concern for the environment’s vulnerability in an opinion close to the positions of biologists and conservationists working at that time, such as Julian Huxley and Harold Coolidge. The International Union for the Conservation of Nature and Natural Resources meeting in Caracas in 1952, and the Congress of the Pacific Science Association in Manila in 1953 (Bo Bardi, 2002) are also expressly mentioned. Although not leading to simplifications or “diversions of the organic architectural type” – as she affirms, openly criticizing the “current spread in Italy by Zevi himself” – (Bo Bardi, 2002:46), it seems there is a spirit inherited from that environmental vision, which relates to the feeling of an imminent disappearance of nature: “Man,” she writes, “according to the well-known concept of Le Corbusier, eats, drinks, sleeps, works, and lives in a different way than yesterday, because the speed phenomenon, and the precipitation of material well-being, recomposes the life of cities, while that of the countryside is constituted according to the first” (Bo Bardi, 2002:18).

That perspective of nature as something that can be lost suggests a very different position, according to her, of what “Simón Bolívar proclaimed militarily, despite the recommendations of Buffon and Humboldt,” namely, in the words of Bolívar, “if nature opposes, we will fight against it and overcome it” (Bo Bardi, 2002:15). The awareness that nature’s resources are finite appears associated with the weakening perception of the distinction between city and countryside, and the territorial transformation in a way that is neither city nor countryside. That form is the suburb.

A growing body of suburban reflection has focused on the adverse effects of suburbanization. However, the suburbs were a fruitful field of experiments for modern architecture. In the 50s, Bo Bardi (1953) published a piece in *Habitat* about the new suburb of Morumbi, in São Paulo, where she had already built her masterly Glass House of 1951 and where she would also build the house for Valeria Cirell in 1958 (Fig. 4, 5).

**The Itamambuca Complex**

Bo Bardi did not design many urban projects. Although her best-known works have an important presence in the city – such as MASP or SESC Pompeia – they are limited to the scale of the lot and correspond to the restrictions of pre-existing blocks (Fig. 6). Similarly, her unbuilt project for a museum by the sea is shown against a nature that extends infinitely, omnipresent, but is almost abstract, unmanageable by architecture (Fig. 7).
FIG 4 Lina Bo Bardi, Casa de Vidrio. Morumbi, São Paulo, 1951. © Lina Bo Bardi

FIG 5 Lina Bo Bardi, Casa Cirell. Morumbi, São Paulo, 1958. © Lina Bo Bardi

FIG 6 Lina Bo Bardi, sesc Pompeia. São Paulo, 1977. © Lina Bo Bardi

FIG 7 Lina Bo Bardi, Museo a la orilla del mar, São Vicente, São Paulo, 1951. Fuente / Source: Habitat N. 8, 1953.
Indeed, Bo Bardi’s urban projects are easily counted: the Itamambuca Complex (1965); her participation in the competition for the renovation of the center of Santiago de Chile (1972); the Cooperative Community of Camurupim (1975); her participation in the contest for the Anhangabaú Valley in São Paulo (1981); and the rehabilitation plan of the historic district of Salvador (1986). The studies for Santiago, São Paulo and
Salvador are projects for metropolitan centers, while the proposals for Itamambuca and Camurupim are focused on rather suburban or rural environments.

The Itamambuca Complex is, therefore, Bo Bardi’s first foray into the scale of urban planning. In this proposal, we find the emblematic symbols of suburban life: the series of isolated houses surrounded by grass and (implicit) automobile mobility. What we intend to highlight here is how Bo Bardi generated a modern suburban vision in this project, looking for compositional structures capable of ordering architecture and territory as a joint system. Without denying repetition and homogeneity – one of the most defining and also most censored characteristics of the suburbs – her proposal recovers what can be called “figurative landscape quality” (using the expression coined years later by Vittorio Gregotti), achieved from the manipulation of architecture and nature (Gregotti, 1975: 80).

