

Introduction: Architecture Is Not a Horse

This book was motivated not so much by what I knew about the architecture of Louis Isadore Kahn, but rather by the many questions it raised. Veiled in an intriguing obscurity, the American architect's œuvre seemed replete with paradoxes both in its theory and practice, while its spatial richness was difficult to grasp. Moreover, Kahn's strange life story demanded answers: how was it possible that one Leiser-Itze Schmuilowksy – a Jew born in Estonia in 1901, who immigrated to the United States at five years of age and was raised, at least from a material perspective, in poverty, but who showed an early artistic talent and fascination for architecture – could realize his first mature project at the unusually late age of 50, and then, within the next two decades, as the result of an exceedingly productive period, flourish into a living paragon and one of the first globally active architects of the 20th century? From an educational perspective, how did he, considered by some the last “heroic architect” and “master,” as a teacher inspire a whole generation of laudable architects? What did one of these successors, Charles Moore, mean when he remarked that Kahn in a “kind of rabbinical sense [...] was the grand bearer of a sacred architectural message [...]”?¹ In terms of his buildings, what were the principles he employed to make his architecture endure as a Stoic point of order within the apparently unstoppable flux of daily life? What were his reasons for poetically employing wind, light, water and earth to manifest an elemental architectural reality that increasingly seems lost in the virtual realms of digital technology? How could he be original in both the sense of going back to historical sources and of transcending these to invent something new?

More questions like these could be added, and the few answers I present here only make evident that Kahn purposefully resisted the temptation to make everything explainable. Insistently, a certain mystery prevailed in his works, an inscrutable aura causing astonishment and wonder. Consequently, Kahn's architecture in many ways defies categorical classification, since it possesses manifold dimensions transgressing geographical, historical, and cultural barriers. Essentially, this concealment – and at the same time, this candor – offers a plurality of possible readings and interpretations. One, namely the argument that not only the past, but also nature inspired his creations occupies the center here. Returning to *beginnings* in both architectural and natural terms, I interpret Kahn's buildings as the result of a general pursuit to comprehend the lawfulness of the natural world; I scrutinize his endeavor to put spatial compositions into an analogy with organisms' principles of growth and form; I illustrate his engagement with the elements and environmental forces to empower the inert materials of his structures and *vice versa* to unveil the world through the

¹ From unpublished notes for the publication of Richard Saul Wurman, (ed.), *What Will Be Has Always Been: The Words of Louis I. Kahn* (New York: Rizzoli, 1986); Cf. 288.1.106, RSWC.

architectonization of nature; furthermore I exemplify Kahn's increasing willingness to make the surrounding landscape and cosmos an integrated part of the architectural project. On a more theoretical level, I reflect on Kahn's ambiguous attitude with regard to man's position within and beyond nature.

Naturally, the use of nature as an interpretative instrument does not limit the possible interrogations. *Nature*, a term of very uncertain extent, encompasses a polyphony of meanings ranging from the atomic to the cosmic, the scientific to the spiritual, the formal to the conceptual. It is from this uncertainty – this tendency to change like water – that nature derives its peculiar appeal, which, since time immemorial, has inspired the most adventurous attempts to gain fresh insights into its workings. Because this dialogue between man and the universe is boundless, the aspects of nature presented here might rather be considered *particles*, since every gaze at the stars and each stroll through the fields only reveals the fragmentary character of the knowledge presented here. By implication, it also goes without saying that an investigation like this can in no way be exhaustive and is necessarily selective. At the same time, though, no unifying theory concerning the relationship of Kahn's architecture with nature has yet been written. This is not surprising in light of the abstract naturalism of Kahn's built oeuvre, which only at second glance reveals itself as more empathic. However, it is quite astonishing considering the architect's extensive use of the term "nature" and related metaphors in his theory.

