ARID TROPICALISM: BETWEEN BRAZIL AND ISRAEL THE DESERT PROJECTS OF ZVI DEKEL AND THE INFLUENCE OF ROBERTO BURLE MARX

Research Thesis in Partial Fulfillment of the Requirements for the Degree of Master of Science in Landscape Architecture

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Abstract

The research examines the development of landscape architecture in Israel from 1960 onwards, focusing on its local modernism and the way in which it is reflected in the desert works of landscape architect Zvi Dekel (b. 1929). Dekel stands as one of the one of the leading landscape architects in Israel, notably for his projects in the nation's dry south. However, what steers this research is the fact that Dekel *learned* landscape architects in the most important modern landscape architects in the world. Dekel moved to Brazil in the 1950s to study and work with him, meeting a modernity that was not only acknowledged but digested into a unique local style. Upon his return to Israel, Dekel imported the principles he found in Brazil and molded them into a local modernism, developing a unique design language for intervening in the mythical Israeli desert – a landscape contrasting with the Brazilian tropical rainforests.

The research is structured from a broader conceptual framework of landscape architecture, nationalism, and modernity, through Brazil and Israel's relation to their mythical landscapes, to finally reach a more specific view and analysis of Dekel's work. Tracing the complex relationship between the design of a local landscape with the local identity and culture, a new term regarding Dekel's work was created; *arid tropicalism*. Three case studies reflect how Dekel's approach to the desert evolved through different stages of his career, representing a variety of levels of scale, form and texture. They include the Avishur neighborhood in Arad (1967), the Albert promenade in Mitzpe Ramon (1989), and the Mount Avnon Lookout, near Yeruham (1994).

Keywords

Zvi Dekel; Roberto Burle Marx; Landscape Architecture; Nationalism; Brazil; Israel; Modern Landscape Architecture; Desert Landscape Architecture.

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Personal Background

While this research is about Zvi Dekel's legacy and the Israeli landscape, it is his background with Roberto Burle Marx and Brazilian Modernism that have inspired me to study his work. As a Brazilian architect, born and raised in Rio de Janeiro, I have been living in and learning from a unique ensemble of architecture and landscape. Their encounters have shaped my notions of nature and space. My first experiences with public spaces, parks and promenades were via projects by Burle Marx, which later, I was thoroughly taught in my architecture studies.

In parallel to my roots in Brazilian culture, I grew up in a Zionist family with a very strong connection to Israel. After years of academic and professional experience in Brazil, I felt that I closed a cycle in my home city, and a desire to live in Israel became my new goal. In 2017, I made *aliah* (immigration) to Israel. I attended the M. A. program in Tel Aviv University and started working in a landscape architecture office (Tsurnamal Turner). Eventually I transferred to the Technion, where I began my research in Master of Science in Landscape Architecture (M. SC.).

Back in Brazil, I designed the Mountain Bike Park for the Rio 2106 Olympic Games, and landscape architecture had become a new field I wanted to explore and deepen my knowledge. The projects in Tsurnamal Turner gave me the opportunity to work throughout Israel, especially in the arid south. Such different geographical reality constantly challenges my perception towards the Israeli landscape, its extreme environment, and innovative planning.

It is in this context that I came across Dekel's canonical desert projects. The Albert Promenade in Mitzpe Ramon, the Zin Promenade in Sde Boker, the Avishur neighborhood in Arad and the Avnon overlook near Yerucham are designed spaces that greatly inspired me and provoked immense curiosity. As I investigated into Dekel's history, I learned that he moved to Brazil in the 1950s to study with Roberto Burle Marx, the leading landscape architect of Brazil and a central figure in Modernist Landscape Architecture of the twentieth century. After almost four years working with Burle Marx, Dekel moved back to Israel, where he started a long and successful career in landscape architecture. Though Burle Marx's projects evoke Brazil's lush nature and vegetation, his modern vision of space, and his philosophy of the interaction of men and nature can be seen and felt in Dekel's projects, even in geographically contrasting landscapes, such as in the Negev desert. Dekel, who experienced the evolution of the perception of the arid landscapes of the Negev from the pre-state period until this day, contributed with a unique language of his own, where art and material are important elements to feeling and understanding landscapes.

This research grew out of my passion and deep interest in the extreme and wild opposing landscapes of tropical Brazil and arid Israel, and the ways these two different worlds came to be connected in the modern landscape design of Zvi Dekel.

Research Description

Goals

The objective of this research is to study the desert projects of Zvi Dekel, in the light of the influence of his formative years working with Brazilian landscape architect Roberto Burle Marx. To better understand this, a broad historical narrative is summarized as a background for the discussion, concerning the relation between landscape architecture and nationalism, the rise of modern landscape architecture, and the role of the tropics in Brazil and the desert in Israel. Then, the professional history of Dekel is outlined, from the early years in Israel, through his years in Brazil and then, comprehensively, on his return and work in Israel. Dekel's response to these concepts is then studied through his design, philosophy, and practice in several projects that epitomize the symbolic shift in the understanding and appreciation of the arid Israeli landscape.

Questions

The hypothesis that underlines this research is that the landscape design of Zvi Dekel stems from two different, yet complimentary, sources: his work under Burle Marx in Brazil and his affinity with the natural and cultural landscape of Israel. The following research questions grow out of these assumptions:

1. How does modern landscape architecture relate to Nationalism?

2. How did the physical and cultural landscape of Brazil and Israel influence the modern landscape architecture over the years?

3. What were the modern landscape architecture principles that developed, reached, and influenced Burle Marx and Zvi Dekel?

4. What are the unique characteristics that permeate Dekel's work in the desert?

5. In which ways did Dekel influence the construction of the Israeli desert landscape?

Methodology

The research is a critical historical study that relies on the following qualitative methods:

1. Comprehensive Literature Survey: ground the research with the existing literature on landscape and Nationalism, and modern landscape architecture, with emphasis on Brazil and Israel, and the works of Burle Marx and Dekel respectively.

2. Archive Research: mainly based on the private collection of Dekel and the Minnad office, which includes sketches, plans, articles, letters etc. Additional archives in Israel and in Brazil provided complimentary material allowing for a broader view of the period, key figures in modern landscape architecture and people who worked in parallel or in collaboration with Burle Marx and Dekel.

3. Recorded Interviews: conducted personally with Dekel as a richer source of information, memories, and opinions to better understand and explore his production.

4. Documented Site Visits: to better understand, experience and compare his broad production in the desert, personal visits were made, registered, photographed and sketched to enrich the analysis.

5. Detailed Analysis of Selected Projects: after an overall study of his desert work, and a comparison to the main aspects observed in the work of Burle Marx, three different case studies of Dekel were chosen to be carefully analyzed, helping to reach insights and conclusions.

INTRODUCTION

"Before it can ever be a repose for the senses, landscape is the work of the mind." (SCHAMA, 1995, p. 6.)

Heading south towards the Israeli desert is always an immersive experience. With the gradient fading vegetation, the paling colors of the soil, and the rugged forms of topography, a set of tangled memories, meanings and myths comes to mind. Nomad dwellers and ancient caravans, tenacious wildlife and ephemeral rivers, innovative agriculture, and fields of solar energy panels all merge in a myriad of allusions and associations to this *infinite* landscape. Encompassed between the long southern borders of the State, this large and arid land (over 60% of the national territory), filled with dry wadis and denuded mountains, stands opposite to the rooted forests and agricultural fields which *physically* connected the Zionist ideology with the land, a liberation from the state of desolation.¹ Somehow, this mythically feared, symbolic and barren landscape, still feels familiar, domestic, *national*.

How does a collective identity relate to a specific landscape? How does a landscape feel national? Considering "landscape as an ideological concept"², it is inevitable to realize that they are configured as an essential human action to transform the territory, adding to the preexisting natural surface a new interpretation, and consequently, its transformation into a cultural product, charged with symbols and meanings.

This research stems from the intention to study the desert work of Zvi Dekel (b. 1929), one of the leading landscape architects in Israel. No other landscape architect has built so much in the nation's dry south; from Be'er Sheva to Eilat, through Arad, Masada and the Dead Sea, Yeruham, Ofakim, Sde Boker, Yotvata and Timna, Dekel has literally left his mark on the territory. "In the desert," he says, "the scale of the design does not have to be large, but it must have a presence."³ However, what steers this research is the fact that Dekel *learned* landscape

¹ ZERUBAVEL, 1996, p. 62. See article for the symbolism of the forests in Israel.

² COSGROVE, 1998, p. 15.

³ LISSOVSKY, 2021, p. 32.

architecture from Roberto Burle Marx (1909-1994), one of the most important figures in the history of the field,⁴ and a main *designer* of the modern Brazilian relation with its nature.

Worldwide famous for his tropical gardens, Burle Marx embraced modernism in the early 1930s as the movement spread among the nation's intellectuals. Adopting the abstract notions he met in European Art as a guiding principle, Burle Marx conceived new forms of landscape expression, revolutionizing garden design through his horticultural skills, artistic training, and love for national culture. Propagating the once undervalued tropical landscapes, Burle Marx eventually became an outspoken advocate against the rapid development, resource exploitation, and ecological devastation of the Brazilian nature.

The dialogue that Dekel met in Burle Marx's manifestations of regional culture while appropriating alien influences was striking. In tropical Brazil, modernity was not only acknowledged but *digested* into a unique local style. Historically feared geographical traits became a source of pride and character of the developing nation. Architecture and landscape architecture became central agents in building a national identity, and still, were deemed as modern. But then, how can the universally modern still be local? Furthermore, how did historically undervalued landscapes became differently perceived through design?

This research brings together the experience of the particular *tropical* modernist view of Burle Marx with the perceptions and design of Dekel's projects in the arid landscapes of Israel to explore these questions. The research is structured in four parts with few chapters each, from a broader conceptual framework of landscape architecture, nationalism, and modernity, through Brazil and Israel's relation to their mythical landscapes, to finally reach a more specific view and analysis of Dekel's work.

In the first part of the research, **Landscape**, **Nature**, **Nation**, a broader idea of landscape and its role in constructing a national identity is outlined. **Chapter 1** (**Construction of a National Landscape**) examines the contemporary approaches to the notion of landscape considering theories in relation to time, space, and the social, national, political, and ideological contexts. Within the context of nationalism, the cohesiveness of a society and its connection to a specific territory strongly affected landscape architecture. Still, thinking about nature before modernity is referring to a mysterious, magical, mythical nature, where the fear of wildlife,

⁴ DOHERTY, 2018.

superstitions, and intuitions ruled the relation between men and territory for centuries. This *Romantic* view of nature gave way to radical new ones.

Established as a radical rupture with the past, the modern movement proposed a new society in line with contemporary life. Originated in Europe in the first decades of the twentieth century, the profound transformations that this new language brought spread across all continents, and its universal message had a profound effect on nations trying to assemble their new identity, such as Brazil and Israel. This framework, which interlaces the research, is established to better understand how this connection between nation and nature took place and influenced landscape architecture and their identity in both countries.

Though art was the first visual mean of study, eventually architecture and landscape architecture played central roles in modernism, offering new approaches towards space and the relation between culture and nature. Chapter 2 (Landscape Architecture enters Modernity) contextualizes some landscape architecture expressions from the late nineteenth and early twentieth century that stood out for presenting innovative theoretical and plastic formulations, pointing to the construction of new visions towards the landscape. They helped to deconstruct old rules, transform traditional concepts, and perceive nature, landscape, and artifice as more articulated. Early expressions of this quest appeared in different contexts, such as England, Spain and France, culminating in the 1925 Paris Decorative Arts Exposition. "Exclusively modern" in its aspirations, its effects reverberated in discussions eventually reaching as far as USA, where the "California School" developed a more scientific-botanical conception of landscape architecture. Inseparable from modern architecture in Brazil from its first experiments, landscape architecture took the challenge of detaching itself from the inherited classic models to create a new one of its own. In the nation-building project of Israel, the modern gardens expose the progressive transformation of the nation's relationship with its nature.

The second part of the research, **Affinity with the Local Landscape**, investigates the affinity that previously depreciated landscapes woke under the convergence of modernism and nationalism. Maintaining the outline of the research, Brazil and Israel are studied from the point of view of the role of their own *untamed* landscapes and their altered perception had in the construction of the national identity. **Chapter 3 (Tropical Brazil: From Cannibalism to Tropicalism)** focuses on the tropical aspect of Brazil, and its interpretation by the nation's

restless modernists. "Discovered" and colonized by the Portuguese from the year 1500, Brazil's history was defined by its abundant tropical nature. Fearsome, exotic, and *profitable*, the relation between man and landscape obeyed the foreign gaze, expressive from the early occupation of the territory through the landscape architecture of pre-modern Brazilian parks and gardens. With the nation's eventual independence, one of the pillars of national unity and identity became its vast nature. In the 1920s and 1930s, Brazilian modernists, anxious not to perpetuate the European cultural dependency of the past, adopted an irreverent attitude towards the ideas that came from abroad. The Anthropophagic Movement paved the way for Brazil to assert itself against European post-colonial cultural domination. The idea of cannibalizing exterior culture and creating a new one, revised and mixed with the local specificities, developed a unique and local type of modernism. Often called Tropical Modernism, or Tropicalism, this Brazilian style of Modernism created a successful new national image and identity, specifically through architecture and landscape architecture.

It was in this context that Roberto Burle Marx emerged as the main figure of landscape architecture in Brazil. Designing over 3000 gardens throughout his life, his work went much beyond the formal definition of gardens and outdoor spaces. He discovered and registered abundant Brazilian flora, explored the relations between landscape and art, and created a longlasting tradition of collaboration and exchange of ideas with other artists, architects and scientists from all over the world. Many scholars consider him as the definer of a pioneer Modern landscape aesthetic.

In **Chapter 4** (Arid Israel: From Exodus to Return), the Israeli desert is briefly overviewed as a symbolic landscape, with its shifting identity and its cultural representations. From mythological biblical scenery to empty land to be developed to national ecological pride, the desert has been perceived in different perspectives over the last few centuries. Cultivated as a symbolic landscape in the Jewish imagination since Antiquity, the desert plays a critical role in the biblical narrative of the Israelites, serving both as a liminal space that allowed divine revelations, and as the set of profound transitions of the Jewish people – from slavery to freedom. Only with the Zionist immigration to Palestine, when facing the physical and geographical *spatial* reality of the "wilderness", the idea of settling and conquering this dry and arid scenery gained a new meaning. The settlement strategy followed by the new *olim* (immigrants) included the project of rebuilding a new society, with its own national culture and identity. However, after many decades considering the desert as challenge to be defeated,

occupation started to be reviewed. With the nation's changing borders, tourist development and ecological concerns, new ideas have been shaping a different, more appreciative gaze at the desert.

Characterized by a shift from the initial occupation period to a broader view of the desert as national pride, Zvi Dekel stands out for his constant connection with the desert through his career. Growing up in Zionist Mandatory Palestine, the relationship Dekel developed with the land is a complex outcome of his childhood in Tel Aviv, youth in Kibbutz Harel and his formative years in Brazil. After years passionately working with gardening, young Dekel left Israel in 1956 to Rio de Janeiro, where he joined Burle Marx's studio. Working in many canonical projects, he developed a personal bond with him, and an admiration for his singular philosophy and methods. Burle Marx's enthusiast approach to landscape architecture and its influence over the local landscape, national identity and culture became a fundamental learning in Dekel's life. In 1960, Dekel returned to Israel, where he started an extensive production through many partnerships and creative collaboration with landscape architects, architects, and artists, becoming one of the leading landscape architects in the nation.

The third part of the research, **Arid Tropicalism**, provides an opportunity to analyze Dekel's work in the desert. By defining new cultural and symbolic visions of this territory, Zvi Dekel developed a specific design language from two different, yet complementary paths. His work captured the principles of Brazilian Tropical Modernism, transforming and adapting it into a specific *Israeli* spirit. In **Chapter 5**, a brief history of his relationship with the desert is explored, and a series of aspects regarding his modern approach are mapped and analyzed, traced and associated with Burle Marx. Afterwards, three projects were chosen as case studies that represent different approaches towards the desert: the Avishur neighborhood in Arad (1967), the Albert promenade in Mitzpe Ramon (1989), and the Mount Avnon Lookout, near Yeruham (1994).

Altogether, these three parts all complement each other leading to the fourth and the last **Discussion** part. Presenting an interpretation of Dekel's relationship with the desert because of his Zionist and Tropicalist experiences combined, **Chapter 6** (**Interpretation**) sums up the characteristics and the reasons that led to his modernism. With **Chapter 7** (**Future Contributions**), it is expected that the material collected, and the information presented will allow for new questions and developments in relation to the extensive work of Zvi Dekel, the

influence Burle Marx bears beyond Brazil and the development of the modern landscape in Israel. Lastly, the **Appendices** provide of a list of **Biographical Notes** that mark the key events of Dekel's life, a **Chronology** of his main desert projects, and the transcription of two personal **Interviews** that took place in 2020, giving an insight into his personal accounts and memories of the topics of the research.

Part I Landscape, Nation, Nature: Brazil and Israel

CONSTRUCTION OF A NATIONAL LANDSCAPE

"Landscape [...] is an ideological concept. It represents a way in which certain classes of people have signified themselves and their world through their imagined relationship with nature and through which they have underlined and communicated their own social role and that of others with respect to external nature." (COSGROVE, 1998, p. 15.)

Landscape as Medium

Landscape has recently achieved a broad intellectual distinction as a theoretical concept,⁵ in which the relationship that man establishes with nature through occupation and conversion of the territory throughout history reflects its religious, political, social and aesthetic values. This complex bond ends up expressing a correspondence between man and universe; a cultural construction where its natural condition is the transformation, through the intellect, of the physical landscape built by man.⁶ Inaugurating the contemporary philosophical reflection on the essence of the landscape, Simmel sees it as a category of human thought. For the author, there is a sharp distinction between the world *created* by man – through culture – and the world in which man *exists* – nature.

Along these lines, landscape is equivalent to the perception of the territorial environment on which man lives and acts, both as an experience of nature itself and as an aesthetic form. Visually appealing from its pictorial and scenic aspects, landscape can be seen as a tool that can be manipulated and transformed by men for their own purposes. Thus, landscape is malleable and intentional, a human creation; cultural. In this sense, Simmel assumes that there is no landscape without a subject, or rather, there is no landscape if no one attributes any meaning to it. From this understanding of the "individual" character of the

⁵ TREIB, 2011, p. vii-xix. In the book's introduction, Treib argues about the multiple meanings of landscape.

⁶ SIMMEL, 1986, p. 9.

landscape, it is worth thinking about the development and amplification of this concern for a collective character of the idea of landscape.

Cultural geographer Dennis Cosgrove claims that:

"[...] landscapes are not only representational, but they also constitute a speech, through which identifiable social groups historically have framed themselves and their relations with both the land and with other human groups, and this discourse is closely related epistemically and technically to ways of seeing."⁷

In other words, both humanistic and scientific approaches to landscape construct, represent, and interpret it from primarily visual and ideological perspectives. In this manner, the landscape does not have a real independent existence, it is a cultural construction that defines a differentiation in relation to the physical dimension of the territory. The aesthetic value is not something intrinsic to the physical space, but something constructed by who observes, organizes, and promotes arrangements of content and form, according to a certain perspective and attributed to certain values and meanings; *"landscape is object and subject both personally and socially."*⁸

In the modern context of the rising nationalism, landscapes became a central device of cultural modernization, constructing not only their new identity, but their collective image and representation. Simon Schama emphasizes that every tradition or memory of the landscape is the product of a common culture, a tradition built from a rich deposit of myths, visions, memories, and obsessions. According to the author:

"[...] If a child's vision of nature can already be loaded with complicating memories, myths, and meanings, how much more elaborately wrought is the frame through which our adult eyes survey the landscape. For although we are accustomed to separate nature and human perception into two realms, they are, in fact, indivisible. Before it can ever be a repose for the senses, landscape is the work of the mind. Its scenery is built up as much from strata of memory as from layers of rock."⁹

⁷ COSGROVE, 1998, p. xiv.

⁸ Idem, p. 20.

⁹ SCHAMA, 1995, p. 6-7.

Reinforcing even more the hypotheses presented above, for Schama, landscapes are products elaborated by the intellect, by culture; it is our transforming perception that establishes the difference between raw material and landscape:

"Landscapes are culture before they are nature; constructs of the imagination projected onto wood and water and rock...once a certain idea of landscape, a myth, a vision, establishes itself in an actual place, it has a peculiar way of muddling categories, of making metaphors more real than their referents; of becoming, in fact, part of the scenery."¹⁰

However, Schama adds an important fact to this reading, realizing the concept of landscape is also directly linked to the imaginary, since social and political memories are projected on it, favoring the collective aspects of the myth. Thus, real and imaginary, subject and landscape constitute and permeate each other. Furthermore, the concept of landscape goes beyond the abstract notion of understanding the environment and becomes a materiality through which men and nature are organized through time in places, regions, and territories, transforming itself into a structuring logic of society. Landscape and society are intrinsically linked: the former allows the latter to materialize its symbolic representations.¹¹

National identity is a discourse and, therefore, like any other discourse, it is constituted dialogically.¹² Made up of diverse communities that recognize themselves collectively as inseparable from a certain territory, the *spatial* dimension of nation building became a central part of their sociological, as well as geographical and architectural discourse. Generally landscape-specific; national identity is linked to the natural features of the nation's locale: to its mountains, rivers, coastlines, and other unique sites.¹³

According to Kaufmann, two broad semiotics emerged in the nineteenth century connecting landscape and national identity. The first, labeled the *nationalization of nature*, describes the process whereby a nation creates a homeland by settling, naming, and historically associating itself with a particular territory. By contrast, the second, termed the *naturalization of the nation*, refers to a dynamic whereby a nation comes to view itself as the offspring of its

¹⁰ SCHAMA, 1995, p. 61.

¹¹ POLIZZO, 2016, p. 67.

¹² BAKHTIN apud FIORIN, 2009, p. 117.

¹³ ALON-MOZES, 2013, p. 2.

natural landscape. In the first case, the perceived direction of causation flows from culture to nature. In the second instance, the process has been reversed: nature now determines culture.¹⁴ Both models emphasize the role of the landscape - imaginary as well as concrete - in constructing a national identity, manifested throughout a broad extent of design and components such as monuments, gardens, national parks, regional landscapes, and more.

From this perspective, the cohesiveness of a society and its connection to a specific territory strongly affected landscape architecture. Based on the planning of a physical and conceptual transformation of nature, landscape architecture became a powerful tool for the cultural construction of modern nations. The connection of the population with a specific territory; along with its geography, fauna and flora, turned into an essential factor in a nation's identity.

It is in this context that Carr argues that "park history is primarily design history", as they often share a history of complex and continuing development and interpretation. They have been a means to preserve apparently unimpaired past conditions - whether cultural or ecological – but they have done so as agents of modernization, that is, as components of a larger patterns of landscape and social changes.¹⁵ Parks serve as examples of how designing the landscape and its relation to the public became a quest in modern nations. The consequences of this cultural construction and the effects they had on modern landscape architecture are at the center of this study.

Naturalizing Brazil

In Brazil, a nation built over a colonial past of territorial exploration and domination, the altering modernist perceptions of their local natural landscape played a vital role in shaping the new national culture. The continental scale of the territory which encompass several different ecosystems is an integral part of the nation's history, since its colonial project lied solely on its geographical traits.

¹⁴ KAUFMANN, 1998, p. 31.

¹⁵ CARR et al, 2013, p. 4.

For more than three centuries, since the arrival of the Portuguese in 1500, the territory which became known as Brazil was mainly exploited for large scale agriculture. But dramatic changes took place in the 19th century. Due to the Napoleonic Wars in Europe, the Portuguese Monarchy fled to Brazil in 1808, establishing a Kingdom and moving the capital to Rio de Janeiro. In 1822, the country declared its independence from Portugal, becoming the short-lived Empire of Brazil, which eventually fell to a military coup in 1889, which established a Republic. After this declaration, Brazil was keen to build its own national identity, and with Europe still being the reference model of progress, Brazilians looked for something unique that would make it stand out as a modern *civilized* nation.

Nature and history have always participated in the construction of Brazil, but the nationalist ideals demanded new narratives to fit the vision for the nation's communal prosperity. In a world increasingly divided between nations competing in the dispute for a place in the world, being united and presenting national cohesion was fundamental. Brazil's distinct geography served as a focus for the construction of a notably national culture, as it was an element considered originally Brazilian.¹⁶ More than showing the beauty of a tropical nature, the 19th century project to give Brazil a face also meant to affirm its own existence.¹⁷

During his expeditions throughout Brazil in the early 19th century, French traveler Ferdinand Denis recognizes the European as a symbol of *history without nature*, and observes the Brazilian as its direct opposite, the representative of *nature without history*.¹⁸ [Figure 1] By valuing Brazil's own striking tropical nature, Denis maximized what Europe is *not* and does *not* have. Rooted in European Romanticism, this national quest for the origin of Brazilian identity turned to the past, in search of elements that could symbolize the uniqueness and grandeur of the nation, such as the native Indian and the exuberant nature. [Figure 2] Oliveira reveals that:

¹⁶ BARBATO, 2014, p. 6.

¹⁷ Ibidem, p. 13.

¹⁸ Having nature without a history was not seen as a positive thing, but it was believed at the time that Brazil was still a young nation, which had not yet reached the maturity of the European and North American nations. Brazilian intellectuals considered that this it was only a transitory period, since the country was going through a process of intellectual advancement, mainly due to the advent of museums, universities, botanical gardens, and other institutes related to science.

"...while in Europe, Romanticism recovered the historical past represented by the medieval, by the Gothic, for the construction of the symbolic ideology of the nation, in Brazil the construction is more complicated, since there was no Middle Ages to be recovered. This led [...] to build imaginary Middle Ages."¹⁹

In this manner, the search for the original Brazilian element resulted in the elaboration of a true *tropical historiography*, characterized by the search for the nation, the ideal of progress and the understanding of nature as a defining element of the unity of the nation, in the face of the lack of a cultural unity.²⁰ Therefore, the nation was *naturalized*.

Still attached to the European *academicist* model during the 19th and early 20th century ("a possible Europe for a tropical Empire"²¹), Brazilian culture materialized within such molds. [Figure 3] It was only from the 1920s that this identity that merged primeval nature with modern progress found a productive condition to be adopted and to expand definitively. The first modernists prompted national culture to breakthrough in a radical way, revealed in plastic arts, literature, architecture and notably, in landscape architecture.

Nationalizing Israel

The connection between religion, history and geography defined Israel as a nation. Israel is the result of Zionism²², a social and political nationalist movement which based itself on the bond between the Jewish people and their ancient homeland. This modern project of national revival centered upon three main elements, the Hebrew man, the Hebrew language, and evidently, the land of Israel. National redemption was thus intimately linked to the idea of redeeming the

¹⁹ OLIVEIRA, 1990, p. 54-55. Oliveira presents the novel "O Guarani", José de Alencar (1857) as an example of a mythological reconstruction of the nations' imagined past.

²⁰ PAZ apud BARBATO, 2014, p. 6.

²¹ SANTOS, A. C. M., 1979, p. 30 apud POLIZZO, 2016, p.91.

²² Zionism is the ideology and national movement to establish a Jewish state in its ancient homeland of Canaan, in the region of Palestine. Founded by Theodor Herzel (1860-1904), Modern Zionism emerged as a reaction of waves of antissetimism in Europe and as a response to *Haskalah*, or Jewish Enlightenment.







[1] *Chef de Botocoudes avec sa Famille*, Bresil par Ferdinand M. Denis, 1837. Brazilian National Library (BN).

[2] Victor Meirelles, *A Primeira Missa no Brasil* (*The First Mass in Brazil*), 1860. Itaú Cultural.

[3] View of the Municipal Theatre and Central Avenue, Rio de Janeiro, 1910. Photograph by Augusto Malta, Brasiliana Fotografica. land; the first settlers believed that in the process of settling in and working the lands they would find their own personal and collective redemption.²³

In this process, Zionist collective identities viewed their land as an obstacle to be tamed and transformed, leading to a process of nationalizing culture *into* nature. Usually arriving from northern Europe, part of the challenge for the first immigrants was to identify with the beauty and uniqueness of an *alien* landscape: the sights they encountered appeared to them as desertic and desolate, a wilderness that had to be conquered, requiring the creation of a new environment different from the existing one. A rapid transformation of this landscape was of major importance to the early Zionist pioneer settlers. No effort was spared trying to change the desolate landscape into a pleasant and livable environment, to create a new homeland, and literally to "get rooted" in it; despite all the hardships they encountered then, they had tremendously high aspirations to achieve a modern western lifestyle and to transform the landscape into a green blooming one.²⁴

Settling and living in the *promised* land became meaningful, as the Zionist model of Jewish history portrays antiquity as a positive period. By emphasizing the nation's biblical era, the pastoral image of the land's past turned into a connection between the positive Jewish past with the modern era. Furthermore, the pastoral image represented a conquest over the desert landscape and the harmony of man living in peace on its lands (without the evidence of the former Palestinian presence on that land).²⁵

Cultivating the land became a main exponent of the new Hebrew culture, as they symbolized modernity and progress. By emphasizing these elements, garden culture was favorably viewed by the Zionist ideology, which had a dominant influence on the creation of the new national Hebrew culture in Palestine.²⁶ [Figure 4] Therefore, producing a cultural connection to the land's plants, animals and places became a priority. Educational emphasis was given on agriculture and nature, as well as local geography and history (*moledet*), and

²³ ZERUBAVEL, 1995, p. 28. In her book "Recovered Roots: collective Memory and the Making of Israeli National tradition", Zerubavel analyzes the Zionist reconstruction of the past through national myths.

²⁴ ENIS, 1992, p. 22.

²⁵ ALON-MOZES, GILAD-ILSAR, 2020 p. 82-83.

²⁶ ALON-MOZES, 2014, p. 57.

hiking throughout the land particularly became a major educational and recreational experience.²⁷

Herein, landscape architecture and garden planning became a significant definer of the possible connections between men and the land. Introduced by a handful of young pioneer professionals that arrived from Europe in the 1920s (graduates of the Jewish School of Horticulture in Ahlem, Germany, and other gardening vocational schools), they were at first involved in the design of *Kibbutzim*²⁸ [Figure 5] and in planning the urban landscape in new Hebrew towns, such as Tel Aviv. [Figure 6] With the Declaration of Independence of Israel in 1948, the participation of landscape architects in national planning took on a much larger scale. As idealist and activist postwar architectural movements²⁹ were appropriated as signifiers of national vigor, landscape architects perceived the land and their impact on it in from a modernist approach.

²⁷ Ibidem.

²⁸ *Kibbutzim* (Hebrew: קיבוץ / קבוץ, lit. "gathering, clustering") are collective socialist and communal settlements which played an essential role in the creation of the Jewish state.

²⁹ See Zvi Efrat's "*The Object of Zionism. The Architecture of Israel*" for a critical study of Zionist architecture and spatial of the State of Israel from the early 20th century to the 1960s and 1970s.





[4] Ephraim Moses Lilien, *May our eyes behold your return in mercy to Zion*, Fifth Zionist Congress Souvenir, Basel, 1901. Wikimedia Commons.

[5] Kibbutz Beit Alfa, 1946. Jewish National Fund.

[6] View of Gan Meir on its inauguration, Tel Aviv, 1944. Photograph by Zoltan Kluger, National Photo Collection of Israel.



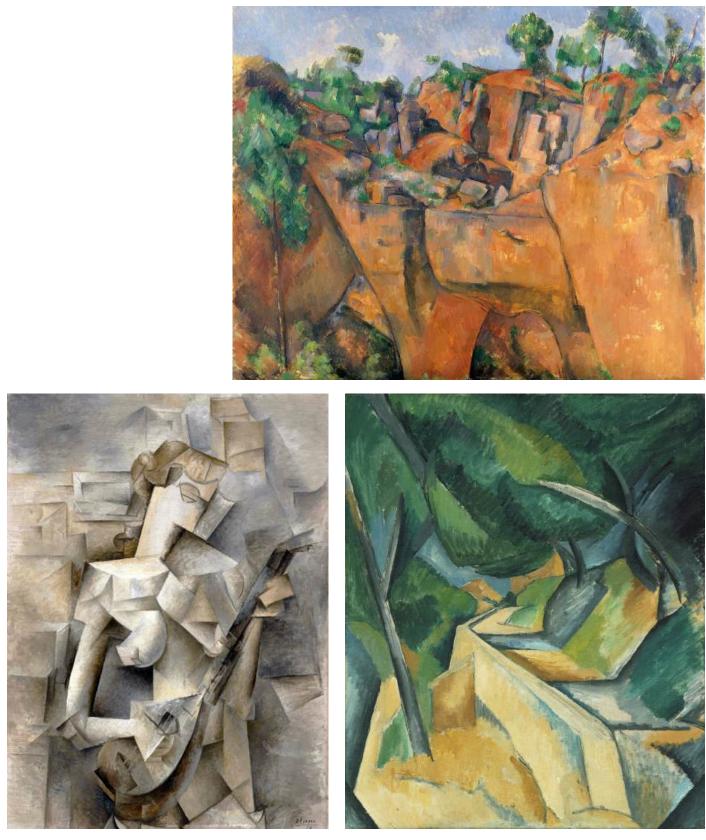
LANDSCAPE ARCHITECTURE ENTERS MODERNITY

"Modern environments and experiences cut across all boundaries of geography and ethnicity, of class and nationality, of religion and ideology: in this sense, modernity can be said to unite all mankind. But it is a paradoxical unity, a unity of disunity: it pours us all into a maelstrom of perpetual disintegration and renewal, of struggle and contradiction, of ambiguity and anguish." (BERMAN, 1998, p. 15)

At the turn of the 19th century, a series of world-historical social processes nourished an amazing variety of visions and ideas that aim to make men the subjects as well as the objects of modernization; "to give them the power to change the world that is changing them, to make their way through the maelstrom and make it their own."³⁰ Among the many revolutionary ideas and perceptions of this fast-changing world, modernity opened up new possibilities of how to articulate space. Related to the corporeal attitude instead of a mentalist representation, space becomes an event of corporeality and, as such, of existence. This new understanding of sensation changes the perception proposed by prior objective thinking, whose description occurs through linear stimulus-causality. This implies the description of the experience as it presents itself to the subject, without giving rise to psychological issues or causal situations.