The Itamambuca Complex was conceived as a new development in Ubatuba, a tourist city located on the coast of the São Paulo state, Brazil. Crossed by the Tropic of Capricorn, Ubatuba extends between the Atlantic Ocean and the Sierra del Mar, an important mountain range covered by the Brazilian Atlantic Forest, one of the most threatened ecosystems in the country. A former port city, Ubatuba faced economic decline before the beginning of the 20th century. In the 30s, the construction of a road that linked the city and the Paraíba Valley strengthened its tourist vocation and promoted its economic recovery. Apparently, Bo Bardi did not write any formal explanation text on Itamambuca. The available sources comprise a series of separate drawings that show the progress of her ideas. However, when reviewing these records together, it seems Bo Bardi devoted herself equally between the problem of land subdivision and the design of the houses.

The site corresponds to a strip of land along the right bank of the Itamambuca River. In a colored sketch, Bo Bardi portrays the site as a piece of untouched nature, covered by lush vegetation and bordered by the blue strip of the river. Next to this drawing, she writes: “The preservation of the ‘natural’ configuration of the place.” However, the word ‘natural’ has a particular meaning. It refers less to a pristine condition, already present, than to a future quality to be pursued through the project.
Circular Lots

At the bottom of the page, under the title “subdivision,” two small diagrams appear, representing two opposite strategies to address the problem of the development of individual homes. A diagram, marked in red, indicates the solution: the use of a rectangular grid, identified as the “traditional geometric” shape. The other diagram shows the sample of a new suburban fabric formed by a series of circular lots linked to each other through winding roads. The word “natural,” associated with this diagram, does not describe the absence of a plan, but rather a contrasting alternative to the rectangular grid (fig. 8).

The morphological structure of this alternative tissue seems to have evolved in parallel with the shape of the houses. Seen together, the various sketches and plans of Bo Bardi for Itamambuca reveal that circular lots were considered from the beginning, although the ways in which the lots were combined varied. A very initial drawing shows a group of circular lots of unequal diameters (notes refer to 18, 22 and 25 meters) arranged along winding roads, with square houses located in the center of each of them (fig. 9).

Bo Bardi’s first schemes for Itamambuca clearly resemble Frank Lloyd Wright’s original plans for the Usonian communities (1947), also unbuilt. These plans had to be reviewed due to the difficulties in obtaining construction permits for circular lots (Henken, 1985). Wright’s plan for Parkwyn Village, in Kalamazoo, Michigan, introduced forty circular or semicircular lots located around a lake and linked by winding roads. The project assumed that the individual ownership of the building lots would be accompanied by the collective ownership of the free spaces between the circles, left to the natural (fig. 10).

Wright’s plan for Pleasantville, near New York, also featured the same winding roads, connecting fifty circular lots for single-family homes with interstitial spaces collectively shared and maintained as green areas. Wright worked with larger lots than Bo Bardi’s in Itamambuca, with approximate diameters of 60 meters in Pleasantville and 70 meters in Parkwyn Village. Despite the homogeneity of the lots, Wright’s plans form distended organizations, where the circles glide freely over each other. Even the position of the houses in the lots varies, moving from the center to the edges of the circles.

However, Bo Bardi gradually departed from Wright’s proposals by abandoning the relaxed configurations present in her early studies, moving towards a structured pattern of organization. Circular lots are reduced to two sizes (with diameters of approximately 12 and 23 meters) and their relative position becomes disciplined by regulatory strokes, a feature absent in Wright’s free disposition.

The following drawings show how the position of the circular lots becomes controlled by a regular grid. Each group of four large circles is virtually inscribed in a square with no more than 50 meters of side, roughly equivalent to one of Wright’s lots (fig. 11). Smaller circular lots are inserted in the remaining space between the large
ones. This logic is reproduced over the entire surface of the site, generating a mesh of large and small circles diagonally crossed by paths that follow the direction of the river (FIG. 12).

The shift towards a structured pattern places Bo Bardi’s work closer to the contemporary research of Team 10 on visual groups and structuring principles than to Wright’s Usonian experiences. As Tom Avermaete (2005:309) has observed in the context of a discussion on the reinvention of the urban fabric by Team 10, Alison Smithson considered that the “apparent similarity” could be “the driving order.” Thus, we can find in the Itamambuca Complex the same search for the underlying order, which will be able to visually structure the architecture and territory, nature and the city.

