Notes from Volume Zero: Louis Kahn and the Language of God
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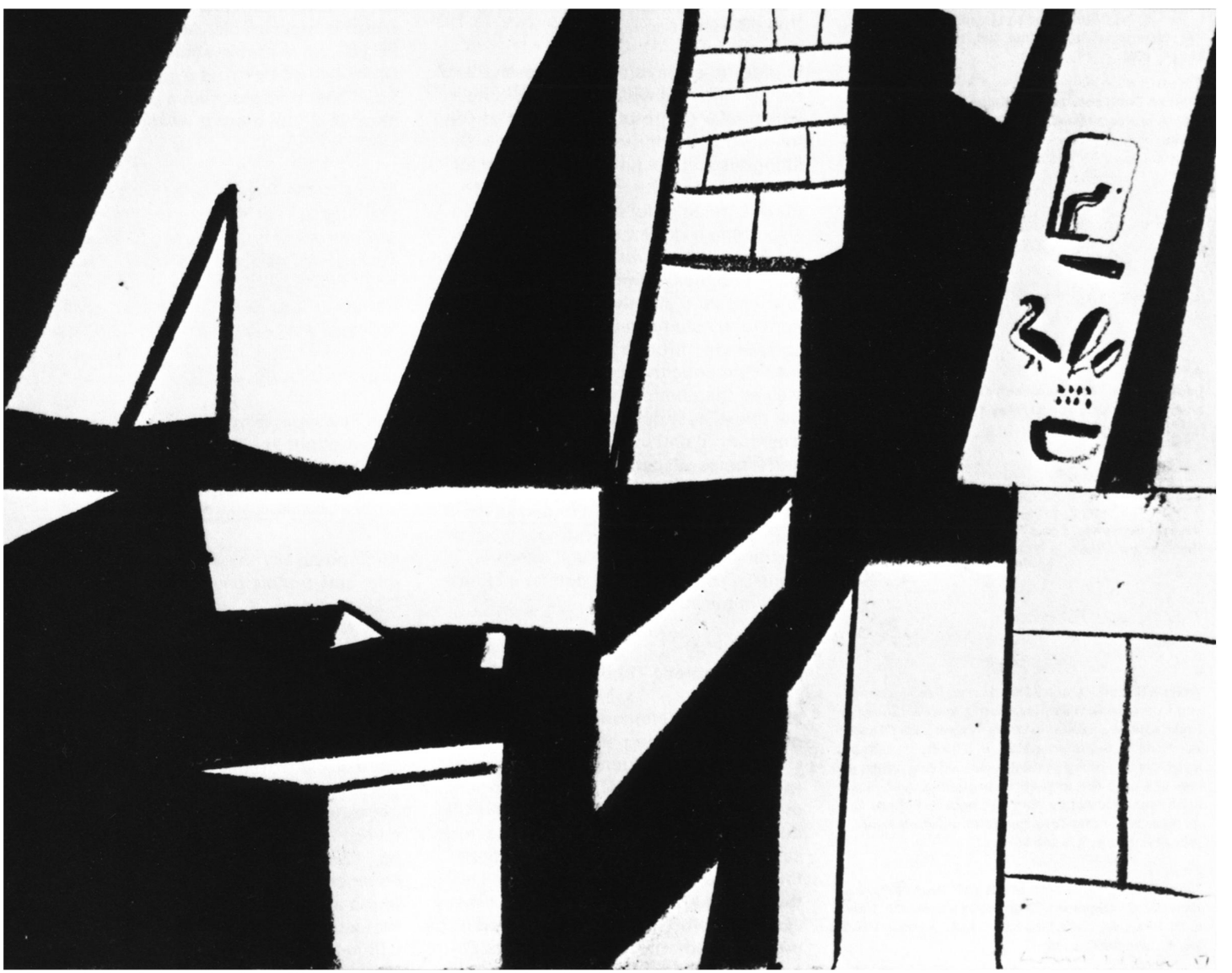
Notes from Volume Zero: Louis Kahn and the Language of God



Louis Kahn, "Detail-Mural (Mural Based on Egyptian Motives)", 1951.

Perspecta: The Yale Architectural Journal, Volume 20 0079-0958/83/20069-022$3.00/0

The architecture of Louis I. Kahn speaks of timeless human needs, psychic, as well as physical, through a consciously inscribed universal language. Kahn tersely summarized this particular collective aspect of his architecture in the following aphorisms:

> Art is the language of God.[1]
> The only language of man is art.[2]

In order to achieve these expressive ends, Kahn embodied within his work images which refer to prototypical forms of communication, both mortal and divine. By lifting his architecture into the realm of the absolute, Kahn evidently hoped to make a meaningful architecture expressive of the requirements of the human soul (psyche), as well as of human physical necessities. Kahn's aesthetic interest in a language of universal creative power apparently stems in part from a contact early in life, through his mother, with German Romantic thought. The Romantics viewed the poet or the creative artist as the priestlike mouthpiece of deity, a doctrine formulated in the late eighteenth and nineteenth centuries from a synthesis of several mystical traditions, largely derived from the European Renaissance. It is in this sense–art manifesting divine revelation–that this article will interpret Kahn's aesthetic theory and its architectural application.

Kahn's Aesthetic Theory

In order to understand how Kahn expected the meaning embodied in his architecture to be understood, it is helpful to look at his aesthetic theory pronounced over the last twenty-five years of his life during the late bloom of his architectural career. This assumes that his aesthetic theory was not formulated during the last third of his life, but that it was an already existing mature philosophy, recalled from memory, and only re-articulated in lectures and writing. The influence of Romantic ideals upon Kahn's thought will be discussed later.

Kahn founded the expressed meaning of his art upon what he called "Order" and "Form." Order, for him, is all inclusive and self-evident. He explained:

> I came to a statement that "order is" because I could never write what it is . . . I made a long list of what I *thought* it was. And when I threw the list away, "order is" remained. It sort of included everything by not trying to say what it is. That word "is" has a tremendous sense of presence.[3]

Order contained his *Weltanschauung*, a cosmology that encompasses two aspects of being, the inner realm of the soul (Psyche), which is immeasurable, and the outer realm of the phenomenal world, which is measurable. According to Kahn, Psyche, an ineffable source underlying Order and all being, is a kind of "World Soul" that possesses an a priori "Existence Will," an eternal *willing to be*. He said:

> I think of the Psyche as being a kind of prevalence–not a single soul in each of us–but rather a prevalence from which each one of us always borrows a part . . . and I feel that this psyche is made of immeasurable aura, and that physical nature is made of that which lends itself to measurement. I think that Psyche prevails over the entire universe. . . .[4]

The Psyche is expressed by feeling and also thought and I believe will always be unmeasurable. I sense that the psychic Existence Will calls on nature to make what it (Psyche) wants to be.[5]

Kahn poetically described the inexpressible, undefinable nature of Psyche as "Silence" and "Volume Zero," an imaginary record of soul, the primal book before all books where Existence Will is inalterably inscribed forever.[6]

The a priori Existence Will within Psyche, Kahn explained, is the beginning of "Form . . . a world within a world."[7] Form is a psychic predisposition *to be* and consists of inseparable abstract elements which invoke a nature, "what a thing wants to be."[8] Being immeasurable in essence, it is never completely realized in concrete terms and, thus, it has an infinite potential for expression. When it manifests itself within the boundaries of the phenomenal world, it takes on a circumstantial aspect reflecting in its physical appearance the situation of its occurrence at a particular place at a particular time: "For example," he said:

> . . . in the differentiation of a spoon from spoon, spoon characterizes a form having two inseparable parts, the handle and the bowl. A spoon implies a specific design made of silver or wood, big or little, shallow or deep. Form is 'what.' Design is 'how.' Form is impersonal. Design

3
"The Mind of Louis I. Kahn," *Architectural Forum*, Vol. 137, No. 1, July/August 1972, p. 46.

1
Louis I. Kahn, "Space and the Inspirations," *l'Architecture d'Aujourd'hui*, Vol. 142, February/March, 1969, p. 13.

2
John W. Cook and Heinrich Klotz, *Conversations with Architects* (New York: Praeger Publishers, 1973), p. 183.

4
Louis I. Kahn, "A Statement by Louis I. Kahn," *Arts and Architecture*, Vol. 81, May 1964, p. 19.

5
Vincent Scully, Jr., *Louis I. Kahn* (New York: George Braziller, Inc., 1962), p. 118.

6
William S. Huff, "Louis Kahn: Sorted Recollections and Lapses in Familiarities", *Little Journal* (Society of Architectural Historians, Western New York Chapter) Vol. 5, no. 1, September 1981, p. 6. Huff: ". . . [Kahn] loved the beginning of things. He said that, when you look at a problem, look at the beginning. And, in the history of architecture, don't go back to Volume One; go back to Volume Zero. For Volume Zero is what precedes shape, it is the source."

7
"Louis I. Kahn Talks with Students," *Architecture at Rice, No. 26* (Houston, Texas: Rice University, 1969), p. 24. See also, Louis I. Kahn, *A. I. A. Journal*, Vol. 33, No. 6, June 1960, p. 99.

8
Scully, pp. 114–115.

belongs to the designer. Design is a circumstantial act, how much money there is available, the site, the client, the extent of knowledge. Form has nothing to do with circumstantial conditions.[9]

The human soul also partakes of Form, he explained, through one's sharing in the pervasive World Psyche, terming its universal attribute as "commonality," "commonness," and "human agreement."[10] It expresses its Existence Will within the limiting constraints of time and space as "nature" through unconscious and conscious agencies called "instruments," and at other times, "singularities."[11] Hence, according to Kahn, Form is revealed unconsciously in nature through the singularity of light, the sun:

The sun is the threshold where the urges arise to express, it is the source of energy and all present.[12]

The sun is,
thus the universe.[13]

and through the instrument of the individual human psyche:

The mind is the soul, the spirit and the brain, the brain is purely physical.

That is why a machine will never be able to compose Bach.

The mind is really the center of the unmeasurable, the brain is the center of the measurable.

The soul is the same in all. Every mind is different. Every one is a singularity.[14]

Humanity as the conscious instrument of Psyche extends through its "institutions," such as art, religion, and education, the immeasurable quality of the Existence Will beyond that of nature.[15] This is because humankind serves Form consciously and therefore has choice.[16] Thus, in Kahn's sense of Order, the phenomenal world descends from the nonphysical world of Form expressing its will to be through unconscious and conscious instrumentalities. He summarized this in poetic imagery as the metamorphoses between Silence and Light:

Silence to Light
Light to Silence
The threshold of their crossing
is the Singularity
is the Inspiration
(where the desire to express
meets the possible)
is the Sanctuary of Art
is the Treasury of the Shadows
Material cast shadows,
shadows belong to light.[17]

This brief survey of Kahn's concept of Form and its central position in his world view facilitates an understanding of the means through which he intended to imbue his architecture with meaning and value. His aesthetic theory is primarily this: a language held in common indicates meaning through a system of shared signifiers.[18] In his own words, "Art is man's only real language since it strives to communicate in a way that reveals the 'human' and that the will to be (the Existence Will) in man is really the will to express."[19] Consequently, he founded his art upon Form and its universal nature grounded in being. Through the means of this timeless, nonpersonal essence, art awakens and intensifies the memory of Form lodged within every human soul, making the invisible, visible:

When a great composition again presents itself, it is as though someone you know well entered the room, someone you still had to see again to know. Because of its unmeasurable qualities it must be heard and again heard.[20]

Therefore, in Kahn's aesthetic theory Form is not only the means–*it is the message, the meaning of his art*.