In Arts, the beginning of the 20th century is marked by several design experiments investigating a continuous space, inseparable from the surrounding things. Paul Cézanne started to break the classical perspective and naturalist space, in research for the complexities of what the eyes observe. [Figure 7] Space and time could intersect the same plane in a non-linear way, inaugurating a new process of expression. Later, Pablo Picasso and George Braque advanced this by analyzing, breaking, and reassembling the objects they see. [Figures 8, 9] It was a new, *cubist* conception of the plastic space: where art ceases to be the representation of the world and starts to become an action that takes place. According to Cosgrove, "Cubism stressed the relative nature of vision as revealed by the camera and of space as theorized in

³⁰ Marshall Berman (1988) All that is Solid Melts into Air: The Experience of Modernity. Penguin Books, New York, p. 16-17.



[7] Paul Cézanne, *The Quarry at Bibémus*, 1895. Google Arts & Culture.
[8] Pablo Picasso, *Girl with a Mandolin (Fanny Tellier)*, 1910. MoMA.
[9] Georges Braque, *Road near L'Estaque*, L'Estaque, 1908. MoMA.

physics which fully and effectively disposed of the dominance of perspective as the central convention for realist representations of nature."³¹ Therefore, the painting is no longer the surface on which a representation of reality is projected, becoming the plastic plane in which reality is organized. Thus, the work should demonstrate a procedure that would renew the very experience of reality.³² From there, the modern subject was able to reconstruct an environment around himself, being able to create entire worlds. The form is reconstructed at each gaze, in a continuous updating process. Consequently, a new relationship between space and object is established.

Contrary to intellectual representation, as proposed by objective thinking, the sensitive experience grew as central to the subject. Argan claims that:

"(...) space is no longer "anything" that converges and ends at a point on the horizon, but something that radiates from a point or a line to infinity... Likewise, the building ceases to be a mass in space to be a plastic achievement in space: the point of view and the horizon are now indistinguishable."³³

There is a modern inclination – exemplified by Le Corbusier and Mies Van der Rohe - concerning a spatial expansion towards the outside, generating a constant tension on the surfaces. This movement, clearly from the inside out, goes beyond the logic of the contained and delimited *classic* architectural space, providing even greater spatial integration with the surroundings, transforming everything into a space created by man, and that precisely because of this continuous creation, it is uncountable in a finite form.³⁴

While architects were seeking new theories, ideals, and materials in an effort to produce architecture in accord with the social and technological conditions of contemporary life³⁵, most landscape architects mainly based themselves on the past by planning English-influenced gardens and their French or Italianizing variants. There was no institutionalized discussion or even experiments comparable to those that arose in the field of art and architecture.³⁶ The few innovative creations of gardens at that time did not take place in the public space, but in the

³¹ COSGROVE, 1998, p. 22.

³² ARGAN, 1992, p 304.

³³ ARGAN. Giulio Carlo. *Introduzione a Wright*, 1947 Apud ZEVI, 1947 In: ZEVI, 1995, p.11-12.

³⁴ ARGAN, 2000, p. 82.

³⁵ TREIB, 1992, p. 36.

³⁶ ADAMS, 1991, p. 16.

private sphere, not favoring the repercussion and maturation of these ideas. Furthermore, these attempts did not come to be configured as a spatial landscape conformation but were restricted to structuring the chromatic potential of vegetation and composition in relation to the construction.³⁷

In pre-First World War Europe, emerging concepts and experiences of landscape architecture outlined an effort to institutionalize a modern language, opening up to new sensibilities and proposing a break with the past. The garden started to be designed according to structural and geometric visual rules, rather than its natural demands. These experimental works tried to reflect in the landscape the new trends observed in arts, such as painting and sculpture. These were cubist attempts which, however, gave the gardens extremely *pictorial* characteristics and were, consequently, too static, that is, the classic spirit was somehow still present. They were efforts to adapt the garden design to the new aesthetic, structuring a plastic composition of lines and surfaces like a painting, however, composed of living matter.³⁸

Although countless landscape architecture expressions can be mentioned in the European and North American context, some experiences were more relevant within the lines of this study, defining its effects in Brazil and Israel. These references were chosen because they indicate - even in subtle ways - changes in the current landscape design paradigms. The scope and scale of the project, the differentiated use of the vegetation, the more intricate relationship between architecture and landscape and the pursuit for a new language regarding the local identity are some of the elements that point towards a more modern prose.

New Expressions

Gertrude Jekyll (1843-1932) was a British artist that advocated the relationship between architecture and gardens. She emphasized that this relation should occur through a fusion of spaces, where the work of the architect and the landscape architect is no different, since this work must be in function of the surrounding landscape. Her work stands out mainly for the

³⁷ POLIZZO, 2011, p. 54.

³⁸ POLIZZO, 2022, p. 57.

importance given to the study and composition of the colors of the vegetation in the gardens and the conscious - almost ecological - use of native species.

Contrary to the trend of picturesque English gardens, inspired by the pastoral landscapes painted by Claude Lorrain and Nicolas Poussin [Figures 10, 11] - where the contrasts between tree masses, disciplined lawns and artificial lakes stand out - Jekyll designed her gardens mixing colors and textures of flowering species, creating soft and organic contours. [Figure 12] For her, landscape art is like "painting a picture, but with live plants"³⁹, that is, having the artistic reference as a base, she explores the vegetal qualities from a detailed knowledge of the plant, making use of its nuances and essences. With a truly naturalistic character, Gertrude Jekyll had a modern attitude towards the natural world, understanding the spirit of the English landscape and working with nature as it is, without the *artificialities* that until then were perpetuated in English gardens.⁴⁰ [Figure 13]

Another experience that stands out from the beginning of the 20th century is the project that Catalan architect Antoní Gaudí (1852-1926) designed for Park Güell, built between 1900 and 1914, in Barcelona. Initially conceived as the collective area of a residential neighborhood inspired by the *trendy* model of garden cities, the complex wasn't built in its entirety, eventually being transformed into a public park in 1926. **[Figure 14]**

The entrance to the complex is via a grand staircase that leads to a large, covered area, called the Hypostyle Room, with columns that refer to classical tradition. The classic is also taken up in the design of the terrace, which forms a semicircle, evoking ancient Greek amphitheaters. Symmetric in its composition, the complex becomes organic in its details, with rustic elements such as the tilted stone columns under the viaduct, the zigzag mosaic benches, and the two pavilions next to the entrance staircase, which are associated with the rocky and mystical nature of the nearby Montserrat mountains. The park's vegetation is also related to the Mediterranean region. The mixture of the imaginary and the traditional are striking in the work of the Catalan architect, who manages to take on organic forms, applying the rationality of mathematics and physics. Gaudí's inspiration for Parque Güell was drawn from stereotyped Catalan images, from its medieval and Muslim past, from the Mediterranean imagination, from the handcraft traditions and the virtues of pre-industrial society. **[Figure 15]** Underlying this

³⁹ JEKYLL, 1901 apud TAMARI, 2017, p. 57.

⁴⁰ SHEPEARD, 1982 apud TAMARI, 2017, p. 59.



[10] Claude Lorrain, *Landscape with Ascanius shooting the Stag of Sylvia*, 1682. Ashmolean Museum Oxford.[11] Nicolas Poussin, *Landscape with a Calm*, 1650. Getty Museum.

Bunningfold 7

[12] Gertrude Jekyll, Burningfold Farm Plan, Dunsfold, 1922. UC Berkeley Archive.

[13] Gertrude Jekyll, Munstead Wood, Gardens for Small Country Houses, 1920. Wikimedia Commons.

[14] Antoni Gaudí, Parc Güell entrance staircase, Barcelona, 1900-1914. Portal Gaudí.

[15] Antoni Gaudí, Viaduc of Parc Güell, Barcelona, 1900-1914. Photo by Georges Jansoone, Wikimedia Commons.







interpretation of the traditional past of Catalonia, a new modern regionalism resonates in the project of Park Güell.⁴¹

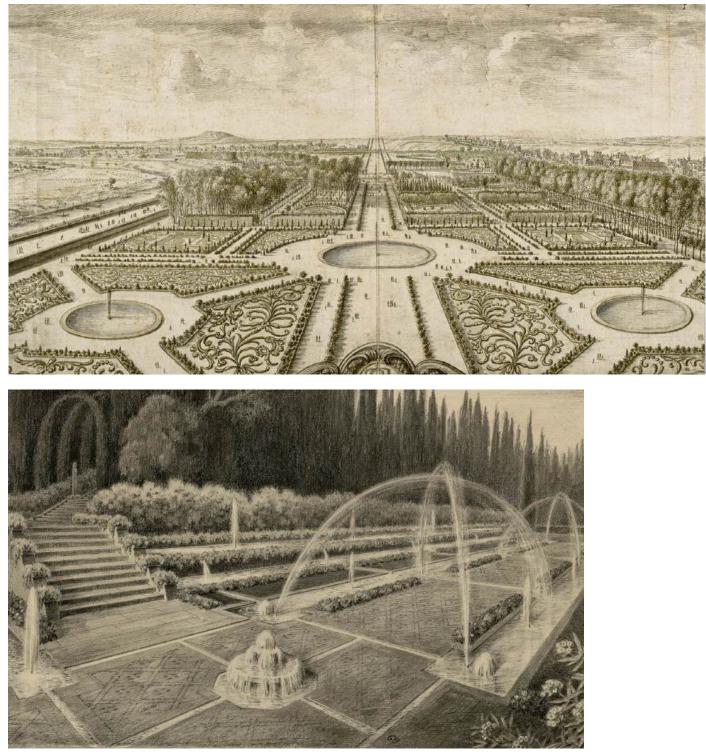
Although some landscape experiences point to the exaltation of modern gardens, in Europe, specifically in France, an opposite trend emerged with the resumption of the historic and *aristocratic* gardens. Reflecting the rise of Nationalism and the search for the essence of French formal gardens, this 'return to order' signaled a return to classical ideas, harmony and repose,⁴² reviving the tradition that stemmed from the landscape heritage of André Le Notrê, with his domesticated and stable gardens, based on logic and reason. **[Figure 16]**

The two greatest exponents of this trend were Henri Duchêne (1841-1907) and his son Achille Duchêne (1866-1947), whose works are recognized for adapting the classic principles advocated by Le Notrê and that, strained to the point of exaggeration, become a work of pure imagination. **[Figure 17]** The broderie parterres win a diagrammatic treatment, which seen from above are related to geometries of the latent Modernism that developed in the visual arts. This historicist trend amplified by the Duchêne's performance spread beyond Europe, reaching gardens in the Americas and Morocco.

Another important figure in this movement was Jean Claude-Nicolas Forestier (1861-1930), a landscape architect who gained recognition for his restoration work on the 18th-century Parc de Bagatelle, Paris, in 1905. Always considering the specific characteristics of each place, Forestier developed sensitive projects, which incorporated rules of classical tradition and local culture. In 1911, Forestier was hired by the committee of the Ibero-American Exhibition of Seville to transform the gardens of the Palacio San Telmo into a great public park, Parque María Luisa. [Figure 18] Adopting a formal language mixed with the traditional language of the Arab-Andalusian culture, Forestier created a series of gardens where typical Moorish elements - such as water fountains, mosaic tiles, edible herbs and flowers – mix with classic French gardens. This modern reinterpretation of Arab Mediterranean gardens became a popular model in Spain and France, and an alternative to the predominant picturesque and classic garden so far. [Figure 19]

⁴¹ MORALES, 1991 apud TAMARI, 2017, p. 59.

⁴² TREIB, 2013, p. 9.



[16]André Le Nôtre, Tuileries Gardens. View by Israel Silvestre, 17th century. Wikimedia Commons.

[17] Achille Duchêne, Henri Brabant, Jardins des Rêves, 1939. Archive Gabrielle Duchêne.



[**18**] Jean Claude-Nicolas Forestier, Plaza de España, 1911-20. Wikimedia Commons.

[19] Jean Claude-Nicolas Forestier, Jardín de los Leones, 1911-20. Fototeca Municipal de Sevilla.



Forestier's stance in reconciling historical styles with culture location and the plastic modalities that expanded in the first two decades of the 20th century, earned him the position of coordinator of the Landscape Architecture at the *Exposition Internationale des Arts Decoratifs et Industriels Modernes* of 1925. **[Figure 20]** Taking place in Paris, the event played a fundamental role in the development of modern landscape architecture and its dissemination.

Exposition Internationale des Arts Decoratifs et Industriels Modernes

After the end of the First World War, France pursued to reestablish itself as a worldwide reference in the fields of arts and industry. Planned by the French government to highlight the new *style moderne* of architecture, interior decoration, furniture, glass, jewelry and other decorative, many ideas *avant-garde* in the fields of architecture and applied arts were presented for the first time at the Exposition, which was inaugurated in 1925 in Paris. **[Figure 21]**

Focused on modern inspired experiments, the Exposition is considered as a pivotal instant in the development of landscape architecture in France, and eventually around the world. Invited to be the coordinator of the exhibition's open areas and gardens around the exhibiting pavilions, Forestier urged architects and landscape designers to elaborate green spaces as artistic expressions, experimenting with abstract forms, using the new materials available and working with the vegetation in new ways. In some ways, these works were visual extravagances, sculptures or bas-reliefs executed in living and inert materials. In other ways, however, the small gardens suggested that the new century in the aftermath of the Great War warranted a substantial overhaul of garden-making ideas and attitudes.⁴³ Planned to complement the architecture of the pavilions and to create a cohesive, yet diverse, ensemble, one of the main challenges of the garden section was the timeline; having the exhibition between set between April and October meant that the gardens had to remain pristine for six months. This problem triggered imagination and led to innovative solutions.

In one of the most radical projects, Robert Mallet-Stevens (1886-1945) in collaboration with Jan and Joël Martel (1896-1966) created a monumental garden made up of two large rectangular beds raised from the ground and marked by topiary vegetation that contrast with reinforced concrete trees, created by the Martel brothers. **[Figures 22, 23]** The clearly cubist-

⁴³ TREIB, 1992, p. 37.

inspired concrete trees indicate the interest of new materials and forms, and also the relationship that begins to emerge between architecture, landscape, sculpture and art.⁴⁴

Perhaps the most emblematic project of the Exhibition is the *Jardin d'Eau et De Lumiere* (Garden of Water and Light), by Armenian architect Gabriel Guévrékian (1892-1970).⁴⁵ [Figure 24] In this project, Guévrékian maintains the symmetrical axis but explores, through use of triangles in the flowerbeds and walls that surround the garden, the three-dimensionality of space. It reinforces the abstract character of the composition when it highlights the multifaceted views of the colorful vegetation that are reflected in the mirrored spherical sculpture by the French glass artist Louis Barillet, located in the center of the garden, the garden suggested true formal development rather than the mere exploitation of a geometric motif.⁴⁶

The reputation achieved by Guévrékian's garden led to the commission of another triangular garden, at the Villa Noailles (1927) in Hyères, southern France. Designed by Mallet-Stevens, the concrete villa was prismatic and modern, and at the southeastern corner of the villa a 120 square meter triangular plot was left for Guévrékian. Raising in shallow steps towards an apex with a rotating statue by Jacques Lipchitz called *Joie de Vivre*, the garden explored the constraints of the site and cleverly integrated mineral and living materials within an unrelenting geometric field. It became an icon of modern landscape design, pairing a fashionable pattern of Cubism inspiration with a suitably formal equilibrium.⁴⁷ The garden became an icon of modern landscape design, even serving as a scenery for Man Ray's surrealist film *Les Mystères du Château de Dé* (1929). Like the *Jardin d'Eau et de Lumière*, the Noailles garden was designed to be seen from outside, from a staged point of view. **[Figure 26]** Guévrékian's gardens were all about organization, distribution, and composition; these concepts, aesthetic principles, and formal expressions are derived from Modernist architectural precedents, the gardens are domesticated, enclosed by walls, and set against nature.

In addition to the 1925 Arts Deco Exposition, other architects also dared to modify the classic composition of the gardens, working with asymmetries, opposing full and empty spaces

⁴⁴ TAMARI, 2017, p. 65.

⁴⁵ See Hamed Khosravi's "Discrete Austerity" (2015) for an analysis of the Garden of Water and Light as an expression of both modernist and Persian gardens.

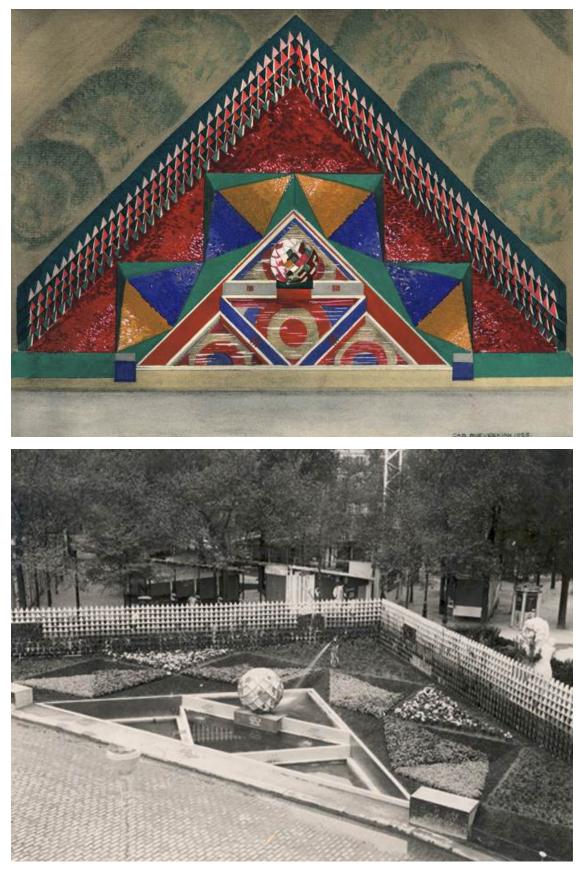
⁴⁶ TREIB, 1992, p. 39.

⁴⁷ Ibid.

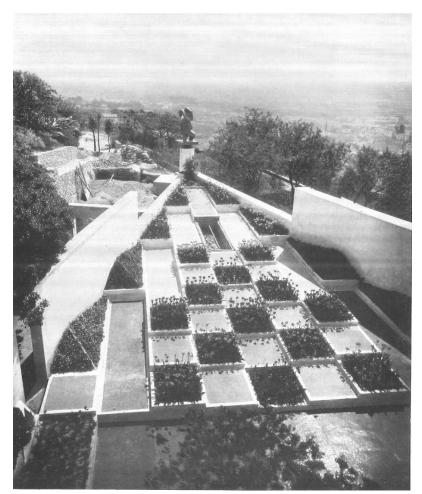


[20] Robert Bonfils, poster for the *Exposition Internationale des Arts Decoratifs et Industriels Modernes*, 1925. Victoria & Albert Museum Collection.

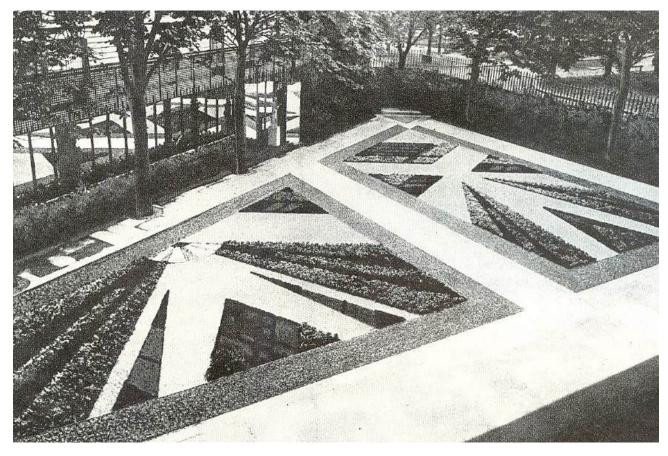
- [21] Principal view on the Esplanade des Invalides, Postcard from the 1925 Paris Expo. Wikimedia Commons.
- [22] Jan and Joël Martel, View of the cubits trees garden, 1925. freresmartel.blogspot.com.
- [23] "Devant l'arbre cubiste: l'arrouser perplexe", Jacques Touchet, 1925. freresmartel.blogspot.com.



[24] Gabriel Guévrékian, Plan for the Garden of Water and Light, 1925. J. Marrast, Jardins.[25] View of the Garden of Water and Light, 1925. Gabriel Guevrekian's Archive at the University of Illinois.



[26] Gabriel Guévrékian, Garden of Villa Noailles, 1927. Photo by Man Ray.[27] André and Paul Vera, Garden at Hotel Noailles, 1926. Photo by Man Ray.



and contrasting colors with the vegetation. An example of this is the garden for the Place des États-Unis, in Paris, designed by brothers André (1881–1971) and Paul (1882–1957) Vera in 1926. [Figure 27] In this project, the artists create a garden with a pictorial character for be seen from the top of the residence and explore, as well as Guévrékian, the strong colors, the triangular shapes and the multiplicity of views formed by the reflection of the mirrors embedded in the walls, which dilute the barriers of the garden making the dimensions of the space visually indefinite.

These expressions in the field of landscape architecture, although still linked to classical principles and often reduced to compositional experiments of planes and colors, indicate the search for new paradigms. A new way of thinking landscape architecture was being rehearsed, having modern art as one of its main foundations. Despite the effort to build an abstract, rational, and visual landscape, these gardens did not establish relationships that constituted an experimentation of the modern form with greater questions about space; they were compositions that barely got off the ground.⁴⁸ Generally small and private, these gardens could not expand visually beyond their limits. They presented themselves as a picture to be seen from a window, that is, they had a static presence and were valued from a unique, *privileged* point of view. Thus, its relationship with cubism becomes only apparent, superficial, in the sense that fractured geometric shapes, angular compositions, planes and segmented surfaces are generated. Grassy surfaces were used as *parterres* to define color planes, not striking volumes of vegetation. The result was two-dimensional, which generated immediate visual effects, that is, the garden was a painting disconnected from its surroundings, which should be understood by its pure visuality.⁴⁹

In this sense, these gardens took artistic intent to the extreme formally, ignoring the laws of nature - and its living state, of changeable and inconstant matter - and understanding vegetation as a mere material that donates color and texture to the composition. Little utilized were the new lessons about space and time and integrated forms that cubism had been proposing.⁵⁰ Consequently, these landscape compositions were more attached to the attempt to

⁴⁸ IMBERT, 1993 apud TREIB, 1992, p. 39.

⁴⁹ POLIZZO, 2011, p. 57.

⁵⁰ TREIB, 1992, p. 39.

create a modern aesthetic appearance, and in this regard, they still remained within the limits of style, not investigating the cubist potential of space.

United States of America

In contrast to the followers of traditional formal gardens and from the outcomes of the *Exposition Internationale des Arts Décoratifs et Industriels Modernes*, a new line of landscape thought emerged in the United States based on the precepts of both art and modern architecture, elevating landscape architecture to a modern status.⁵¹ From the late 1930s onwards, there is a reflection on the modern landscape architecture, whose main protagonists were Thomas Church (1902-1978), Cristopher Tunnard (1910-1979), Dan Kiley (1912-2004), James Rose (1913- 1991), Garrett Eckbo (1910-2000), among others.

Thomas Church (1902-1978) studied landscape architecture at Berkeley and later, in 1926, he graduated from postgraduate studies in City Planning and Landscape Architecture at Harvard. After graduating from Berkeley and Harvard, Church spent six months in Europe, studying gardens and parks in France, Spain, Italy and observing their responses to a Mediterranean climate, which is similar to California. Thus, he began to look up to the Mediterranean tradition for a model to be developed in his projects in the Californian landscape, inspired by the courtyards of the houses and the gardens of Italian villas, or by the use of water fountains - and in the case of the United States, swimming pools - as the search for references for the "outdoor life" project was developing. Church transformed some traditional principles, adapting them to the new conditions and needs of modern Californian life.

Within an extensive practice and a considerable contribution to publishing magazines, Church's effort to disseminate his gardens became effective so much that the Donnell Gardens (1948) in Sonoma City is arguably the most iconic project in the history of landscape in the United States. **[Figure 28]** Apparently drawn from a painting by Jean Arp, the amoeba-shaped pool ornamented by Adaline Kent's sculpture, became a symbol of this new line of American landscape architecture, and the modern lifestyle it represented. **[Figure 29]**

⁵¹ IMBERT, 2003, p. 47.

Contemporary to Church, Canadian-born Christopher Tunnard was another influential figure in the development of modern landscape architecture. After studying in England, Tunnard migrated to the United States also on invitation of Joseph Hudnut to teach landscape architecture at Harvard. Particularly critical of the formal versus informal debate surrounding garden design, he expressed his modernist view in a series of articles which he wrote for the *Architectural Review*.

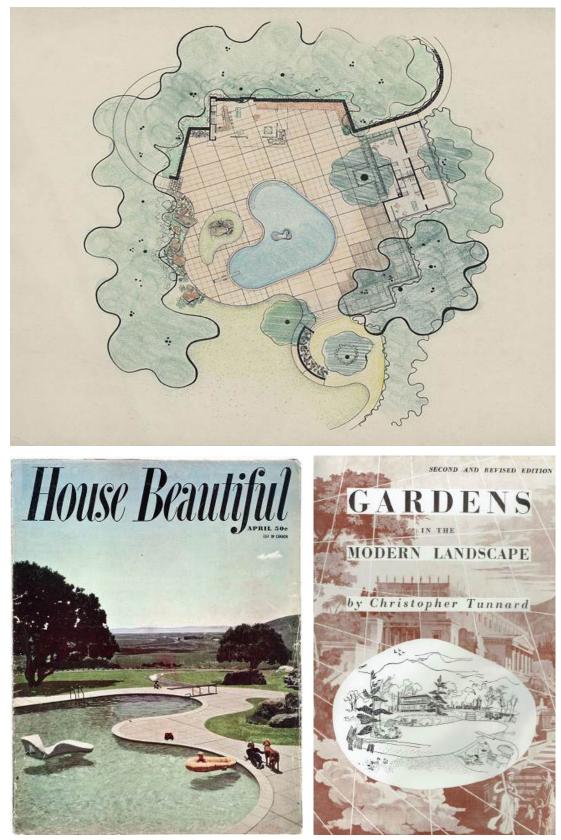
In 1938, Tunnard published "Gardens in the Modern Landscape", in which he proposed three fundamental guiding principles of the modern garden. [Figure 30] The first was that it should be functional, reflecting the needs for rest and recreation. The second principle was empathy, which he related to the placing of the garden in the landscape. There should be freedom from symmetry, with axes and vistas leading into the landscape and instead, the landscape architect should look for a balance between the designed landscape and nature around it. Finally, he praised for the use of art in the garden, especially non-representational sculpture, where the honesty of the modern materials would not be obscured by design.

Tunnard's philosophy on the relationship of the house to the wider landscape came from a desire to be part of it, and not to conceal it. For him, any plant is part of a greater whole; its characteristics and structural views are secondary to its contribution to a coherent design.⁵² Nature should be controlled, but not *imposed*. Tunnard's writings gave clear indication of the direction modern landscape architecture would follow.

Representing a different generation, more radical in promoting modernism, Garret Eckbo, Daniel U. Kiley and James C. Rose were landscape architects who gained notoriety for their academic and design productions in the late 1930s. They met at Harvard University in 1936, when joining the Graduate School of Design. The landscape architecture course at the Harvard University postgraduate followed the method focused on the *Beaux-Arts* traditions and thus the issues related to gardens were resolved in the dichotomy of the formal garden, with the rigid symmetrical axes, or informal, with the inherited naturalistic design of Frederick Law Olmsted's projects.⁵³ When arriving in Harvard, Eckbo wrote that:

⁵² TREIB, 1992, p. 57.

⁵³ IMBERT, TREIB, 1997, p. 13.



[28] Thomas Church, Donnell Gardens, Sonoma, 1948. Garden Plan, LACMA Unframed.[29] Thomas Church, Donnell Gardens, Sonoma, 1948. Cover of House Beautiful magazine, April 1951. LACMA Unframed.[20] Chairte de Cardenais et al. (Cardenais et al. (Cardenais) and Cardenais).

[30] Christopher Tunnard, Gardens in the Modern Landscape book cover, 1938.

"I came across a college of landscaping who believed that since trees were not made in factories, it was not necessary (for the profession) to worry about the new ideas that were propagated in Architecture or the Arts. The proven system formal/ informal operation since the eighteenth century and still continued being comfortable and reliable."⁵⁴

In the same building but on the floor above, modernist concepts spread rapidly at the Faculty of Architecture, as the director, Joseph Hudnut decided to renew the school's curriculum in 1935. Architect and Bauhaus founder Walter Gropius (1883-1969) and his protégé Marcel Breuer (1902-1981) - who fled Germany earlier in the decade - were invited to join the faculty, introducing modern and new ideas about the social role of architecture into what had been until then a traditional curriculum. If landscape architecture at Harvard was still attached to the historical tradition manifested in *Beaux-Arts*, several young landscape architects started to look to other disciplines in architecture, seeking new references. Gropius, who eventually became Chair of the Department of Architecture, was an important figure in the education of Eckbo, Kiley and Rose, and the social circle of architects around him offered them a unique modernist learning.

European *avant-garde* ideas, vocabularies and references provided a valuable model for rethinking landscape architecture in the United States. Le Corbusier's (1887-1965) five points of modern architecture⁵⁵ resulted from the separation of structure and enclosure. [Figure **31**] The reclaimed ground, now under *pilotis*, allowed new relations between the building and the landscape around it, creating terrace gardens, such as in Villa Savoye (1929). [Figure **32**] Meanwhile, Mies van der Rohe (1886-1969) quest for continuous space culminated in his project for the German Pavilion for the 1929 Barcelona Exposition, which became the true archetype of modernist spatial composition.⁵⁶ Distinguishing inside from outside becomes arduous, no rigid intersections delineate rooms within the building or its limit; building and garden have been rendered spatially coincident, only the shift in vocabulary from living vegetation to inert building materials distinguishes the two realms. [Figure **33**]

⁵⁴ ECKBO, 1983 apud FRAMPTON, 1991, p. 43.

⁵⁵ Published in his book *Vers une Architecture* (1923), Le Corbusier developed a set of five architectural principles that defined his visions of the new modernist architecture. They are; the free design of the plan, the free design of the façade, the use of *pilotis*, horizontal windows and roof gardens. ⁵⁶ TREIB, 1992, p. 43.

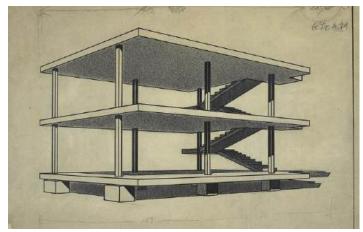
Following this path, the Harvard trio adopted the free plan and the interpenetration of spaces proposed by modern architecture not only in their projects but also in their theories. In a series of articles written in *Pencil Points* and *Architectural Records* magazines, they broadcast their ideals in relation to a new vision of landscape architecture. They criticized landscape projects that repeated the same formulas adopted by traditional formalism, proposing the creation of multiple views from irregular and free forms, where the gaze, without the rigid perspectives provided by the symmetrical axes, finds a privileged view of the space. Taking the place as a starting point, the landscape architect could design not only from aesthetic and formal propositions, but also to explore the "honesty of materials" – either mineral or vegetable - revealing their intrinsic qualities and potential.