**Square Houses**

According to Priscilla Henken’s comments about Pleasantville, the houses had to be all different. “That derives naturally from the principles of Mr. Wright’s organic architecture, which require that each house be adapted to the needs and personalities of the owners,” each being “the only one of its kind, a work of art with the signature of the artist” (Henken, 1985:8). Bo Bardi did exactly the opposite. Like so many other suburbs, Itamambuca would be populated by replicating almost identical houses, always located in the same fixed...
position within the lots. None of the houses would be the only one of its kind, although all could be considered as the work of an artist.

Not much information is available on the order, including the extension of the program. Considering the size of the houses and the fact that they are multiple, it is assumed that Itamambuca would be an urban enterprise aimed at a middle class interested in relatively cheap holiday homes, a dream fostered by the recent expansion of the São Paulo automotive industry.  

Despite the round shape of the lots, Bo Bardi did not use any of the circular houses she had developed in 1962, which were also suburban, with porches, patios and green roofs. Instead, she designed two types of square-plan houses, one for the large lot and one for the small one, always arranged on the geometric center of the lot (FIG. 12).

There is a collective life more or less implicit in the general plan. Private gardens are replaced by shared spaces, while picturesque trails extend through a
pastoral landscape, dotted with frugal houses and no fences. As the perspective shows, the twisted structure of the plan causes truncated views, opposing visual limits to the open landscape and favoring, from the observer’s point of view, the impression of a natural scenario on a domestic scale (FIG. 13).

Zeuler Lima (2013:119) stressed that the Itamambuca Complex “confirmed the formal palette that Lina had begun to develop at the end of the 50s.” In fact, the houses are presented as cubic volumes with green roofs, thatched roof porches and exterior walls where small plants sprout, suggesting a certain figurative character that is familiar to her previous house for Valeria Cirell, designed in 1958 in the Morumbi suburb, São Paulo.

The Cirell House (FIG. 5) still exists. The first known studies show a rectangular plan with some alternatives for the facades, similar to those finally executed, except for the carpentry (Ferraz, 1993). The definitive plans are perhaps closer to the houses of Itamambuca, either due to the square plans or to the rotation around a nucleus, in this case, the chimney, which establishes diagonal lines in plan and triangular geometries. But Morumbi was a high-income suburb with very generous lots. When considering much smaller lots in Itamambuca, Bo Bardi had to develop other strategies to guarantee the ideal of continuous green and the sense of freedom suggested by a life close to nature. In a subdivision in which the distinctions between front and bottom have been erased, as in the fabric of circular lots, the centralized position of the house on the lot allows nature to be used as a buffer while offering some privacy to the domestic space.

In Itamambuca, the two types of houses have symmetrical plans that develop from a centralized staircase and are constructed geometrically by the rotation of a smaller square into a larger one. Also, the small house can be registered virtually in the big house. The big house has a 9-meter side. The inner square circumscribes a double-height space around the central staircase, introducing a centripetal configuration. In addition to the kitchen on the ground floor, the four small bedrooms and bathrooms on the second floor are pushed into the four corners. A peripheral porch, supported by rustic wooden pillars and covered by a thatched roof, expands the seating area on the ground floor (FIG. 13). The section reveals the wooden mezzanine and the ceramic tile roof hidden behind the masonry walls. The small house has a 6-meter side.
However, it is not generated from the rotation of a square figure inside, but from an exterior that forms four open porches in the corners, with wooden pillars and thatched roofs.

If the plans are rigidly fixed by geometric and, therefore, intellectual games, the exterior appearance of the houses seems to come from an antithetical primitivist attitude. Children’s drawings represent modest, almost shy facades, which keep a sense of innocence in their uncertain windows, their lattice doors and their walls where small uncultivated plants sprout randomly (FIG. 14, 15).