To render Form visible, he suggested the symbolic image as the vehicle through which a work of art intimates psychic meaning that transcends its own physical presence:

An architect . . . is an artist in addition to being a professional man. But first let me explain what an artist is . . . Giotto was a great artist because he understood the realm of his art. He wasn't afraid to paint black skies in the daytime, people bigger than a building, birds that couldn't fly and dogs that couldn't run. His people weren't even people . . . but they are in their proper relation for the allegory. . . . They are related story-wise. . . . In the same way, a successful architect must understand his art, must command his medium.[21]

He also explained that symbolic architectural images were intrinsically more subtle and disciplined than images in the

9
Scully, p. 115.

17
Wurman and Feldman, *Notebooks and Drawings*.

10
McLaughlin, p. 19. See also, Louis I. Kahn, "Louis Kahn, Silence to Light," *Architecture and Urbanism*, No. 73:01, January 1973, pp. 11–19.

18
Myron Goldfinger, *Villages in the Sun* (New York: Praeger Publishers, 1969), p. 7.

11
Louis I. Kahn, "Remarks," *Perspecta 9/10*, 1965, p. 305. See also, H. Ronner, S. Jhaveri and A. Vasella, *Louis I. Kahn Complete Works*, 1935–74 (Boulder, Colorado, Westview Press, 1977), p. 447.

19
Louis I. Kahn, personal notebook, K 12/22, c. 1959.

12
August Komendant, *Eighteen Years with Architect Louis I. Kahn* (Englewood, N.J.: Aloray Publishers, 1975), p. 183.

13
Louis I. Kahn, "Twelve Lines," *Visionary Architects*, catalog to the exhibit, University of St. Thomas, Houston, Texas, 1969, p. 9.

20
Louis I. Kahn, *l'Architecture d'Aujourd'hui*, p. 14.

14
Louis I. Kahn, "Statements on Architecture," *Zodiac 17*, 1967, pp. 55–57.

15
John Lobell, ed., *Between Silence and Light* (Boulder, Colorado: Shambhala Publications, Inc., 1979). Louis Kahn in the 1973 Pratt Institute Lecture, p. 44: "Institution stems from the inspiration to live. This inspiration remains meekly expressed in our institutions today. The three great inspirations are the inspiration to learn, the inspiration to meet, and the inspiration for well-being. They all serve, really, the *will to be, to express*. This is, you might say, the reason for living. All the institutions of man, whether they serve man's interest in medicine, or chemistry, or mechanics, or architecture, are all ultimately answerable to this desire in man to find out what forces caused him to be, and what means made it possible for him to be."

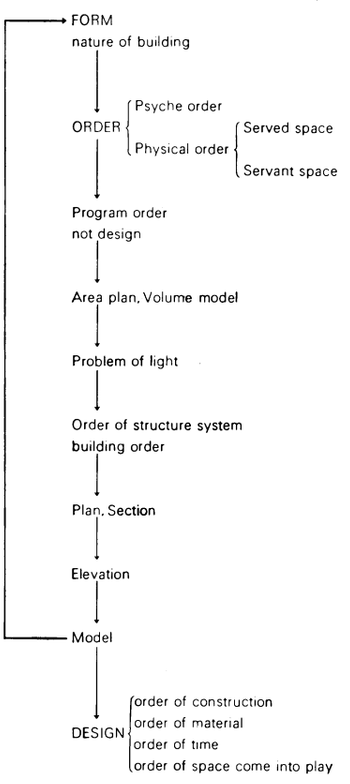
16
Richard Saul Wurman and Eugene Feldman, eds., *The Notebooks and Drawings of Louis I. Kahn* (Philadelphia, Pa., Falcon Press, 1962), p. 5.

21
Carol E. Kleckner, "Louis Kahn Explains Esthetic Theories," *The Philadelphia Inquirer*, 30 August, 1959, p. 6D.

other arts because of the complex, pragmatic nature of architecture:

> Another aspect (of architecture) is training a man (the architect) *to express himself*. This is his own prerogative. He must be given the meaning of belief, the meaning of faith. He must know the other arts. . . .
>
> The sculptor can place square wheels on a cannon to express the futility of war. An architect must use round wheels ("if he wants to bring his stone from place to place"), and he must make his doorways bigger than people. But architects must learn that they have other rights . . . their own rights. To learn this, to understand this, is giving the man the tools for making the incredible, that which nature cannot make. The tools make a *psychological validity*, not just a physical validity, because man, unlike nature, has choice.[22]

Thus, the architect, according to Kahn, must integrate the symbolic, "psychological" ideas of a work within the physical constraints of structural and functional requirements. He diagramed, in a figure published in 1973,[23] this subtle overlay of the psychic and physical aspects of Order reconciled within his architectural imagery (figure 1).



1
Louis Kahn, diagram of the realization of Form.

Romanticism and the Language of God

Kahn's interest in an allegorical script of intrinsic, universal meaning stems most likely from a long lived Neoplatonic tradition concerning the Egyptian hieroglyphic.[24] This Graeco-Roman lore revived by German Romanticism in the late eighteenth and early nineteenth centuries accounted that the Egyptians had invented writing in the beginning and that their hieroglyphics were visual analogues of the Platonic ideas–reflecting Plato's philosophy that the phenomenal world, language, and physical beauty are poor copies of the archetypal realm of the ideas–Plato's word "idea" meaning in Greek "form," but *form seen only by the mind's eye*.[25] Six hundred years later Plotinus, the founder of Neoplatonism, wrote in "On the Intellectual Beauty" that by speaking directly to the mind's eye, the hieroglyphic expressed philosophical concepts in one intuitive glance and not discursively. Although historically Plotinus, in conjunction with Plato, gave the hieroglyphic its aesthetic-philosophical nuance, Leone Battista Alberti during the Renaissance is credited with helping to establish it in Western art as a universal and timeless iconography. In *Book Eight* of his *Ten Books of Architecture*, a book dealing with ornament, he writes:

> The Aegyptians employed Symbols in the following Manner: They carved an Eye by which they understood God; a Vulture for Nature; a Bee for King; a Circle for Time; an Ox for Peace, and the like. And their Reason for expressing their Sense by these Symbols was, that Words were understood only by the respective Nations that talked the Language, and therefore Inscriptions in common Characters must in a short Time be lost; as it actually happened to our *Etruscan* characters: For among the Ruins of several Towns, Castles and Burial-places, I have seen Tomb-stones dug up with Inscriptions on them, as is generally believed, in *Etrurian* characters, which are like both those of *Greek* and *Latin*; but nobody can understand them: And the same, the Aegyptians supposed must be the Case with all Sorts of Writing whatsoever; but the Manner of expressing their Sense which they used upon these Occasions, by Symbols, they thought must always be understood by ingenious Men of all Na-

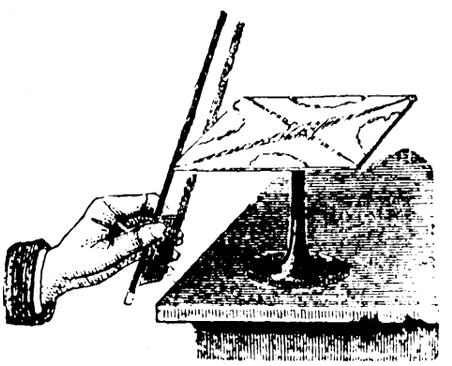
24
George Boas, *The Hieroglyphics of Horapollo* (New York: Pantheon Books, 1950). See also, Liselotte Dieckmann, *Hieroglyphics, The History of a Literary Symbol* (St. Louis, Missouri: Washington University Press, 1970). See also, E. H. Gombrich, *Symbolic Images* (New York: Praeger Press, 1972).

25
Sir William David Ross, *Plato's Theory of Ideas* (Oxford: Clarendon Press, 1961), pp. 40–43.

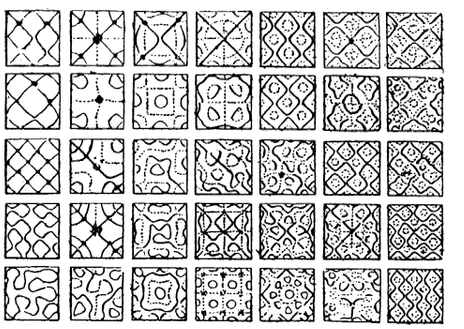
22
Ronner, Jhaveri and Vasella, p. 447.

23
Louis I. Kahn, *Architecture and Urbanism*, p. 47.

2
Johann Casper Lavater, physiognomic studies, 1778.



3
Chladni sound plate vibrated by bow.



4
Chladni figures formed by vibrations of differing wavelengths.

tions, to whom alone they were of Opinion, that Things of Moment were fit to be Communicated.[26]

Later in the Italian Renaissance, Pico della Mirandola combined the pagan concept of the hieroglyphic with a Christianized form of Jewish mysticism, the *kabbalah*. It was a reunion of sorts as the kabbalah, largely an oral tradition, possesses classical origins associated with Neoplatonism.[27] It taught that God created the material world through the instrumentality of the Hebrew alphabet and according to the *Sepher Yetzira*, a primary document of the kabbalah translated as the *Book of Creation* and sometimes as the *Book of Nature*, God bestowed upon each individual letter a particular form, weight, and number. Through the combinations and permutations of the Hebrew alphabet in the "Word" of God, the origin of all languages as well as the phenomenal world with its living creatures were manifested. Pico believed Hebrew to be the first primitive language of humankind *and of Nature* and that Adam, using this divine language inspired by God, named all of creation in agreement with its manifested inner natures. He also believed that Abraham took this wisdom to Egypt, from which the Egyptians created their hieroglyphics. Thus Moses, learning this pictographic writing from his adopted race, wrote *Genesis*, "The Story of Creation" using a script derived from kabbalah.[28] In the sixteenth century after Pico, especially in Germany,[29] the letters of the Hebrew alphabet and their kabbalistic interpretation also became viewed as "heiroglyphics" inscribed in the *Bible* and throughout nature.

Reviving these earlier mystical interpretations at the end of the eighteenth century, the German Romantics, in revolt against the rationalism of the French-led Enlightenment, again elevated the hieroglyphic to an honored place in modern philosophies of beauty. During this period, it began to lose its Egyptian cast and came to be seen more in the physiognomic light of Romantic natural philosophy, the phenomenal world being identified as a vast, sacred tome, sometimes called the "Book of Nature," filled with natural "hieroglyphics" of God's Word. The analysis of handwriting, phrenology, and the physiognomic studies of Lavater (figure 2), were all understood to be such "signatures" of God's self-expression, as were the physiognomies of the mineral, plant, and animal worlds.[30] Likewise the phenomena discovered by E. F. F. Chladni in 1787 of two-dimensional sound figures left by a vibrating bow when it struck the edge of a fixed plate covered with iron filings (figures 3, 4), were considered to be natural hiero-

28
Dieckmann, *Hieroglyphics*.

26
Leone Batiste Alberti, *The Ten Books of Architecture*, ed. Joseph Rykwert, trans. James Leoni (London: Alec Tirante Ltd., 1955) Book VIII, Chapter IV, p. 169.

29
Joseph Leon Blau, *Christian Interpretation of the Cabala in the Renaissance* (New York: Columbia University Press, 1944). See also, Frances Yates, *The Occult Philosophy in the Elizabethan Age* (Boston: Routledge and Paul, 1979).