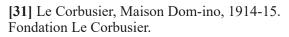
Rose's article "Freedom in the Garden" puts the landscape design between architecture and sculpture. He jokes juxtaposed his own garden project with a painting by Theo van Doesburg and the plan of Mies van der Rohe 1924 "Brick Country House" to illustrate his idea of continuous space, without the restrictive coercion of the singular axis. **[Figures 34, 35]**

In the series of three articles called *Landscape in the urban environment, Landscape in the rural environment, Landscape in the primeval environment*, the three landscaper architects conceptualize the differences between urban, rural and primeval environments, and point out in a simple and assertive way the propositions are pertinent to each of them. In relation to the urban environment, they reiterate the need for free areas for leisure and recreation, since modern man spends much of his day at work and needs, to have a healthy life, quality space to exercise or simply rest. On the other hand, the rural environment is almost the reverse of the urban environment: if on the one hand the city needs more free space for leisure, on the contrary, the countryside does not need as much space for recreation, but this space needs to be used more that allows for the social integration of a territorially sparse population. For the primeval environment, the landscapers indicate territorial protection, mainly with protection and control of fauna and flora, with a minimum of human intervention, since they are environments of contemplation, observation and scientific study.⁵⁷

In general terms, the three landscape architects tried to explain the need to face the relationship between architecture and landscape with a new look. The main idea revolved

⁵⁷ ECKBO; KILEY; ROSE, 1939, 1940 in TREIB, 1992, p. 78-91.





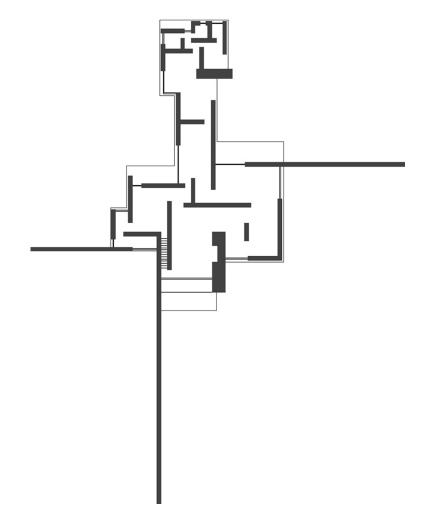
[32] Le Corbusier, Villa Savoye, Poissy, 1929. Photo by Montze Zamorano.

[33] Mies van der Rohe, German Pavilion for the 1929 Barcelona Exposition, Barcelona. Wikimedia Commons.

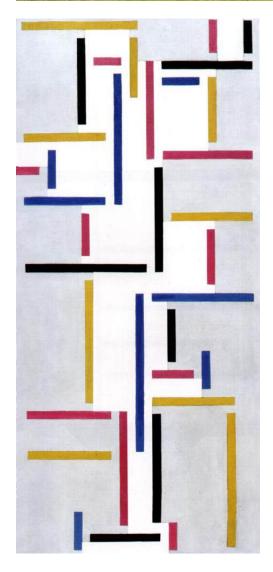
[34] Theo von Doesburg, Rhythm of a Russian Dance, 1918. Wikidata.

[35] Ludwig Mies van der Rohe, Floor plan for a Brick Country House, 1924. MoMA.









around the motto "landscapes are for people", which sought to bring landscaping closer to industrial society, that is, the program followed the social and technological conditions of contemporary life and, at the same time, respected the specificities of the place through a more sensitive attitude towards the landscape and the constructions of the external environment.

Brazil

Succeeding the cultural and political changes that swept through Brazil during the 19th century, the country saw the first actions towards a new post-colonial modern identity in the beginning of the 20th century. As a new perception towards the Brazilian nature and its specificities started to arise, artists, architects, writers, and other intellectuals tried to seek the consolidation of a national culture that protested the current dated model, based on the veneration for the *European* past. Certainly in tune with the vanguard movements in Europe, Brazilian modernist movement also showed from the very beginning an ideological dimension of its own: to acknowledge and interpret their national reality.⁵⁸ This aesthetic project would establish new paradigms in language, insisting that art had to overcome mere imitation of nature, rejecting artistic academicism and historicism.⁵⁹

In the field of arts, a naïve and symbolic exploration of the local landscape and vegetation begins appearing as a major theme, such as in paintings by Tarsila do Amaral, Anita Malfatti and Lasar Segall, and in written poems and metaphors by Oswald de Andrade and Manoel Bandeira.⁶⁰ There was, however, a much greater concern with the adoption of a stereotyped theme than with the plastic experience itself, as occurred in Europe. Polizzo emphasizes the paradox of Brazilian modernist productions: while there should be an opening to a universal language in the use of colors and shapes, there is a constant need to affirm the values that would demonstrate an awareness of national identity - through the adoption of a theme - generating a fragile modernity in a permanent tension.⁶¹

⁵⁸ LAFETÁ apud CARMONA-RIBEIRO & CARBONI, 2019, p. 154.

⁵⁹ PERECIN, 2003, p. 110.

⁶⁰ DOURADO, 2009, p. 41-50.

⁶¹ POLIZZO, 2011, p. 59.

Moreover, the development of modern landscape architecture was inseparable from the consolidation of Brazilian modern architecture. In the late 1920s and the 1930s, architects were increasingly imbued with the motivation to think of a new architecture that not only added the new technical possibilities, but also emphasized the *local* as worthy of Brazil's own architectural expressions.

Within this context, the first glimpse of a modern *Brazilian* garden appears with Mina Klabin Warchavchik (1896-1969) in the gardens of Santa Cruz Residence (1927), in São Paulo, designed and built by her husband, architect Gregori Warchavchik⁶² (1887-1953). Inserted in the effervescent cultural environment at the time, the couple lived in the milieu of Brazil's pioneer modernists. Constantly, the thoughts of these artists permeated the work of Mina, who adopted the native vegetation as a symbol for national roots, mainly the cactus and the *mandacaru*, as a synthesis of *Brazilianness*.⁶³ As she manages to contrast the sobriety of Warchavchik's neutral and universalizing architectural volumes with the garden, the flat lawn emphasizes the rare and peculiar vegetation, which assume a main role in the composition. [**Figure 36**] Mina Klabin seeks references in the local nature as an index of local regionalism, an attempt to create a local modern landscape architecture expression.

Mina also designed gardens of other houses planned by her husband, on Rua Itápolis (1929) and Rua Bahia (1930), considered her main work. The large sober, white façade of the house gains a new design with the presence of sculptural species of cati and trees planted in front of it. **[Figure 37]** Sitting on an irregular topography, the rear garden descends in three levels. The middle level stands out for its chessboard design interspersing floors and flower beds, directly evoking Guevrékian's garden for Villa Noailles. **[Figure 38]** Certainly Mina, always connected to the European artistic vanguards, was already familiar with the work of the Armenian architect.⁶⁴

⁶² Gregori Ilych Warchavchik (1896—1972) was one of the leading names in the first generation of modernist architects in Brazil. Born in Ukraine, he studied architecture in Rome before he immigrated to Brazil in 1923. Naturalized Brazilian in 1927 after marrying landscape designer Mina Klabin, Warchavchik designed and built for himself what was considered the first modern residence in the country. He published a series of texts introducing modernism in the Brazil, other than teaching and practicing.

 ⁶³ More about Tarsila do Amaral's influence on Burle Marx on Chapter 3. Guilherme Mazza Dourado discusses the presence of Tarsila do Amaral in the work of Mina Klabin Warchavchik in the first chapter of his book *Modernidade Verde – Jardins de Burle Marx* (DOURADO, 2009).
 ⁶⁴ LIRA, 2011 apud TAMARI, 2017, p. 90.







[36] Mina Klabin Warchavchik, Gardens of the Santa Cruz Residence, entrance, São Paulo, 1927. Arquivo.arq.br.

[37] Mina Klabin Warchavchik, Façade of the Rua Bahia Residence, São Paulo, 1930. Arquivo. arq.br.

[38] Mina Klabin Warchavchik, Gardens of the Rua Bahia Residence, backyard. São Paulo, 1930. Arquivo.arq.br. It is important to consider that parallel to Klabin's private gardens, public and largescale landscape architecture was still strongly *Beaux-Arts* oriented. French architect and urban planner Alfred Agache (1875-1959) was hired to plan Rio de Janeiro's "expansion, remodeling and beautification" plan (1926-1930). The project, which was partially implemented, dismantled mountains for landfills for the city expansion, while creating new public parks according to French formal gardens, with topiaries, fountains, and parterres, such as Praça Paris (1926).⁶⁵ [**Figure 39**]

Aside from Europe, another important influence came from American-born landscape designer Roberto Coelho Cardozo (1923-2013).⁶⁶ After graduating at UC Berkeley, Cardozo was hired by *Eckbo, Royston & Williams* - then considered one of USA's main offices – where he worked for two years. Moving to Brazil in 1952, Cardozo started his own practice in São Paulo, where he also inaugurated the teaching of landscape architecture in the country at the School of Architecture and Urbanism at USP (Universidade de São Paulo).

Reminiscent of Eckbo's values and traces, strong geometry is present in most of Cardozo's plans. [Figure 40] The Golda Meir Nursing home in São Paulo contrasts the open horizontality of the space while gentle ramps and tree masses create a thoughtful garden for the elders to rest. [Figure 41] Influenced by the contact he had with the landscape architecture renovation movement that permeated the cultural and urban environment of California, Cardozo's projects reveal this influence not just in the design, but in his systematization and technical approach to planning. His work is modern not only because of the use of modernist language in the use of materials, construction elements and plant composition, but also in his way of thinking about the project, which, based on intellectual work and clear development, detailing and execution process.

Making an irreversible breakthrough on Brazilian modernism, Roberto Burle Marx (1909-1994) emerged as the most important landscape architect exponent. Understanding the garden as a human intervention with nature, Burle Marx, from the start of his career, took a position of rupture with the prevailing precepts of the time. His connections with modern

⁶⁵ In a conference given in 1954, Burle Marx pejoratively mentions the park was created by "an uninspired follower of uninspired followers of Le Nôtre, have been copied in the interior from the Bayside gardens he laid out, which he called out of homesickness perhaps the Praça Paris."

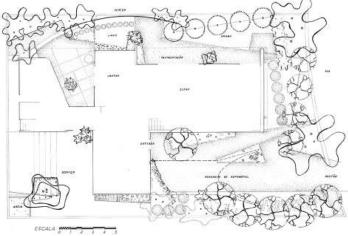
⁶⁶ See Gabriela Tie Nagoya Tamari's thesis *Modernidade Paulistana, o Paisagismo de Roberto Coelho Cardozo* (2017), an in-depth study of Cardozo's life and legacy.



[39] Alfred Agache, Praça Paris (Paris Square), Rio de Janeiro, 1929. Brazilian National Library (BN).

- [40] Roberto Coelho Cardozo, Golda Meir Nursing Home, São Paulo, 1959. In: Tamari, 2017.
- [41] Roberto Coelho Cardozo, Plan of Dório Pamphilli building garden, São Paulo, 1960s. In: Tamari, 2017.





architects guaranteed him a rare design autonomy in his contemporary professional environment, which gave him the possibility of developing projects at the most diverse scales and programs. In a time when the nation was building its own modern image, landscape architecture reconciled with the movement of architectural renovation that happened then, resulting in a "modernist-movement-with-garden".⁶⁷ These unique circumstances allied to the affinity that Burle Marx developed with the local landscape resulted in some of modern landscape architecture's most outstanding works.

Israel

Being a modern project of a nation, the history of landscape architecture in Israel is very recent, although the art of garden design in this territory extends as far back as Ancient History. Along with the ideology of the nation's rebirth, its rapid growth in a harsh environment and its prolonged conflict have undoubtedly shaped the character of its citizens and influenced urban and regional planning as well as landscape architecture.⁶⁸

Growing in parallel stages to key events and development of the nation, Israeli landscape architecture can be traced though several generations that shared similar concerns and attributes.⁶⁹ Characterized by vernacular culture, the 'Pioneers' Generation' arrived in the beginning of the 20th century, coming from northern Europe and establishing themselves in British Mandate Palestine (1918-1948). Influenced by socialism, many were founders of kibbutzim, where they started gardening on their own initiative. **[Figure 42]** Though they were poorly trained, self-taught, and gardening was seen as a less important labor of the community, they were characterized by the kibbutz's communal lifestyle and the vision of creating a utopian rural community. Only from the 1930s that immigrants with professional education started to arrive from Europe, bringing ideas and skills that strongly influenced future planning concepts.

⁶⁷ LEENHARDT, 1994, p.114.

⁶⁸ ENIS, 1992, p. 22.

⁶⁹ See ALON-MOZES, 2012, 2017, ENIS, 1996, HELPHAND, 2002, LISSOVSKY, 2018, 2021, OMER, 1996.

With the establishment of the State of Israel in 1948, the first decades (until the Six Day War in 1967) brought new opportunities for landscape architects to engage in large-scale projects. With emphasis placed on the connection between the people and the land, the planning of national parks, archeological sites and resorts, and the use of local and biblical vegetation mark this period. Known as the 'Founders' Generation', they highly manipulated the local landscape with their ideals about connecting man to the land through physical labor; farming in rural areas and gardening in urban areas. Their messages were also transmitted through the education system, like students in agricultural schools and gardeners in various kibbutzim.

Considered the garden designers who laid the foundation for modern landscape architecture in Israel, their work has a national and state character and reflects the ideology that shaped the face of the State through the first decades of its establishment. Yehiel Segal, Shlomo and Elisheva Weinberg-Oren, Haim Letta, Alfred Weiss, Yitzhak Kutner, Zvi Miller, Moshe Blum and Lipa Yahalom are key figures of this group. Also during this period, the Israeli Association of Landscape Architects was founded (1951) and large areas were allocated to large public parks in many cities (such as Tel Aviv, Jerusalem, Haifa and Ramat Gan). The landscape architects saw themselves on a critical position - hired mostly by the public sector – to plan important public spaces and influence the relation between population and nature. **[Figure 43, 44]**

From the 1967 to the 1990s, the growth of the national territory (Golan, West Bank, Gaza Strip and the Sinai Peninsula) led to a significant momentum of development and expansion in the variety and number of projects in the built and open landscape. The next generation – called the 'State Generation' – still had some immigrants, but most of them were already born in Israel. While some graduated from agricultural schools, many studied landscape architecture abroad (especially in the USA), where they adopted the new concepts learned, changing the way of thinking landscape architecture then. Terms like *local, ecological, natural,* and *symbolic* were introduced in the Israeli landscape architecture, resulting in projects that are more connected to the local geography. This generation, like the previous one, dealt extensively with the education of the younger generation and the creation of an infrastructure, which eventually led to the establishment of a landscape architecture course at the Technion in



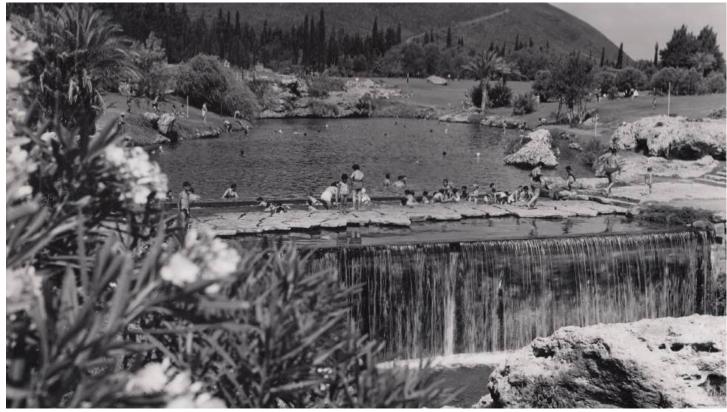
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[42] View of Kibbutz Kfar Rupin, 1930s. JNF.

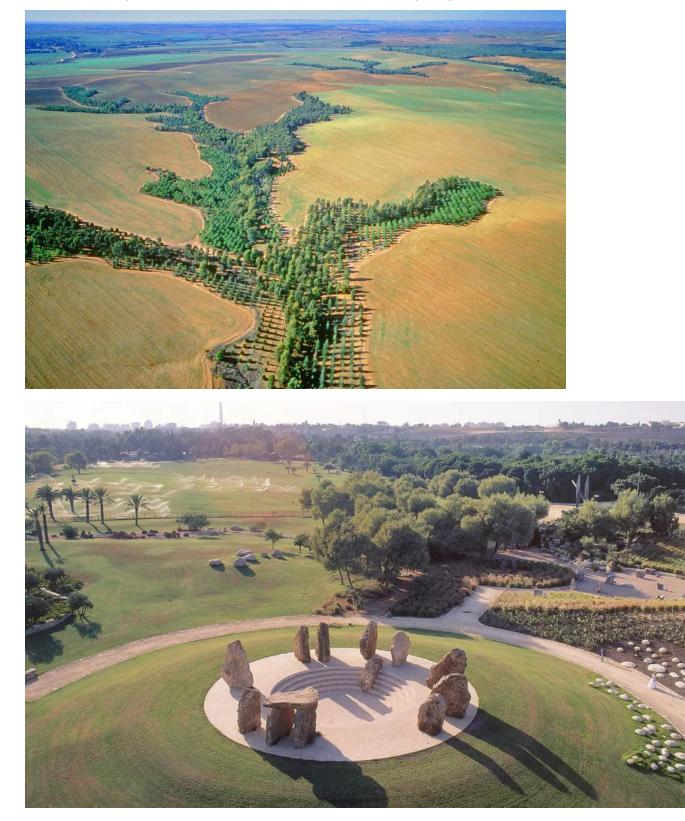
[43] Yehiel Segal, Perspective of Gan HaMoshava, 1946. Rishon leZion Museum.

[44] Lipa Yahalom & Dan Tzur, Gan HaShlosha National Park (Sahne), 1960. Photo by Andreas Ramer. The Israel Internet Association.



[45] Shlomo Aronson, National Plan for Afforestation, 1986. Albatross.

[46] Gideon Sarig, Rock Garden, HaYarkon Park, Tel Aviv, 2020. g-sarig.co.il.



the late 1970s.⁷⁰ Dan Tzur, Zvi Dekel, Aryeh Dvir, Shlomo Aronson, Gideon Sarig and Shaul Amir are among the names of this group. **[Figure 45, 46]**

Eventually, the 'Middle Generation' of landscape architects are the graduates of the Technion, many of whom have pursued their master's degree abroad. Following the immigration from the Republics of the Soviet Union (mid-1990s to the present day), this period is characterized by the transition from the local to global, where landscape architecture focuses more on infrastructure, urban landscape, and environmental-ecological issues.

Alon-Mozes and Gilad-Ilsar point out the modernity of Israeli landscape architecture in three main aspects:

"Central among them is the social role of landscape architecture as a profession working for the public sector. [...] A second theme is the relation between landscape architecture and identity and the connection between local and global. [...] The third tendency that made its initial steps during the research period is the emergence of an environmental discourse among Israeli landscape planners and designers."⁷¹

Through the scope and scale of its projects, its connections to the global community, and its sources of inspirations, Israeli landscape architects have shaped not only the physical spaces of a modern nation, but also the cultural connections to the land and the national identity.

⁷⁰ HELPHAND, 2002, p. 106.

⁷¹ ALON-MOZES, GILAD-ILSAR, 2020, p. 82.

Part II Affinity with the Local Landscape

TROPICAL BRAZIL: FROM CANNIBALISM TO TROPICALISM

"Cannibalism alone unites us. Socially. Economically. Philosophically". (DE ANDRADE et al., 1991, p. 38)

Pre-Modern

Committed to the integration of Brazil into the modern world, the young country's intellectuals developed a deep awareness of time, history, and the need to formulate a national project.⁷² Under Romantic, Eclectic and Neocolonial trends, the main symbols erected by the Brazilian nationalist movement throughout the 19th century emulated European models, inherited directly from the French Artistic Mission. Only the dawn of the 20th century and its revolutionary ideas brough drastic changes; in the 1920s and 1930s that Brazilian modernists, anxious not to perpetuate the lasting cultural dependency of the Old World, adopted an irreverent attitude towards the culture that came from abroad. Oswald de Andrade's *Anthropophagic Manifesto* published in 1928 paved the way for Brazil to assert itself against European post-colonial cultural domination.

The manifesto announces the idea of cannibalizing exterior culture and creating a new one, revised and mixed with the local specificities, developed into a unique, local strand of modernism. Often called Tropical Modernism⁷³, or Tropicalism, this Brazilian style of Modernism created a new national image and identity, specifically through architecture and landscape architecture. This chapter suggests that this process provided Burle Marx with the tools to incorporate in his design new forms of landscape, creating what became Brazil's new national image.

⁷² OLIVEIRA, 1990, p. 53.

⁷³ In her dissertation about Brazilian art and architecture, LE BLANC (2011) argues about the ambiguous origins of the term "Tropical Modernism," widely in relation to Brazilian modern architecture of the 1930s, 1940s and 1950s.

The cultural and artistic ideas led by the European vanguards in the beginning of the twentieth century did not take long to reach Brazil and to be assimilated. The recently young Republic (1889) was starting to develop into a modern nation while trying to assemble its postcolonial identity. Though the country was never a center of Western classical culture or home to any of the great symbols of this tradition, Brazil had a great influence from metropolitan Portugal before it received a systematic dissemination of traditional French culture.

For three centuries, the economic exploitation of the territory was the base of the Brazilian colony. From the first attempt to colonize the land, through the system of *Capitanias Hereditárias* (Hereditary Captaincies), the local landscape, its nature and natives were under control of private noblemen given by the Portuguese crown. [Figura 47] These *captains* were granted ample powers to administer and profit from their land possessions, especially with the profitable trade of *Pau-Brasil* (brazilwood). After the captaincies failed, the Portuguese monarchy unified the territory and took over the political and economic leadership of the colony. Eventually, agricultural plantations (mostly sugar cane) and mineral extraction (mostly gold) became the main exported commodities to Europe, based on slavery work force of either indigenous natives or African trades. It is common to find in European iconography from this era depictions of wild Indians with Caucasian features, events such as masses and catechesis in the jungle and stylized landscapes with fantastic flora and fauna. These exotic elements marked the difference between this strange, distant tropical world from the European 'civilized' life. [Figure 48]

But, unlike any other colony in the Americas, Brazil became the center of its European settler. In 1808, the Portuguese Royal family flew from Napoleonic invasions and transferred with them their entire court and institutions to the colonial village of Rio de Janeiro. Arriving in a humble and modest reality, the Royal family commissioned the *Missao Artistica Francesa* (French Artistic Mission), which came in 1816 and started to "civilize" the new Royal capital and its environs. **[Figure 49]** Its target was the systematic diffusion of traditional European academic knowledge in the nineteenth century, which propelled the local arts and architecture towards a more idealized representation of the "exotic" Brazilian reality. **[Figure 50, 51]**

Much after Brazil declared independence from the Kingdom of Portugal (1822), many generations of Brazilian painters and architects continued to be formed in accordance with the

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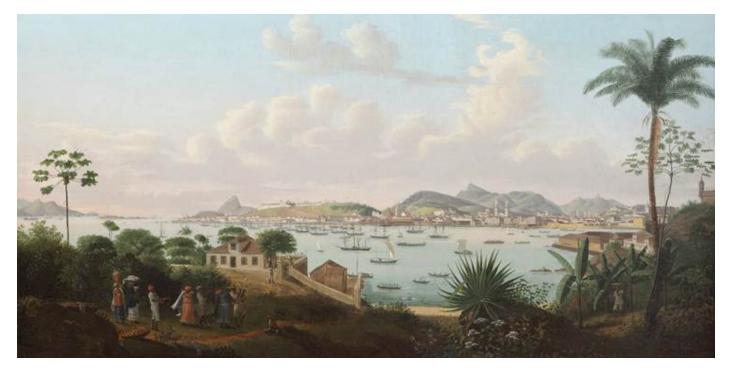
[47] Luís Teixeira, Portuguese America map showing the division of the hereditary captaincies of Brazil, 1574. Wikimedia Commons.

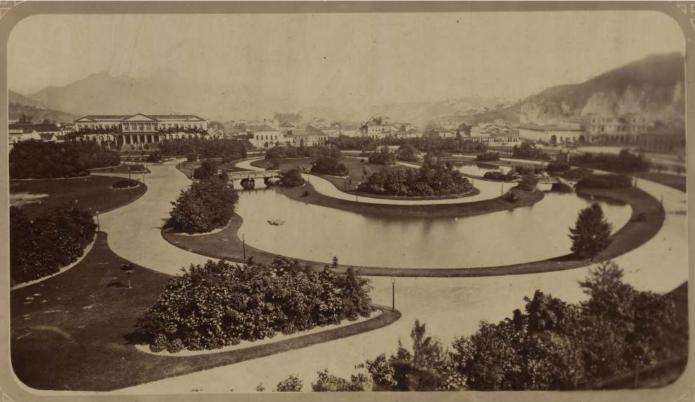
[48] Albert Eckhout, *Tapuia Cannibal Woman*, 1641. Wikimedia Commons.

[49] Jean-Baptiste Debret, Disembarkation of D. Leopoldina in Brazil, 1818. MNBA, Wikimedia Commons.









[50] Félix-Emile Taunay, *Guanabara Bay seen from Ilha das Cobras*, 1828. Picturing the Americas.[51] Auguste François Marie Glaziou, Campo da Aclamação, 1880. Photo by Marc Ferrez. BN Digital.

*Beaux-arts*⁷⁴ cultural system, until revolutionary ideas and movements led to its eventual dissolution. Reacting to the *decontextualized* European Eclecticism, the Neocolonial style emerged seeking in the traditional forms of Brazilian art and architecture that could be defined as genuinely *native*. It was the first manifestation of an awareness by Brazilian intellectuals of the possibilities of their country and of their originality.⁷⁵ Though many artists and architects embraced the Neocolonialism⁷⁶, the movement did not last long due to the abrupt arrival of European Modernism.

Modern Art Week of 1922

Historically marked as the founding of Brazilian Modernism, the *Semana de Arte Moderna* (Modern Art Week) of São Paulo in 1922 was an important happening, which combined painting, sculpture, theater and lectures that echoed the European avant-garde. **[Figure 52]** The event expressed the desire of artists and intellectuals for an authentically Brazilian form of Modernism, one that could mix both superstition and rationality, international and local. This was vividly expressed in Oswald de Andrade's *Manifesto da Poesia Pau-Brasil* (1924)⁷⁷, an appeal to poets to embrace the contradictions of the "medicine men and military airfields," "the jungle and the school" of contemporary Brazil, and to acknowledge them as "barbaric but ours." The manifesto meant to recognize that Brazilians themselves belonged in some way to the European image of the exotic 'other'. It also meant overcoming their traditional fears of

⁷⁴ *Beaux-arts*; French for *fine arts*. Term used to describe the academicist movement that dominated Arts in the 19th century, especially Architecture and Painting, that studied and favored ancient Greek and Roman tradition.

⁷⁵ BRUAND, 1997. p. 52.

⁷⁶ Lucio Costa (1902-1998), who eventually became the central figure of Brazil's Modernist Project, adopted primarily the emerging Neocolonial architecture style in the beginning of his career, especially after spending two months travelling in the old cities of Minas Gerais, preserved ensembles of typically Brazilian Colonial and Baroque architecture. His architecture would shift dramatically in the following years, as he partnered with Russian architect Gregori Warchavchik, responsible for Brazil's first modern houses after he emigrated from Ukraine.

⁷⁷ First published in *Correio da Manha*, Rio de Janeiro, 18 March 1924; reproduced in ADES, 1989, p. 310-311. P*au-Brasil*, or brazilwood, was the tree exploited by the first European transatlantic traders, from which the name of the colony was given.

medicine men, the jungle, and the barbarism that existed beyond their own immediate urban environments.⁷⁸

Fear was always an important component in Europe's fascination with the tropical landscape: fear of potentially hostile and cannibal Indians, savage animals, poisonous insects, wild plants and uncontrollable forces of nature. The *Manifesto Pau-Brasil* situated itself as a "reclaim the jungle" movement, an attempt for Brazilians to reclaim an idea traditionally associated with danger and to make it accessible and attractive to the urban intellectual imagination.

This paved the way for many fields to express new gazes over the local landscape. Tarsila do Amaral's powerful paintings of the late 1920s, in an ironic play on Europe's ancient fears, reclaims the myth of the Brazilian cannibal, placing her proud, monstrous figures and animal in landscapes of giant wild vegetation, parallel to the built urban and industrial environments. The idea that the primitive and the modern, the national and the cosmopolitan should coexist dialectically was the ideological the root of the upcoming Anthropophagic Movement.

In 1928, Tarsila do Amaral⁷⁹ painted *Abaporu*, depicting a monumental, seated figure of a primordial being, with giant feet, naked, sitting against a blooming cactus. **[Figure 53]** Using the colors of the Brazilian flag, the title given combined two words from the language of the *Tupi-Guarani* Indians: *aba* (man) and *poru* (who eats human flesh). Given as a birthday gift to her husband Oswald de Andrade, this landmark painting inspired him to write the

⁷⁸ FRASER, 2000, p. 184.

⁷⁹ Tarsila do Amaral (1890-1973) is one of the greatest Brazilian artists of the 20th century and a central figure of modernism. Born in Capivari, State of São Paulo, she studied piano, sculpture, and drawing in São Paulo before leaving for Paris in 1920 to attend the Académie Julian, then a famous art school. During subsequent visits to the French capital, she studied with André Lhote, Albert Gleizes, and Fernand Léger, fulfilling what she called her "military service in Cubism". However, it was on her return to Brazil, in 1922, that the painter became a central figure in the making of a Brazilian modern art, taking part in the main modernist events and movements of the 1920s and 1930s. Tarsila became known for her signature style of sensuous, vibrant landscapes and everyday scenes of Brazil.



[52] Emiliano Di Cavalcanti , São Paulo Modern Art Week poster, 1922. Itaú Cultural.

[53] Tarsila do Amaral, Abaporu, 1928. MALBA.



MANIFESTO ANTROPOFAGO

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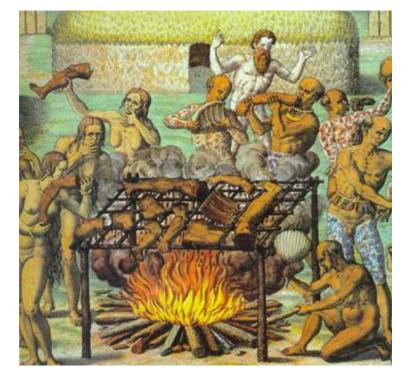
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[54] Oswald de Andrade, Page of the original publication of Manifesto Antropófago, 1928.
Wikimedia Commons.

[55] Theodor de Bry, Antropophagy scene in Brazil, from Americae Tertia Pars Memorabile Provinciae Brasiliae Historiam, 1557. Brasiliana Iconográfica.



*Manifesto Antropófago*⁸⁰ (*Anthropophagic Manifesto*), **[Figure 54]** which was fundamental for the Anthropophagic movement that followed. The author dates the manifesto to a mythological event in 1556, when the *Caeté* Indians devoured the first bishop of Brazil, Father Dom Pero Fernandes Sardinha - known as Bispo Sardinha - after being shipwrecked on the coast of Alagoas. **[Figure 55]** The act of swallowing by the *Caetés* does not imply satisfying hunger, but a ritual of incorporating the attributes of the "other" (exterior), overcoming the restrictions of the "I" (interior) through assimilation and increasing the enemy's qualities. Through this wild attitude, according to the author, it would be possible to reverse the traditional relationship between the colonizer and the colonized. Oswald considers the primitive as an autochthonous inner force and invites everyone - in the Manifesto - to destroy imported culture elements by swallowing, which would ensure their maintenance in our reality through the process of transformation of certain alien elements.

Thus, considering "swallowing" as an "assimilation mechanism", anthropophagy justifies a whole attitude towards international influences. It is up to the Brazilian to remove from the alien culture, intuitively or consciously, those elements that interest him. Thus, the "cannibal ritual" is a sum of contradictions between national and foreign, primitive and modern. Hence, the movement did not hesitate to seek European creation while promoting Brazilian cultural identity; according to them, where primitivism was considered in Europe as an exoticism, in Brazil it corresponded to the very essence of the country. The metaphor of anthropophagy permeates the cultural production in Brazil: from there they created a mixed culture, which belong simultaneously to the two worlds and none. A swallowed object, assimilated and transformed into a new outcome; a modernism "with a local flavor".⁸¹

Landscape as Motif

Although conceived in a very urban setting, the first modernists ventured into many expeditions into the nation's interior, where they found the translation of their ideas. This search for an

⁸⁰ According to the Oxford Dictionary, anthropophagus means a ritualistic cannibal, especially in legends or fables. Mid 16th century Latin, from Greek anthropophagos 'man-eating', from anthropos 'human being' + -phagos 'feeding or subsisting on a specified food'.

⁸¹ LINO, 2009, p. 136.

alliance between modernization and the national essence was encountered in the nation's unique construction, where the *Europeanized* "civilizing" architecture integrated the "indomitable" landscape as the setting for the popular culture. The baroque cities of Minas Gerais, especially Ouro Preto,⁸² became the portrait of the will to grasp a cultural heritage, in the search for the roots of Brazilian artistic expression. **[Figure 56]**

In most of Tarsila's works from this era, landscapes become a central theme. Instead of the external, not native existing approaches to these depictions, she makes them abstract, fantastic and ambiguous, playing between the legacy of European art and the disassociation from it. In Postcard (1928), the landscape structure of the work is very similar to that of the European depictions of colonial Rio de Janeiro, but at the same time it with the modern projection of the unconscious borrowed from contemporary avant-garde. [Figure 57] Painted in bold colors, the famous hills of Rio are surrounded by colonial style houses in the background of the landscape, while massive, stylized vegetation with fruits and monkeys are placed in the foreground. Deep, mythical, and wild nature appears in the front, as a proud nationalist statement. The representation and imagination of the tropical fauna and flora, intertwined since the colonial times, becomes a modern expression of sharp outlines, meandering curves, and amoebic shapes. The local landscape, the fauna and the flora, become ideological versions under the *anthropophagic* gaze.