**The Wonderful Primitivism**

A sketch of the partial lot plan portrays a canoe and its occupants by the river, perhaps referring to the name of the city – Ubatuba means "place of canoes" in Tupi – and the ancient indigenous occupation of the region or perhaps evoking the memory of old telluric forces (FIG. 11). Bo Bardi’s architecture in Itamambuca did not require more than low-tech construction systems and materials available in the region. Nothing that could not be easily built with local labor. Although we can hardly speculate on the role that could have played in the project, the construction system reminds us of the Caïçara house, the typical refuge of the region’s inhabitants in the past, with thatched roofs and wooden structures.

The link between architecture and nature was a recurring theme for Lina Bo Bardi. The ways in which she approached it in her work have been formally and materially rich and varied, as tempting as it is to see a turning point in the figurative primitivist of Itamambuca or Casa Cirell. Simultaneously, Bo Bardi relied on the universalist codes of a technically advanced glass architecture, such as her own home and the MASP, and explored local and traditional sources, such as Casa Cirell or Itamambuca. Nor would it be convenient to understand this figurative feature in opposition to modernity or as an overcoming of modernity. The truth is that as early as 1943 we found Bo Bardi saying, in the Italian magazine Domus, that the modern world "brought the relationship earth, climate, environment to architecture," which "we see sprouting with a wonderful primitivism, from the most spontaneous architectural forms: rural architecture" (Bo Bardi, 2009:47).

In that sense, it seems pertinent to speak of primitivism and figuration in the work of Lina Bo Bardi (as problematic as the notion of 'primitive' has become, in general in the field of social sciences), even more pertinent than simply speaking of the presence of vernacular references (Cabral & Bender, 2017). Primitivism summons a distance. It exhibits an impasse that is, in a sense, indifferent to the vernacular. Ernst Gombrich has highlighted the essentially 'non-primitive' nature of primitivism as an artistic operation and its insertion in the thinking of the avant-garde of the beginning of the century. According to Gombrich (2012:295), primitivism is precisely the tension between a visually sophisticated...
intellectual operation and the discarding of a certain ‘skill or refinement’ in the material condition of the work. Bo Bardi’s approach to rural architecture forms is within the scope of artistic operations (and that is why all the houses could be the work of an artist, even if they were identical).

From an urban point of view, awareness of nature’s vulnerability and of environmental concerns, which were already present in the Propaedeutic Contribution to the Teaching of Architecture Theory, do not lead to a critique of the need for planning; there, too, Bo Bardi condemned the “romantic attitude” of territory planning and expressly defended the rational, illuminist reconsideration of the architecture-nature binomial (Bo Bardi, 2002:15-16;46). Her vision of the suburb in 1965 is not purely Arcadian or conservative, but rather paradoxical. It is not a reaction against planning, but the production of the landscape from the instruments of architecture: instead of claiming uncontrolled organic freedom, it proposes a geometric pattern based on docile but recurring curves that can be repeated mechanically. The generic characteristics such as repetition and homogeneity (both incorporated by the suburb) find a particular figuration in the landscape of rounded lots and primitivist architectures.10

ARQ

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1 Environmental history, defined in a very succinct way, seeks to understand the environment in its historical context while understanding human history in an environmental context (Isenberg, 2014).
2 See also Ábalos (2009) and Ábalos, Mateo et al. (2007).
3 The contest never happened. Lina Bo Bardi edited the text as an illustrated ninety-page booklet, which after her death was published in its entirety by the Lina Bo e P.M. Bardi Institute (2002). On the competition, see Lima (2013:75).
5 Ibid. Perspective (067ARQD0045). Collection of Lina Bo e P.M. Bardi.
6 Ibid. Partial lot plan with notes (067ARQD0023). Collection of Lina Bo e P.M. Bardi.
7 According to the National Association of Automotive Vehicle Manufacturers, ANFAVEA, the number of cars jumped from 9,478 vehicles in 1957 to 130,435 in 1964.
8 Ibid. Section (067ARQD0055). Collection of Lina Bo e P.M. Bardi.
9 Ibid. Blueprints (067ARQD0049; 067ARQD0050). Collection of Lina Bo e P.M. Bardi.
10 This text is part of a research supported by CNPq, Conselho Nacional de Desenvolvimento Científico e Tecnológico, Brasil.

Bibliografía / Bibliography