27
R. Baine Harris, *The Significance of Neoplatonism* (Norfolk, Virginia: Old Dominion University Press), pp. 14–15. See also, Gersham G. Scholem, *On the Kabbalah and Its Symbolism*, trans. Ralph Manheim (New York: Schocken Books, 1960). See also, Arthur Edward Waite, *The Doctrine and Literature of the Kaballah* (London: The Theophysical Publishing Society, 1902).

30
Alexander Gottfried Friedrich Gode-Von Aesch, *Natural Science in German Romanticism* (New York: Columbia University Press, 1944), pp. 217–239.

glyphics.[31] Somewhat similarly, the theory of artistic genius formulated by the Romantics is aligned with the idea that the creative artist is a prophet, an expressive instrument enunciating God's Word. As man created in God's image speaks like God through the self-expression of his art and times, the Romantics also believed that the history of man, his religious myths, and sacred literature, could all be interpreted allegorically as hieroglyphics. It was this idea that caused them to investigate traditional forms of human culture and aesthetic expression other than Graeco-Roman ones. They especially delighted in the study of less sophisticated, primitive cultures (chronologically and culturally) seeing them as untainted by too much civilization and being in greater harmony with nature, and hence, God.[32]

German Romanticism was to dominate Western art, as positivism and materialism were to dominate science, during the entire nineteenth century, spreading to England, France, and America. At the end of the nineteenth century, an avant-garde, Neo-Romantic movement, Symbolism, which included the notion of the hieroglyphic, was again in full swing throughout Europe and America, protesting the purely materialistic and rational attitudes of much mid-nineteenth century bourgeois culture based upon the Industrial Revolution. This Neo-Romantic thought contributed fundamentally to the character and development of modern twentieth century art up until the mid-twentieth century.[33] The hieroglyphic also entered the twentieth century through the psychoanalytical theories of Sigmund Freud and C. G. Jung, maturing in an environment strongly stimulated by German Romanticism and its concept of the "unconscious."[34] These early pioneers of a contemporary theory of the human soul interpreted the unconscious material generated by the human psyche as a universal pictorial writing like so many "hieroglyphics." Freud, who based his psychoanalysis of patients upon the interpretation of their dreams, writes in an article entitled "The Philological Interest of Psycho-Analysis":

> I shall no doubt be overstepping common linguistic usage in postulating an interest in psychoanalysis on the part of philologists, that is of experts in *speech*. For in what follows "speech" must be understood not merely to mean the expression of thought in words but to include the speech of gesture and every other method, such, for instance, as writing, by which mental activity can be expressed. . . . When we interpret a dream we are simply translating a particular thought-content (the latent dream-thoughts) from the 'language of dreams' into our waking speech. In the course of doing so we learn the peculiarities of this dream language and it is borne in upon us that if forms part of a highly archaic system of expression. . . . Another striking feature of our dream-language is its extremely frequent use of symbols, which make us able to some extent to translate the content of dreams without reference to the associations of the individual dreamer. . . . They are in part substitutes and analogies based upon obvious similarities; but in some of these symbols the *tertium comparationis* which is presumably present escapes our conscious knowledge. . . .
>
> If we reflect that the means of representation in dreams are principally visual images and not words, we shall see that it is even more appropriate to compare dreams with a system of writing than with a language. In fact the interpretation of dreams is completely analogous to the decipherment of an ancient pictographic script such as Egyptian hieroglyphs. . . . The ambiguity of various elements of dreams finds a parallel in these ancient systems of writing. . . .[35]

Thus, over seventy five years after Champollion's translation of the Rosetta Stone, a long lived philosophical conceit survived and entered the twentieth century still retaining the power of its original vision–that hieroglyphics embody unchanging psychic essences of aesthetic virtue and share in a universal human language made up of timeless symbolic images.

The Romantic Mysticism of Louis Kahn

In examining Kahn's aesthetic theory pronounced over the last twenty five years of his life, a close parallel to late eighteenth and nineteenth century Romantic theories of language and art can be clearly observed. This Romantic tendency was first commented upon by August Komendant

31
Gode-Von Aesch, p. 220.

32
Eugene Elliot Reed, *The Civilized vs. Civilization, Primitivism in the Literature of German Pre-Romanticism* (Moscow, Idaho: University of Idaho Press, 1978). See also, Harry Levin, *The Myth of the Golden Age in the Renaissance* (Bloomington, Indiana: Indiana University Press, 1969).

33
Barbara Rose, *American Art Since 1900, A Critical History* (New York: Praeger Publishers, 1968).

35
John T. Irwin, *American Hieroglyphics* (New Haven, Connecticut: Yale University Press, 1980), p. 213.

34
Henri F. Ellenberger, *The Discovery of the Unconscious* (New York: Basic Books, Inc., 1970).

in his book, *Eighteen Years with Architect Louis I. Kahn*, where he suggested Schopenhauer as one of the possible influences behind his friend's thought.[36] In trying to locate the origin of Kahn's philosophy and aesthetic theory, the existing evidence strongly supports his mother, Bertha Mendelssohn Kahn, as his tutor and guide into a Romantic world view based largely upon German literary sources. This is suggested by the testimony of his family, friends, and colleagues as well as the evidence of his recorded statements, personal papers, and library. According to his family, Kahn was very close to his mother and throughout her life they spent time together in long conversation. A member of a large family of comfortable means, she was well educated as a young woman, being born and raised upon a large farm outside the city of Riga, the very old capital city of Latvia. The city possessed a population of over 200,000 and a sophisticated Western culture which had been dominated for centuries by aristocratic German, and later, Polish influences. Although the financial stability, advantages, and social prestige of her early life were to change drastically upon her arrival in America, the cultural advantages and ambitions of her more affluent background in Europe were passed on and encouraged in her children.

A strong Germanic character runs through Kahn's cultural inheritance from his ancestral background. His first spoken language was German, which he probably read.[37] During his upbringing, the family spoke only a "high, hard Berlin German" and some Yiddish at home, a residence located in a poor immigrant neighborhood of North Philadelphia largely made up of transplanted Germans, Lithuanians, and Russians. In this Germanic context, it is important to note the family tradition that Kahn's mother was related to Felix Mendelssohn (1809–1847), the Germanic Romantic composer, as well as the composer's famous grandfather, Moses Mendelssohn (1729–1786), the distinguished Jewish philosopher of the German Enlightenment. The family interest in music, with its implied Mendelssohnian tradition linked to Romantic Germany, ran deep and still does in its survivors. Bertha Kahn was a gifted musician, a harpist, and was credited by her son for his own developed appreciation and knowledge of music. He often used musical analogies in presenting his architectural thought, apparently the result of his training at home. It was in this German speaking environment that Kahn evidently learned of German Romantic thought, revived in the Neo-Romanticism of the late nineteenth century of avant-garde Europe and America. Mrs. Kahn was well-read, having studied literature as well as music as a girl; she continued to read a great deal, especially German literature studied in the original German. As family members attest, Goethe and Schiller were her favorite authors. Esther Kahn described her mother-in-law as an "expert upon Goethe" and also recalled Mrs. Kahn's literary interest in Nietzsche. William Huff, an office member, remembered that Kahn said his mother had "raised him upon Goethe." In a statement regarding his mother and Goethe, Kahn seemingly expressed the philosophical and literary character of his upbringing:

> I'm only reading Goethe now because I have a great reverence for a person who loved Goethe, and because I love this person I had to read it. Before this I struggled to read Faust page by page. I met Faust for the first time and discovered a wonderful thing: that Gretchen was more soul than body, that Faust was a balance between body and soul, and Mephistopheles was really all body, the body of man. He had no soul. Two people can't have the same sense of soul. The singularity is a soul and a body, though I believe that soul is a prevalence and that soul is the same in all, no different in anyone. The only difference is the instrument, our body, through which we express desire, love, hate, integrity, all the measurable qualities of soul.[38]

Evidently, Kahn's "raising" by his mother was one where he was taught the philosophical principles of this great German poet/philosopher/scientist whose Neoplatonic thought and natural philosophy played an important role in forming the idealistic and mystical visions of the pioneer of German Romanticism.[39]

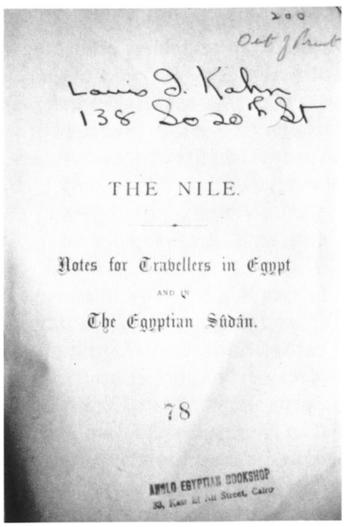
In addition to the strong German cultural current running through Kahn's background, a form of Jewish mysticism, most likely the kabbalah, appears to have come from this same maternal source. According to a story that Kahn told William Huff, his maternal grandfather, Abrahm Mendelssohn, was a "famous," well-beloved Jewish mystic and spiritual healer in Riga. Kahn reported that the entire city of Riga, Christian and Jew alike,

36
Komendant, p. 23.

37
According to Esther Kahn, several books printed in German in Kahn's personal library were gifts from his mother who read German. These literary gifts suggest that he did read German at one time.

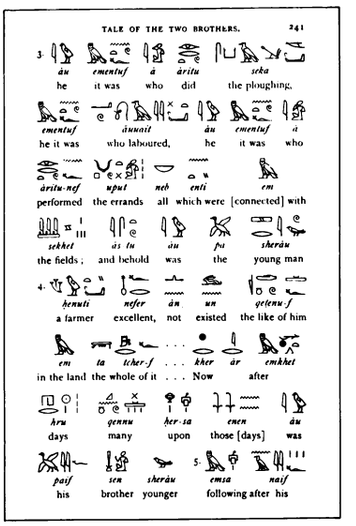
38
Ronner, Jhaveri and Vasella, p. 330.

39
Liselotte Dieckmann, *Johann Wolfgang Goethe* (New York: Twayne Publishers, Inc., 1974), p. 45.



5
E.A. Wallis Budge, *The Nile*, Kahn's personal copy.

had expressed their esteem for his mystic grandfather by burning candles in their windows on the evening of his death. He also told Huff, as well as Anne Griswold Tyng, that in Philadelphia his mother was considered the neighborhood counselor and "wise woman." They also related that Kahn said his mother had received a "healing secret" from her father at his deathbed which was to be revealed to Kahn on her own deathbed. Unfortunately, Kahn arrived in California from the East coast one hour after his mother's passing in 1958, never learning this promised secret. His sorrow about this tragic timing is probably part of the reason that Kahn broke his usual silence and revealed the mystical background of his inner life to members of his office.



6
Translation of Egyptian Hieroglyphs from *The Nile*.

Architecture as Logos

Considering his mother's deep-seated interest in German literature and her close relationship with her son, it seems reasonable that Kahn became acquainted with the Romantic mysticism of much eighteenth and nineteenth century German literature through her and not via English and French derivations. However such typical Romantic concepts entered his thought, they closely resemble the ideas that his mother would have known from her literary pursuits and her father's mysticism. For example, Kahn's primary notion of Form is like Plato's theory of the ideas, also well known in English by the term "Forms," as well as "Ideas."[40] His use of the word betrays a German origin. "Form" was preferred by Schiller to express ideal, abstract concepts instead of *gestalt*, which in German means "physical configuration, pattern, or shapes."[41] Nowhere is the Romantic nature of Kahn's thought made more evident than in his belief that Form manifests itself in the phenomenal world as the hieroglyphics of primitive languages, the *Bible*,[42] history, nature, psychology, and art. Proof of this Romantic belief is made explicit in his architecture by literal quotations of these notes from *Volume Zero*.