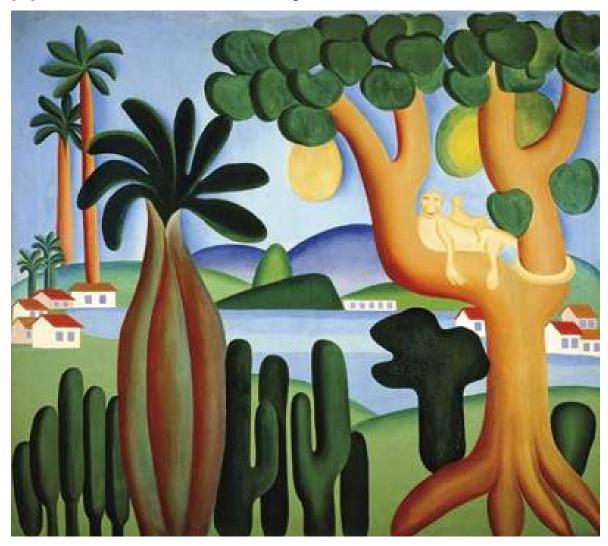
In the field of architecture, anthropophagic ideas echoed in the moment that the first architecture works considered modern were built in the country. Le Corbusier, one of the pioneers of Modernism (or International Style⁸³) was invited to give a series of conferences about his revolutionary ideas in Rio de Janeiro and São Paulo in 1929. The Swiss-born French architect already had professional and intellectual reputation worldwide, especially since his book-manifesto *Towards an Architecture* (1923) was published and some of his emblematic villas were built, such as the recently completed Villa Stein (1927) and Villa Savoye (1928).

⁸² Ouro Preto became the symbol of Brazilian nationality and a paradigm for the policy of preserving the architectural heritage in Brazil, specially though the efforts of Lucio Costa. On his quest for a Brazilian national artistic source, see FILHO, E. B. (2012) "Lúcio Costa em Ouro Preto : a Invenção de uma "Cidade Barroca"."

⁸³ In architecture, Modernism is also known as the International Style, primarily in the U.S.A., considering the landmark exhibition held at the Museum of Modern Art of New York in 1932, which gave the movement its title.



[56] Tarsila do Amaral, Sketch of Ouro Preto, 1924. Itaú Cultural.[57] Tarsila do Amaral, Postcard, 1929. Picturing the Americas.



Arriving in Rio by plane, Le Corbusier wrote his impressions on the landscape, revealing the recurring Brazilian cultural theme, guided by a need to impose artifice on nature as a form of domination, or even survival of civilization amid the violent landscape of the tropics:

"... when you are an urban planner and an architect, with a sensitive heart to natural magnificence and an eager spirit to know the destiny of a city, when you are a man of action by temperament and by the habits of a lifetime; so, in Rio de Janeiro, a city that seems to radiantly challenge all human collaboration with its universally proclaimed beauty, we are seized by a violent, perhaps crazy, desire to try a human adventure here too – the desire to play a game of two, a match of 'assertion-man' against or with 'presence-nature'".⁸⁴

During his visit, the architect sketched radical urban proposals for Rio de Janeiro and for São Paulo, both dealing two fundamental *modern* urban problems - traffic congestion and lack of space for expansion - while also exploring the city's spectacular setting. His vision for Rio was based on a vast automobile road atop a long, continuous mixed-use building (*l'immeuble-autoroute*) that would wander through the local topography in graceful curves, giving the best views of the surrounding peaks and bay.⁸⁵ [Figure 58] According to Polizzo, there is "a potentialization of architecture in function of the natural site: the constructed rationality does not distance man from the landscape, but assumes a natural characteristic, relating to the curves of the mountains and, in turn, enhancing the man-nature interface."⁸⁶ His words and sketches portray his vision of "bringing the landscape into the room".⁸⁷ [Figure 59]

The Corbusian precepts presented then became the major influence on the composition of what would be modern Brazilian architecture and landscape architecture, as new perspectives opened the possibility of adopting the free and continuous forms as a mediator between built form and existing place, enabling a new understanding of space as a continuous

⁸⁴ LE CORBUSIER, 2004, p. 229.

⁸⁵ FRASER, 2000, p. 180.

⁸⁶ POLIZZO, 2011, p. 80.

⁸⁷ "The pact with nature has been sealed! By urban planning, it is possible to register nature in the lease. The landscape of Rio de Janeiro is admirable! [...] A frame all around! The four oblique from this perspective! The room is located opposite of the site. The landscape is brought completely into the room." Le Corbusier and de Pierrefeu, F. (1942) La Maison des homes. Paris: Plon, p. 87, apud LEE, 2014, p. 40.

totality.⁸⁸ These entirely new concepts of city-planning, architecture and relation to nature had a compelling influence on Brazilian architects, even more considering that their formation and production was still wavering between the Eclectic and the Neocolonial, while ideas of a new modern identity were already appearing in plastic arts and literature.

Though small private modernist projects were accomplished throughout the country, it was in 1936 that architecture in Brazil started to develop decisively its own version of Modernism. Le Corbusier returned to Brazil seven years after his first visit; this time officially invited by the Brazilian government as a consultant for large public projects in Rio de Janeiro. The visit resulted in Brazil's first major Modernist building, the *Ministério da Educação e Saúde* (Ministry of Education and Health). [Figure 60] Coordinated by Lucio Costa, the project was developed by those who became first generation of Brazilian architects that embraced Modernism, like Oscar Niemeyer, Carlos Leão, Affonso Eduardo Reidy and finally, Roberto Burle Marx.

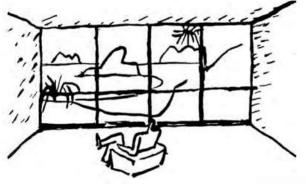
The MES project was groundbreaking in many ways. Sponsored by the government, the project embraced the notion that architecture and indeed nature could be immobilized both operationally and expressively to support a new cultural construct for Brazil.⁸⁹ While it incorporated Le Corbusier's five points of architecture⁹⁰, it also incorporated *azulejos* (ceramic tiles) and local pink granite in the public spaces at the ground floor, and concrete solar shading in an entire façade of the building, an element that became a characteristic of Brazilian Modernism.⁹¹ Yet the gardens, planned by Burle Marx, are a crucial part of the success - and the fame - of the building.

⁸⁸ POLIZZO, 2011, p. 81.

⁸⁹ NORDENSON, 2018, p. 40.

⁹⁰ Published in his book *Vers une Architecture* (1923), Le Corbusier developed a set of five architectural principles that defined his visions of the new modernist architecture, which are: the design of the free plan, the design of the free façade, the use of *pilotis*, horizontal windows and rooftop gardens.

⁹¹ GOODWIN, 1943, p. 81-85. In the catalogue of the famous MoMA exhibition *Brazil Builds*, this element is described as "a great original contribution to modern architecture is the control of heat and glare on glass surfaces by means of external blinds. [...] As developed by the modern architects of Brazil, these external blinds are sometimes horizontal, sometimes vertical, sometimes movable, sometimes fixed. They are called quebra sol in Portuguese, but the French term brise-soleil is more generally used."



[58] Le Corbusier, sketches of an urban plan for Rio de Janeiro, 1929. Fondation Le Corbusier.

[59] Le Corbusier, sketch of a window view of his urban plan for Rio de Janeiro, 1929. Fondation Le Corbusier.

[60] View of the Ministery of Education and Health headquarters, 1953. Photo by Marcel Gautherot. Instituto Moreira Salles.



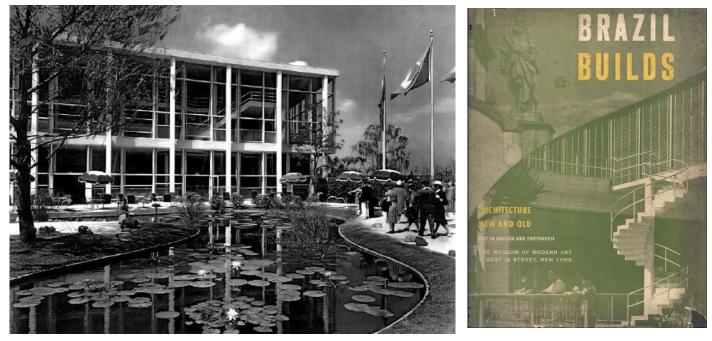
Moving from the content to the forms, from the plants to the design, the gardens of the MES building mark the emergence of one of Burle Marx's most characteristic features; sinuous, liquid, curves and amoebic blobs composed of local flora. Here, the anthropophagic metaphor can be seen as a strategy, with the consumption of the contemporary European culture used deliberately and selectively. Le Corbusier's vision of a vast megabuilding structure that meanders through Rio, creating perfectly framed visions of the spectacular landscape from *inside the modern civilization* is provoked by Burle Marx's vision of being *inside the landscape*, a part of it.

Though the building is based after the avant-garde Modernist architecture, a distinguished *Brazilianity* in the architectural elements and in Burle Marx's distinctively tropical garden generated a local, tropical⁹² Modernism. Ultimately, this new style would achieve international recognition and fame with the Brazilian pavilion in the 1939 New York's World Fair, designed by Lucio Costa and Oscar Niemeyer.⁹³ Though Burle Marx did not participate in the design of the pavilion gardens, what Costa evoked most skillfully was an integration of the landscape and tropical climate into this iteration of a distinctly Brazilian and state-supported vision of modernist architecture.⁹⁴ The gardens evoked a tropical paradise, with its amoeboid pond, luscious vegetation, wild animals such as fish and birds. [Figure 61] Nicknamed the *tropical pavilion*, it inaugurated the terminology that links Brazilian modern architecture with its geographical position and natural conditions.⁹⁵ Different from poetry, literature and painting, in architecture and landscape architecture the construction of this new national identity is directly affected by its physical conditions, defining the shape of its architecture and adopting its *unique* luscious landscape in an original way.

 $^{^{92}}$ Oxford English Dictionary emphasizes two meanings for the word tropic; 1. One of the two imaginary lines drawn around the world 23° 26' north (the Tropic of Cancer) or south (the Tropic of Capricorn) of the equator, and 2. The area between the two tropics, which is the hottest part of the world. The word comes from Latin and from Greek *tropikos*, from *tropē* "turning", from *trepein* "to turn".

⁹³ For more about the New York World's Fair's Brazilian Pavilion see Comas, C. E., New York World's Fair of 1939 and the Brazilian Pavilion, 2010 and Le Blanc, A., Building the Tropical World of Tomorrow: The Construction of Brasilidade at the 1939 New York World's Fair, 2009.
⁹⁴ NORDENSON, 2018, p. 45.

⁹⁵ MOIMAS, 2014.



- [61] View of the Brazilian Pavilion, 1939 World Fair, New York. Archdaily.
- [62] Catalogue cover of the exhibition "Brazil Builds", 1943. Photo by Soichi Sunami. MoMA.
- [63] Monumental axis of Brasilia, Still from Phillipe de Broca's movie "L'Homme de Rio", 1964.



Modern Brazilian architecture was at the forefront of the international scene, and the 1943 Museum of Modern Art (MoMA) exhibition "Brazil Builds: Architecture New and Old, 1642-1942" organized in New York by Philip Goodwin, contributed enormously to its influence. [Figure 62] The exhibition contrasted the traditional colonial and baroque patrimony of Brazil with the unique modernity that spread throughout the nation. With its modern reinterpretations of historical elements, its bold new forms, and an underlying relation with the landscape, tropical modernism became the national image of Brazil from the late 1930s to the 1960s, culminating with Brazil's new capital, Brasilia. [Figure 63]

The modern national identity that Brazil built over these years valued not only architecture and landscape, but the integration between them. The role that Burle Marx had was essential, bridging nature and culture, history and modernity, European and Brazilian art, and reflecting his early formation, influences, and determinations.

The Modern Path of Burle Marx

"I believe it's time Brazil learnt to love nature – the forests, rivers, lakes, animals, birds. I believe we must reformulate our concept of patriotism. Patriotism, to me, is to protect our heritage [patrimony]. Artistic, cultural and the earth, which gives us all of this." (BURLE MARX, 1973)⁹⁶

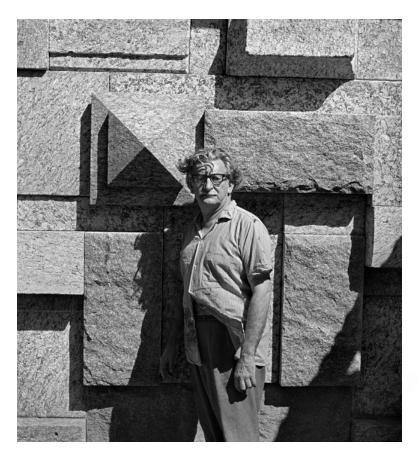
Born in São Paulo (1909) to a German immigrant father and a Brazilian mother, Roberto Burle Marx was introduced to music and plastic arts from an early age. [Figure 64] In 1913, the family moved to a house in Rio de Janeiro, where he developed a special relationship with gardening and botany through young life, taking care of the family garden. In Berlin, where he moved to study music in 1928, not only he had contact with classic and contemporary art that influenced him throughout his life, but there he had an epiphany when confronting Brazilian flora in the Dahlem Botanical Gardens, wondering why such extraordinary species were not used in Brazilian gardens.⁹⁷ [Figure 65] When back in Rio, Burle Marx started his graduation in architecture at the *Escola de Belas Artes* (National School Fine Arts) but transferred to painting and sculpture at the suggestion of his friend, mentor and neighbor Lucio Costa.

Lucio Costa, an architect and urban planner, became a central figure in the modernization of Brazil. He took part in many excursions through the country's interior in the 1920's to study and document the local colonial architecture, deeply influencing his search for a national architectural identity. **[Figure 66]** After a brief phase engaged in Neocolonialism, Costa quickly became fascinated by the European modernism and its renovation ideals. Appointed in 1930 as the new director of the National School of Fine Arts (ENBA) in Rio de Janeiro, Costa introduced modern methods and views to the curriculum, proposing that courses in urbanism and landscape should be taught at the school. Throughout his career, Costa was a staunch defender of the integration between architecture and the landscape.⁹⁸

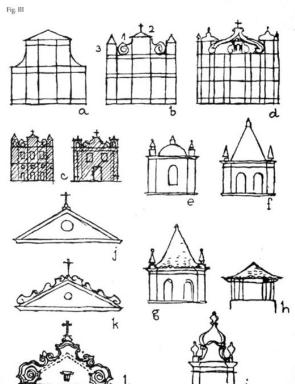
⁹⁶ Cited in "Burle Marx - Entrevista: a devastação é total", interviewed by Oswaldo Amorim, published in Veja magazine, No. 263, on 19th September 1973.

⁹⁷ DOHERTY, 2018, p. 58. This famous episode was elevated to the condition of a myth maker by Burle Marx himself, who referred to the fact several times in different texts and lectures throughout his career.

⁹⁸ NORDENSON, 2018, p. 41.







[64] Portrait of Roberto Burle Marx at the Sitio, 1961. Photo by Marcel Gautherot. Instituto Moreira Salles.

[65] *Das Große Tropehnaus* (Great Tropical Pavilion), Berlin-Dahlem Botanical Gardens, 1917, Photo by Zander and Labisch/ Ullstein Bild via Getty Images. In: Nordenson, 2018.

[66] Sketches of Ouro Preto, Lucio Costa, 1930s. In: Costa, 1937, p. 36-37. After inviting the pioneer modernist architect Gregori Warchavchik⁹⁹ to teach the architecture course at the school, the two formed an architectural practice in Rio de Janeiro that lasted three years, employing a young Oscar Niemeyer and commissioning Burle Marx's first garden, the roof terrace for the Schwartz residence (1932). In the house, elements of different cultures are recognized. Theories of Bauhaus and Le Corbusier appear under traditional spatial aspects of Brazilian houses, creating an architecture that intends to be in accordance with international theories, but that intrinsically presents local issues, that is, a mixed architecture, both local and universal. The garden echoes the avant-garde architecture, with regular geometric circles and lines and mixed vegetation, that flaunted the irregularity of scale and form of the local flora in contrast with the tactic of isolating specimen plants on the pages of scientific volumes. **[Figure 67]** In his first garden, Burle Marx simultaneously engaged and transformed strategies of the European avant-garde and the artificial naturalism of picturesque landscapes to create an original and Brazilian brand of modernism characterized by the synthesis of the arts.¹⁰⁰

The Schwartz residence garden led to his appointment as director of parks in the city of Recife (from 1934 to 1937), capital of Pernambuco state and his mother's hometown. For his first public projects he redesigned three of the city's neglected gardens and squares, allowing him the opportunity to put in practice his original visions. In these projects, he emphasized the importance of the planning stage of landscape instead of the execution, abandoned the adoption of *parterres* and topiary practices, introduced local flora and created didactic gardens relating to both national and regional culture. Among the most representative propositions was the Praça Euclides da Cunha. Named after the writer of *Os Sertões*¹⁰¹ ("Rebellion in the Backlands", 1902), a landmark of the Brazilian modern regionalist literature, the project kept

⁹⁹ Gregori Ilych Warchavchik (Odessa, Russia, 1896 - São Paulo, 1972) is considered as the introducer of modern architecture in Brazil, through his first built works and texts published in the press. Graduated in 1920 in Rome, Warchavchik worked with Marcello Piacentini before moving to Brazil in 1923. In 1927 he built himself the first residence considered modernist in Brazil. Le Corbusier, when visiting the house still under construction, invited Warchavchik to be the delegate of South America in the International Congresses of Modern Architecture (CIAM's). He associated with Lucio Costa in the 1930s, where he became a teacher of the first generation of Brazilian modern architects. ¹⁰⁰ VALE, 2019.

¹⁰¹ *Sertão* refers to the dry interior region of northeastern Brazil, largely covered with *caatingas* (scrubby upland forests). It is a sparsely populated region, economically poor and well-known in Brazilian culture, for its rich history and folklore.



[67] Rooftop Garden of the Alfredo Schwartz residence in Copacabana, Rio de Janeiro, 1932. Architects Lúcio Costa and Gregory Warchavchik. Casa de Lúcio Costa Archive.

[68] Roberto Burle Marx, Praça Euclides da Cunha, Recife, 1935, ink on paper. Vitruvius.com.br.

[69] Roberto Burle Marx, design for the Minister Office Rooftop Garden, Ministry of Education and Health, Rio de Janeiro, 1938. Gouache on paper. Jewish Museum of New York.



the existing traditional plan, but the vegetation received a monumental treatment, highlighting their beauty.¹⁰² He used typical trees of the Northeast, such as *umbuzeiros, juazeiros* and *paus-d'arco*, and created in the center a *cactarium*, highlighting the local genres of cacti. **[Figure 68]** Intensely criticized at the time, Burle Marx showed interested in opposing the formal gardens of European tradition to these native plants, in order to give modern aesthetic form to the local culture.¹⁰³ This early project reveal remarkable aspects; the idea of accepting European formalism in a manner linked to the idea of contrast through vegetation as a source of visual impact, stimulating differentiation and recognition to who see and experience the gardens.

While in Recife, an invitation came to be the landscape architect for the new headquarters of the MES building in Rio de Janeiro, the project that earned him worldwide acclaim.¹⁰⁴ He designed three gardens; the ground level public space and two terrace gardens; one for the minister on the third floor and one atop of the building. In the gardens of the street-level plaza, beds full of shade-tolerant plants extend like pools of liquid underneath the building, so that the *pilotis* rising among them are more like architectural tree trunks than a classical column could be. Out in the plaza, he included the most Brazilian of trees; *Pau-Brasil*, after which Andrade had named his first manifesto. The terraces provided him with a complete rectangular canvas on which to work, where he designed beds of curved, amoebic forms with lush species of local vegetation, which eventually became his signature style.¹⁰⁵ [Figure 69]

His early projects already put in evidence how the local vegetation, culture and tradition should construct the public and cultural relation between men and nature. Deeply impactful on his career, the MES project and his collaborators led Burle Marx to a series of important projects that became symbols of the Brazilian modernism. During the 1940s, Burle Marx consolidates his biomorphic design language, strongly influenced by surrealism and abstractionism, while engaging in new landscape architecture programs and possibilities. He continued his collaboration with the architect Oscar Niemeyer and the artist Candido Portinari in the gardens of the Pampulha Complex in Belo Horizonte (1943) [Figure 70] and planned a

¹⁰² SANTOS, 1999, p. 340.

¹⁰³ "It is urgent that we start, now, to sow the Brazilian soul in our parks and gardens." Burle Marx, 1935 apud SIQUEIRA, 2017.

¹⁰⁴ DOHERTY, 2018, p. 61.

¹⁰⁵ FRASER, 2000, p. 188-189.

series of gardens for private residences in Brazil, United States of America, and Venezuela, which gave him a privileged opportunity to experiment with freedom his design language. These private gardens have become anthological due to the relationships established between garden and landscape through several investigations with shapes, textures and colors. **[Figure 71]**

In 1949, he acquired the Sitio Santo Antonio da Bica near Rio de Janeiro, a former coffee plantation where he could collect and experiment his creations. Famous for accommodating his dinner receptions and his growing plant collection, the Sitio became his personal plant nursery and laboratory for painting, compositions and juxtapositions of forms and plants.¹⁰⁶ [Figure 72]

During the 1950s, as national art and architecture underwent a formal and critical review, his design language becomes more angular. The principles of constructive geometric abstraction present in Neoplasticism and Concrete Art - especially Max Bill¹⁰⁷ - influenced Burle Marx to shift the focus of his aesthetics to more geometrically constructed spaces. The gardens for the Museum of Modern Art in Rio de Janeiro (1954) and the Parque del Este, in Caracas (1961) experiment with rigorously designed geometric forms and explores them three-dimensionally, integrating garden, murals, sculpture and architecture elements. **[Figures 73,74]**

With commissions for larger projects arriving, the amount of work led Burle Marx to transform his modest atelier into a big modern office; Burle Marx and Associated Architects.¹⁰⁸ Projects such as the Ibirapuera Park in São Paulo (1954), the gardens of Brasilia (1960), the Flamengo Park (1960) and the Copacabana Beach promenade (1970) in Rio de Janeiro were

¹⁰⁶ Years before his death, Burle Marx donated his Sitio to the Brazilian government, which eventually became a national heritage site. In July 2021, it earned the status of World Heritage Cultural Site by UNESCO due to its values: "The garden features the key characteristics that came to define Burle Marx's landscape gardens and influenced the development of modern gardens internationally. [...] The garden is characterized by sinuous forms, exuberant mass planting, architectural plant arrangements, dramatic color contrasts, use of tropical plants, and the incorporation of elements of traditional folk culture."

¹⁰⁷ Swiss artist Max Bill (1908-1994) was a central figure of Concrete Art. With strong emphasis on geometrical abstraction, Bill was particularly influential on Brazilian Neo-Concrete art (Frente and Ruptura movements) after his retrospective exhibition in the São Paulo Museum of Modern Art, in 1951.

¹⁰⁸ The original partners were John Stoddart, Fernando Tábora, Mauricio Monte and Julio Pessolani.





[70] Roberto Burle Marx, Oscar Niemeyer and Candido Portinari, Church of the São Francisco de Assis, Pampulha, Belo Horizonte, 1945. Wikimedia Commons.

[71] Roberto Burle Marx, Eduardo Canavelas Reisdence, 1957. Photo by Marcel Gautherot. Instituto Moreira Salles.

[72] Sitio Santo Antônio da Bica, 1969. Photo by Marcel Gautherot. Instituto Moreira Salles.



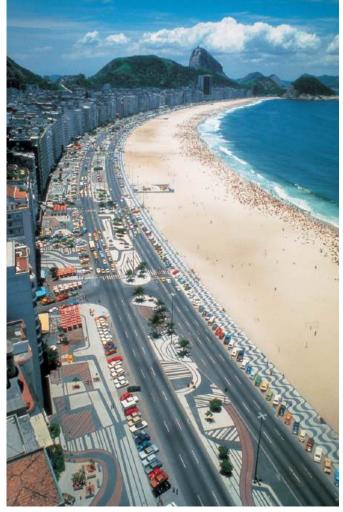


[73] Roberto Burle Marx, Museum of Modern Art Gardens, 1956. Photo: Leonardo Finotti.

[74] *Patio Los Azulejos, R*oberto Burle Marx, Parque del Este, Caracas, 1956. Photo: Leonardo Finotti.

[75] Copacabana Beach promenade (Avenida Atlântica), Rio de Janeiro, 1970. Burle Marx & Cia. Atchdaily.com.





extremely significant, as he experiments with a larger city scale. **[Figure 75]** From the 60s onwards, Burle Marx is committed to using these spaces as important instrument for larger urban planning, allowing him to experiment mixing aesthetic pleasure with public functions and pedagogical values in a new way.

Beyond the influence through his built work in the most diverse scales, Burle Marx was largely responsible for the modern Brazilian impression of their own nature. Volunteering as an advisor to the national government in a critical period of military dictatorship - between 1967 and 1974 - Burle Marx took part in a series of texts, lectures and manifestos, consistently positioning the Brazilian landscape as a significant element of Brazil's cultural heritage, arguing vehemently for its protection during totalitarian times.¹⁰⁹ Nordenson states that:

*"Burle Marx transformed a conservationist spirit into a prescient environmentalist position that constructed Brazilian modernity as inseparable from an ecological positioning of nature."*¹¹⁰

Having a tremendous influence on governmental decisions regarding the environment, these depositions addressed issues such as deforestation, national parks and land conservation, botanical gardens, ecological devastation, and the unique qualities of the Brazilian landscape, articulating an environmental and cultural opposition to the regime's strict strategy of national economic development.

¹⁰⁹ In the book "*Depositions: Roberto Burle Marx and the Public Landscape under Dictatorship*" (2018), Catherine Seavitt Nodernson analyses the environmental position pieces Burle Marx wrote for the journal *Cultura*, a publication for the Brazilian Ministry of Education and culture between 1976 and 1974.

¹¹⁰ NORDENSON, 2018, p. 12.

4 ARID ISRAEL: FROM EXODUS TO RETURN

"Of all the lands there are for dismal scenery, I think Palestine must be the prince. The hills are barren, they are dull of color, they are unpicturesque in shape. The valleys are unsightly deserts fringed with a feeble vegetation that has an expression about it of being sorrowful and despondent." (TWAIN, 1967 [1869], p. 67.)

Over the last century, the desert landscape has played different roles in the Israeli narratives of national identity. First, as a mythological biblical scenery built in the Jewish psyche. Later, under the modern Zionist narrative of return to their homeland, this arid territory was viewed as an obstacle to be overcome, an empty space to be developed, tamed, *conquered*. Finally, with the country well-established, a different posture has prospered, ascribing to natural land a primordial and regenerative quality, becoming a tourist destination and a national ecological pride.

Cultivated as a symbolic landscape in the Jewish imagination for centuries (since the Jewish Diaspora), the desert plays a critical role in the biblical narrative of the Israelites, serving both as a liminal space that allowed divine revelations, and as the set of profound transitions of the Jewish people - from slavery to freedom. The idea of the people longing for their ancient homeland for centuries and the depictions of the Holy Land in Western culture contributed to its idealization and its association with the mythical desert landscape. **[Figure 76]** That was, until the late nineteenth century, when the first Zionist Jews started to migrate to Palestine, facing the physical and geographical *spatial* reality of the "wilderness". While the Exodus provided a paradigm of national renewal in the homeland, the perception of the Palestinian landscape through the mnemonic lens of exile reinforced the significance of the Jewish settlement project.¹¹¹ In the face of the fast social, economic and political changes around them, the idea of settling and *conquering* this dry and arid scenery gained a new meaning.

¹¹¹ ZERUBAVEL, 2018, p. 13.

The vision of settlements followed by the new *olim* (immigrants) included the project of rebuilding a new society, with its own national culture and identity. In the distinct "spatial code" that emerged in the Zionist Hebrew culture in Palestine, the "desert" and the "settlement" constituted key symbolic landscapes, defined by their opposition as well as their interdependence.¹¹² However, for many decades, as this new Israeli culture emphasized the importance of the Jewish settlement, it also considered the desert as the backdrop against which the settlements were built. One of the more prominent expressions of the "conquest of the wilderness" was the distinctively ideological character of the settlements that were set up in the given landscape - the landscape of new settlements, especially kibbutzim, turned their back to the immediate natural environment, longing nostalgically to the immigrants' European landscapes of origin.¹¹³ **[Figure 77]**

With the quick development of the country, occupation started to be reviewed. The visions of the past were no longer persuasive, as the country's frontiers changed, natural preservation arose as a collective concern. Besides the military present throughout the area, new groups of interest began to develop a close bond with the desert. Archaeologists, botanists, geographers, meteorologists, climatologists, and travelers constitute many agents of a new vision that shaped a different, more appreciative public gaze at the Negev and its particularities.

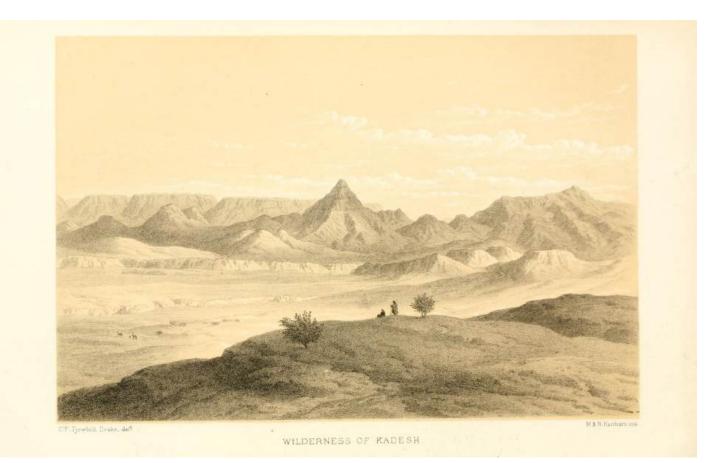
Desert as a Myth

"Remember how the Lord your God led you all the way in the wilderness these forty years, to humble and test you in order to know what was in your heart, whether or not you would keep his commands."¹¹⁴

¹¹² ZERUBAVEL, 2018, p. 2.

¹¹³ MORIA et al., 1996, p. 21.

¹¹⁴ Deuteronomy, 8:2. Most of the events of the books of Leviticus, Numbers and Deuteronomy are set in *the wilderness*. This term refers to the desert, a land that contains little vegetation or trees, and because of a sparsity of rainfall, that cannot be cultivated.



[76] C.F. Tyrwhitt-Drake, Wilderness of Kadesh, illustration from Edward Henry Palmer's "The Desert of the Exodus - journeys on foot in the wilderness of the forty years' wanderings - undertaken in connection with the ordnance survey of Sinai, and the Palestine exploration fund", 1871. Internet Archive Book Images.

[77] View of Kibbutz Ein Harod, 1930. Jewish National Fund.





[78] Pietro Perugino, *Moses Leaving for Egypt*, 1482, Sistine Chapel. Wikimedia Commons.[79] Krzysztof Lubieniecki, *Moses Strikes Water from the Stone*, 1714. Wikimedia Commons.



Long before Zionism was an idea, the desert carried strong symbolic meanings in the Jewish memory. As the biblical scenery of the Exodus¹¹⁵ - where the Jewish people became free - this unknown landscape was described, imagined, and depicted throughout Western culture charged with mystique, fear and fascination. **[Figure 78, 79]** In the biblical narratives related to the Exodus, the desert is where Moses encounters the burning bush and accepts the divine command to rescue his siblings from oppression in Egypt. It is the territory to which the ancient Israelites flee when they escape from the Pharaoh, and the landscape where they wander for forty years on their way to the land of Canaan. Most significantly, the desert is where the community of runaway slaves is transformed into free people and receives the precepts of the Torah that provide them with a unifying identity, a distinct faith, and a set of laws.¹¹⁶

Here, to the specific group of Jewish people, the desert provides the transitional space, deriving its significance from its structural position between Egypt and the Promised Land. It differs both from the land of exile, which represents displacement, oppression, and suffering, and from the future homeland, which represents permanence and security.¹¹⁷ Gurevitch points out that the Jewish holidays of Passover and Sukkot "commemorate the desert and stress wandering rather than settlement. The ritual text of Passover tells the story of deliverance in which the leaving of Egypt and the crossing of the desert are clearly depicted as formative events in the birth of the people [...]."¹¹⁸ The festive of Sukkot bears the requirement of dwelling for a week in a temporary, rough tent evoking the desert experience. Gurevitch argues that:

"The hallmark of this ritual is nonpermanence. The permanent dwellers of the land are required to leave the permanence of their homes and sit in a sukka to return symbolically to life in the desert. In this way, in the midst of the tranquility of nativity and the celebration of the yield of the (owned) land, the desert is commemorated and revived as an antithetical myth of the place. Dwellers of the land must come to grips again with their essential strangeness in the land. The necessity of place is thus

¹¹⁵ The book of Exodus is the second book of the Torah and of the Old Testament. The word Exodus comes from Greek *exodos*; "a military expedition; a solemn procession; departure; death," literally "a going out," from *ex* "out" (see ex-) + *hodos* "a way, path, road; a ride, journey, march. ¹¹⁶ ZERUBAVEL, 2018, p. 14.