Because of the frequent application of natural terminologies and allusions, practically every scholar tackling Kahn has unavoidably also targeted my central topic – a particularly strong focus has been placed on the relationship of Kahn's architecture with natural light, his humanist understanding of geometry and nature, and more recently the "grounding" of his works in the land. Incorporating and extending these studies, however, my analysis is more inclusive and unitary. The research is based to a large degree on a re-evaluation of Kahn's archival material at the Architectural Archives of the University of Pennsylvania, as well as that of some of his collaborators and close colleagues, including Anne Griswold Tyng, Robert Le Ricolais, August E. Komendant, Ian L. McHarg, George E. Patton, Luis Barragan, Robert Venturi and Denise Scott Brown. Additional oral information has been gained from the latter, as well as from Carlos Vallhonrat, Blanche Lemco van Ginkel, Balkrishna V. Doshi, and Harriet Pattison. Many phenomenological aspects could only be experienced in reality, and it was important, thus, to visit a vast majority of the discussed projects *in situ*.

Every attempt to generate new meanings from Kahn's buildings will ultimately not interfere with their present capacity to act as central institutions in the lives of many people. However, historical vision allows relating occurrences that in reality might not have been consciously linked, and beyond a narration of past facts and

events, historical writing is unavoidably also a constructive and creative act.² In this sense, I deliberately tried to follow T. S. Eliot's advice that "[t]he past should be altered by the present as much as the present is directed by the past."³ My aim, too, was not merely to present an appraisal of a great architect, but also to deduce in the light of one historic example more general, practical axioms concerning the complex juxtaposition of architecture and nature. In this regard, and based on the hypothesis that man's existential encounter with the natural cycles and elements remains quite constant over time, the present deliberations are also an appeal for an ecologically sound, down-to-earth approach, which takes into account passive strategies, the impulse of the primitive, and works *with* natural energies rather than against them. Concerning such general considerations, Vincent Scully, Kahn's first biographer, noted:

Indeed, the relationship of manmade structures to the natural world offers [...] the richest and most valuable physical and intellectual experience that architecture can show, and it is the one that has been most neglected by Western architectural critics and historians.⁴

From a practical standpoint, human constructive activity has been in relation to nature since its beginnings, both in terms of *connection* when seeking to employ the larger environmental forces to ameliorate a building's microclimate, and *opposition* when exploiting nature's material basis. The very act of building, the setting of the foundations, supposes a connection with, but also a destruction of, the given land. Like mountains, the roof and walls help the rainwater to descend, perforations block or channel the breeze, and louvers shield or welcome the sun's rays. It is important, however, not to abuse nature semantically when setting it into relation with architecture: as much as a building might be envisioned to function like an organism, in which no element can be eliminated without making the entire system fail; as much as an edifice might, in terms of energy use, function self-sufficiently like a plant, a building is ultimately not an organic being. Animals are mobile because of their need for food, but a house rarely moves. Plants, in most cases, possess such small dimensions and great resilience in supporting their own weight that, unlike buildings, they are practically insensible to the effects of seismic force.

Yet, the main difference between a building and an organic configuration is their varied *modus* of animation. When animal bones break, they tend to knit together on their own, whereas the structure of a building does not mend itself after collapse. In

² Similarly George Kubler noted: "The historian communicates a pattern which was invisible to his subjects when they lived it, and unknown to his contemporaries before he detected it." Kubler, *The Shape of Time: Remarks on the History of Things* (New Haven: Yale University Press, 1962) p. 13.

³ T. S. Eliot, "Tradition and Individual Talent" (1919), in Eliot, *Selected Essays* (New York: Harcourt, Brace & World, 1964) p. 5.

⁴ Vincent Scully, *Architecture: The Natural and the Manmade* (New York: St. Martin's Press, 1991) p. xi.

other words, animals and plants are self-activated, whereas a building does not come into being by itself. A building does not grow, since it possesses no innate vital power that stimulates and controls its development. Closely linked with this differentiation is the epistemological meaning of the term *nature*, deriving from the Greek *physis*, literally “to bring forth,” “produce,” or “make to grow.” Similarly, in Latin, the term *natura* derives from *natus* or *nasci*, again both implicating birth and origin. This focus upon an inner, organic dimension stands in clear contradiction to the more common use of *nature* today delineating a set of outer, hybrid artificial-natural environments.