The Egyptian Hieroglyphics

There are several books in Kahn's library which demonstrate his interest in primitive (both chronologically and culturally) pictographic scripts, especially ones that deal with the interpretations of Egyptian hieroglyphics. The two most important of these being *The Nile*, an old travel guide of 1912 by an important early Egyptologist at the British Museum in London, E. A. Wallis Budge, and *The Pyramids of Egypt* by I. E. S. Edwards, also a noted Egyptologist of the British Museum. *The Nile*, a long favored book of Kahn's, according to his wife, was ornamented with a beautiful cover of golden hieroglyphics. Judging from the bookdealer's stamp on the title page (figure 5), he evidently purchased the book in Egypt in 1951 while acting as a tour guide to members of the American Academy in Rome where he was a resident professional.[43] Budge's book is full of diverse and admirable information and illustrations and presents a wealth of hieroglyphics translated into English. For example, it renders into English: archaic tales (one of these was bookmarked by Kahn, figure 6), hymns and prayers to the gods, and the names of Egyptian gods and Pharaohs. It includes various hieroglyphic lists dealing with particular subject matter, for example, celestial objects, objects of earth, objects of water, building types, parts of the body, animals, birds, fish, etc. Perhaps most interesting from a Romantic point of view, *The Nile* presents the phonetic equivalents of the English alphabet in hieroglyphics and Hebrew, thus uniting in a chart those intermingled traditions of the original divine language of man (Adam), Hebrew, and its first script, hieroglyphics. Several of his books compare other primitive scripts to the Egyptian one. For example, *The Nile* compares them to Chinese pictograms, *Egypt and Its Monuments*,[44] compares them to Mexican Indian picture

43
American Academy in Rome Report 1943–1951 (New York: Spiral Press, 1951), pp. 17–20.

40
Ross, p. 41.

41
Friedrich Schiller, *On the Aesthetic Education of Man*, eds., F. M. Wilkinson and L. A. Willoughby (Oxford: Clarendon Press, 1967), pp. 308–310.

42
"The Architectural Metaphysics of Louis I. Kahn," *New York Times Magazine*, 15 November 1970, p. 78. Kahn: "I regard the *Bible*, like other religious writings as a well-source of art."

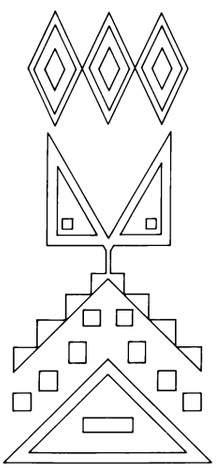
44
E. A. Budge, *The Nile, Notes for Travellers in Egypt and the Egyptian Sudan*, 12th ed. (London: Thomas Cook and Sons, 1912); Francis Lister Hawks, *Egypt and Its Monuments* (New York: Putnam, 1850).

7
Chinese picture writing and later conventional characters from Hutton Webster, *Early European History*.

8
Illustration from Joseph Epes Brown, *The Sacred Pipe*.

9
Illustration from Tseng Yu-ho Ecke, *Chinese Calligraphy*.

9



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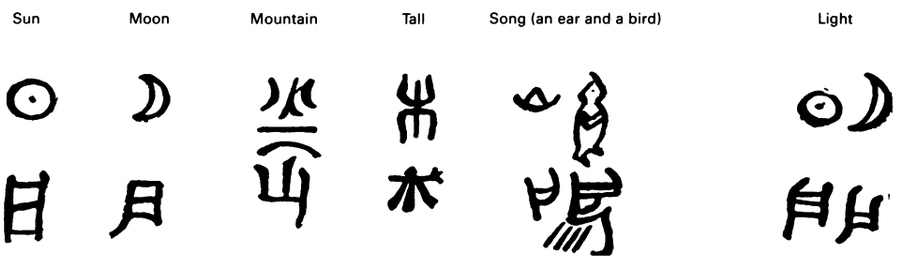


7

writing, while *Early European History*,[45] does both (figure 7), in a section concerning Writing and the Alphabet of a chapter entitled, "The Ages before History."
Kahn's own collection of books dealing with primitive pictographic scripts seems to follow similar comparative lines. Most impressive of these is an 1883 edition of the *Fourth Annual Report of the Bureau of Ethnology to the Secretary of the Smithsonian Institute*. This beautiful book is copiously illustrated with hieroglyphic-like writing and translations of various American Indian tribes. He also owned another book, *The Sacred Pipe*, dealing with the subject of American Indian culture and its pictograms (figure 8).[46] Further afield in this subject of hieroglyphic-like scripts was a book entitled *Chinese Calligraphy* (figure 9). In keeping with this apparent Romantic taste for primitive forms of transmitting information was a special 1972 edition of *Scientific American* devoted to the topic of communication; its cover displayed a photograph of a hieroglyphic inscription from an ancient stele with a translation inside.[47] The subjects broached by this special issue were: cellular communication, animal communication, verbal communication, communication and the community, communication and the social environment, as well as an article by E. H. Gombrich, the eminent British Art Historian, discussing graphic communication. Gombrich provided an illustration of an ancient Egyptian hieroglyphic which had survived as a symbolic image into the present age. This small collection in Kahn's personal library apparently expresses his continued interest in primitive forms of writing and their ability in certain instances to persist and communicate over long periods of time upon a collective basis.

45
Hutton Webster, *Early European History* (New York: D. C. Heath & Co., 1917).

47
Tseng Yu-ho Ecke, *Chinese Calligraphy* (Philadelphia: Philadelphia Museum of Art, 1971).

46
Joseph Epes Brown, *The Sacred Pipe, Black Elk's Account of the Seven Rites of the Oglala Sioux* (Norman, Oklahoma: University of Oklahoma Press, 1971).

The philosophical importance of the hieroglyphic in Kahn's work is best demonstrated by I. E. S. Edwards' book, *The Pyramids of Egypt*. Kahn's edition, copyrighted 1952, was a gift from his daughter, Sue, Mrs. Kahn remembered, soon after his return from Egypt in the early 1950s. In the chapter, "Construction and Purpose," of his book, Edwards gives the ancient hieroglyphic for the pyramid, △ , translated as "the castle of eternity," as well as a variant for the older stepped pyramid, ⌂ , translated as "the place of ascension." He also explained that the iconographic meaning of the pure pyramid had always been symbolic of the sun in Egypt, even during the most primitive times:

> But what did the *benben* (the primitive stone fetish of pyramidal shape) and its architectural derivative, the true pyramid, represent? Only one answer suggests itself: the rays of the sun shining down on earth. A remarkable spectacle may sometimes be seen in the late afternoon of a cloudy winter day at Giza. When standing on the road to Saqqara and gazing westward at the Pyramid plateau, it is possible to see the Sun's rays striking downwards through a gap in the clouds at about the same angle as the slope of the Great Pyramid. The impression made on the mind by the scene is that the immaterial prototype and the material replica are here ranged side by side.[48]

Of this emblematic explanation, Edwards may also have had in mind the similar solar iconography found in the later Armarna period (figure 10). Edwards also explained that the symbolic form of the pyramidal tomb, △ , "the castle of eternity," had a practical magical purpose for the soul of the dead Pharoah, serving as a solar ladder to the bright god above. Quoting ancient magic spells, he writes:

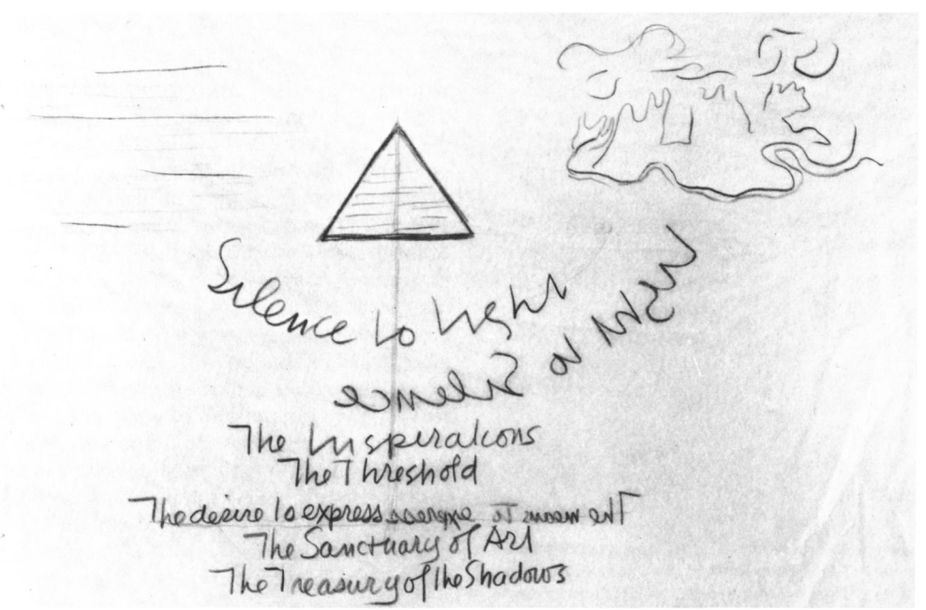
> The Pyramid texts often describe the king as mounting to heaven on the rays of the sun. Spell 508 of these texts, for instance reads: 'I have trodden those thy rays as a ramp under my feet whereon I mount up to that my mother, the living Uraeus on the brow of Rē.' The temptation to regard the true Pyramid as a material representation of the Sun's rays and consequently as a means whereby the dead king could ascend to heaven seems irresistible.[49]

His reading of the pyramid as a solar stair is probably influenced by his similar interpretation of the stepped pyramid, ⌂ , "the place of ascension," upon which the Pharaoh's soul was to make its way to the gods. He also suggested that this built icon is similar in significance to the ziggurats of ancient Mesopotamia and

48
I. E. S. Edwards, *The Pyramids of Egypt* (New York: Penguin Books, 1952), pp. 289–290.

49
Edwards, p. 291.

10
Egyptian stone relief.



11
Louis Kahn, "Silence to Light" drawing, 1969.

the historical Tower of Babel where they were considered to be a link between heaven and earth.