²ERUDAVEL, 2016, p. 14.

¹¹⁷ GUREVITCH and ARAN, 1994, On Place (Israeli Anthropology), p. 15, offer a different typology of exile as "the other place" and the desert as "the non-place."

¹¹⁸ Ibidem, p. 213.

counterpointed with a ritual of temporariness and of movement that highlights nonplace and the freedom from captivity in place."¹¹⁹

Therefore, from the Jewish perspective, this landscape abstractly bears symbols of transformation, punishment, redemption and reward. The mythical Jewish perspective of the desert led the way to the ideological perspective with the Zionist focus on national and cultural renewal in the ancient homeland. Along with its significance as a transitional phase within the redemptive paradigm of the exodus, the desert therefore assumed a competing meaning as a historical metaphor associated with the exilic past, which assumed greater weight in the Zionist settlement discourse.¹²⁰ Physical, representational and intellectual approaches provided the semeiotic foundations for the desert as an area to be conquered and developed in the modern Jewish State.

Desert as a Place

"The small State of Israel [...] cannot tolerate within its bounds a desert which takes up almost half of its territory. If the state does not eradicate the desert, the desert may well eradicate the state. [...]"¹²¹

With the rise of Zionism, the land of Israel - then Ottoman-ruled Palestine - started to be seen in a new light. It was conceived by and for the new immigrants, a vision that not only meant moving to a new place and rebuilding a new society, but also developing a new national cultural identity, different from the outdated mythical gaze of the promised land. In the distinct "spatial code" that emerged in the Zionist Hebrew culture in Palestine, the "desert" and the "settlement" constituted key symbolic landscapes, defined by their opposition as well as their interdependence. Yet while Hebrew culture underscored the importance of the Jewish settlement, it considered the desert as the background against which the settlement was constructed.¹²² [Figure 80]

¹¹⁹ GUREVITCH, 2007, p. 213.

¹²⁰ ZERUBAVEL, 2018, p. 21.

¹²¹ BEN-GURION, Minutes of Israeli Government Session #12, May 13, 1949 (Israel State Archive), apud EFRAT, 2018, p. 252.

¹²² ZERUBAVEL, 2018, p. 13.

European Jewish immigrants referred to the landscape as barren and inhospitable, interchangeably alluding to it as a "desert," "wasteland," or "desolate desert" (*midbar-shemama*).¹²³ The application of these terms to a wide range of terrains with varied physical attributes reveals that they were used as generalized references to address the state of decline of the land rather than provide realistic descriptions of particular landscapes. The desert therefore implied a symbolic landscape, a cultural construct in which memory and space were intertwined and projected onto the physical landscape.¹²⁴ This vision of the land was described as waiting for its exiled sons to rescue it from suffering.

As a result, direct connection with the land emerged as a central theme in Israeli society. Israeli ecologist Alon Tal remarks of the attractions of an expanse that offers both the promise of renewed life and emptiness:

"The Israeli instinctively returns to this natural world, finding rest from the cacophony of city life, much as the prophets did when seeking inspiration in days of old. There is no better place . . . to purge defeatist impulses from the human heart."¹²⁵

With their arrival, the desert became *real*, a physical and geographical place. A space to be used, settled, occupied. For the *halutzim* (pioneers), land became a focus of mystical desire. It was therefore conceived as having been metaphorically empty until their long-awaited arrival, as if they were coming to redeem it. According to this conception, the abandoned land was a dismal combination of desert and swamp until the historic moment of being entered by the pioneers.¹²⁶ The desolated desert signified a special, boundless, virginal environment enthusiastically awaiting the issue to penetrate and fertilize it. [Figure 81] The overall image of this desolate land was integral to the redemption and salvation process.

Making the desert green became a Zionist axiom¹²⁷, through afforestation, gardening, and especially through agriculture. **[Figures 82, 83]** This ideological connection to the land portrayed the desert a barren landscape to be transformed. With the delineated borders after the

¹²³ In the Introduction to her book, Yael Zerubavel explains that Jews projected a negative view of exile onto the landscape, referring to it interchangeably as a "desert" (*midbar*) or "a desolate land" (*shemama*), or even using the hyperbolic biblical expression "desolate desert" (*midbar-shemama*), p. 4. ¹²⁴ ZERUBAVEL, 2018, p. 22.

¹²⁵ TAL, 2002, p. 431.

¹²⁶ SAND, 2012, p. 223.

¹²⁷ TAL, 2002, p.105.

declaration of the Independence and its subsequent war (1948), the Negev covered more than half the area of the State of Israel. From then to the 1960s, the desert became identified with the concrete, physical landscape of the Negev region; as a challenging frontier that had been transformed from its initial position as external to the Jewish settlement into an internal frontier, contained within the borders of the state of Israel. In the face of the massive Jewish immigration to Israel of the post-independence years, the state began to direct new immigrants to the desert. Yet in spite of the political and military developments that determined its inclusion in the Jewish national space, this open and scantly settled desert landscape, inhabited by Bedouins and a small Jewish population, continued to represent the counter-place to Israeli Jews.¹²⁸

There are good reasons that the desert, as untamed space, provoked rational Zionists like David Ben-Gurion and other philosophical and pragmatic architects of the nation, for, despite the boldest efforts to conquer and subdue, it posed a resilient realm in which the eternal and mythical stubbornly remained impermeable to nationalist jurisdiction.¹²⁹ Ben-Gurion, the first prime minister, set an example himself as the promoter of this idea, moving to kibbutz Sde Boker himself and stating that "we will make the desert bloom." This perception was an integral part of the ideological influences in early state planning, which focused on several development towns (such as Arad, Dimona and Mitzpe Ramon) and kibbutzim, rural areas, industrial centers, and infrastructure projects. **[Figure 84]**

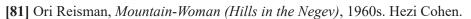
Still, the desert and its unique features, its legacy and contextual uniqueness went mostly unrecognized, as Israeli planners generally ignored the nature of the area. In the 1967, after the Six-Day War (1967) against its bordering countries, the State of Israel expanded its frontiers into new conquered lands (especially the Sinai Peninsula, seized from Egypt), diminishing the status of the Negev as a frontier. Amongst security concerns, environmental sympathies, and the growing tourist gaze, important implications on the region planning and management gave way to new cultural values and more affectionate visions of the Negev.

¹²⁸ ZERUBAVEL, 2018, p. 95-96.

¹²⁹ OMER-SHERMAN, 2006, p. 171.



[80] "How to Set Up Settlements in the Negev Desert", Davar newspaper, September 6, 1946. National Library of Israel.



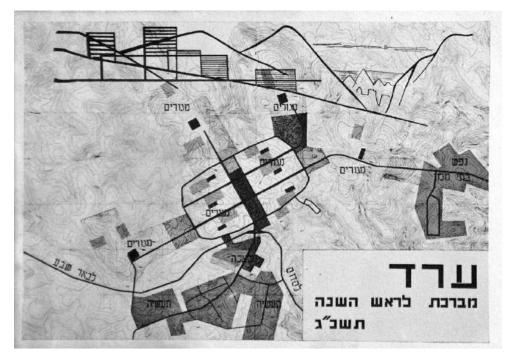




[82] Poster from KKL (Jewish National Fund), Vision of the Negev, Redemption and water including the desert, 1948. The Zionist Central Archives.

[83] Poster from KKL (Jewish National Fund), *Hahistadrut ("To conquer the desert, to settle in the wilderness!"*), 1955. The Zionist Central Archives.

[84] Arad City Plan at the Blessing of a Happy New Year, 1962, from the office of Yona Pitelson. Wikimedia Commons.



Desert as Affinity

"It is a necessity for man to have a place to go to shake himself off and refresh himself from the city, from the built, from the enclosed, from the delivered and to absorb the refreshing contact with the primal, with the open, with the "before the coming of mankind"—if there ever was such a time. "¹³⁰

Though the desire for the connection with nature was a foundation of new Hebrew culture, the tension between the Zionist ethos for development and occupation and the need to protect the natural environment began to appear only from the mid-1960's. The desert, representing both Israel's "open space" and the frontier for potential settlements, revealed the disaccord between these different visions.¹³¹ Following the peace treaty with Egypt with the return of the Sinai Peninsula in the early 1980s, the transfer of military and air force bases to the Negev, along with the designation of large areas as national parks and nature reserves, altogether limited the space available for new settlements.

Environmental consciousness about living in the desert and managing the desert ecosystems followed the nation's history of nature and landscape protection.¹³² The growing awareness of protection and preservation of nature led to a series of political and cultural campaigns through the 1960s and 1970s, subverting the earlier narratives of occupation. It was the symbolic desert that now required protection from the settlements.¹³³ Hence, the attitude towards the Negev has made the need to highlight its inherent positive value, as a site of nature and an open space, reinforcing the commitment to ensure the protection of the desert environment from its uses and abuses in the name of settlement and development.¹³⁴

Preservation approaches appeared, conveying romantic views of the desert landscape as a representation of primordial nature. The landscape itself became a collective object of conservation and the "conquest of the wilderness" was replaced by ideas such as the "love of

¹³⁰ TAL, 2002, p. 163.

¹³¹ ZERUBAVEL, 2018, p. 159.

¹³² TAL, 2002, p. 113-153. Alon Tal dedicates a chapter about the emergence of the environmental movement, describing the turning point in the history as the drainage of the Hulah Lake, in the Jordan Valley, completed in 1958. Its ecological damage and agricultural fiasco mobilized advocacy groups, ending up partly reversed by reflooding a portion of the wetlands and turning it into a nature reserve.
¹³³ See ZERUBAVEL, 2018, chapter 6 for a more detailed revisitation of the "desolate land" process.
¹³⁴ ZERUBAVEL, 2018, p. 171.

the wilderness" and "desertification.¹³⁵ Perceived as "the last open space" in the nation, the desert began to be preserved, respected, eventually admired. National parks and nature reserves were established in large areas of the Negev. Artists saw the desert as a source of inspiration, becoming both a subject and a setting for environmental art¹³⁶. [Figure 85] Hiking trails, individual farms and accommodations began to appear in so far isolated areas. Ever since, the Negev has been going through a growing preservation course under a new understanding; man is not able to live *against* the desert but that can only live with it.¹³⁷

One of the biggest indicators of this changed perception is the growing development of tourism, which indicates the vision of the desert in recent Israeli culture. **[Figure 86]** Its possibilities represent a new view that allows visitors to imagine their experiences in the desert as a meaningful diversion from their everyday lives, often framing the positive traits of the desert experience as a surprise. The discourse of tourism articulates the romantic vision of the desert back to the mythical site associated with the Hebrew Bible, but under a new, positive gaze; as an open space that provides an escape from the pressures of the modern overwhelming urban centers; a retreat. This recurrent theme implicitly acknowledges the challenges that the Israeli desert settlements face in defying their negative image, in an attempt to transform it into an attractive destination for recreational and educational experiences, investments and "inspiration".¹³⁸ **[Figure 87]**

The current discourse highlights many sides of this once "empty" landscape, emphasizing positive qualities of the desert under multiple views. As a mythical site of unspoiled nature, as immune to the impact of time and civilization, as a once lively ancient trade route¹³⁹, many faces this dry landscape has assembled developed a sense of affinity.

¹³⁵ Ibid, p. 22.

¹³⁶ For the 1962 sculpture symposium "Jegar Sahadutha", held by Kosso Eloul (1915-1995), a number of international and local artists were invited to conceive interventions using local material on a site near Mitzpe Ramon, by the edge of the Makhtesh. After years of neglection, in the mid-1980s the site was restored by Ezra Orion (1934-2015), who invited other artists over the years to create new pieces in what became the Desert Sculpture Park.

¹³⁷ EVENARI et al., 1971, p. 413-414.

¹³⁸ ZERUBAVEL, 2018, p. 179.

¹³⁹ Designated a World Heritage area by UNESCO in 2005, "Incense Route - Desert Cities in the Negev" encompasses an area of the Negev desert in southern Israel, which connected Arabia to the Mediterranean Sea in the Hellenistic and Roman period. This trade led to the development of ancient

"Desert style" hotels, hiking trails, camel tours, Bedouin camping tents and music festivals are remaining evidence of the enduring "desert mystique", which increasingly, belongs to Israeli popular culture as a national source of pride and local identity.

Considering the complex geographical and cultural backgrounds that constitute the Negev, landscape architecture bore the potential to integrate, reconcile and conceive new relations between men and such extreme environment. It is precisely to this process that Zvi Dekel has dedicated a meaningful part of his work. After years learning and working with Roberto Burle Marx in tropical Brazil, Dekel became fascinated by Israel's arid south as he came back. Translating the tropical modernity he met and transforming into an arid one, Dekel's work offers a unique insight into his changing perceptions of this unique landscape.

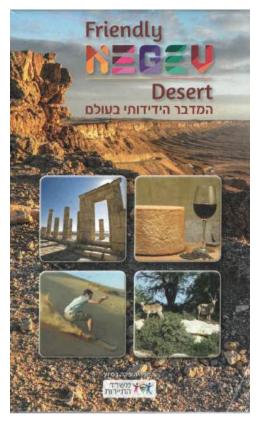
towns (such as Avdat, Haluza, Mamshit and Shivta), forts and caravanserai, apart from agricultural development.



[85] Desert Sculpture Park, Mitzpe Ramon. Placing Itzu Rimmer's Kites sculpture, 1986. Photo by Avraham Chai. desertsculpture.info.

[86] "Friendly Negev" campaign brochure, Israeli Ministry of Tourism, 2010s.

[87] Aerial view of Midburn Festival, Negev, 2018. Midburn.org





The Modern Path of Zvi Dekel

"When we came to conquer the land, we wanted to conquer everything - both the land and the people, this is Zionism. I wanted the people who live in the desert to really live there".¹⁴⁰

Zvi Dekel (Delbkowicz) was born in Tel Aviv in 1929, to Polish parents that immigrated to Palestine. **[Figure 88]** He grew up in the ideological melting pot of the Jewish community during the Mandate and beginning his professional activity in the second half of the twentieth century, after the establishment of the state. His deep connection to the local landscape, reflected in his modernist approach to landscape planning, is largely the result of his biography: his childhood in Tel Aviv, his youth as member in the *Hashomer Hatzair*, participation in the establishment of Kibbutz Harel, and his stay in Brazil.¹⁴¹

Since his childhood, Dekel showed interest in nature and environment. He has fond memories of the sea, the sand dunes and the trees near the place he grew up. At the age of 12, Dekel studied painting at Avni Studio, where artists as Avigdor Stematsky and Yehezkiel Streichman taught at the time. During that period, other students that would cross Dekel's life in adulthood were also students there, such as Dan Zur, Danny Karavan, Dan Kedar and Icha Mambush.

A member of the *Hashomer Hatzair* youth movement, he used to formulate a worldview through activities that included "not only socialist realism and patriotic songs in Russian melodies, but also hanging picasso paintings on the nest walls and listening to classical music." Eventually, Dekel and his friends established kibbutz Harel in the Judaean Hills. **[Figure 89]** There he married Chaya, his classmate and friend from age 14, and their daughter

¹⁴⁰ Zvi Dekel. Excerpt from an interview with Michael Jacobson, 2011, from the online blog michaelarch.wordpress.com.

¹⁴¹ LISSOVSKY, 2021, p. 15. Most of the biographical notes on Dekel are taken from the chapters "Landscape Biography", by Nurit Lissovky (p. 14-33) and "With Zvi Dekel: In yellow, green and blue landscapes", by Israel Drory (p. 34-39).



[88] Portrait of Zvi Dekel, 2019. Photo by Tomer Apelbaum. Haaretz.

[89] Postcard of Kibbutz Harel at the Blessing of a Happy New Year, 1949.



Smadar was born. After engaging in activities like carpentry, painting, and agriculture, Dekel eventually dedicated to his true passion, gardening.

He began to plan the landscape for his Kibbutz, following the advice of Avraham Karavan¹⁴², who often came to visit his son Dani. At the same time, Dekel traveled regularly to the Hebrew University of Jerusalem for lectures with Professor Michael Zohary, a pioneering Israeli botanist. In 1956, due to internal ideological disagreements, the kibbutz was dissolved, which gave Dekel the opportunity to pursue his passion and study landscape architecture. He consulted with Abraham Karavan – then the chief landscape architect of Tel Aviv - who advised him to go to Brazil and study under Roberto Burle Marx, already acclaimed internationally by inserting Brazilian modern landscape architecture on the map. Young Dekel left for Rio de Janeiro, to learn that Burle Marx stopped teaching, and is concentrating on work in his growing studio and his newly acquired *sitio*, a large estate where he experimented with his growing botanic collection. Passionate and enthusiastic, Dekel went to interview with the master, bringing his "portfolio" of paintings and gardening works. Burle Marx was impressed by the young Israeli, accepting him to work in his studio. His wife and daughter followed him a year later

Learning from Brazil

Dekel arrived in a particularly stimulating moment in Brazil's history. Massive waves of immigration, rapid urbanization and increasing industrialization in the first half of the century led the country to a progressive modernization, boasting its new national identity. Though art and literature were important means of expression, architecture and landscape architecture shaped the character of Brazilian Modernism. Reverberating in international books, magazines, and exhibitions, Tropical Modernism, or Tropicalism, was the original approach developed by local architects and landscape architects embodied Brazil's new national identity, taking roots in the local tradition while still engaging in modern renovation.

¹⁴² Ukranian-born Avraham Karavan (1902-1968) emigrated to Israel in 1920, becoming a gardener for the Tel Aviv Municipality. Eventually, Karavan became the chief gardener of the city from the 1940s to the 1960s, planning public spaces such as the Meir Park (1944), the Independence Garden (1952), and the Kovshim Park (1957).

In this context that Roberto Burle Marx emerged as the main figure of landscape architecture in Brazil. Collaborating with an impressive roster of modern architects since the beginning of his career, Burle Marx developed an internationally recognized language that went beyond the formal definition of gardens and outdoor spaces, giving landscape architecture an autonomy and recognition unlike before in Brazil. Upbrought in an intellectual background of music and fine arts which influenced his extensive career, he also discovered and registered abundant Brazilian flora and thoroughly advocated for the protection of the unique Brazilian nature. It is the relationships between these various facets of his work - activism, aesthetics, art, botany, conservation, ethics, the social, the urban – that makes his landscape architecture so successful.¹⁴³

Dekel recalls that working with Burle Marx was a one-of-a-kind experience. Located in a historical family house in Rio, the studio had people from all over the world who worked, discussed, had meals together, and usually took breaks to go to the Leme beach nearby. Day long banquets and receptions were also held in Burle Marx's *Sítio*, a huge property where he experimented with compositions and juxtapositions of plants and forms.¹⁴⁴ Dekel took part in projects of many scales, drawing and developing vegetation plans [Figure 90], and even participated in the famous botanical expeditions organized by the studio to discover and collect new plant species. This hospitality, openness and provocations were very important in the studio environment, reflecting Burle Marx's character and values.

It is important to note that Dekel joined Burle Marx' office in a crucial moment of his extensive production, the large volume of both national and international commissions, and the transition from mostly private gardens to public parks. Though public gardens and squares had been planned since his first years in activity, from the 1950s Burle Marx - already a well-established professional - could focus on larger scale *public* projects. The Ibirapuera Park (1954) in São Paulo, the Parque del Este (1956) in Caracas, and the Flamengo Park (1961) in Rio are some examples of projects brought the very important element of social cohesion, where their landscape architecture is decisive in the creation of a citizenship identity with positive effects for tourism and economy.¹⁴⁵ The creation of a new local, modern identity, relating men to the surrounding wild nature and the potential that landscape architecture brings

¹⁴³ DOHERTY, 2018, p.81.

¹⁴⁴ Ibid, p. 55.

¹⁴⁵ÁBALOS, 2001, p. 13.

in such scale eventually followed Dekel's many large-scale projects in Israel; natural reserves, parks, promenades and neighborhoods.

Part of his experience with Burle Marx was based on not just accepting the local geography but admiring it and bringing it closer to people through both leisure and culture. According to Oliveira:

"Burle Marx saw the garden as a place where a special relationship between man and nature is established. This idea, however, is not based on a nostalgic or romantic claim. He uses his own concept of nature to define the garden as a model of peaceful coexistence between various species, a place of respect for nature and for the "other", for the different; a means of awareness of an existence in the true measure of man, of what it means to be alive. In short, an instrument of pleasure and a means of education."¹⁴⁶

Developing a close bond with the figure of Burle Marx, Dekel was also well-integrated with the team and the studio, which earned him the position of project coordinator. During this time, the office received so many works in Venezuela that justified the opening of a branch office there.¹⁴⁷ When asked to move to Caracas as one of the associates in charge for an indeterminate time, Dekel was caught in a crossroad to either follow his career in South America or to go back home. Dekel decided to return to Israel after working for three and a half years in Brazil.

Working in Burle Marx's office became Dekel's landscape architecture school. Starting as an intern and leaving as a project coordinator, Dekel and Burle Marx developed a mater and apprentice relation, where Burle Marx transferred his knowledge personally, discussing and collaborating through the entire project process, and ultimately, sharing his personal views of the world. Burle Marx had his own instruments of creation, as Oliveira describes:

"The tools he uses are a keen observational power, a wide openness to the unknown, an imperative need to place his garden as a work of art and, at the same time, as a vehicle of education, a discipline and dedication clinging to his work and a performance supported by an interdisciplinary team [...]."¹⁴⁸

¹⁴⁶ OLIVEIRA, 2002, p. 69.

¹⁴⁷ SILVA, 2018, p. 34.

¹⁴⁸ Ibidem.

These more personal traits immensely influenced Dekel's perceptions, strategies, and work, echoing for the rest of his life. After his years living and practicing in this tropical *milieu* of modern landscape architecture, Dekel returned home to engage in his own modernist projects.

Working in Israel

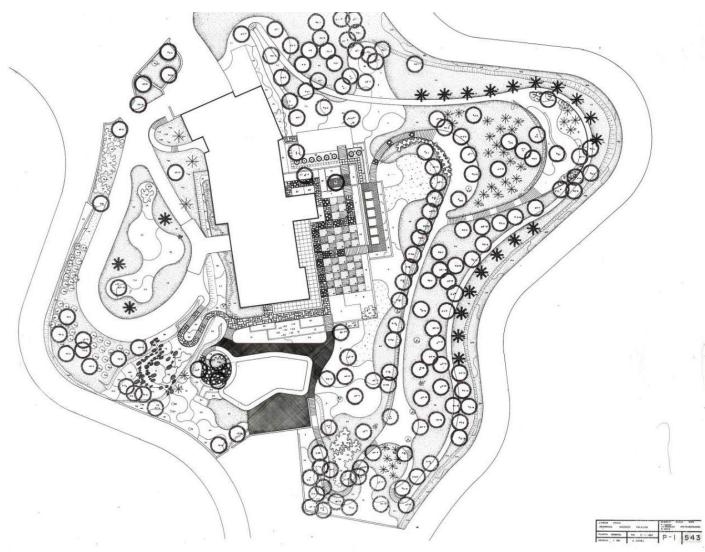
In 1960, after deciding not to move to Venezuela to open a branch of Burle Marx's office, Dekel returned to Israel filled with passion and knowledge, and eager to put them into practice. A special professional examination was drafted together for him and for Dan Zur (by the Faculty of Architecture at the Technion in Haifa and the Faculty of Agriculture of the Hebrew University in Rehovot) which both passed with success and were accepted as members of the Landscape Architect's Association.

In that same year, Dekel joined the small family office of Yechiel and Yosef Segal. Yechiel Segal was one of the most successful landscape architects in Israel then, a senior landscape architect of the 'Founding Generation'. Considered one of the most creative and influential in this generation, Segal learned the characteristics of the established local land after being displaced from the landscape of their homeland.¹⁴⁹ Among his main projects are the Binyamin Garden, in Haifa (1925), YMCA Garden in Jerusalem (1932) and Kiryat Meir, in Tel Aviv (1936). **[Figure 91]**

In 1962, after the death of his father, Yosef Segal¹⁵⁰ established a joint office with Dekel. The partnership lasted until 1966, after which they moved in parallel paths until they rejoined in 1969. Their office, Segal-Dekel, was inscribed in a practice format that characterized the period, which includes Yahalom-Zur (Lipa Yahalom and Dan Zur) and Miller-Blum (Zvi Miller and Moshe Blum). They created a unique professional partnership

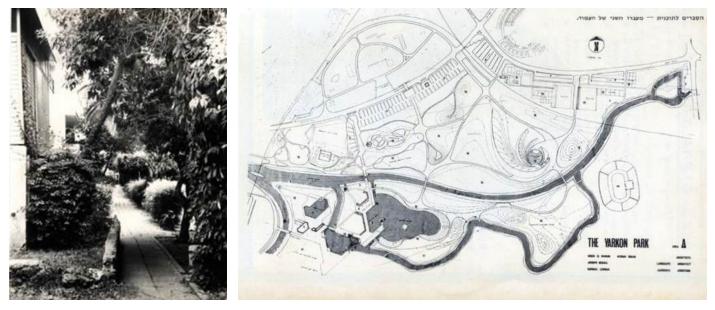
¹⁴⁹ Yehiel Segal (1886-1962) was the first landscape architect to immigrate to Israel after World War I. Graduated in the Jewish school of Horticulture, in Ahlem, Germany, he started planning private gardens in Tel Aviv and Jerusalem after he arrived in 1919. From the 1930s, he started planning public projects and gardens for many kibbutzim. For more, see ENIS, R. (1996) "Historical Gardens in Eretz-Israel and their Pioneer Designers".

¹⁵⁰ Yosef Segal (1924-2008) studied garden design at the University of Versailles in France, and after he graduated in 1952, he joined his father's office.



[90] Roberto Burle Marx, Plan for the Palacios Residence garden in Caracas, 1956. Vegetation Plan signed by Dekel.[91] Yehiel Segal, View of Kiryat Meir gardens, circa 1940.

[92] Yosef Segal, HaYarkon Park general plan, 1962-70.



integrated into an ongoing family friendship, despite differences in personality, background, and education. Lissovsky states that:

"[...] their work was based on the creation of a composition in space that stems from treating the garden as a work of art. Their work can be described as "Israeli classicism", characterized by a system of informal design rules and the creation of a structure and framework within which an experimental laboratory takes place."¹⁵¹

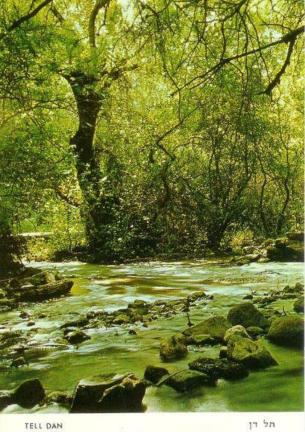
Leading the landscape planning of Israel in the first decades following its establishment, these offices played a key role in the design of space in the architectural-landscape-national history of the State.

In the Segal-Dekel partnership, each one had responsibility over his own projects in the office, large commissions mark their work during this decade. With the euphoric outcome of the Six Day War, in 1967, Israel significantly expanded its territory, resulting in a number and variety of new development projects throughout the country. Some of the main projects Segal oversaw were the HaYarkon Park in Tel Aviv, Ein Hemed and Yehiam Fortress National Parks and a series of new neighborhoods in East Jerusalem, like Gilo, Ramot, Neve Yaakov and Pisgat Zeev. [Figure 92] Meanwhile, Dekel planned the Tel Dan and Ayun Stream National Parks, [Figure 93, 94] Yotvata Nature Reserve, new neighborhoods in the town of Arad and a series of Kibbutzim, such as Gonen, Ruhama and Gash.

This diversity of projects from the beginning of his career gave him the opportunity to experience and develop his own design language towards different sites in Israel, from the lush parks of the north to dry desert of the south. Sensitive towards the natural sites but already striking in its intervention, these projects already reveal Dekel's boldness. But the highlight of the first decade is the sculptoric Avishur neighborhood in Arad, for which he won the Karavan Prize for Landscape architecture in 1973. **[Figure 95]**

While his interest in arts dates from his youth, Dekel began collaborating with his friend Dani Karavan, inaugurating a lifetime long collaboration with artists and sculptors. They worked together in Karavan's first environmental sculpture work, the Monument to the Negev

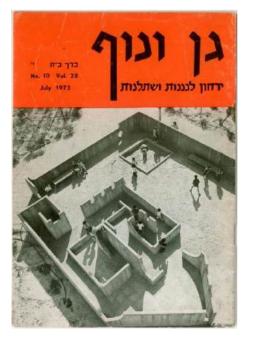
¹⁵¹ LISSOVKY, 2021, p. 23.



[94] Ayun Stream Nature Reserve. Photo by the author.

[93] Tel Dan Nature Reserve postcard. In: Drory, 2014.







[95] Cover of Gan VeNof Magazine, 1973.

[96] Monument to the Negev Brigade, Beer Sheva, 2021. Photo by Werner Braun. Wikimedia Commons.

[97] Edith Wolfson Park, Tel Aviv. Entrance plaza, stairs and concrete walls before planting the vegetation in the park, 1977. Photo by Ran Arda.



Brigade (1963-68), which became a collective landmark.¹⁵² [Figure 96] Interested in matter, form, light and relation to the environment, Dekel consistently challenges the boundaries between sculpture and landscape architecture, seeing art as integral part of landscape architecture; "a means of creating a spiritual experience that transcends function and program."¹⁵³

Later, Uri Miller (1937-2019) joined Segal-Dekel in 1972, and the duo became the Segal-Dekel-Miller trio, renaming the office "Tichnun Nof" (Landscape Planning). Though growing up in Israel, Miller had studied in the United States, bringing universal insights and professional knowledge from the North American modernism, and a desire to create a synthesis between local-oriental-Mediterranean architecture and the international style. The scope of projects in the office gradually increased, along with the volume of construction in the country and the establishment of new cities and districts, with large projects such as the Wolfson Park in Tel Aviv (1976) and Timna Park (1976-82). **[Figure 97]**

After the retirement of Segal and Miller (1994 and 2001, respectively), a new partnership office was created in 2008 with Dekel, Shlomi Zeevi and Yair Avigdor, under the name "Minadd". Here, green planning strategies and a focus on new urbanism (New Urbanism) and infrastructure replaced the classic landscape design of an open space, which characterized office work in kibbutzim and nature reserves through the 1960s and 1970s.

The unique path traced by Dekel provided him with a series of tools; from gardening and botany to learning Modernism through Burle Marx, from practicing with the older generation of Israeli landscape architects and partnering with new ones. Nevertheless, a constant lure throughout his career motivated a large part of his work into one specific landscape: the Israeli desert.

¹⁵² See Adi Englman's article "Everything Flows and the Monument Remains: Dani Karavan's Negev Monument and the Passage of Time", Maarav, October 2017, supplement 22.

¹⁵³ LISSOVKY, 2021, p. 31.



ARID TROPICALISM

5

"The fact that I fell in love with the desert after the tropicality I experienced, gave me a fresh breath to look for a landscape architecture specific to this aridness."¹⁵⁴

Dekel and the Desert

Growing up taking field trips with *Hashomer Hatzair¹⁵⁵*, Dekel recalls how he was introduced to the local nature and admiration for the landscape. **[Figure 98]** Activities such as camping, hiking and farming placed the new national culture within the landscape as a critical part of his formation. But still, for a generation that grew up in Israel in the mid-1930-40s, the desert was part of a formative experience charged with Zionist ethos.¹⁵⁶ Apparent in the establishment and development of Kibbutzim, the spirit of conquering and taming the land was even greater regarding the barren desert in the South. The desire to green, domesticate and create a "home", a protected environment, characterized most of the landscape architects who worked in the country.¹⁵⁷ By denying the local landscape while trying to create a new one, lush gardens in kibbutzim and sprawling green urban plans characterize the national projects of desert occupation. **[Figure 99, 100]**

In opposition, Dekel met a quite different approach regarding the extreme landscapes in his years in Brazil. Deeply impacted by the tropical landscape of Rio, Dekel declares how the abundant vegetation, mountains and water were as impressive as intimidating.¹⁵⁸ Traditionally represented as harsh, fearsome and willing to be tamed, Burle Marx introduced

¹⁵⁴ Dekel, Z. (2020) Personal interview [View Appendix C].

¹⁵⁵ *Hashomer Hatzair* (The Young Guard) is a socialist, Zionist, secular, scouting Jewish youth movement. Founded in Galicia (now part of Poland and Ukraine) in 1913, the movement believed that the liberation of the Jewish youth could be accomplished by *aliah* (immigration) to Palestine and living in kibbutzim.

¹⁵⁶ ALON MOZES in LISSOVSKY, 2021, p. 119.

¹⁵⁷ Ibidem.