All these issues will be discussed in further detail in the main part of this book, which is structured into the four sections of Optimization, Organization, Adaptation and Expression. Following a chronological order, each one addresses a different perspective of Kahn’s changing comprehension of nature. In an add-up process the principles employed earlier will not be neglected later, but in a synthetic manner lead to a more holistic recognition of the term’s complexity. At the outset, *Optimization* deals with Kahn’s premature phase; it culminates in the discussion of the Yale Art Gallery and his proposal for a helical City Tower in Philadelphia. Reduced to a mechanism, nature, oversimplified and abstracted, appeared as an all-knowable entity. The architectural project resulted from the attempt to make its all-pervasive order and eternal striving for economy applicable in the practical realm. Kahn’s idea of optimization did not imply repeating nature’s superficial appearance, but rather decoding and employing its inherent laws of creation.

Organization, which centers on the design of the Trenton Bath House and ultimately coalesces in the Richards Medical Research Building, focuses upon compositional questions. Acknowledging nature’s hierarchical ordinance, it reveals a shift from a universal to a more individuated space conception. No longer appear Kahn’s designs as merely efficient from a structural perspective; now, they also achieve spatial optimization following the imperatives of an orthodox Functionalism and its pursuit to articulate a space’s inner character. At the same time, the humanist conception of the system as a whole, where “served” and “servant” spaces were mutually interlinked, was paralleled by Kahn’s interest to use geometry as a mediator between the micro- and macrocosm. Notably, this return to classical precepts was extended to the treatment of the larger environment as well, while theoretically the perception of nature as a mere instrument collided with its appreciation as a conscious living thing.

Adaptation, targeting issues of contextual and environmental integration, pays tribute to the formative design agencies effective from without. As form changes with changing conditions, Kahn’s buildings as a geological and climatic reality began in the early 1960s to merge more intimately with the given constraints. Analyzing the crucial development of the *second wall*, the chapter pinnacles in the discussion of the Salk Institute, where Kahn paradigmatically manifested architecture’s power to bring nature to presence. Besides, this chapter helps situate Kahn’s development in a larger historical context without diminishing his ability to formulate a highly personal idiom

of spatial articulation. While the period saw the decline of Modernism and the search for alternatives by the members of Team X, it was also a time of growing ecological awareness. For many it became evident that mankind's power to change the face of the earth had increased faster than its understanding of the manipulations' profound effects.

Expression, following and further developing the directives of *Adaptation*, deals in many ways with that which nature is not: it targets the particular human capacity to make architecture with all its implied meanings and metaphors plumb the unfathomable depths of the mind. Most vividly expressed in the design of the National Assembly in Dhaka and the Hurva Synagogue in Jerusalem, this chapter illustrates Kahn's ambition to create buildings that were more than a sole fulfillment of utilitarian needs but relevant to people on a collectively-unconscious level. Attempting to stir the emotions, Kahn did not seek self-expression, however, but abrogated his own preferences by following the natural flow of things to express a sense of in-commonness. In that vein, lastly also Kahn's enigmatic comprehension of "light" as "the source of all being" in contrast to "silence" is being examined.

Transferring from theme to thesis, I argue that nature was an essential counterpart to Kahn's work, which, reciprocally involved with the built structure, activated the latter, while it was also itself in this process of domestication raised to a higher level of consciousness in man's perception through it. Offering a kind of Rosetta stone to decipher Kahn's philosophical statements, this focus upon nature shows that his comments were not the expressions of a romantic mystic, but often paraphrased contemporary scientific thought. Bridging the opposition between confronting and participating in nature, Kahn sought to logically integrate nature's laws of creation while believing in a holistic interconnectedness of all life. At the same time, however, he acknowledged that only mankind, endowed with the faculty of choice and judgment, could appreciate the beauty of a flower or gleaming sunset. In sum, Kahn's architectonization of nature did not invent, but rather transform reality through the establishment of carefully calibrated spatial frames that staged the cosmic spectacle we witness every day.

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