As an ancient expression of light, the image of the pure pyramid, with its two dimensional hieroglyphic, △ , appears to have best symbolized Kahn's conception that Form manifests into the material universe as a kind of "inspired writing." The pyramidal shape, as revealed in his "Silence to Light" diagrams, circa 1969 (figures 11), spells out in two and three dimensional hieroglyphics his sense of Order and the manifestation of Silence in time and space as Light. Of this three dimensional emblem, he said:

The pyramids seem to want to tell us of its motivations and its meeting with nature in order to be. I sense Silence as the aura of the 'desire to be to express' Light as the aura 'to be to be' material as 'spent light' (The mountains the streams the atmosphere and we are of spent light.)[50]

Kahn's associating Edwards' solar explanation of the pyramid with his world view is in keeping with a Neoplatonic cosmology where traditionally the sun has served as the manifest image of the deity.[51] This *Weltanschauung*, also known as the "Great Chain of Being,"[52] was delineated by Kenneth Walter Cameron (figure 12), in a published study, *Emerson the Essayist*, where he traced the important influence of Goethe and the German Romantics upon the Neoplatonism of American Transcendentalism.[53]

It is with his discovery of the pyramid hieroglyphic, circa 1952, that the birth of Kahn's mature architectural creativity apparently began. This interpretation supports and complements Vincent Scully's late 1970s observation that the mastery of Kahn's architecture really begins with his Egyptian journey in 1951.[54] In 1978 while studying Kahn's travel sketches, many devoted to renderings of the Pyramids, Scully noted the overpowering influence of the pyramidal form in Kahn's early mature work at the Yale Art Gallery, completed in 1953, with its hollow coffered tetrahedral ceiling (figures 13, 14), and the Trenton Bath House, completed in 1956, with its four pyramidal roofs. The imagery of the pyramid can be found in Kahn's constructions throughout his mature career, from its beginning at the Yale Art Gallery, as Scully has observed, to the very last major completed work of 1977 across the street at Yale, the Center for British Art. Here the pyramidal form, following the logic of a "solar hieroglyphic," appears most obviously where one would expect it to be, in the natural light fixtures which scientifically modulate the entrance of sunlight through the roof into the building. In an interior perspective of the building, Kahn gave these natural light fixtures the symbolic shape of a truncated pyramid made up of smaller pure pyra-

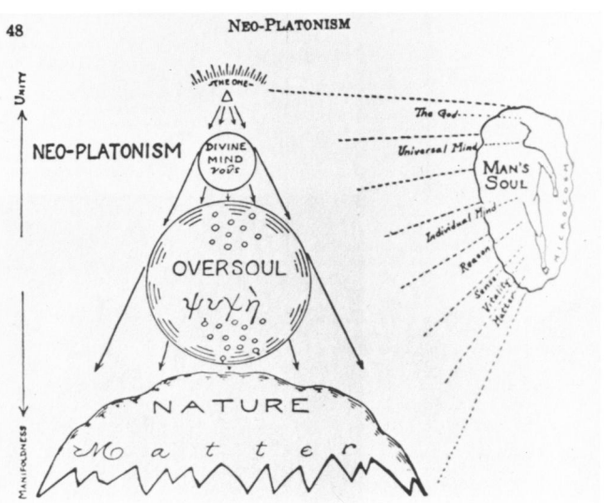
53
Kenneth Walter Cameron, *Emerson the Essayist* (Hartford: Transcendental Books, 1972), p. 48.

54
Vincent Scully, Jr., *The Travel Sketches of Louis I. Kahn* (Philadelphia: Pennsylvania Academy of Fine Arts 1978), pp. 10–12.

50
Wurman and Feldman, *Notebooks and Drawings.*

51
Joseph B. Collins, *Christian Mysticism in the Elizabethan Age* (Baltimore: Johns Hopkins Press, 1940), pp. 8–9.

52
Arthur O. Lovejoy, *The Great Chain of Being* (Cambridge: Harvard University Press, 1976).



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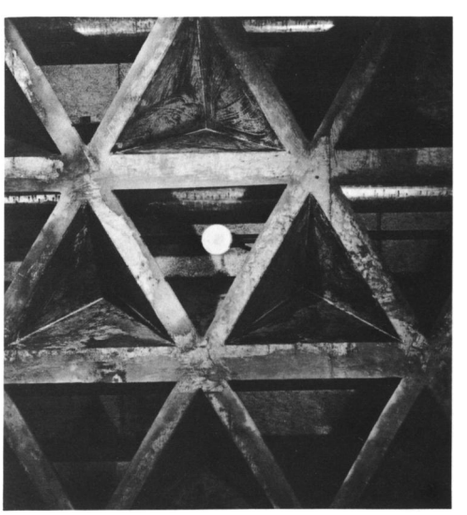
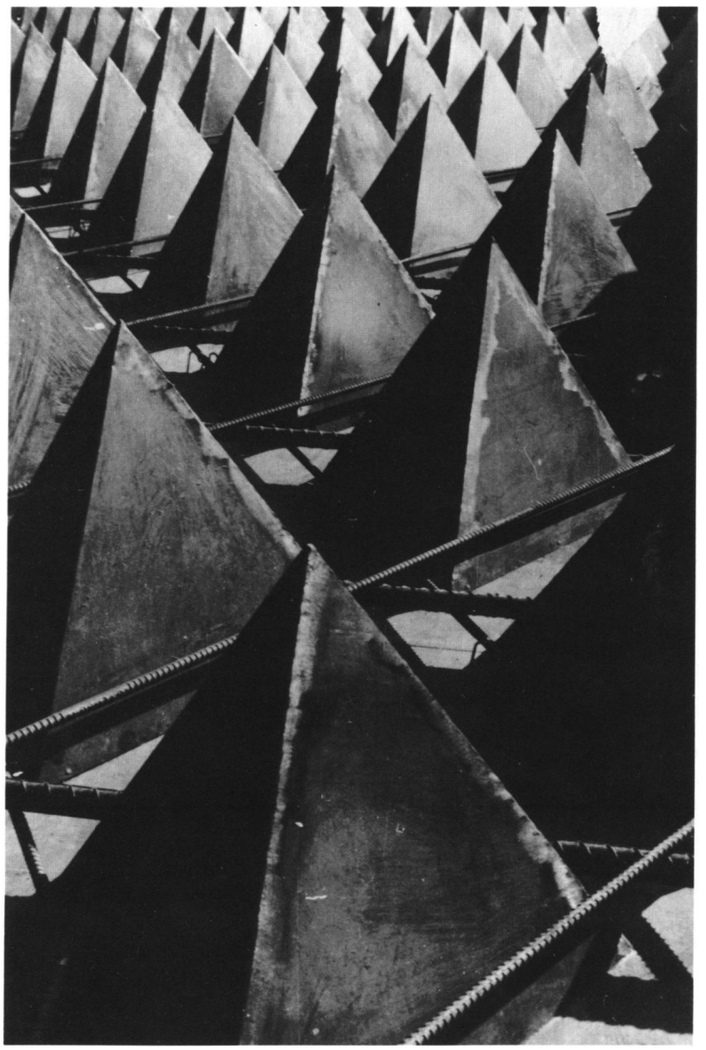
Kenneth Walter Cameron, *Emerson the Essayist*, diagram of Neoplatonism.



13
Louis Kahn, Yale Art Gallery, New Haven, 1953, tetrahedral ceiling.



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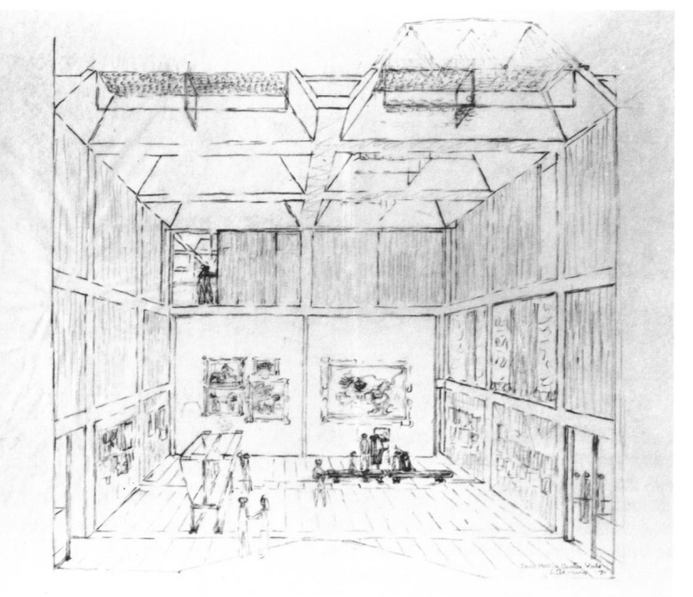
14
Yale Art Gallery, steel formwork for tetrahedral reinforced concrete slab.

15
Louis Kahn, Yale Center for British Art, New Haven, 1977, sketch of interior library court.

16
Yale Center for British Art, skylight mock-up model.

17
Louis Kahn, Washington University Library, St. Louis, 1956, sketch.



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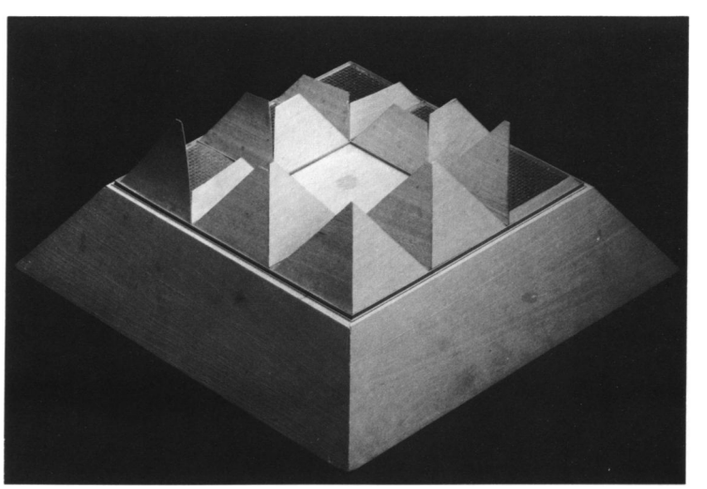

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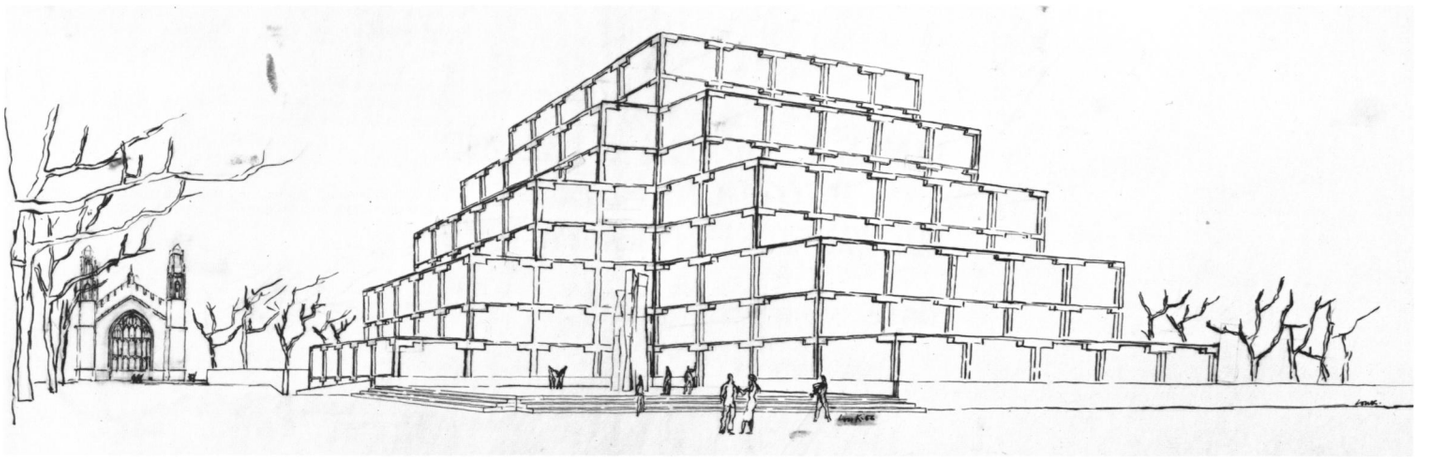


17

mids (figures 15, 16). This is in accordance with the authority of the Egyptian iconography he knew, for one reads in *The Nile* that the truncated pyramid was also an emblem of the sun:

> . . . The sun-symbol here represented (the ben-ben) suggests that the earliest worshippers of the sun believed that their god dwelt in a particular stone of pyramidal shape. At a later period, when perhaps their descendants in other parts of the country could not find a stone of similar shape, a stone in the form of a truncated pyramid was adopted as a symbol of the Sun.[55]

55
Budge, p. 521.

Kahn's interest in the Egyptian hieroglyphic is also seen in his use of the stepped pyramid pictograph,  , "the place of ascension," which Edwards had described in his book on the pyramid. In Kahn's unbuilt projects for the Washington University Library of 1956 (figure 17), and the Theological Library at Berkeley, 1973–74 (figure 18), one finds this hieroglyphic "quote" literally produced three dimensionally in cruciform plan and and in a "wedding cake" composition, respectively. These designs for two institutions devoted to the pursuit of learning were truly to be "places of ascension" of the human mind and its aspiring spirit, an idea especially apt in the context of a theologian's library.