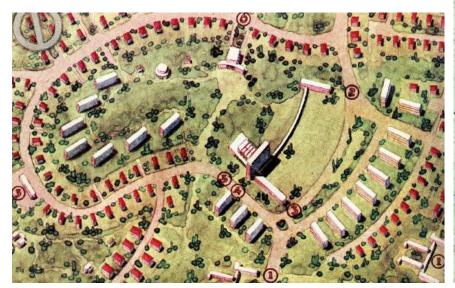
¹⁵⁸ Dekel, Z. (2020) Personal interview [View Appendix C].



[98] HaShomer Hatzair youth movement poster, 1946. Central Zionist Archives.

[99] Beer Sheva masterplan, Arieh Sharon, 1952. ariehsharon.org.

[100] Beer Sheva masterplan neighborhood detail, Arieh Sharon, 1952. ariehsharon.org.





him to the full acceptance of the *wild* local nature. He understood the potential that landscape architecture had in giving form and identity to a modern view of society by transforming how one sees its nature. Oliveira explains:

"...in favor of nature, of its preservation, is beauty itself, which for him constitutes a form of catharsis, which leads to an understanding of this very nature. Thus, his garden, by being on the street and not inside the museums, by providing aesthetic pleasure to those who contemplate it, wants to carry out, through art, a playful and educational task: it is more difficult to destroy the plant that one has learned to love."¹⁵⁹

This idea of bringing nature into society, and society into nature influenced Dekel's gaze of Israeli landscapes as he came back. Historically seen as barren and desolate, the same desert landscape became rich to Dekel's eyes:

"The transition from Brazil's lush vegetation to the desert landscape was a shock. It took me a while to get used to the local palette of vegetation and materials. I did a reverse jump: I fell in love with the desert."¹⁶⁰

Like Burle Marx's retroactive "myth of origin" in Dahlem, Dekel indicates his experience in tropical Brazil as the premise of his love for the desert. Experiencing such distinct nature altered the way he saw and felt about his home landscape. Notably, one of his first commissions was the landscape gardens of Kibbutz Revivim, in the northern Negev. Fascinated by the desert landscape after his tropical *immersion*, Dekel boldly planned to bring the unique surrounding landscape and vegetation into the residential neighborhoods of the kibbutz. The kibbutz assembly rejected his proposal, stating that they "wanted to conquer the desert, not be conquered by it."¹⁶¹ Eventually, Dekel made a second, greener and less arid version which was finally implemented. **[Figure 101]**

This occasion marked the beginning of his lifelong quest for a language of his own, promptly involved with the critical task of planning in the Israeli contradictory aridness. The result is expressed in the materials, forms, compositions, and functions that emerged throughout his extensive work.¹⁶² Dekel managed to plan landscape gardens for kibbutzim

¹⁵⁹ OLIVEIRA, 2002, p. 11.

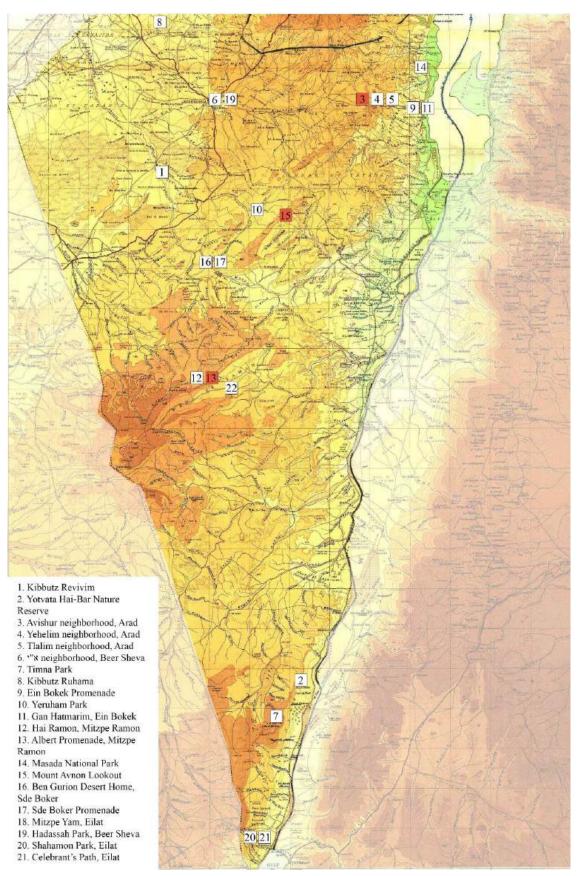
¹⁶⁰ Dekel, Z. (2020) Personal interview [View Appendix C].

¹⁶¹ DRORY in LISSOVSKY, 2021, p. 24.

¹⁶² See DRORY, "Dekel's Major Works 1966-2020," in LISSOVSKY, 2021, p. 184-287.

(Revivim, Ruhama), nature parks and reserves (Yotvata, Masada, Timna), urban parks (Yeruham, Shahamon), neighborhoods (in Arad, Beer Sheva and Eilat), promenades (Mitzpe Ramon, Sde Boker, Ein Bokek), lookouts (Mount Avnon) and land rehabilitations (Ramon Crater), creating design narratives specific to his own visions of such symbolic place. If some of his initial neighborhoods in Arad (Avishur, Yeelim and Tlalim) invoke the Zionist spirit, with their rough spaces protecting people from the desert, moreover, in Mitzpe Ramon, his language would take form in a complete acceptance of the desert as it is; dry, arid, a perfectly complete landscape.

Map of Zvi Dekel's Desert Projects



Modern Aspects of Dekel's Desert Projects

The term "*arid tropicalism*" is created here to describe Dekel's desert landscape architecture. Whereas other Israeli landscape architects of Dekel's generation show clear European or North American influences, his foundations are built largely on *Burle Marxian* ideas. With Burle Marx spirit in mind, Dekel sought for a universal, and at the same time site-specific, language of his own. By transforming and adapting the concepts and strategies he learned in Brazil, the desert landscape and its attributes became an evolving investigation of his work.

Like many of his peers that were diligently building a new state, Dekel left no written record of his built work or the ideas that underlie his design. Hence, to fully understand his insights, it was necessary to combine several research methods. First, a series of site visits occurred to meet, observe, and register most of his extensive accomplishments. Then, iconographic material research - such as plans, sections, details, and documentation from Dekel's office archive – and personal interviews with him helped to understand the premises of his ideas and realizations.

The interrelations between Brazil and Israel can be explained by the development of landscape modernism across the Western world. Marc Treib's seminal work: "six axioms for modern landscape architecture" (though aimed at California)¹⁶³ sets the stage for other "axioms" and "readings." For the analysis of Dekel's Arid Tropicalism, three characteristics were defined: **Scale; Form; Texture**. Each contains additional two aspects: Territory and Program under Scale; Design and Art under Form; Material and Vegetation under Texture. Illustrated through examples based on the historiography on Burle Marx¹⁶⁴, and Dekel's practice, three case studies follow, correlating the evolution of Dekel's arid tropicalism.

SCALE

Scale is here defined as the range that the project undertakes. It relates mainly to **territory**, or the geographical conditions – topography, climate, fauna, and flora – and to **program**, or the functions and activities that deal with connecting the space to the users.

¹⁶³ TREIB, 1992, p. 53-59.

¹⁶⁴ Notably DOHERTY (2018), DOURADO (2001), NORDENSON (2018), OLIVEIRA (2000), SIQUEIRA (2017).

Territory

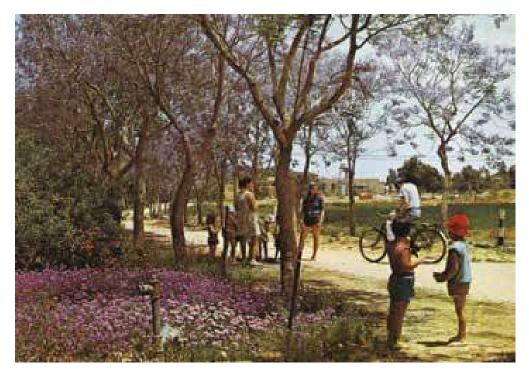
The term territory is here used as defining the intermediate space between men and nature, the considered planned space and its effects. Modern landscape architecture deemed for a broader context of the intervention, resulting in a different understanding of how a project relates both to culture and nature.

Burle Marx defined "territorial" as a concept that associated the local culture to the surrounding natural landscape in innovative ways, bringing references to marginal landscapes and nationalist ideas through cultural perceptions. He did so both in the gardens he designed and in public activities as a cultural consultant to the Ministry of Culture (1967-74). Since one of his first projects, the gardens of Euclides da Cunha Square, he brought the arid vegetation of the nearby Sertão, associating with the books of the novelist Euclides da Cunha.¹⁶⁵ [Figure 102, 103] Local plants, materials and crafts considered marginal are brought as a staple throughout his work. More importantly, through speeches and articles, he advocated for the protection of the Brazilian landscape (more specifically about the establishment of national parks, deforestation and traditional values attached to landscapes).¹⁶⁶

Similarly, but in a different setting, Dekel considers the arid landscape at its expanded scale. From his first (unbuilt) proposal for the gardens at kibbutz Revivim, Dekel already pursued the connection with the local surrounding arid vegetation. Possibly, this unsuccessful attempt - due to the will of the kibbutz dwellers to green the desert - influenced some of his other early projects, like the neighborhoods in Arad. There, the relation with the wider landscape is still indirect, visually discontinuous, almost if making users forget about the barren reality at the end of the street. In contrast, larger natural areas, such as Hai-Bar (natural habitat) Yotvata, Timna Park, or the Makhtesh Ramon quarry landscape rehabilitation, Dekel sought to preserve the geographical territory and the landscape as naturally untouched. [Figure 104] In less remote contexts, Dekel relates the plan to preexisting site conditions, creating visual and physical connections. The central axis of Eilat's Shahamon neighborhood reinforces visually, even if through an oasis, the connection between the mountain range and the Red Sea. [Figure 105]

¹⁶⁵ See chapter 4.

¹⁶⁶ See NORDENSON, 2018 for the written pieces by Burle Marx and a comprehensive reading by the author.



[101] Kibbutz Revivim, 1972, "Happy New Year" postcard published by Palphot. In: Lissovsky, 2021, p. 25.
[102] Roberto Burle Marx, Praça Euclides da Cunha, Recife, 1935, ink on paper. Vitruvius.com.br.
[103] View of Praça Euclides da Cunha, Recife, 1940. Photo by Alexandre Berzin. Acervo FUNDAJ.







[104] Ramon Quarry Landscape Rehabilitation, 2020. Photo by Ricardo Wolokita.[105] Aerial view of Shahamon Park, Eilat, 2020. Photo by Ricardo Wolokita.



The aridness is also brought in audacious ways. Dekel, when faced with the desert's dramatic panorama, Dekel reverences it through minimal gestures, letting the landscape *awe* the users for what it is. The Albert Promenade in Mitzpe Ramon makes use of the existing topography to overlook the urbanity on its backside, focusing the mediation on the tangent edge of the crater and its unending horizon. **[Figure 106]** In Sde Boker, Dekel not only refers to the scenic view of the Zin Stream along the promenade, but also to the Ben Gurion burial setting (designed by Yahalom-Zur). Considering the diversity of factors that involve each work, Dekel developed the ability to enhance, integrate, or even challenge the environment when faced with the infinite scale of the desert.

Program

Modern landscape architecture ultimately concerns making outdoor spaces places for human use.¹⁶⁷ This humanist approach denies the classic *beaux-arts* system, where gardens generally had either given or decorative functions, and were more concerned about patterns and visuals than its use. Activities and uses are what makes the space alive, relating to the organization, division and correlation of the spaces planned.

The social function of gardens was considered by Burle Marx as the greatest good that can be brought to people,¹⁶⁸ making spaces fit for collective meetings and for individual contemplation. Frequently, his program link recreation and ecological preservation and act to bridge the designed space with the surrounding landscape. One of Burle Marx's largest project, the Parque del Este in Caracas, Venezuela - which Dekel participated in the early planning process - developed into the city's main public space, containing zoological and botanical gardens, a planetarium, sculpture garden, an open-air theatre, and playgrounds. **[Figure 107]** The park's vegetation in divided into three local ecosystems: tropical woods, aquatic garden and dry garden, offer multiple interactions between visitors and the nation's geography.

This approach permeated Dekel's work, where he regarded how programs can relate to both ecology preservation and national identity. After planning natural reserves in northern Israel (Dan and Ayun Streams), Dekel moved to the south where he planned the Hai-Bar Yotvata for breeding and re-acclimation of endangered species to be reintroduced in the Arava.

¹⁶⁷ TREIB, 1992, p. 55.

¹⁶⁸ REY PÉREZ & TABACOW, 2013, p. 35.



[106] Aerial view of the Albert promenade, Mitzpe Ramon, 2021. Photo by Ricardo Wolokita.[107] Roberto Burle Marx, Parque del Este plan, Caracas, 1958. Sala Mendonza.



There, Dekel conceived a creative rounded structure where visitors access through a ramp that descends one meter below the ground, promoting close encounters with the animals on the other side. **[Figure 108, 109]** Likewise, the program of a botanical and zoological open museum (Hai Ramon) near the visitor center at Mitzpe Ramon act as an ecological introduction to the Crater nearby. This pedagogical aspect of the complex contrasts with his plan for the Albert Promenade, which focuses especially on contemplation. In Sde Boker, Dekel solution to the gardens around Ben Gurion house, lies with the creation of a new program: the preexisting olive grove serves as an intermediary space of paths and tents for groups to gather, explore and learn while waiting to enter the tiny house and exhibition space. Dekel explores how creating or combining specific functions can both promote and preserve the spaces planned.

FORM

Form is defined as the spatial configuration, the way in which plans come to be in space. Breaking the symmetrical axes and their calculated perspectives inspired by classic gardens, modern landscape architects pursued to create more fluid, volumetric and dynamic spaces, providing multiple views and experiences for its users. **Design** is the basic tool that allows the plastic exercise of abstraction; controlled, conscient and dynamic gestures that define a project's geometry and structuring elements. Based on the abstract lines of modern painters such as Arp, Miró and Kandinsky¹⁶⁹, the act of design itself becomes an abstract exercise of the desired relations between landscape, movement, and sight. **[Figure 110]** Subsequently, **Art** gains a more prominent space in modernism, as artistic expressions become less formal and more public, its use becomes an element that approximates the field of landscape especially with sculpture, reducing the boundaries between the two.

Design

Being multidisciplinary par excellence, design tends to seek references in various areas of knowledge to build its own expression. Central articulation to the modernism in general, the design in landscape architecture was highly influenced by visual arts and architecture. On the artificial production of shapes, Burle Marx stated:

¹⁶⁹ TREIB, 1992, p. 50.

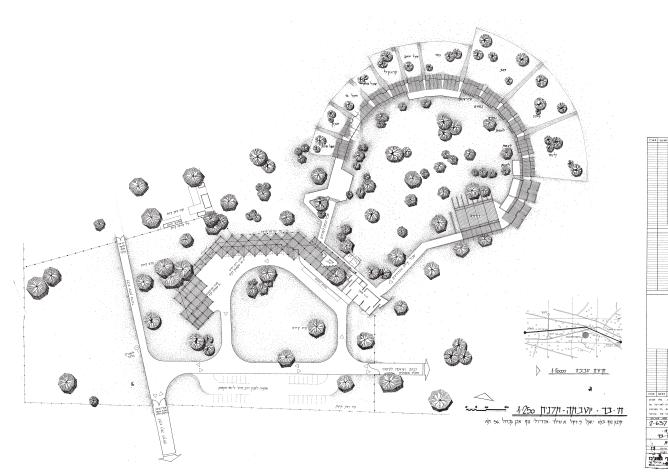


Figure 107 Hai-Bar Yotvata Visitor Center, Plan, 1975. Minadd archive.Figure 108 Hai-Bar Yotvata Visitor Center aerial view, 2020. Photo by Ricardo Wolokita.





[110] Jean (Hans) Arp, Form, 1951. MoMA.[111] Roberto Burle Marx, untitled, 1959. Itaú Cultural.



"In this sense, there is no doubt that the garden is a phenomenon of creation, based on a system of order. Otherwise, it could be confused with nature, which occasionally can produce shapes that seem to contain an artistic intention."¹⁷⁰

With traces that became internationally recognized as the *image* of Tropical Modernism, Burle Marx's pictorial training expresses his desire to connect with what was happening elsewhere; especially with Europe and the United States.¹⁷¹ Graduated in Fine Arts, both his gardens and his paintings started to be formed by overlapping layers, clearly influenced by Cubism, revealing a controlled gesture: it manifests itself but does not overflow, it is configurative but undetermined, it deconstructs the rigor of the regulated layout, but does not eliminate it.¹⁷² [**Figure 111**] His early projects already experimented overlapping the strict lines and grids of the architecture with ameboid vegetation shapes, such as the gardens of the Ministry of Education and Health in Rio, and the Pampulha Complex in Belo Horizonte. [**Figure 112**] His design language later developed into a more rigid geometry, culminating in a complex combination of his previous forms, expressed in the Copacabana Beach promenade.

[Figure 113]

This uniquely modern design language certainly influenced Dekel. From his first projects, Dekel created plans and schemes marked by sharp shapes and clear geometry, forming structurally dynamic spaces. Allowing Dekel to experiment his own design language was the planning of the public spaces of Avishur, in Arad. Conceived to contrast with the surrounding orthogonal architecture, Dekel created angles, circles, and curves, attempting to dynamize the perception of the public space throughout the neighborhood. The opposition between geometric and organic lines - apparently dissonant – reveal a complexity of relationships and thoughts behind his concepts of equivalence and opposition. Always sprouting from the ground and cast in reinforced concrete, these shapes become elements such as walls, guardrails, benches and playgrounds, creating a sense of unity and relation to the ground. [Figure 114, 115, 116] Some of these forms are reminiscent of Burle Marx's Parque del Este, in Caracas (in which Dekel

¹⁷⁰ OLIVEIRA, 2002, p. 74.

¹⁷¹ Burle Marx corresponded actively with many landscape architects, such as Thomas Church, Garret Eckbo, Ian McHarg, Lawrence Halprin among others. See DOURADO, G. M. (2017) *Espelhos de Si: Burle Marx a partir de sus Cartas*. In Paisagem e Ambiente, N. 39, São Paulo , p. 15 – 39.

¹⁷² Floriano, Cesar. "Poética da Criação de Roberto Burle Marx: Gênese do Jardim Moderno no Brasil". in Manuscritica, 2004, #23, p. 117.



[112] Roberto Burle Marx, Design for the Grand Hotel, Pampulha, 1944. Jewish Museum New York.[113] Aerial view of Copacabana Beach promenade, 2010s. Photo by Leonardo Finotti.





[114] Avishur neighborhood, Arad. 1973. Gan veNof Magazine.

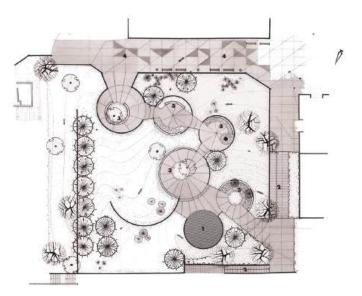
[115] Avishur neighborhood, Arad. 1973. Gan veNof Magazine.

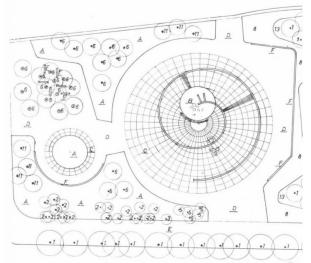
[116] Avishur neighborhood plan of a square, Arad. 1973. Gan veNof Magazine.

[117] Roberto Burle Marx, view of Plaza República del Perú, Buenos Aires, 1971 (demolished). Archivo de Iconoclasia en América Latina.

[118] Roberto Burle Marx, plan of Plaza República del Perú, Buenos Aires, 1971 (demolished). Archivo de Iconoclasia en América Latina.









took part in planning), and the later Peru Square in Buenos Aires, indicating the common thread between their landscape design. [Figure 117, 118]

While some of Dekel's organic traces are found in projects outside the desert - like Wolfson Park in Tel Aviv, and Ayun Stream Nature Reserve - the aridness seems to have influenced a more angular-forward vocabulary. These acute lines are recurring in Dekel's plans, always marking the human touch in such wild landscapes. Intermediated by drawing, these assertive lines delimit nature, creating a clearly human construction that provokes an active participation of the user to explore the space. In the visitor center of Yotvata, the circular contours of the plan contrast with the sharp angles of the building's section. [Figure 119] Sharp angles reappear in his projects in Mitzpe Ramon, such as in Albert Promenade's wall that resonates the edge it borders, and in the lookout and pergolas of the Hai Ramon. [Figure 120] Either through rhythm, repetition, or analogies or free forms, Dekel makes use of modernist outlines to express in his plans what they really are: a direct human intervention in a modified natural space.

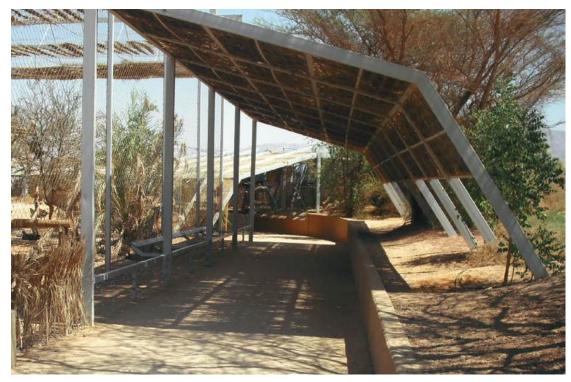
Art

Burle Marx and Dekel shared a deep passion for art, which connected them personally and marked their entire production. Their modern idea of intervening in nature goes beyond painting and drawing; it incorporates different forms of art - painting, sculpture, crafts - as part of the vocabulary of landscape planning.

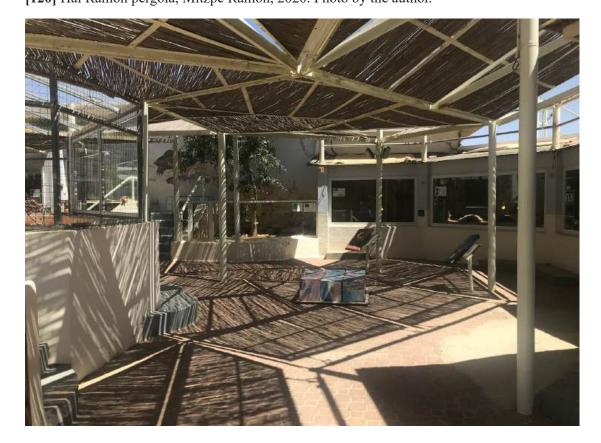
Burle Marx used sculpture of modern artists like Bruno Giorgi and Candido Portinari as organic parts of his gardens, or created his own sculptural elements, such as tilework, murals, and objects. [Figure 121, 122] It is important to stress that Burle Marx career traversed from early modernist podium sculptures to the expanded field, where art becomes an intrinsic part of the space.

Dekel was attracted to art and to its potential impact on public space. Not just any art, but *local* art, in a sense of an art that is sensitive to the place's identity, either through its material, its intention and its content. Starting his production in the late 1960s - within the rise of environmental and land art - Dekel collaborated with many Israeli artists, relating the landscape through delineating layouts, views, vegetation, and topography.¹⁷³ He worked with Dani Karavan, a leading Israeli sculptor and close friend, in a series of projects (most notably

¹⁷³ See Gideon Ofrat's article "Desert Sculpture" in LISSOVSKY, 2021, p. 154-165.



[119] Hai-Bar Yotvata visitor center entrance, 1975. Minadd archive.[120] Hai Ramon pergola, Mitzpe Ramon, 2020. Photo by the author.





[121] Roberto Burle Marx, Retaining wall built from leftovers of a demolished historical building in central Rio, Sitio, 2019. Photo by the author.

[122] Roberto Burle Marx, Praça dos Cristais at the Ministry of Army, Brasilia, 1970. Getty Images.



is the Monument to the Negev Brigade in Beer Sheva). With Ezra Orion, he collaborated in the layout of the Desert Sculpture Park in Mitzpe Ramon and in the *Identity* Sculpture, in Yeruham. [Figure 123]

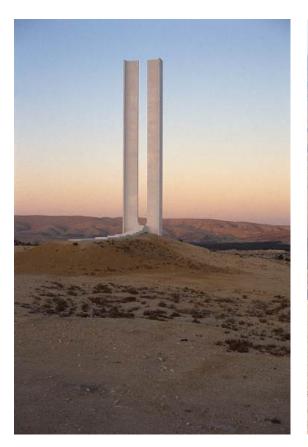
In the Albert promenade in Mitzpe Ramon, Israel Hadany's *Layers* marks one of two focal points that connect the promenade with the city, directing the views towards the empty crater. [Figure 124] *Oasis* in Beer Sheva (Hadassah Park) indicates the north entrance to the city, creating landform spirals where walls delineate courtyards surrounded by waterfalls, vegetation, and topography. [Figure 125] A collaboration with Buky Schwartz in Eilat (Wadi Shahamon) near the remains of an ancient trail to Mecca, yield *The Road to Mecca* - site of a procession of 120 sculped figures heading east. [Figure 126] Constantly in dialogue with artists, Dekel incorporates sculptures as essential parts of his projects.

TEXTURE

Texture relates to the consistency, appearance and feel of the surfaces in landscape architecture. The design of modern gardens explores the integrity of the **materials**, relating them to the site geologically and symbolically. The character and consistency of also come integrated with the use of **vegetation** – using either native or adapted species - as part of the composition and as a part of the landscape intervened.

Material

Open to the new materials and possibilities, the original and creative use of local materials is striking to both landscape architects. Since Burle Marx's first canonical project - the Ministry of Health and Education in Rio de Janeiro - the use of traditional Portuguese pavers and tiles (*azulejos*) mixed with modern concrete and glass created gardens that allude to both the local heritage and the new avant-garde movements from Europe. [Figure 127] The values of local material were not based solely on its aesthetic qualities and availability, but also on the fact that it belongs to the place's national identity, and the old knowledge of how to use it. The presence of *azulejos* and local stones is present throughout Burle Marx works, rooted in traditional craft of rich texture and colors. His projects from the 1940 merge minerality of





[123] Ezra Orion, Identity, Yeruham, 1990. Ezraorion.org.

[124] Israel Hadany, Layers, Mitzpe Ramon, 1992. Photo by the author.

[125] Israel Hadany, Oasis, Beer Sheva, 1994.

[126] Buky Schwartz, Road to Mecca, Eilat, 2006. Photo by Ricardo Wolokita.







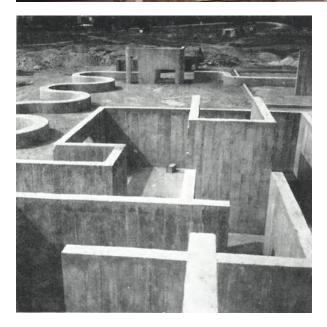
[127] Roberto Burle Marx, Study for an *azulejo* tile wall for the Jean Marie Diestl residence, Rio de Janeiro, 1947. Acervo sitio Roberto Burle Marx.

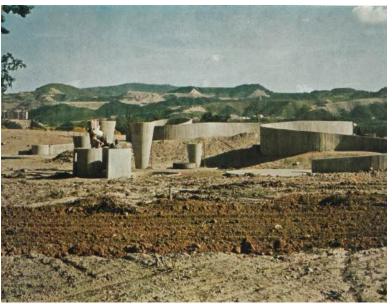
[128] Roberto Burle Marx, Banco Safra roof garden, São Paulo, 1985. Jewish Museum New York.

[129] Roberto Burle Marx, Detail of the playground (concrete maze), Parque del Este, Caracas, 1958. Photo by Marcel Gautherot. In: BARDI, 164, p. 138.

[130] Roberto Burle Marx, Concrete walls under construction, Parque del Este, Caracas, 1958. Photo by Marcel Gautherot. In: BARDI, 164, p. 139.







stones and rocks with vegetation, showing his scientific aspirations, blending local rocks and stones with the vegetation, based on his infamous expeditions.¹⁷⁴ From the 1950s, minerals play a central role in some of his gardens, such as in the Museum of Modern Art in Rio de Janeiro, the Copacabana Beach promenade and the terrace at Banco Safra, in Sao Paulo.

[Figure 128]

Bold in his ideas, especially in the *monochromatic* desert environment, Dekel often mixes the local stones with bare concrete, suitable for the harsh climate while allowing a unique plasticity. With concrete as a staple of modernist architecture - notably in Brazilian and Israeli Brutalist architecture – bringing it to landscape architecture was innovative. Burle Marx used concrete walls in many of his projects, including Caracas' Parque del Este, which Dekel took part during its planning. **[Figure 129, 130]** Influenced by the possibilities learned from this experience, the exposed grey concrete is used by Dekel from his first projects in Israel, which combined with the colored local stones creates a connection between the local geology, and the new, modernist, language being introduced in Israel during that time.

It is important to note that both landscape architects use of materials - each within its *local* context - relate to architectural "Critical Regionalism", Frampton's description of the aspiration to some sort of cultural, economic, and political independence:

"It is a fact: every culture cannot sustain and absorb the shock of modern civilization. There is the paradox: how to become modern and to return to sources; how to revive an old, dormant civilization and take part in universal civilization..."¹⁷⁵

Ingrained with the color and texture of the landscape, mineral matter is often used by Dekel to create an intricate relation between the natural and the built. In Timna Park and in Mitzpe Ramon for example, paths are carved out of the natural stones, creating a topographical experience in which natural and artificial blend as one. **[Figure 131]** Local stone appear in walls, paths and stairs in most of his projects. In Avishur, the local Arad stone was used in both rough and polished surface, along with bare concrete. **[Figure 132]** In Eilat's Shachamon Park, Mitzpe Ramon Promenade and in Avnon's overlook, the use of local stones appears in polished cuts, revealing new colors and textures that were *hidden* underneath their rough state. **[Figure**

¹⁷⁴ OLIVEIRA, 2001.

¹⁷⁵ Paul Ricouer, 1961, "Universal Civilization and National Cultures", apud FRAMPTON, 2007, p. 314.

133] Daring in the use and combination of materials, Dekel seeks to express through them a contrast with the bare ground and geology, complementing and highlighting nature in a modern way.

Vegetation

Vegetation plays an important role in modern landscape architecture. Previously attached to formal axioms, modern gardens stress the use of vegetation, either native or newcomers, in terms of their adaptation to the local conditions and look at their individual botanical and sculptural qualities, as "modern landscape results from approaching the design rationality but tempered with the mind of an artist."¹⁷⁶

Burle Marx developed a passion and knowledge for Botany from an early age. His sensitivity and creativity led him to create gardens that are rich with harmonious contrasts and exuberant shapes. Though many plants were introduced to Brazil from abroad during the colonial era, Burle Marx valued the native vegetation, organizing several botanic expeditions to the country's interior, discovering and cataloguing unknown species. Differing from European tradition, which domesticated nature *because* it was wild, Burle Marx gardens *embrace* the wild, linking it as part of the nature and geography beyond the limits of the garden. [Figure 134, 135] Eventually, as he recognizes that "in nature, associations are not made by chance, but obey compatibilities that depend on the complete set of factors of climate, soil and the very interaction between plants and animals and plants with each other".¹⁷⁷ This knowledge allowed him to incorporate and even transgress the natural laws. Developing a more synthetic approach from the 1960s, he affirms that "over time, I felt the need to build more consciously, more economically, controlling the exuberance of the tropical form [...]."¹⁷⁸

In the rough desert, Dekel too had to experiment with vegetation to reach a concision of his own. Unlike most of Burle Marx's projects, where plants play a significant role, vegetation in the desert context is not the main story. In urban cases, Dekel overcomes the aridness with a careful selection of species adapted to the harsh conditions (such as *Acacia Pachyceras, Pistacia Atlantica, Date Palms, Eucalyptus*). Playing with the concept of oasis, he creates non naturalistic green clusters resulting in refuges for its users. Hadassa Park and

¹⁷⁶ ROSE, 1938 apud TREIB, 1992, p. 56.

¹⁷⁷ MARX, 1982 apud OLIVEIRA, 2002, p. 74.

¹⁷⁸ Idem.

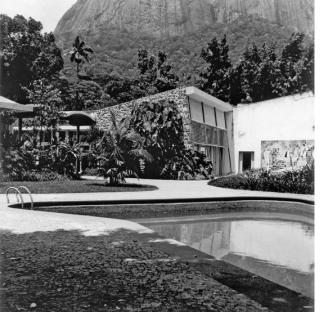


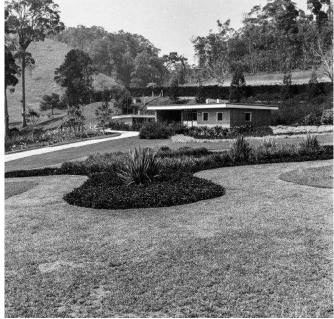
[131] Stairs at Solomons's Pillars, Timna Park, 2020. Photo by the author.

[132[View of one of the street corners at Avishur, Arad, where concrete walls meet local stone walls, 2021. Photo by the author.

[133] Detail of the polished and natural stones in the Albert Promenade, Miztpe Ramon, 2020. Photo by the author.