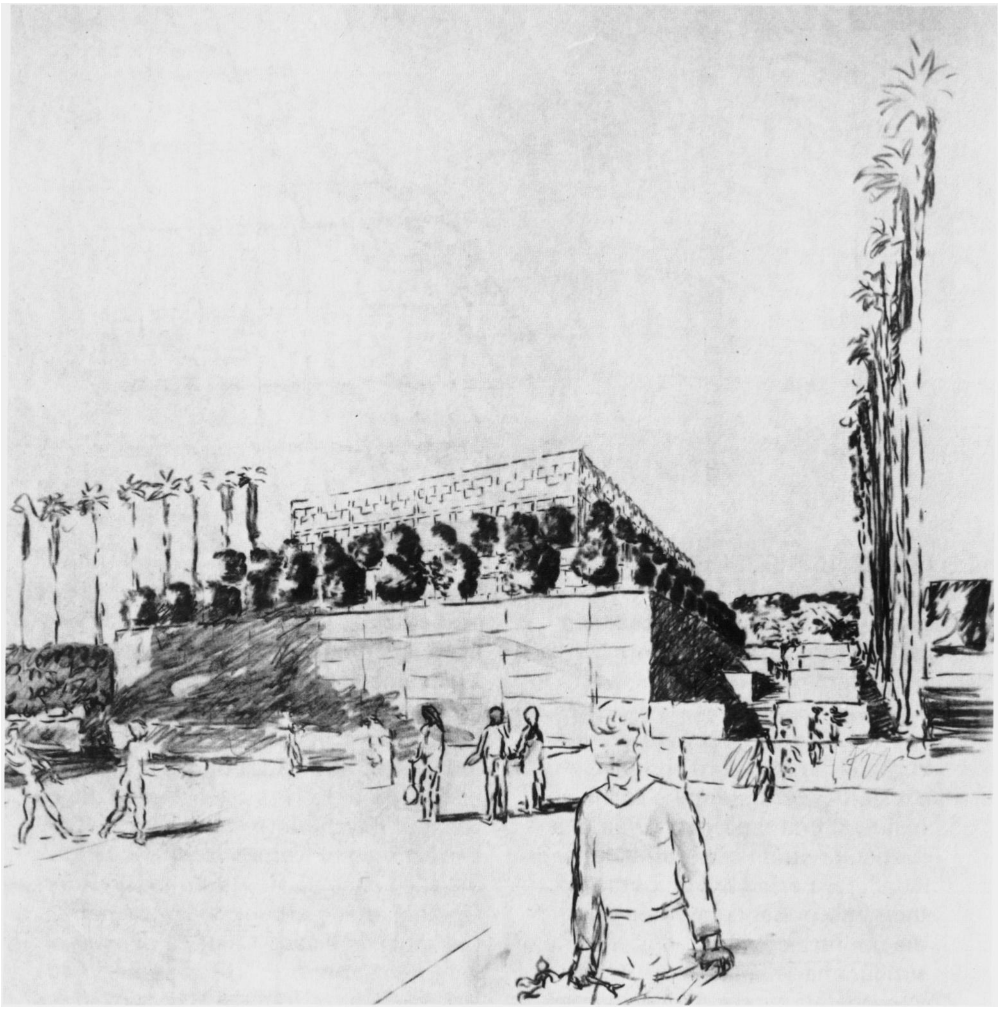
56
Cook and Klotz, p. 180.

Because of its Romantic fusion with the hieroglyphic and the mysticism of Kahn's maternal genealogy, it is useful to look at the kabbalah for potential Hebraic "signatures" which Kahn might have inscribed in his work, for example, in the synagogue projects for Mikveh Israel and the earlier Adath Jeshurun. According to the kabbalah, which means "tradition," God possesses a limitless nature which has many countenances and names. He manifests himself through ten aspects called "sephiroth" forming the kabbalist Tree of Life (figure 19), which is similar in kind to the Great Chain of Being of the Neoplatonists. One of Kahn's diagrams of the descent of Psyche into matter (figure 20), closely resembles this traditional kabbalistic conception. Although the Hebrew God has many expressions and names, the kabbalists assert that all of creation is summarized in one "great name," Yod Heh Vav Heh, meaning "That which was, is, and shall be." The great name is not peculiar to Jewish thought alone, classically, it was used to describe pagan gods, and Kahn often expressed a similar variation of it in his definition of art, "the language of God:"

> The artist senses human validity. Validity transcends time. What *is* has always been. What *was* has always been. What *will be* has always been.[56]

However this may be, Kahn's projected plan for the congregation of Mikveh Israel, 1961–70 (figure 21, 22), appears most likely to be a kabbalistic image of the Tree of Life. A member of his office, Vincent Rivera, has proposed that the plan of Mikveh Israel is patterned after this Hebraic cipher seen on a cover illustration (figure 23), of a book that Kahn owned, now no longer in his library. A similar visual comparison has also been suggested by Jeff Keiffer. Despite the fact that he was not sure of the book's title, Rivera clearly recalled the cover illustration depicted upon a red ground, and remembered meaning to ask Kahn if the

57
The early paperback editions of *Major Trends in Jewish Mysticism* had such an illustration printed on a red ground. The title Rivera could not remember could likely have been the one of Scholem's book.



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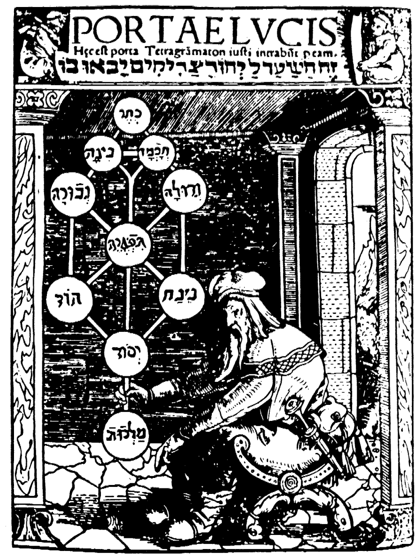


23

18
Louis Kahn, Theological Library at Berkeley, sketch.

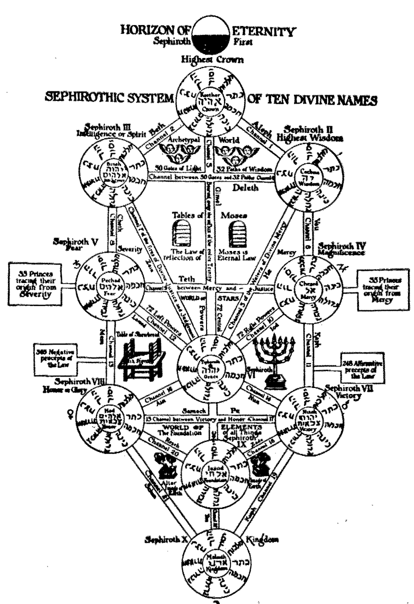
19
The Sephirothic Tree of the Later Kabbalists, after Kircher, *Oedipus Aegyptiacus*, Rome, 1652.

20
Louis Kahn, diagram of the descent of Psyche into Matter.

21
Louis Kahn, Mikveh Israel Synagogue, Philadelphia, 1961, ground floor plan.

22
Mikveh Israel Synagogue, model.

23
The Sephirothic Tree from Paulus Ricius, *Porta Lucis*, Augsberg, 1516.



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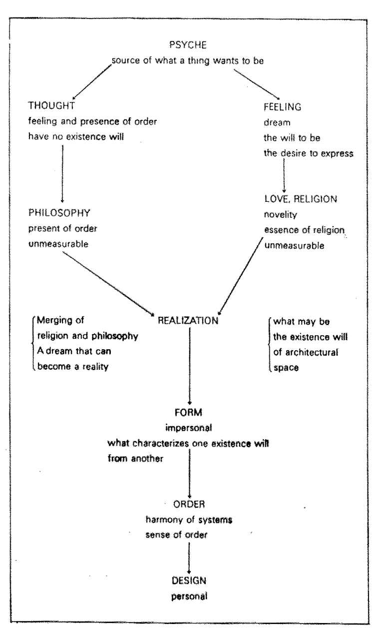

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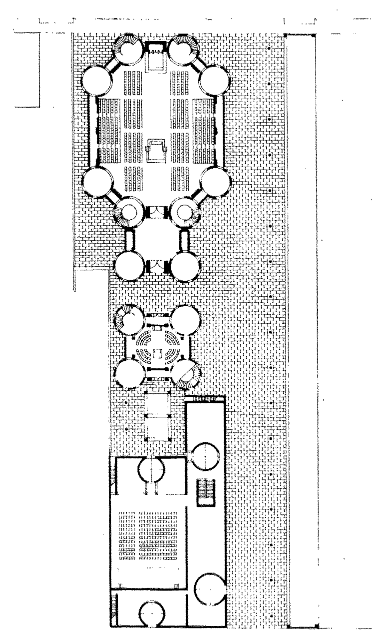

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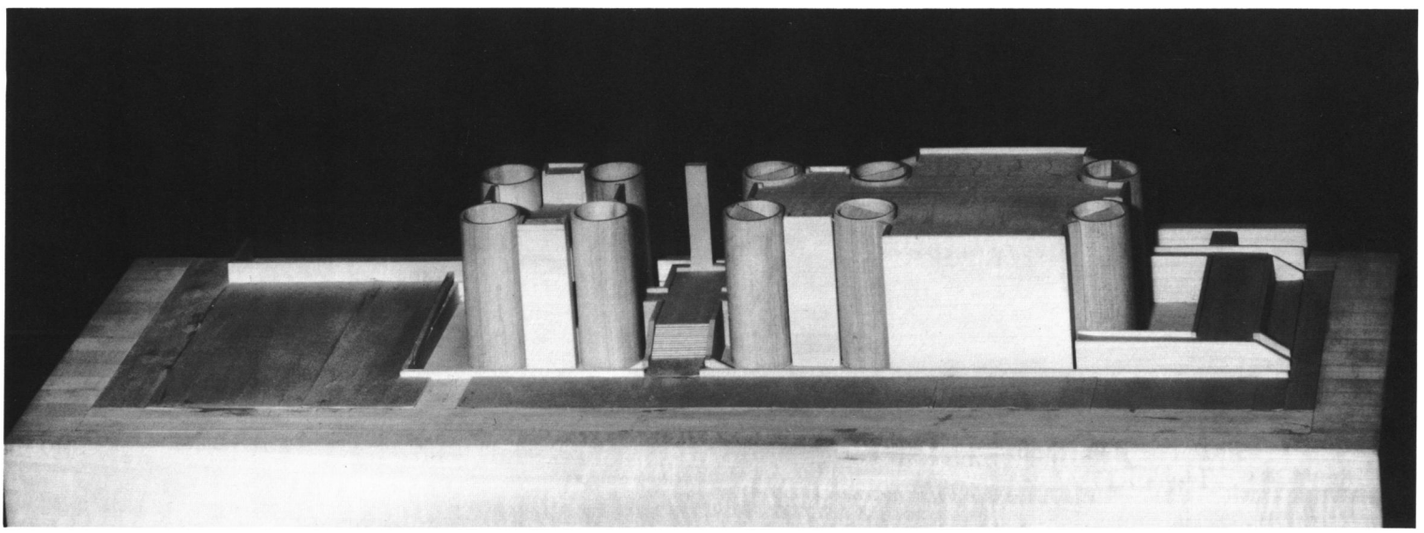


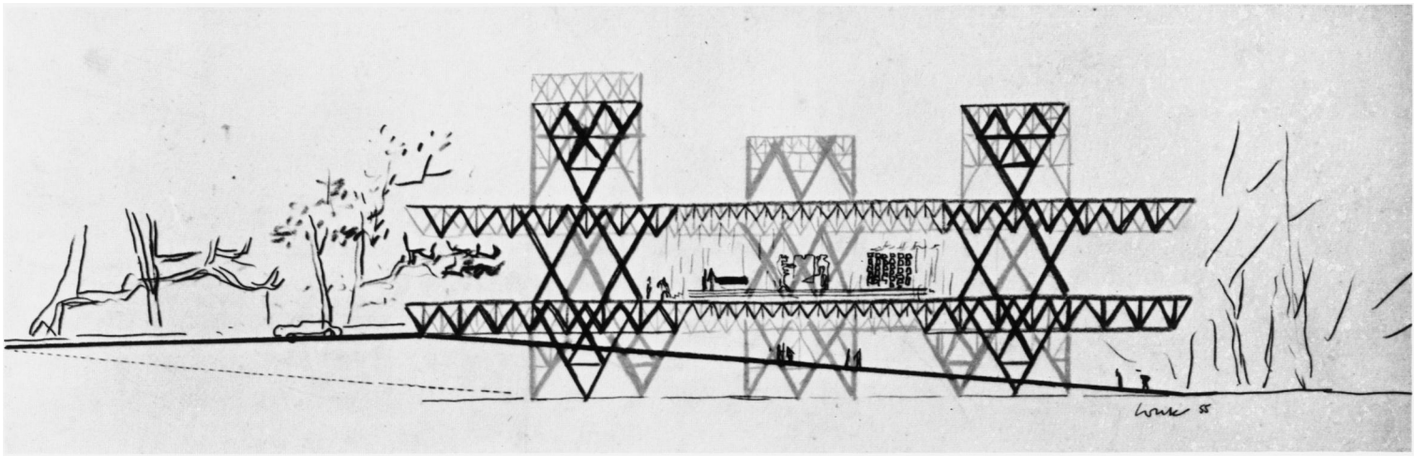
22

striking similarity was intentional when seeing it in the office while Mikveh Israel was being designed. This rendering of a Hebrew sage in contemplation grasping a Tree of Life, as Rivera described it, "like a bunch of balloons," exemplifies the kabbalistic process of returning to God, up the Tree, sephiroth by sephiroth, through meditating upon the various names of Jehovah. This mystical odyssey also parallels the Neoplatonist's "flight to the One" via the "hieroglyphics" of beauty along the Great Chain of Being. Appropriately enough, Kahn seems to have envisioned Mikveh Israel as a "place of ascension," for according to Ezekial Musleah, the rabbi of the congregation during the period of the design, Kahn described the cylindric stair towers of the plan as "columns, like the Tower of Babel aspiring to God." Rabbi Musleah did not find this idea apt, recalling the Biblical account of where the first language of man was confounded into a plethora of unshared speech. Kahn, however, appears to have been thinking of I. E. S. Edwards' comparison of the Egyptian stepped pyramids with the ziggurats of Mesopotamia and the Tower of Babel. Like the towers, the entire plan as a Tree of Life signifies a "place of ascension." For as the congregation of Mikveh Israel would move forward into the sanctuary to worship the names of Jehovah, they would make, allegorically and physically, a mystical return to God through this architectural Tree of Life. In his unbuilt design of 1954 for the congregation of Adath Jeshurun, Elkins Park, Pennsylvania (figure 24), Kahn seemed to be trying to create a similar but more abstract place of ascent, for he used the metaphor of a tree to describe this tetrahedral space slab supported by three column clusters of nine columns:

> Each column cluster harbors a stairway as though captured in a great hollow trunk. The columns thus spread grip the floor and roof structure like outspread fingers.
>
> It is what the space wants to be: a place to assemble under a tree.[58]

These three trunks of Adath Jeshurun are suggestive of the three supernal sephiroth of the Tree of Life, philosophically similar to the Neoplatonic concept of a triune deity. The Neoplatonic deity like the Hebrew God manifests himself physically as the sun and is symbolized by Kahn's use of the two dimensional solar hieroglyphic, , "the castle of eternity." Like the Tree of Life sprouting from heaven, sephiroth to sephiroth, the remainder of the spaces of the sanctuary were to unfold and again unfold from the three trunks. These stair towers, like those of Mikveh Israel later, apparently are architectural sephiroth, by reason that they are rooted in the great name, Yod Heh Vav Heh, found written in its numerical form (26) in the side dimensions of 26 feet of the triangular column clusters. This is in agreement with the kabbalistic process of gematria: Yod = 10, Heh = 5, Vav = 6, hence Yod Heh Vav Heh = 10 + 5 + 6 + 5 = 26. Whether or not this kabbalistic reading is merely a happy coincidence, it is in accordance with the Romantic tradition of the language of God and the reported Jewish mysticism of Kahn's family.

58
Ronner, Jhaveri and Vasella, p. 81.



24

Human History as Hieroglyphic

Kahn's special interest in these historic hieroglyphics reflects a strong Romantic predilection for things primitive. He explained:

> [the] . . . primitive case is more of an indication of value than the sophisticated case. To accept something at the very, very beginning, without precedent is an infinitely stronger statement than how it is extended in later years.[59]

> . . . because I know . . . that the beginning is . . . an eternal confirmation . . . If man's nature would not approve, a beginning would be impossible. So beginning is a revelation which reveals what is natural to man–it never would have happened. What the human approves–human as a larger term for man, instead of man simply as the species–is natural to all humans. . . .[60]

Similarly, while discerning *Volume Zero* between the lines of these man-made allegorical images, he seems to have been interpreting history Romantically, literally as so many hieroglyphics.[61] He summarized his architectural conviction to maintain traditions which reflect humankind at its most characteristic:

> The works of man reveal his nature.
>
> The time of a work holds its own validity from which the sense of truth can be drawn to inspire a work of another time.[62]

Physiognomic Hieroglyphs

Along with his books on primitive scripts, Kahn owned several other significant "chapters" from *Volume Zero* filled with natural hieroglyphics, one of these being D'Arcy Thompson's *On Growth and Form*. His attraction to the natural forms described by Thompson is well confirmed, for example by his nephew, Dr. Marshall Alan Kahn, and William S. Huff. Dr. Kahn remembered that his uncle told him that if a person could read only one book in his life, it should be *On Growth and Form*. Although it simultaneously implies the realm of "Silence," Kahn's concept of *Volume Zero*, the "unwritten" book before all books, smacks of the Romantic's *Book of Nature* and probably explains his respect for D'Arcy Thompson's book, a natural lexicon of Form. Huff says that Thompson, quoting Plato, had written "God always geometrizes" and suggests that Kahn most likely felt that an architect should do the same. Huff also remembered that Kahn had a similar interest in Chladni music forms, which Thompson had also mentioned (figures 3, 4), and believed that they possessed a "cosmic significance," a view shared by the natural philosophers of German Romanticism. Kahn owned a book by William T. Bartholomew, *Acoustics and Music*, which depicts a selection of Chladni's music forms, and was signed by him inside the cover, an indication of its importance to him. (Kahn rarely signed his books unless he especially wanted to keep them and was afraid of losing them, as he was generous to a fault in loaning them to others.) The pure geometries of God's Word, such as the *Lithocobus geometricus* exhibited in Thompson's book (figure 25), and the Chladni figures of Bartholomew's book (figure 26), are often found fluently enunciated in Kahn's designs, for example in

59
Wemischner, p. 3.

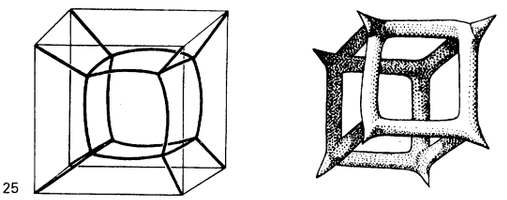
60
McLaughlin, p. 20.

61
Ronner, Jhavari and Vasella, p. 448. Kahn: ". . . Tradition is just mounds of these circumstances, you see, the record of which is also a golden dust from which you can extract the nature of man: which is tremendously important if you can anticipate in your work that which will last–that which has a sense of commonness about it, and by commonness I mean essence of it. When you see the pyramids now, what you feel is silence. As though the original inspiration of it . . . the motivation that started that which made the pyramid is nothing but simply remarkable. To have thought of this shape personifying a kind of perfection, the shape of which is not in nature at all, and striving with all this effort, beating people, slaves, to the point of death to make this thing. We see it now with all the circumstances gone, and we see that when the dust is cleared, we see really silence again."

62
Goldfinger, p. 7.

24
Adath Jehurun Synagogue, Elkins Park, Pennsylvania, 1954, section.

25
Bubble suspended within a cubical cage and Lithocubus geometricus Hkl from D'Arcy Thompson, *On Growth and Form*.



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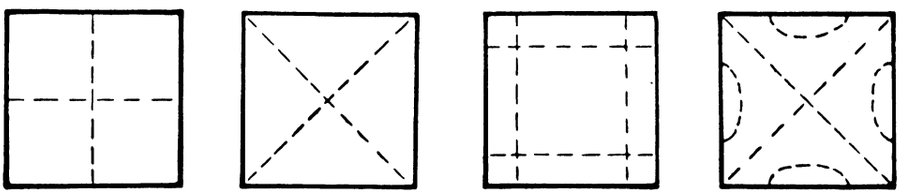
26
Chladni diagrams from T. B. Bartholemew, *Acoustics and Music*.



26

the overall cubic form of the Exeter Library and the nine square ceiling design overlaid by the "x" of two diagonal beams of its central light court/clerestory (figures 27). Obviously, his use of such pure geometries possesses a self-evident and universal validity of its own, however, as Huff explained, these natural hieroglyphics, God's geometries, contribute to the authority of such forms in his work. And because the will-to-be of Form summons character, "a nature," Kahn's study of *On Growth and Form* seems to have been a physiognomic one with an eye to its expressive architectural application. Of the similar natural hieroglyphics found within the *Book of Nature*, he said:

. . . there is this (Existence) Will of the least living thing to be itself. The microbe wants to be a microbe, (for some ungodly reason), and the rose wants to be a rose, and man wants to be man . . . to express . . . A certain tendency, a certain attitude, a certain something which moves in one direction rather than in another kept hammering away at nature to provide the instruments which made this possible. The great desire to express . . . the presence of the unmeasurable, which is the realm of the artist.