[134] Garden of the Walther Moreira Salles residence, 1951. Photo by Marcel Gautherot. Instituto Moreira Salles Archive.

[135] Garden of the Carlos Somlo residence, 1967. Photo by Marcel Gautherot. Instituto Moreira Salles Archive.

[136] Nahal Solelim Park, Beer Sheva, 2020. Photo by Tal Alon-Mozes. In: Lissovsky, 2021, p. 130.

[137] Nahal Solelim Park, Beer Sheva, 2020. Photo by Tal Alon-Mozes. In: Lissovsky, 2021, p. 131.





[138] Shahamon Park's main axis, Eilat, 2020. Photo by the author.[139] Nahal Zin Promenade, Sde Boker, 2021. Photo by the author.



HaSolelim Wadi in Beer Sheva, [Figure 136, 137] or the neighborhoods in Arad and in Eilat are good examples of green oasis. [Figure 138]

Sometimes it is just the opposite: the absence of vegetation or its scarcity is the leading design force. Such is the case of his plans in Mitzpe Ramon, Mount Avnon and Timna. An isolated, lonely tree in the Sde Boker promenade received a monumental aspect, defining shade and rest areas whereas in extreme arid natural environments. **[Figure 139]** Dekel embraces the nature when vegetation is absent, the aridness is accepted and illustrated as fundamental.

Case Studies

Three representative projects were chosen as case studies for detailed investigation: Avishur neighborhood in Arad (1969-71), Albert Promenade in Mitzpe Ramon (1988-91), and Mount Avnon lookout near Yeruham (1991-1994). The three projects represent the development in Dekel's work over three decades (1970s, 1980s, 1990s) on a different scale, context, and content, so, in a way, they illustrate Dekel's changing approach towards the desert through his life.

Radical in their essence, each one bears a distinct spatial occupation system. Based on Kevin Lynch's legibility and imageability¹⁷⁹ of the collective space, each of the cases represents a different physical element; a point (node), a line (path) and a network (district), dealing with the surrounding landscape different ways. In Arad – one of his earliest projects in the desert - Dekel developed strategies by understanding the desert as a social and landscape network *in development*, echoing his perception of the Zionist spirit. In the Albert Promenade in Mitzpe Ramon, the design is a minimalist linear path along the cliff of Ramon Crater. In the Avnon lookout near Yeruham, Dekel designed an artistic place that overlooks the dramatic view of the Great Crater, and at the same time serves as a focal point for contemplation.

¹⁷⁹ In "The Image of the City", Lynch identifies five key that allow citizens to create mental images, assign meaning, and develop an emotional connection to a city; paths, edges, districts, nodes, and landmarks.

Avishur Neighborhood, Arad (1969-71)

Arad was initiated and planned in 1960 by the Israeli government as a new town to be strategically located between the Negev and Judean deserts close to the Dead Sea.¹⁸⁰ Planned by a team of architects and urban planners led by Yona Pitelson¹⁸¹, Arad was one of the first planned cities in Israel. The plan was of a linear city, a rational layout against over-dispersal, following a main artery with different districts developed around it. Very modernist in its layout, the masterplan divided the city by its functions; dwelling, services, industry and leisure. The residential districts were designed with a series of modular, social housing units, that were economic and fast to be built, but provided a generic character to its dwellers. Architecture was modular and multipliable. **[Figure 140]** Social housing units were the easiest solution to create dwellings for the incoming population. People from very non-desert backgrounds came to live in Arad, and they needed to build such a settlement that would combine modern city life with desert life.

When Zvi Dekel was invited to design the public spaces of the Avishur neighborhood in Arad (1967), his design was conceived to contrast with the surrounding modular architecture. The arid climate, with its strong sunlight and sandy desert winds, was taken into consideration as Dekel designed somewhat *closed* spaces throughout the neighborhood, creating protected, microclimatic "outdoor rooms" for the surrounding dwellers. The buildings are arranged in parallel or perpendicular directions between themselves, are all elevated from the ground on *pilotis* – covered, but open as part the public space. This allows the winds to enter the neighborhood in a way that does not bother and creates a network of passages through the modular housing units.

Rigidly modernist in its urban planning, the vehicular system of Arad was planned separated from pedestrians. Road networks connect directly to the parking lots from different points around the neighborhood perimeter, leaving the core free for walking. A wide and central pedestrian axis crosses the district, connecting a network of smaller walking paths with open spaces, gardens, and playgrounds. These intimate public spaces are all designed in special angles $(30^\circ, 45^\circ, 60^\circ)$ in relation to the architecture, creating a dynamic and rational system

¹⁸⁰ SHADAR, 2016, p. 575.

¹⁸¹ Before Yona Pitelson was appointed the head of the planning team (1962), Luba Elia, Alexander Sher and Ilana Elrod were responsible for the site selection and the initial planning of Arad.

felt in every detail throughout the neighborhood. **[Figures 141, 142]** These angles also appear in the chamfered concrete corners of the walls that level the buildings to the natural topography, contrasting with the colored stone walls that always run parallel to the buildings, softening the sharp angles so present in the modular architecture.

Dekel's main concerns were creating comfortable shading with the built elements and the planned vegetation (carefully chosen native or climate-adapted species), and the materials that were suitable for the local climate and the landscape.¹⁸² Together with the local stones, bare concrete was chosen as the perfect material, allowing unique design throughout the park, while it required little maintenance. It becomes playground elements, benches, guard rails, and walls, that are carved with basic geometric shapes and lines in low and bas-relief, a play between primitive-like and modern symbols. The exposed concrete, combined with the local colored stones creates a connection between the local geology, perceived in the desertic landscape around the city, and the new, modernist, brutalist language that was introduced in Israel during that time, appropriated as a signifier of national vigor.¹⁸³ While the playgrounds and courtyards are paved with concrete squared pavers, the main pedestrian axis receives a pattern made of large gravel that alludes to the angles of the playgrounds. In the center of the project, a garden made of interlacing circular shapes stands out as the greenest area in the district, next to the school and the kindergarten. **[Figures 143-148]**

The Avishur project gained attention and publicity, earning Zvi Dekel the prestigious Karavan Prize for Landscape Architecture in 1973. In the explanation for the awards, judges noted:

¹⁸² Dekel, Z. (2020) Personal interview [View Appendix C].

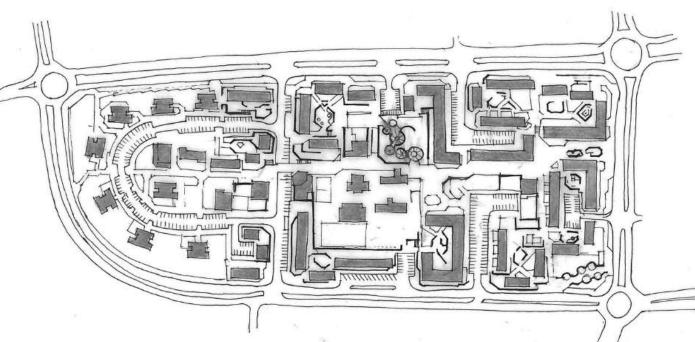
¹⁸³ EFRAT, 2018, p. 606-619. In this chapter on Brutalism, Efrat chapter argues on the importance that concrete gained as the "Israeli" material from the 1950s to the 1970s. "*Concrete is a blank slate, something that can be used to create anything and everything. But above all, concrete is permanent— a strong building material with an appearance of immovability and rootedness—and transformational. When married with architectural modernism, concrete was put to the purpose of shaping those who lived in its apartments, worked in its universities, attended its concert halls, and visited its monuments." Concrete was a central piece in the spatial and structural experiment of building the State of Israel. Besides being available amongst the nation's crude resources, the warm climate did not pose problems for the material, which was preserved in good conditions in the dryness of the desert.*

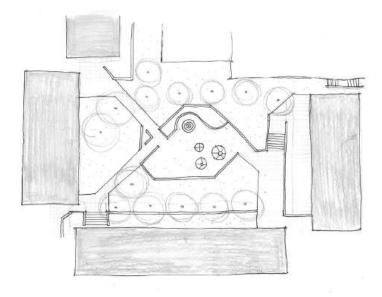


[140] Arad postcard, 1960s. In: Lissovsky, 2021.

[141] General plan of the Avishur district. Sketch by the author.

[142] Plan of a courtyard with playground. Sketch by the author.

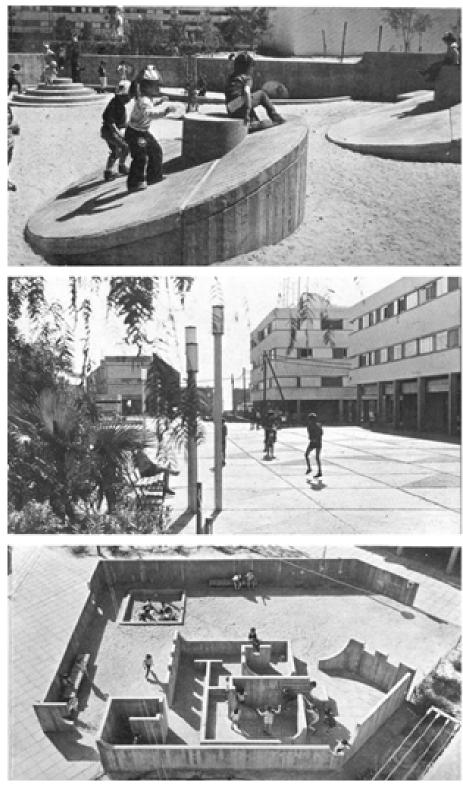




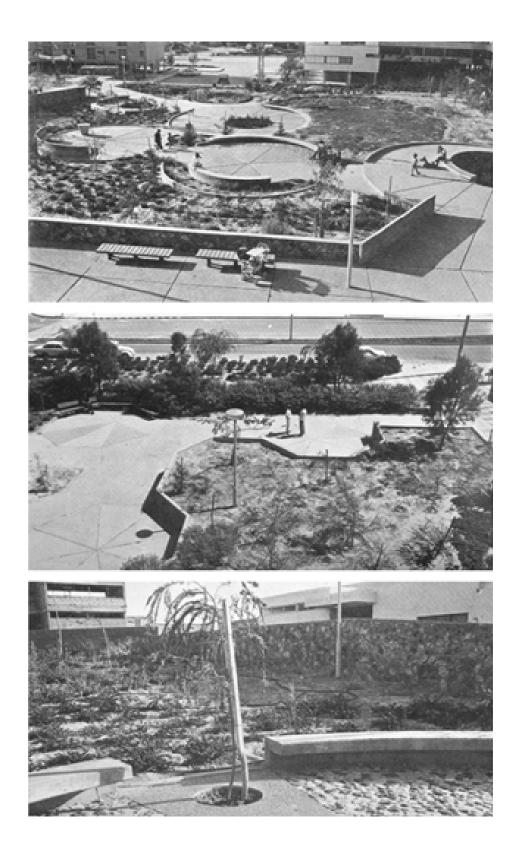
"...the goal of the 1973 award was to design a neighborhood and environment in a residential neighborhood that offers functional and aesthetic solutions to interior spaces, contributing to neighborhood life itself and to the neighborhood as an integral part of the city, garden and plots that would serve as a convenience or endeavor. But for a stay of all sections of the population - for children to play, for adults to meet, for recreation and rest and contribute to the creation of neighborhood living and the focus of activities in an aesthetic and pleasant environment."¹⁸⁴

More than fifty years after the project started being built, much of how society uses the public space has changed, especially in a planned development town like Arad. And though nowadays most of these spaces became deteriorated - with parts the vegetation changed or disappeared, and some areas of the original projects have been transfigured - the bulk of Dekel's plan still stands out. The concrete and stone prove to be resistant to the desert conditions, and a clear set is still perceptible; a well-defined collection of distinct objects and elements that are part of a bigger whole, linking these different public spaces in a singular, planned system. **[Figures 149-154]**

¹⁸⁴ The judges for the 1973 Karavan Prize for Landscape Architecture were architect Shulamit Nader, landscape architect Lipa Yahalom and author and journalist Amos Elon. Excerpt taken from https://michaelarch.wordpress.com/



[143-148] Photographs from the AA (a monthly magazine of the Association of Architects and the Association of Engineers and Architects in Israel) edited by Lonnie Gershuni, August 1973.





[149-154] Avishur today (2020). Top: The main pedestrian axis and the concrete guard rail. Middle: The central garden, made of interlacing circular shapes and one of the courtyards with a playground. Bottom: Concrete squared pavers projected outwards becoming a playful element, and the symbols carvings of a wall. Photos by the author.



Albert Promenade, Mitzpe Ramon (1988-91)

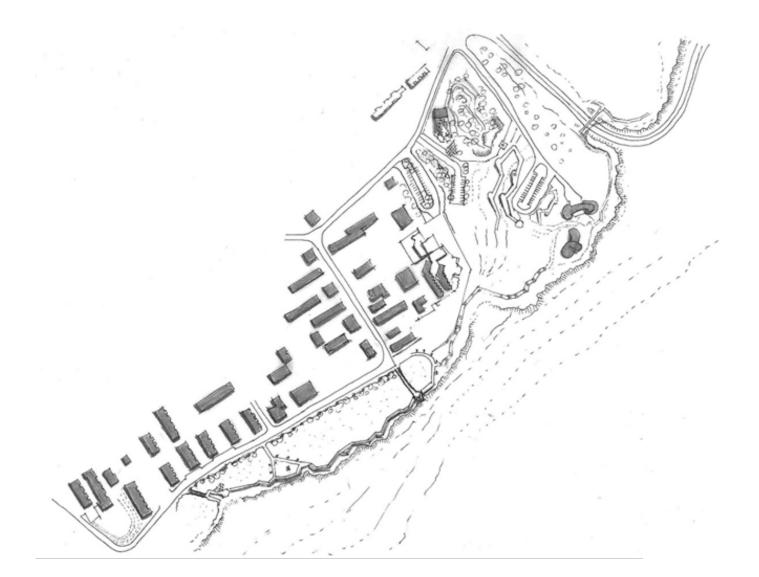
In the 1950s, a labor camp that was set up for workers of Route 40 to Eilat grew into a corporative settlement of workers from a mineral exploitation plant in the Ramon crater. In 1957, the Planning Department of the Housing Ministry prepared an economic program for the settlement of Mitzpe Ramon, which became a development town. The town grew in the 1980s and early 1990s, with the absorption of military bases in the area (moved from Sinai after the Israel-Egypt peace treaty) and with the arrival of immigrants from the former Soviet Union that were settled there. In this context Mitzpe Ramon started to grow also as a touristic site, mostly because of its dramatic site at the edge of the Makhtesh Ramon.¹⁸⁵

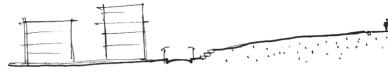
In the 1980s, Zvi Dekel was called to design the landscape of a new complex around the new visitor center, including a botanical garden, a small zoological garden, and mainly, a promenade (*tayelet*) along the edge of the cliff. [Figures 155, 156] The botanical garden is an effective display of six different habitats of the Negev vegetation, while the zoo (Hai-Ramon) exhibits, research and treats some of the local fauna. The pergola of Hai-Ramon specifically stands out, with an ingenious mechanism of height-adjustable canopies of bamboo straws. [Figure 157] Between the flora and fauna preservation area and the building of the visitor center, there is a terrace rock garden with displays of different historical man-made prehistoric structures. [Figure 158] However, the promenade is the highlight of the entire plan.

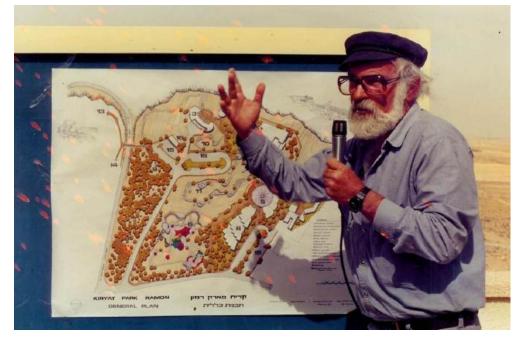
Promenades (tayalot) are places where the encounter between people and nature take place, and its landscape relationships dramatized.¹⁸⁶ Its design echoes and intensifies the connection to their surroundings, and in this case, this applies to the desert crater. Planned tangent to the city, the Albert promenade – as it is named - is simple and stripped of redundant details and information; it has almost no vegetation. It is reduced to a simple path along the steep and dangerous cliff edge, bordered by a kilometer long stonewall. The promenade's typical section is essentially a wall and a path, bordered by the cliff on one side and by desert soil on the other.

¹⁸⁵A *makhtesh* (Hebrew: מָכְהָשׁ) is a geological landform considered typical for the Negev desert of Israel and the Sinai peninsula of Egypt. A makhtesh has steep walls of resistant rock surrounding a deep closed valley, which is usually drained by a single *wadi*.

¹⁸⁶ HELPHAND, 2002, p. 204-207.







[155] General plan and typical section of the Albert Promenade, Mitzpe Ramon. Sketch by the author.

[156] Dekel presenting the masterplan for the area around the visitor center in Mitzpe Ramon, 1980s. In: Drory, 2014.





[157] Detail of the Hai-Ramon Pergola, 2020. Photo by the author.[158] Rock Garden Terrace, 2020. Photo by the author.

With strong gestures of pushing in and out of the cliff, the promenade has two main entrances from the town. The one that pushes the promenade in creates a dry wadi-like *amphitheater* space, marked by the sculpture *Layers* of the artist Israel Hadany. Seven vertical stone slabs recall sails capturing wind in the light, set back from the edge of the plateau directing your vision. The other entrance throws itself outwards into the void, with a hanging lookout pavilion (*mizpor*) shaped like an arrow towards the void. Built in a metal, the complex structure that allows its cantilever is manipulated in order to look as light as possible. Zvi Dekel describes it as the wings of a bird, or a glider flying in empty space.¹⁸⁷ [Figures 159-164]

Precisely, it is this emptiness that represents his view towards the balance between development and conservation of the site. For years Israel *feared* the desert, then tried to *conquer* it, but here it is not only recognized for what it is, but it is praised. Dekel saw the crater's edge as the seashore of Mitzpe Ramon, and the crater the sea to be contemplated. Its role is to make the natural landscape exactly what it is – a desert. Described by Jorge Luis Borges as a labyrinth¹⁸⁸ because of its vast, endless condition, the desert is perceived through Dekel as less daunting. On the contrary, here, one feels part of the desert without feeling lost.

Much of this idea can be traced to Dekel's interpretation of the desert nature; where the interaction of ecological concerns and aesthetic aspirations gain a minimal, land art feeling to it. Poetics play a big role in the design, creating a space in which visitors are ready to understand the raw landscape and not just the space within the project boundaries – it is a design that communicates with the monumentality and the dryness, creating a sense of being part of that desert as a whole, thus promoting a sort of collective affection towards the geographical environment.

Minimal gestures become rather significant, inducing the visitor to a contemplative experience, where time almost stops and all is left is the crater, the sky, the rocks and the wind – all essential elements to the project. Landscape architecture acts here as a medium that amplifies nature, pushing us towards it, increasing our awareness of it. The aridness here is exposed, in a way that the built elements, such as the wall, the *mizpor* and even the path gain a meaning of safety, of civilization. Indeed, the concept of the Albert promenade has no emphasis on vegetation, planting or greenery; it is a space limited by a border wall that encloses a piece

¹⁸⁷ Ibidem.

¹⁸⁸ Jorge Luis Borges, "The Two Kings and Their Two Labyrinths", in: "The Aleph and Other Stories" 1933-1969, Dutton, New York, 1978.

of local dry land. In the infinite landscape of the Negev desert, a walled piece of land stands as an exception, a place within a desert. **[Figure 167]**



[159-61] The Albert promenade today. Top: The lookout pavillion at one entrance. Middle: View of the stone wall along the edge of the cliff. Bottom: Entrance stairs made of local stones in different cuts. Photos by author.



[162-64] The Albert promenade today. Top: Hadany's sculpture and the amphitheatre wadilike space. Middle: View of the stone wall along the edge of the cliff. Bottom: View from the promenade towards the makhtesh. Photos by author.



[165] Aerial view of the Albert Promenade, 2020. Photo by Ricardo wolokita.

Mount Avnon Lookout, near Yeruham, Eastern Negev (1991-1994)

Mount Avnon is a prominent mountain overlooking the Makhtesh HaGadol¹⁸⁹ in the eastern Negev. Taking a small detour on Road 225 from Yeruham, before it descends into the Makhtesh, lies the lookout planned by Dekel. Accessible by a path from a small parking space delineated by surrounding boulders, the lookout is not at the peak of Mount Avnon (631 m), but a few meters below, on a less exposed terrace bordering the cliff. Dealing with such untouched site, Dekel's premise was the least possible interference in the landscape and the terrain.

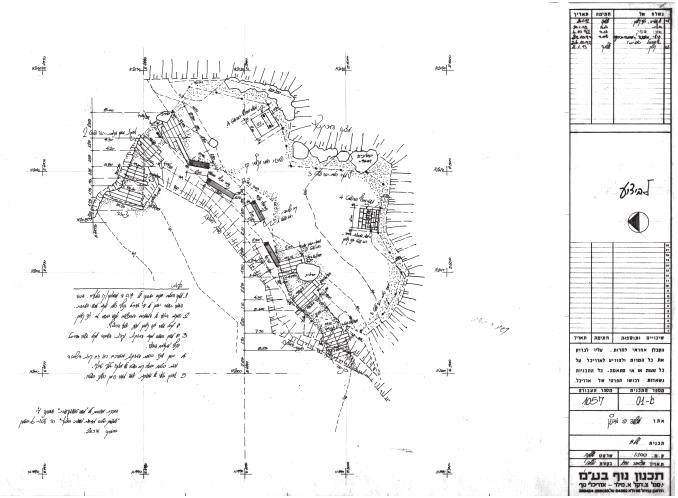
His strategy is precise: adapting to the existing topography and framing the panorama of the large crater with minimal touch on the surface yet providing the users a place for contemplation. [Figure 166] The approach is dramatic; as the access path from the parking lot creates a distinct horizon that opens to the landscape. As the lookout is accessed through stairs that go down, one feels as if descending into the crater. [Figure 167]

The two sets of sinuous stairs are placed in close harmony with the existing topography. Looking as if they were carved from the rocky formations, the rhythm of the horizontal stripes rocks allude the makhtesh phenomenon, characterized by geological strip patterns. Some of the steps extend sidewards, creating seating areas, while other isolated ones stem from the rocks. [Figures 168, 169] Made of sawn light local stone, these linear elements stand out against the background of the surrounding darker rocks. [Figure 170] Here, the previously *heavier* barriers move from the solid wall of Albert promenade to the metallic guardrail of Sde Boker to a minimal, almost invisible couple of metallic cables (which probably wouldn't be there if it were not for safety reasons).

Mount Avnon lookout feels very personal in its conception. More mature and refined than in any of his other projects, this expressive intervention references the desert itself, showing how much Dekel simply *loves* this landscape. The solution in almost an emotional response to being there, to feeling the site and seizing its *grandeur*, translated into something minimal. Dekel investigates an abstraction of the local condition, with its occupation, minerality and calculated absence. **[Figure 171]**

Dekel's subtle gestures provoke how we, humans, feel in such a fearsome and inspiring site. It is conceived as a place of *expansion*, where contacting nature and contemplating the desert landscape happen physically and spiritually in its most essential way.

¹⁸⁹ Makhtech HaGadol (the large crater - *makhtesh*) was recently renamed Makhtesh Yeruham.



[166] Moun Avnon Lookout general plan, 1991. Minadd archive.[167] View of the approach, 2020. Photos by author.





[[168] Stairs view with a bench, 2020. Photos by author.

[169] Detail of the meeting of the steps and the stones, 2020. Photos by author.

[170] View of the project from the lower level. Photo by Ricardo Wolokita.



[171] Aerial view of the Mout Avnon Lookout, 1994. Albatross.

Case Studies Final Considerations

These case studies illustrate Dekel's continuously evolving approach towards the Israeli desert. The will to play and design free forms using concrete, creating a new and protected place in Avishur reflect not only his lessons in Brazil, but the Zionist spirit he gathered up to then. In Arad, Dekel developed strategies by understanding the desert as a landscape *in development*. Somehow still *exotic* and in need of improvement, his plan attempts to create a safe place, suitable for the new dwellers. The project creates a system of public spaces that manifested a spatial autonomy designed through ludic architectural elements, vegetation and materials, establishing a site with peculiar and unique characteristics creating a sense of familiarity, belonging and protection. With subtle allusions to the arid surrounding landscape but mostly protected from it, Avishur it is set *against* the feared and mythical nature. In Mitzpe Ramon, however, the position of the observer is fixed towards the landscape outside, *opening* towards the desert. The formal expressions and modernist aesthetic composition of Avishur gives away to a more *sincere*, albeit rough experience of the landscape in the Albert promenade. The aridness here is exposed, in a way that the built elements, such as the wall, the *miztpor* and even the path demarcation gain an indirect meaning of civilization, of safety.

Indeed, the original concept of the Albert promenade has no emphasis on vegetation; it is a space limited by a border wall that encloses a piece of local dry land. In the open landscape of the desert, a walled piece of land is an exception, a *place* within a desert. Finally, the lookout at Mount Avnon *is* itself part of the desert. Concise in many senses, the lookout is almost a statement of Dekel's evolving affection towards the desert. The simple, yet sophisticated design acts as a bow, reverencing a sight that should be minimally touched.

Each in his own way and its own terms, the three projects promote a progressive encounter, from introverted to exposed. Dekel uses his design to bring people to confront the desert, but not in an aggressive way; in a defiant way, as to deconstruct their preconceptions of visions established in the past. Through his projects, he declares a discreet austerity through which men is put in dialogue with the unique nature of the desert in different ways. They present a unique position, from which he developed and designed his ideas of the Israeli modern landscape, mixing the ideology that braved to settle the desert with a growing sense of respect and protection in its relationship to the public realm. Dekel intended his gardens to provide didactic and meditative environments for the public, exposing them to his own visions of the desert. Zvi Dekel will remain a symbol of a generation that willingly accepted the challenges of founding and building the state of Israel. Specifically in the arid environment, with the intention of providing didactic environments for the public, to expose them to the wealth and the beauty of the ever-transforming idea of the desert landscape.

Part IV Discussion

INTERPRETATION

6

"Each city receives its form from the desert it opposes." (CALVINO, 1974, p. 18)

In one of the tales in *Invisible Cities*, Calvino's Marco Polo describes the same city from two different perspectives. One from a traveler that arrives from the sea, onboard a ship, and one that arrives from the desert, riding a camel. Playing with the idea of different perspectives of the same reality, each one sees the city as an embodiment of the other, as symbols of their own minds. I shall argue that Dekel *saw* through Brazil's Tropicalism a new way to deal with his own extreme landscape, the Israeli desert. This process, rooted in the *national* Zionist culture – lived so intensely in his youth – combined with the *foreign* experience of working in the "exotic" tropics, resulted in a very specific modernity which he developed throughout his life. His relationship with the desert and the values, visions, and methods of his work can be interpreted as an inflection of these two experiences.

In Brazil, Dekel experienced an approach towards an historically charged landscape which became not just a source of affinity, but a tool for Burle Marx's groundbreaking landscape architecture. Praised by Jellicoe (and others) as "the top landscape architect in the world"¹⁹⁰, Burle Marx managed to deal with existing elements as vital to a new objective and symbolic arrangement in a "conception of modernity that can perfectly incorporate what remains, or even what challenges it."¹⁹¹ His concept of modernity considered an open dialogue with the diversity of Brazilian cultural and natural tradition, but also with those who shape the nature and culture of the places for which he carries out his projects.¹⁹² The influence of this process on Dekel provided the possibility of dealing with the cultural and natural multiplicity of a place, as open to a "recontextualization" of the existing site. In this way, Dekel explored his own perceptions of the desert by deconstructing old ones, extracting from his experiences elements that unify his interpretation of both physical and cultural aspects. Long after Dekel

¹⁹⁰ Sir Geoffrey Jellicoe's words written shortly after Roberto Burle Marx's death in 1994, apud DOHERTY, 2018, p. 56.

¹⁹¹ SIQUEIRA, 2017, p. 96-97.

¹⁹² Ibidem.

returned to Israel, the two kept corresponding in letters, visited each other, and his admiration for Burle Marx as a master and a personal mentor remains to this day.

Parallel to Burle Marx's own movement from the aggressive, but necessary *cannibalistic* approach to a more refined Tropicalism, Dekel took part in "conquering" the desert at first, to later accept and cherish it for what it is. For him, the challenge of dealing with such tough landscape evolved with the society's changing mindset, from a mythological scenery to a challenging conquest, and eventually, to a more spiritual connection. For Israel, a nation that developed by rooting itself in abstract ideas, to settle in a territory and to accept its nature was a complex process - specifically regarding the symbolic and geographically arduous desert. Dekel stands as one of the main figures that challenged this notion, exploring new ones along his career.

Implying and adapting the design principles used by Burle Marx and his precedents, Dekel created a specific cultural model with new expressions, standing as part of the complex "lineage" of both Israeli and Brazilian modernism. Just like Lucio Costa was personally influenced by Le Corbusier, passing his knowledge to a young Burle Marx (among many others), Dekel received this vision directly from Burle Marx first, and mixed with the other ones he received in Israel throughout his career. The analysis and the case studies reveal several characteristics of his approach to landscape architecture:

- A will to experiment with radicality, a rupture towards previously established notions.
- The desert seems to awake in Dekel the desire and opportunity to play and redefine the symbolism of the landscape intervened.
- The artistic freedom and creativeness. In such extreme landscape, Dekel managed to tackle different solutions to each project based on his changing perceptions of space.
- A poetic sense to his production that seeks a dimension of abstraction, in a sense that what he builds supports his ideas of experiences and sensations. It is no coincidence that Dekel often collaborates with artists.

Dekel's *arid tropicalism* is a modern combination of innovative ideas and daring actions. His sense of nationalism, his attitude toward extreme territories, his understanding of local materials and plants, his dialogue with the arts, all permeate his production. Leaving his

own *signature* on the landscape, the simple admiration for nature and sensitivity to the spirit of the place are present in all his work.

Burle Marx stated that there aren't any formulas, there are only principles.¹⁹³ Recurring similarities in such different contexts expose the empathies Dekel developed while experiencing a unique *tropicalness*. In his words: "the desert and the tropical rainforest are like opposite sides of the same coin".¹⁹⁴ This simple, yet complex statement reveals how Dekel embraces multiplicities and contradictions - he would not have the same perception of one if it weren't for the other. For him, landscape architecture is a medium to reconcile man and nature, where differences - instead of opposites - become complementary.

¹⁹³ CALS, 1995, p. 27.

¹⁹⁴ Dekel, Z. (2020) Personal interview [View Appendix C].

7 FUTURE CONTRIBUTIONS

While the core of this research stems from study of the works of Zvi Dekel in the desert, a series of different topics and issues were raised in the process to enlighten the context of modernist landscape architecture and its broader relation as a national entity, in both Brazil and Israel. One of the first issues is the extensive influence Burle Marx had beyond Brazil. His unique approach to landscape architecture brought together a wide range of fields – visual arts, architecture, scenography, botany, among others - but it also made landscape design key in the modern construction of a national space.

The creation process, the relationships established with architects and artists and other collaborators, and the results of their project vary in the production of Zvi Dekel and Roberto Burle Marx. At the same time, they are not antagonistic, but constructions supported by common principles of a new vision of the landscape and its role, which were formulated, transformed, and manifested from very specific and local *modernities*. This brought the topic of the conflict between the universal language of modernism and the nationalist search for a local identity, specifically in the contexts of Brazil and Israel.

In many ways, this dissertation sought to describe the contours of the cultural context in which landscape architecture came to be during the maelstrom of modern life in the early 20th century. Like art and architecture, it became a tool that could create not only spaces, but a common language that represents a nation. Related to the historically transformed gaze at their local geography, an associative and symbolic connection was made between the landscapes in which both Dekel and Burle Marx operated. While the *exotic*, tropical rainforests of Brazil became a central piece of the modern identity of the nation, the arid desert of Israel has had a main role in how Israel sees itself as a land. Both once *feared* landscapes developed new perceptions through acceptance, conciliation, and pride.

After taking these formulations into account, the modern aspects present in Dekel's projects were analyzed, followed by studies of how these axioms relate specifically to the desert.

However, the will to analyze Dekel's arid work is just one indication of the great potential to be explored in distinct areas regarding Israeli modern landscape architecture. The first area of potential research would be the further study of Dekel's life and career, as more critical evaluation is required to set out the full range of his extensive career and accomplishments. Parallel to this research, the first book on Zvi Dekel's work was published.¹⁹⁵ Different articles deal with specific projects, still, there is a need for a comprehensive critical view.

Dekel developed a unique relationship with the field of art, especially with environmental and land art. Epitomized in his collaboration with prominent Israeli artists, the relation between art and landscape, and their ecological and political motivations is a rich subject to be explored. Second, as Dekel returned to Israel, he began working with Yechiel Segal and his son Yosef. Practicing in Israel since the 1930s, Yehiel was one of the major figures of landscape architecture in Israel. This relationship and the influence from this other master is an area of interest. Furthermore, as Dekel became a partner of Yehiel's son, (Segal-Dekel) Yosef was part of a practice format that characterized a very specific modern period of the Israeli landscape production. From the 1960s through the 1990s, this format, which includes Yahalom-Zur and Miller-Blum, created an "Israeli Classicism"¹⁹⁶ in landscape architecture, which defined and still influences much of the landscape architecture in Israel until today. Researching these practices, this period and their influence is still scarce and much needed.

Certainly, more research and study are needed, not only to set out the full range of Dekel's accomplishments, but also to understand such significant era in Israeli landscape architectural history. In general, it is expected that this research has clarified how the path and work of Zvi Dekel served to contribute to the rich formation to the field in Israel from the 1960s to the present day, exposing new debates and expressions, and by expanding the historiography, making it possible to broaden the panorama of the discipline, with the different *modernities* it presents.

¹⁹⁵ LISSOVKY, 2021.

¹⁹⁶ Idem, p. 23.

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Appendices

A

Biographical Notes on Zvi Dekel

1929	Born in Tel Aviv, January 10
1941	Begins to study painting at the Avni Studio
1948	Arab-Israeli War, Dekel served the Palmach
1949	Founded Kibbutz "HaShomer Hatzair" Harel
1950	Married Chayale
1953-1956	Served as Kibbutz Harel secretary until its dissolution
1956	Moved to Rio de Janeiro, Brazil
1956-1960	Worked in Burle Marx's office
1960	Returned to Israel, joined the office of Yechiel and Yosef Segal
1962-1966	Entered partnership with Yosef Segal, Segal-Dekel
1966-1972	Dekel established his own independent office
1966	Tel Dan Nature Reserve
1969	Avishur, Arad
1973	Awarded Karavan Prize for Landscape Architecture for Avishur
1972-2008	Entered partnership with Yosef Segal, Tichnun Nof (later joined by Uri Miller)
1976	Park Wolfson, Tel Aviv
1982	Timna Park (Phase A)
1991	Hai Ramon, Albert Promenade in Mitzpe Ramon
1992	Shlomi Zeevi joined the office (later becoming a partner in Minnad)
1994	Mount Avnon Lookout 189

- 1995 Sde Boker Promenade, Founder's Garden in Hedera
- 2008- Entered partnership with Yair Avigdor, *Minnad*
- 2009 Independence Park refurbishment, Tel Aviv
- 2021 "Perspectives of the Work of Zvi Dekel" book launch

Chronology of Dekel's Desert Projects

1965	Kibbutz Revivim
1968	Monument to the Negev Brigade, Beer Sheva (with Dani Karavan)
1968	Yotvata Hai-Bar Nature Reserve
1969	Avishur, Arad
1970	Yehelim, Arad
1973	Tlalim, Arad
1978	א" (Nahal Solelim), Beer Sheva
1982	Timna Park (Phase A)
1984	Kibbutz Ruhama
1984	Ein Bokek Promenade
1985	Yotvata Hai-Bar Nature Reserve Visitors Center
1986	Desert Sculpture Park, Mitzpe Ramon (with Ezra Orion)
1989	Yeruham Park (Phase A)
1989	Gan Hatmarim, Ein Bokek
1991	Hai Ramon, Albert Promenade, Mitzpe Ramon
1993	Masada National Park
1994	Mount Avnon Lookout
1994	Ben Gurion's Desert Home, Sde Boker
1996	Sde Boker Promenade
1998	Mitzpe Yam, Eilat
1998	Hadassah Park, Beer Sheva

B

2000	Yeruham Park (Phase B)
2006	Shachmon Park, Celebrant's Path, Eilat (with Buky Schwarz)
2007	Timna Park (Phase B)
2013	Quarry Rehabilitation, Ramon Crater
2019	Timna Park (Phase C)

Interviews with Zvi Dekel

С

On two different occasions I personally interviewed Zvi Dekel in his apartment in Tel Aviv. Here are the transcriptions of these two interviews. **[Figures 171, 172, 173, 174]**

Interview #1: June 9th, 2020

I am currently doing my research about your work, specifically in the Israeli desert. It interests me...

Why? (laughs)

Being from Brazil, and we don't have anything close to that landscape.

(Laughs) I see...

What is your first memory of a landscape?

The seashore. The sand dunes all over what is now Tel Aviv. I was born here, in this house. I moved to the kibbutz when I was really young, age 18, 19. My encounter with the desert came later, but it completely dominated me.

So when you moved to the kibbutz you started relating to gardens?

No, before that. I have a criminal past, I used to paint. (laughs) See those two painting? (Pointing at the wall) I painted those at age 14 – this drawing I did at Avni studio. I actually started from drawing. This interest came together with Botany... it was normal to get to know the plants of *Eretz Israel*. I felt that this was my path. I considered studying architecture at the Technion, but I decided not to, I wanted to be a landscape architect. I had good knowledge about vegetation and this entire world charmed me. I decided I wanted to be a landscape architecture at the Technion back then. I checked to study in England and France, but it was really expensive.

I went to talk to Aby Karavan, father of my good friend and gardener of the Tel Aviv Municipality... he was very updated with books and magazines, and said I had to go to Brazil to study with Roberto Burle Marx. And I went! The three-month trip on a boat was really hard... me and all the Italian criminals. I had family there and they received me, I managed to meet Burle Marx and got a job. He said: "when I see someone like you, so young and willing to be a landscape architect, coming all the way to Brazil I can't refuse you! Join the studio." There I stayed for four years.

What are your memories of working in the studio? What did you do?

I planned. I drew. First, when I arrived, I did not know anything. About landscape architecture planning, I mean. There were five or six architects, that came to work with Burle Marx. I mean they had architecture knowledge, and I knew a bit of practice.

About the Brazilians, I arrived early in the morning – no had arrived yet – and left late, around eight or nine, no one was there anymore! (laughs) And in between they would go to the beach – and so did I. I learned a lot from them, and I started to develop myself... Burle Marx saw this in me and that's why I stayed there for years. I had a huge amount of fun, I loved Brazil. The landscape, the beach, the people... the music made me crazy! I arrived three weeks before the carnival, I learned the lyrics, I went out to the streets *blocos*. Samba made me *drunk*.

What about Burle Marx, how do you remember him?

What a pleasure working with him, he was wonderful, unique. He was a painter, a landscape architect and a singer. His dad had sent him to Germany to train to be an opera singer. There, he really connected to painters, artists, and he understood that that wasn't it for him. So, he came back a landscape architect. He was a wonderful man, in a unique way. It was such a pleasure working with him... even working so hard all day long. (laughs) I remember him always saying *ponha papel* (put more paper), asking for another layer of tracing paper to further sketch. (laughs)

How was your personal relationship with him?

I had the privilege because one, I knew more about botanic than anyone else at the office then, and two, because I drew together with him. I would be called up to the second floor to sketch, lots of drawings for the murals he made in garden walls... I worked with him a lot. KIZUR, I enjoyed it. Drinking coffee all day long – *vamos tomar um cafezinho?* There was Olivio, the maid of the house, he would cook the food, make coffee, I think he was Burle Marx's boyfriend. Did you know that Burle Marx was homosexual? Once I sang to him the first carnival song I

learned, *Bom mesmo é mulher* (What is really good is women) and he said laughing "you don't understand anything." (laughs)

So you were enjoying Brazil... why did you decide to come back to Israel?

First of all I was there for four years, a long time. My daughter was already in first grade... we thought about returning to Israel because of that. Also, there was a situation, when I worked on this huge project, half the size of Israel. (laughs) I worked a lot on it. The project was in Venezuela, and it was so large he had to open an office there. Roberto came to me and asked me what I thought about moving there. I did not earn a lot of money – I did start as a student... It would open a new world, living better, earning more money, but I had to sign a contract for five years.

In the end, me, Chayale and Smadar decided not to go. If I did so, I would be an international landscape architected, I would be finished with Israel. By the way, when I refused, two others from the studio moved there, John and Fernando, from England and from Argentina. They went instead of me. A few years later I met them in a congress in Europe, they told me: "Good you did not go. We went, opened the office and ended up staying there after all." I came back straight to Israel.

How did you start working in Israel when you came back?

The day after I came back, I went to Lipa Yahalom, he said come and work with us. I then understood that I did not want, I wanted to work by myself, I wanted to try to do things my way. Close to me was Yosef Segal, his father was a renowned landscape architect (Yehiel) and they accepted me in an independent condition... a partnership where each had his own projects. I worked there for a month or two and then we became partners. That's when we founded Segal-Dekel.

When you came back to Israel, did you see it in a different way? The nature, the landscape?

I switched my mind. Very quickly I fell in love with the desert. My first project was in kibbutz Revivim, in the south. I did a plan bringing the desert inside, they almost threw me down the stairs. They said: "we want to expel the desert and you bring it into our door? The landscape and also the vegetation?" I stayed with my convictions... the office was very busy, and I got to plan a few incredible projects.

How was your movement towards working in the desert?

For my luck, we received some commissions in the area where the desert starts... we talked, and they knew I wanted to work in the desert. So, I started to receive work. I got interesting commissions. I wanted to change the way people saw the desert... more harmonious and less dominating. When I worked in the *Tnuat Kibutzit*, I understood their will: *I want to wake up in the morning, see the desert, but live here* – a friend of mine said. The Nature Reserve (*Shmurat HaTeva*) approached me to do some work, and I started my work in the Negev. It was for me a journey. On the one hand, I had beautiful admiration of the landscape and the power of the compulsion I put myself to work in the restrained desert.

Easily you can let you imagination run wild... but to work in the desert is to be restrained. There is one work that I find the most beautiful... Mount Avnon. Its almost nothing, two lines with white stones, white stone. I felt this was my truest interpretation of the desert.

It reminds me of other projects of yours, such as the albert promenade in Mitzpe Ramon. Both have a minimalist feel, almost land art piece.

Exactly, exactly. Restrained. It's not bad.

When you only mark the lines in stone, the soil is exposed. Tell me about this project.

I only did one thing; select the material. You take from the field and chose the best fitting. The rocks are from the site. The stairs are from the site. Next to it there its Hai-Ramon, a desert garden. The pergola there is quite interesting... we created inside all the geological phenomenon that there are in the crater. The vegetation, the way water streams... there are two wadis – one with white stone and one with red stone. My work was very modest, there was a larger plan but only part of it was executed. The lookout had a cantilever that needed 15-meter-long beam that one can't see to hold it. I wanted this with the patina and one that goes down. This marked one of the two entrances, this one throw itself into the crater and the other one pushes in, based on the wadi that was there. It felt right. It's part of the desert.

And the sculptures on the entrance that pushes into the town?

The sculptures I did with the sculptor Israel Hadany, I called him. He created these vesselshaped structures covered in stones to complete the *pas-par-tout* for the landscape, like a small amphitheater. With such an inspiring view.

What about the relation with the town?

The existing road is much lower that the edge, six meters, that's why I created two entrances, so that people could reach the crater. No one could see the crater, so I worked with a geologist not to crack the crater... so many fights there were... Beyond the promenade, the path extends as a simple line, a landscape path that literally puts you in the desert. It couldn.t be any simpler.

The bridge was my idea, it is my responsibility. (laughs) There was a planned building on the other side, but they didn't build it... so the bridge connected to an empty area for many years... looks good. It is like a gate to the crater. The engineer wanted to kill me. (laughs)

Is there any connection with primitivism? The stone walls, miles and lines?

Those who dwelled this area 2000 years before us used the same stones I did. Similar use, different approach. The miles are for as lighting elements, I did not want lighting poles, so I placed them throughout the main paths. You know how much I invested here? Every morning I would wake up at 5 and go there. I would go there at least twice a week, and it was much farther than today. (laughs)

Moving to the first large project of yours in the desert, Avishur in Arad. Can you tell me a bit about it?

It's the main axe of a neighborhood, no cars can reach the footpaths. Here there are schools and kindergartens, kids would play without worries. The buildings they were building there were terrible, so I wanted to create a separate system in the public area. An interior carpet if you will. Whoever goes in enters a new landscape. I did not use the local stones, I wanted something different, contrasting. This is *granolit* casting. With the concrete, they seemed right. The playgrounds were made of concrete walls, so they could last. And they do! But they painted some of them... it kills me! People can't stand bare concrete... I don't get it. The vegetation was desert specific. I was willful.

How was building a new town? In the desert?

When I started there was nothing there... I started with the architect and urban planners from the beginning, the interior patios act as small, protected spaces. They trusted me; I was lucky. The architects really liked my work.

Did you feel any direct influences from Brazil in those works?

Sure. It could not be different. Clearly, it's a different landscape. In Rio, trees grow anywhere without a problem. Here the desert is different. The fact that I fell in love with the desert, after the tropicality I experienced, gave me a fresh breath to look for a landscape architecture specific to this aridness. Like in Rio they developed their own.

The time you were in Brazil is a key period, when Burle Marx – and most architects – began to create with a conscient of praise to their local geography. Non-European, post-colonial, modern approach lo a new landscape architecture.

Burle Marx was a painter in his soul. The landscape architecture came along with his design... his traces, his vegetation, the context he grew up in gave him a singular idea of his own nature. His passion for botanic was contagious... we would go in expeditions to the forest, collecting plants that had not even been catalogued. That is part of the tropical privilege... I remember when an American newspaper came to interview Burle Marx, and we all went to a forest together,

Anyway, I think that the contrast between the tropics and the desert create more harmony than disharmony, that at least influenced me. If I look back, I am much more connected to the arid landscapes of Israel than to the abundant tropics, rich and beautiful as it is. There is something delicate about the desert that made me fall in love, like a woman. First you fall in love, and as years pass you keep finding out more reasons why.

In most of your work you call artists for collaboration. Why is that important for you?

Why? Because I aim to be modest. I used to paint, but I was a landscape architect inside. I have lived in the arts world always, but I never made a podium to put a sculpture on it. That's not the type of art I think fits in landscape architecture – at least not in mine. The collaboration with artists through planning added a lot of sensitivity, listening to them and they listening to me always makes the projects better.

Do you feel that the desert changed in people's eyes?

The desert in enough strong to stand abuse. It has powers... I have to say though that few landscape architects have been sensitive enough to the landscape. If you walk on the desert and you make a mark, it stays there. I think that in my works I have been attentive enough towards the nature. Hence, I had to restrain myself... because of that many things came out, much better

than I would have thought. To understand the right scale, how to express oneself in such places... I think my projects are minimalist in a sense of keeping myself not to *overplan*, which is tempting in such landscapes. Thats what I learned from many years of working... If I did something *noisier* it was only to show how much the landscape surrounding is quiet, peaceful.

Lately, I heard that they are planning to renovate some of my works in the desert... it hurts me, really. That's the truth. I say if I had died when I was 80, I wouldn't have to see this (laughs). But overall, I was, and I stayed a landscape architect, from when I was born until the day I die. Look, who decides to be a landscape architect can only be a good one if he really is one. Were

I am happy I am a landscape architect, it's not simple. There are lots of storms on the way, of the clients, of execution, of maintenance, still, I wouldn't change anything. I am happy I didn't become a painter. (laughs)

Interview #2: July 30th, 2020

In the last interview, you said that you considered Mount Avnon as your most beautiful work. When I was there, it felt like part of the landscape itself. The project feels almost invisible.

Yes, this is how one needs to work at the desert. Clean, you see the result of the cliff, the view, the landscape. This is not bad. The rocks were there, but I moved them a bit. I connected them with topography, with the cliff. The railing was unnecessary... they pressured me I had to put something... so no one would fall... (laughs) This is what I call a sketch in the landscape (רישום בנוך) it's a sketch, no more. Discreet, just right. This is the local stone. Another thing is that I didn't receive an exact survey back then, so I planned based on the place itself, what I felt there and what it felt right to do. When I got to the place, I started walking and got to that spot. There I decided that the lookout was supposed to be. I sketched something back at the office, but the marking was made in the site itself. Amman Harpaz worked with me; he has the soul of an artist, but he is a gardener. We marked together in the field... you said you find the plan? Show me (laughs). The beauty of this work is in its simplicity. A line in nature.

Let's talk about Ben Gurion Desert Home in Sde Boker.

I remember. Those pergolas, the covered areas... that's the story. The house itself is tiny. When one bus arrives, everybody has to wait outside, because they just don't fit in the house. I planned the parking to be far from the hut and create these paths that gradually lead to the house itself. In the path there are points of small amphitheaters, so that the groups that arrive stop in the way and begin the experience before they reach the house.

Why olive trees?

They were there. It was an existing olive grove, I planned through the existing grid. There was a chaver kibbutz responsible for the area – he thought he knew how to plan, there screams and fights until the sky... The seating areas go up some steps. I wanted these steps to entrench in the land, so the walls would be smaller. He said there would be problems about the drainage, fights.

The canopies were made of bamboo straws, it looked not bad in the end. It is not mat (straw). I miss there. How does one move the public and how can they experience the story of Ben Gurion in this place, in the desert?

The experience feels like a stroll in the olive grove, a promenade.

Image that the cars parked by the house itself! That's why I started planning putting the parking far from the house. It also sits between the kibbutz and an NGO responsible for the house... The central idea was the dynamics with the visitors, so everybody would have an experience learning in the way to visit the house. The material used is kurkarit made in loco, including the explanations. I worked with an interior designer, who liked the idea of bringing the kurkarit into the spaces too...

Quite close to it there is the Nahal Zin Promenade.

Yes, there was one tree there. I decided I wanted to turn it into a place for seating, relaxing, seeing the view... The cliff has a height difference with the arrest of the site, so I made a ramp, stairs and walls made of local cut stones to connect them. There was an issue there with water. The drainage could not lead the water into the cliff, because it erodes it. The inclination of the path is the opposite, the water goes into the wall, there is a draining system hidden under there. There was pressure to pave everything in paving stones, but I managed to leave in unpaved, in gravel.

I remember seeing in the masterplan a project for a Botanical Garden nearby...

Yes, in the end they began planting the trees and the botanical garden was cancelled. I didn't even remember that. (laughs) There was a big discussion that they wanted to make canopies in the way, I didn't want to close the view to the cliff, and I said that there were trees! They provide shade just as canopies.

I tried to visit Hai Bar Yotvata, but I couldn't get in. What was the visitor center planned is now a technical and treatment area for animals, closed for visitors.

Shame to hear... The Nature Reserve called me and said they needed a place to treat the animals of the reserve, and I proposed that it should be a place for visitors to see them too, not only from the car (safari). I dug up a path, that goes down one and a half meter below the ground, so when you walk the inner path, you see the animals right in front of you, in the height of your eyesight.

I built a concrete wall, glass windows and shadows on both sides, so both visitors and the animals are protected from the sun.

I also visited the Makhtesh Ramon with Ben Drori, who explained the rehabilitation from a geological point of view.

In the beginning he was much against my opinions, in the end we got along. We spread out a lot of material to sort of recreate the landscape that was so damaged along many years.

In Eilat, you have many projects around the Shahamon neighborhood.

On... There were so many problems there... (laughs)

Such as...?

This axis of palm trees, that connects the mountain range with the sea, had to be planted three times. The first time, the soil was salty, so they had to be eliminated. The second one, we carved four meters deep trench to change the soil where they were planted. In the end they are fine.

What is the sculpture in the center of the park?

It is a sundial. I didn't understand it either at first (laughs).

And the sculpture on the wadi, on the road to mecca?

I found out that there was an ancient path that led to Mecca. I found sections of stones, so I dug into it, and I thought that they keep walking to Mecca. Me and Buky Schwartz made 120 sculptures, same size, same shape, walking towards Mecca. There is the neighborhood road, the wadi where the sculpture is much lower than the road, so I created a garden, a shaded seating area to sit and look at the caravan. The pergola came out a bit heavy, but the caravan looks good. (laughs) Don't they look like Arabs on pilgrimage?

How did you decide where to place them?

Do you know what was to place those elements in site? They had to be placed one by one, on site. I feared graffiti, because there was a controversy back then with the mayor – "why do we have to tell the story of the Muslims?" – It's in a place of the city not that attractive to visitors ... that was much of my ego there (laughs).

Nearby there are the twin lookout points.

A bit exaggerated (laughs). There was no way out... railings and another railing and fence... scary!

Where did the idea come from two identical lookouts?

I saw the two hills; they are one next to another and I thought it was right to provide two points of view of the same landscape. As a concept it felt right, in reality it is a bit heavy... I am doing some self-criticism here (laughs), it needed to be more delicate, the canopy itself has three levels, I would change to a simple one. It looks beautiful, but a bit heavy. Next time I will do it better (laughs).

The flooring are railroad ties, they are old, and I felt the material and the color matched the site and the project. At a certain point I wanted to connect them through a bridge, but quickly it didn't go forward, budget, etc. I like things at a space level, no one asked me to make these lookouts... when I walked around and saw the hills, I wanted to make them. I managed to put them in the tender last minute, and so it happened. It was a very hard work, getting up there with trucks and not destroy the topography... it was all very challenging.

From Eilat, I went to visit Timna Park. I was surprised by the scale of the site.

I will tell you the story. There is the Nahal Shahamon, it goes down through the existing copper mines. For the mines not to flood, they built a mound, a dike. When it rains, a lake appears there. When I came to visit there was a 6-meter-deep lake in there, so I decided to plan a lake, a permanent one. Ina all of Timna, this is the most intensive area – the lake, the campsite, the cafeteria, I concentrated all the intensive uses in the most damaged area of the site.

Why is the lake closed for swimming?

Security concerns last until today, railing around the lake... I don't get it really, every time I went there, I would just enter the lake and swim. The lake changed with time. The amphitheater came much later... the lake was divided in two, with a wall dividing the, the upper part became the small theater for events a few years ago, and the new building where there is a restaurant, and a shop was built also.

Very striking throughout the park are the paths and stairs that blend with the topography.

I spend so much time there, walking around, choosing what paths were right (and possible). To plan those underground passages, entrances, stairs... it was fun. I would wake up at 4, go there and come back at might twice a week. I really enjoyed working there.

I see your projects always connected to the larger surrounding landscape.

Yes, I always seek that in a delicate way. Were there people there, using the space?

It was full of people that camped there, families...

Great, I am glad to hear. I mean, to whom do I work for? For the people. If they come it's a good sign. There are always discussions... You always get either misunderstandings or oppositions, and its not simple to go through this process. I must say that I am a bit stubborn. But everywhere I finished a work, I made friends. I do what I want to do, but I understand when someone comes and tells them a different idea of what they had in mind... The highlight is when I started to work in Tel Dan. There, the water flows. You see that it flows but there aren't any waterfalls, so in a specific path, we opened paths among the vegetation, and I wanted in this path that there would be small waterfalls. I created them with concrete, small, half meter falls. The director of Israel Nature Parks at the time was Avraham Yoffi. He was tall, 2,5 meters tall and he was a madrich in HaShomer Hatzair, etc. When I started to pour the concrete, he came to me and asked - what are you doing? In the middle of nature, concrete? – I told him (as both of us were at Hashomer Hatzair) Hazak Veematz! (Be strong and courageous). When you come in two weeks you won't see the concrete anymore. "You're naughty Dekel."

It's also about personality. You must insist on what you think is right. There is nothing to compromise. There are no crimes. If you're happy with your work. If you know what you want in your work, I mean. It's hard to move things, but in my life everything was great. In general, people don't like changes. If you have a conscience with yourself, you make things right according to yourself, insist on that. I think that precisely in the desert, I have the right connection with the desert, because I understand it, I feel it. Hence, I cannot make terrible mistakes. I mean, I can, but less... It's harder to harm such environment if you feel it.

Did you do a tour, something jumped into your eyes terribly? You say that sensitivity exists, there is understanding. If theoretically you hear that someone has uses concrete in the desert it sounds absurd. He doesn't know how much it is not absurd.

What did you bring from the Brazilian tropics into the Israeli desert?

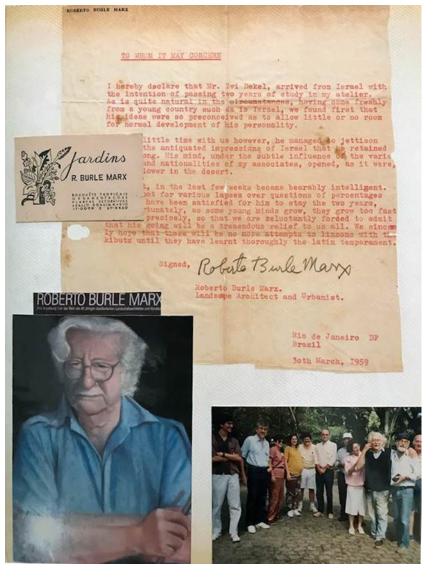
The desert and the tropical rainforest are like opposite sides of the coin. By principle, they are connected. My excitement with my encounter in Brazil was much deeper because I am Israeli, I was born here and grew here. It's like asking if you have a favorite child out of two. I love

them both equally, in different and complimentary ways. Each of the two sides touch on some internal competitive mechanism, that is just more creative in the end. It is precisely this dualism makes it richer. The two of them together that created my excitement for the profession, and I keep excited to this day.



[172] Interview with Dekel in his apartment, 2020. Photo by Ricardo Wolokita.[173] Meeting in Dekel's book launch, Tel Aviv Museum of Art, 2021.





[174] Page from Dekel's scrapbook with Burle Marx's business card, letter of recommendation and pictures.

[175] Picture of Dekel and Burle Marx on a visit to Brazil, 1990s.



Hebrew Abstract (תקציר)

צבי דקל (נולד 1928) עומד כאחד האדריכלים המובילים בישראל, עם הפקה המתפרשת על פני למעלה מ-60 שנה. אף על פי שעבודתו נוכחת ברחבי ישראל, אף אדריכל נוף אחר לא בנה כל כך הרבה בדרום הצחיח של האומה. עם זאת, מה שמנחה את המחקר הזה היא העובדה שדקל למד אדריכלות נוף אצל רוברטו ברל מרקס (1909-1994) באזורים הטרופיים של ברזיל. מחקר זה עוסק בדיאלקטיקה בין הצורה החומרית לבין כוחות לא חומריים רחבים יותר שהביאו לאדריכלות נוף מודרנית, ובמיוחד כיצד תרגם אותה דקל לפרויקטים המדבריים שלו.

המחקר בנוי ממסגרת מושגית רחבה יותר של נוף ותפקידו עם עליית הלאומיות. המחקר מגדיר את ההשפעות השונות שהיו למודרניות על ברזיל וישראל, מדינות המנסות להרכיב את זהותם החדשה. מסגרת זו, השוזרת את המחקר, הוקמה כדי להבין טוב יותר כיצד התרחש החיבור בין לאום לטבע והשפיע על אדריכלות הנוף בדרכים שונות. ברזיל החלה לראות את עצמה כצאצא של הנוף הטבעי שלה, האומה התאזרחה. בינתיים, ישראל יצרה מולדת על ידי התיישבות, מתן שמות ושיוך היסטורי לטריטוריה מסוימת, הטבע הולאם.

עיון בביטויי אדריכלות נוף מסוף המאה התשע עשרה ותחילת המאה העשרים, עם דוגמאות המציגות ניסוחים תיאורטיים ופלסטיים חדשניים. אלו מצביעים על בניית חזונות חדשים כלפי הנוף ותפקידו כמדיום בין אנשים למקום ספציפי, בפרט בהקשר האוניברסליסטי של המודרניזם.

לאחר מכן, המחקר חוקר את הזיקה שהתעוררו בעבר נופים שהופחתו תחת ההתכנסות של מודרניזם ללאומיות. ברזיל וישראל נלמדות מנקודת מבט של תפקיד נופיהן הבלתי מאולפים ותפיסתם המשתנה בבניית הזהות הלאומית. בברזיל, ההיבט הטרופי שלה נלקח על ידי המודרניסטים חסרי המנוח והתפרש כמקור לתרבות פוסט-קולוניאלית. הם ייסדו את הרעיון של קניבליזציה של תרבות חיצונית ויצירת תרבות חדשה, מתוקנת ומערבבת עם הספציפיות המקומיות, ופיתחו סוג ייחודי של מודרניזם מקומי. מכונה לעתים קרובות מודרניזם טרופי, הוא יצר דימוי וזהות לאומית חדשה ומוצלחת, במיוחד באמצעות אדריכלות ואדריכלות נוף. בהקשר זה התגלה רוברטו ברל מרקס כאחד מאדריכלי הנוף המודרניים החשובים בעולם ומעצב ראשי של היחס הברזילאי המודרני עם הטבע שלו.

בישראל רואים את המדבר כנוף סמלי, עם זהותו המשתנה וייצוגיו התרבותיים הרחבים. מנוף תנ"כי מיתולוגי ועד אדמה ריקה שתתפתח ועד לגאווה אקולוגית לאומית, המדבר נתפס בנקודות מבט שונות במהלך המאות האחרונות. צבי דקל, המאופיין במעבר מתקופת הכיבוש הראשונית לראייה רחבה יותר של המדבר כגאווה לאומית, בולט בקשר שלו עם המדבר. בגדל הציוני המנדטורטי, שפותח קשר הדקל עם הארץ הוא תוצאה מורכבת של ילדותו בתל אביב, בני נוער בקיבוץ הראל ושנותיו המעצבות בברזיל. דקל הצעיר עזב את ישראל ב-1956 לריו דה ז'ניירו, שם הצטרף לאולפן של ברל מרקס, שם עבד בפרויקטים קנוניים רבים, פיתח איתו קשר אישי והערצה לפילוסופיה ושיטותיו הייחודיות. בשנת 1960 חזר דקל לישראל, שם החל בהפקה נרחבת באמצעות שותפויות רבות ושיתוף פעולה יצירתי עם אדריכלי נוף, אדריכלים ואמנים.

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דקל ייבא את העקרונות שמצא בברזיל ויצק אותם לגרסה שלו למודרניזם מקומי. בעקבות ההיבטים העיקריים והקשר המורכב בין עיצוב נוף מקומי לזהות ותרבות מקומית, נוצר מונח חדש לגבי עבודתו של דקל; טרופיות צחיחה. שלושה מקרי מקרים שנותחו במחקר זה משקפים כיצד גישתו של דקל למדבר התפתחה בשלבים שונים של הקריירה שלו, המייצגת רמות שונות של קנה מידה, צורה ומרקם. הם כוללים:

שכונת אבישור בערד (1969-71), מערכת שטחים ציבוריים שתוכננה לעיר פיתוח. עם אוטונומיה מרחבית שתוכננה באמצעות אלמנטים אדריכליים, צמחייה וחומרים, הפרויקט יוצר תחושה של היכרות, שייכות והגנה. עם רמיזות עדינות לנוף הצחיח שמסביב אך מוגן ממנו בעיקר, עומד אבישור מול הטבע המפחיד והמיתולוגי.

טיילת אלברט במצפה רמון (1988-91) היא שביל ליניארי הגובל בעיירה ובקצה מצוק. הוא חושף את הצחיחות, ללא דגש על צמחייה. זהו עיצוב שמתקשר עם המונומנטליות והיובש, יוצר תחושה של להיות חלק מהמדבר הזה, מקדם סוג של חיבה קולקטיבית כלפי הסביבה הגיאוגרפית.

מצפור הר אבנון, ליד ירוחם (1991-94) הוא עצמו חלק מהמדבר. תמציתית במובנים רבים, התצפית היא תצפית פשוטה ומינימלית, הצהרה על חיבתו המתפתחת של דקל כלפי הנוף הזה. העיצוב הפשוט אך המתוחכם פועל כקשת, מכבד מראה שיש לגעת בו באופן מינימלי.

ממצאי מחקר זה מצביעים על כך שעם השנים דקל פיתח שפה אותנטית יותר כלפי הנוף הצחיח. בהשפעת הרוח הציונית שגדל ומהגישה שפגש ופעל בברזיל הטרופית, תפיסתו את אדריכלות הנוף במדבר היא לא רק מודרנית, אלא גם מקומית, תורמת להיווצרות אדריכלות הנוף בישראל משנות ה-60 ועד היום ותפקידו ברעיונות המתפתחים של נוף המדבר.

מילות מפתח

צבי דקל ;רוברטו בורלה מרקס; אדריכלות נוף; לאומיות; ברזיל; ישראל; אדריכלות נוף מודרנית; אדריכלות נוף מידברית.

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הנחיה

המחקר נעשה בהנחיית פרופ"ח נורית ליסובסקי בפקולטה לארכיטקטורה ולבינוי ערים בטכניון – מכון טכנולוגי לישראל.

תמיכה כספית

אני מודה לפקולה לאדריכלות ולבינוי ערים, לבית הספר ללימודי מוסמכים בטכניון והקרן הלאומית למדע מילגה מס' 953/18 על התמיכה הכספית בהשתלמותי.

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שבט ה׳תשפ"ב חיפה ינואר 2022

בני גולצמן ברזילאי

לשם מילוי חלקי של הדרישות לקבלת התואר מגיסטר למדעים באדריכלות נוף

חיבור על מחקר

טרופיקליזם צחיח: בין ברזיל וישראל. עבודות המדבר של צבי דקל והשפעתו של רוברטו בורלה מרקס