It is the language of God.[63]

His interest in Chladni's sound forms appears to be a similar romantic one founded upon an apparently nineteenth century concept of synaesthesia. As musical tones and various shades of color evince a psychological mood in their audience, he explained that the size and shape of a space revealed by light creates a corresponding mood:

. . . space has power and gives mode.[64]

I feel fusion of the senses. To hear a sound is to see its space. Space has tonality, and I imagine myself composing a space lofty, vaulted, or under a dome, attributing it to a sound character alternating with the tones of a space, narrow and high, with graduating silver, light to darkness. The spaces of architecture in their light make me want to compose a kind of music, imagining a truth from the sense of a fusion of the disciplines and their orders. No space, architecturally, is a space unless it has natural light. Natural light has varied mood of the time of the day and the season of the year. A room in architecture, a space in architecture, needs that life-giving light–light from which we were made. So the silver light and the gold light and the green light and the yellow light are qualities of changeable scale or rule. This quality must inspire music.[65]

Similarly, his description of the architect's plan, "a society of rooms" is presented as an arrangement of Chladni forms:

Open before us is the architect's plan. Next to it is a sheet of music.

The architect fleetingly reads his composition as a structure of elements and spaces in their light.

The musician reads, with the same overallness, his composition as a structure of inseparable elements and spaces in sound.

A great musical composition is of such entity that when played conveys the

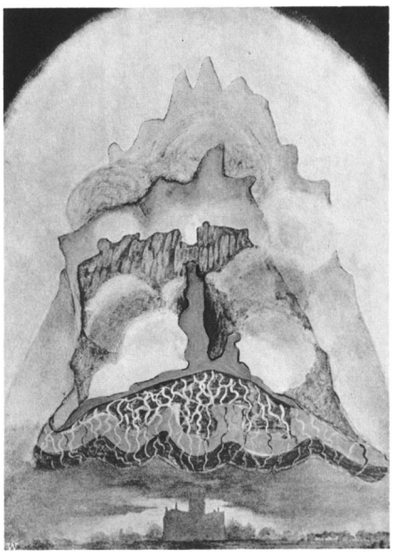
64
Scully, pp. 115-116.

65
Louis I. Kahn, *l'Architecture d'Aujourd'hui*, p. 14.

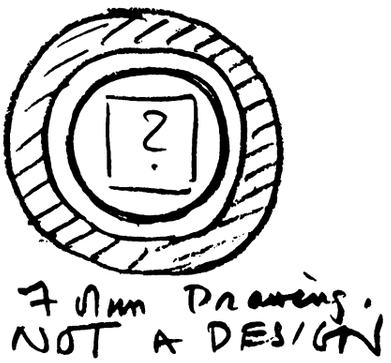
63
"Louis Kahn Talks with Students," p. 13.

27
Louis Kahn, Library, Phillips Exeter Academy, Exeter, New Hampshire, 1974, interior.

28
"Frozen" musical forms drawn by clairvoyant, from Besant and Leadbetter, *Thought Forms*, 1905.



29
Louis Kahn, Form "signature" of the Unitarian Church, 1959.



feeling that all that was heard was assembled in a cloud over us. Nothing is gone as though time and sound has become a single image.[66]

His illustration of architecture as a kind of "frozen music" verbally resembles two turn-of-the-century portrayals of musical forms seen by clairvoyants after performances of the Romantic composers (figure 28). This example from a book entitled *Thought Forms* by two Theosophists, Annie Besant and Charles Leadbetter, played an important role in Wassily Kandinsky's own Neo-Romantic theory of synaesthesia in the early twentieth century which he developed into the beginnings of modern Abstract Expressionism. Kahn, like Kandinsky, is apparently thinking in a similar vein, most likely an attitude suggested to him by his musically minded mother.

As Form ordains character in inorganic and organic entities, mode in sound, in architecture Kahn explained it *evokes use*,[67] creating a mood that encourages certain activities and inhibits others:

One may say that architecture is the thoughtful making of spaces . . . not the filling of areas prescribed by the client. It is the creating of spaces that evoke a feeling of appropriate use.[68]

As the room, the plan was for him also an inscription of the Form of a particular human activity or program:

. . . The architect considers the inspiration before he can accept the dictates of the spaces desired. He asks himself what is the nature of one [program] that distinguishes itself from another. When he senses the difference, he is in touch with form. Form inspires design.[69]

He often used the following cipher (figure 29), for example, to illustrate the Form "signature" of the Unitarian Church.

Kahn also appears typically romantic in his cogent architectural expressions of materials and structure as natural hieroglyphics. His introspection into the characteristic nature of materials, their respective Existence Will, led to his well known conversation with the brick and similar consultations with other building materials. He explained that once established what a material "wanted to be," he rendered it physiognomically:

I asked the brick what it liked,
and the brick said,
"I like an arch."[70]

. . . I could have souped up the brick with interior rods, but instead I allowed the brick to be brick and build the way brick wants to express itself.[71]

You can have the same conversation with concrete, with paper or papier-maché, or with plastic, or marble, or any material. The beauty of what you create comes if you honor the material for what it really is. . . .[72]

He was also emphatic about leaving the marks of a manufacturing process upon the individual building materials and the building as a whole. He called this kind of

66
Louis I. Kahn, *Perspecta 9/10*, p. 310.

69
Louis I. Kahn, *Perspecta 9/10*, p. 310.

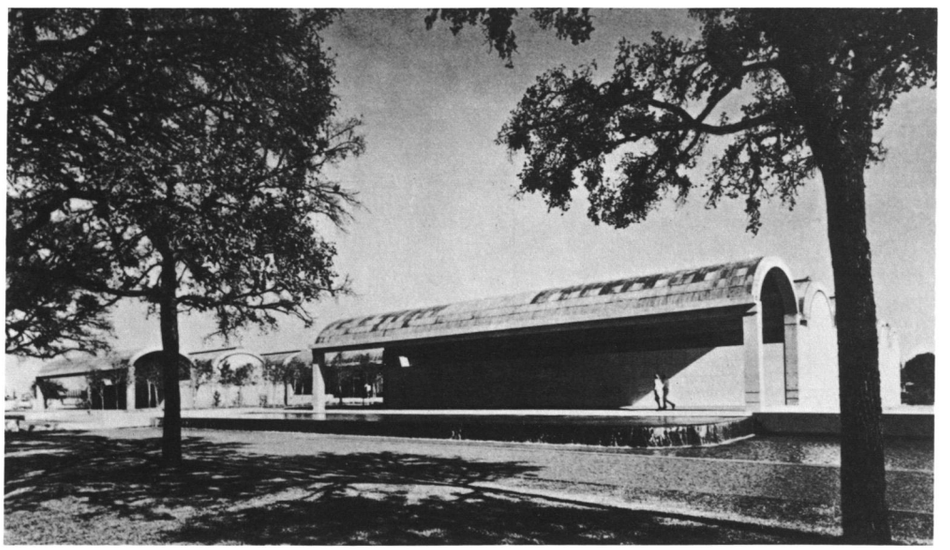
70
Architectural Forum, Vol. 137, pp. 63-65.

67
Sixten Ringbom, *The Sounding Cosmos*, Acta Academiae Aboensis, Series A., Vol. 38, No. 2, 1970.

71
"Louis Kahn Talks," *House and Gardens*, October, 1972, pp. 124–125, 219.

68
Scully, pp. 117–118.

72
Lobell, p. 40.



30
Louis Kahn, Kimbell Art Museum, Fort Worth, Texas, 1966-72.

writing, "sgrafito,"[73] explaining that this physiognomic record led to a modern kind of ornament.[74] Similarly, he contrived to articulate the structure of a building so that an observer could read it and understand why the building did not fall down. For example in the Kimbell Museum (figure 30), and the Yale Center for British Art (figure 31), he boldly unveils the nude structure of the buildings at the portico, allowing the user to grasp the building's structural logic before entering. Of this explicit structural exposition in the Kimbell Museum at Fort Worth, he stated:

Because of the open porches, how the building is made is completely clear before you go into it. It is the same realization behind Renaissance buildings, which gave the arcade to the street, though the buildings themselves did not need the arcade for their own purposes. So the porch sits there, made as the interior is made, without any obligation of paintings on its walls, a realization of what is architecture. When you look at the building and porch, it is an offering. You know it wasn't programmed; it is something that emerged.[75]

Psychic Hieroglyphics

It is with this revelation of pure structure, according to Kahn, that the room declares itself psychologically, differing with the concept of "universal space" in modern architecture:

You should never make a space between columns with partition walls. It is like sleeping with your head in one room and feet in another.[76]

. . . space is not a space unless you can see the evidence of how it was made. Then I like to call that a room. What I would call an area, Mies would call a space, because he thought nothing of dividing a space. That's where I say no. Let me draw a diagram. Here is a large area. You can divide it into four parts. No matter how many partitions are in it, Mies would always call the whole area a space. I would call any one of the four divisions a space, but, after you divide it, the whole thing is not a space any more. I would call this a space, provided it is never divided. What you see in the third diagram are four spaces. I consider these four rooms. Mies would consider this a space within which divisions could be made. In the Miesian spaces he allows division, but for me there's not entity when it is divided.[77]

His purist conception that a room is determined solely by its structure suggests his knowledge of modern psychology. According to Esther Kahn, in the early 1930s while she was a doctoral student in experimental psychology at the University of Pennsylvania, her husband would quiz her on Gestalt psychology. He apparently took a keen interest in this subject and she remembers that he continued to peruse her accumulated text books on psychology throughout his life. Kahn's special interest in Gestalt psychology, a partial development of romantic psychology, may have been influenced by his understanding of the somewhat similar German meanings of "Gestalt" and "Form." The tendency of the human psyche to order one's perceptions in a

73
***Processes in Architecture: A Documentation of Six Examples*, Catalog to the Exhibit, Hayden Gallery, Massachusetts Institute of Technology, 1979, p. 42.**

74
Louis I. Kahn, "Towards a Plan for Midtown Philadelphia," *Perspecta 2*, 1953, p. 23.

77
Cook and Klotz, p. 212.

75
***Architectural Forum*, Vol. 137, p. 89.**

76
William F. Huff, "Kahn at Yale", a lecture given at the Institute for Architecture and Urban Studies, New York City, 26 November 1974.

priori "Gestalts," probably encouraged him to understand this psychology as a romantic science of the soul's self-expression, a psychic self-portrait. In summation, of the physiognomic aspect of his work, its romantic "hieroglyphics" copied from *Volume Zero*, he said:

When I design a building, I want a man to be able to walk down the street, see it, feel the logic behind it, and perceive the derivation of its need.[78]

I hope that it will have the qualities that show you through itself.[79]

In interpreting Kahn's work as a comprehensive pictographic expression of a mystical romantic *Weltanschauung*, the question arises: "Why did he not discuss the specifics of this vision in more detail, for example his use of the Egyptian hieroglyphic?" There are three probable answers to this question which come to mind. First, he apparently was not clear himself about the intellectual history and cultural importance of his romantic mysticism:

. . . I don't know how to extend things, because I don't have any historical knowledge, nor any research tendencies. I can't look up and find other literature, I just can't do it. And so it's left in a way, in a very undeveloped state, as though it were just an offering for someone else, you know, to extend. It doesn't happen, because I really say too little to make it completely understandable. That's why I like to talk about it, because I talk about it more freely, because writing is very difficult for me, though I've done some. . . .[80]

His ignorance of the intellectual origins of his thought reflects the manner in which he acquired information. His family, friends, and associates all explain that being a creative, intuitive artist, not a scholar patiently reading in depth, he borrowed ideas in conversation from others who read more, using them as his "books." His preference for oral instruction parallels the traditional kabbalistic training by word of mouth and may be in part the reason that he habitually learned in this method. Secondly, his reluctance to discuss his belief in detail is typical of the ancient and traditional silence surrounding western mysticism, such as Neoplatonism and kabbalah. For example, according to Plutarch in his essay "Isis and Osiris" of the *Moralia*, the sacred reality of a mystery cult founded in Graeco-Roman-Egyptian culture ". . . for the most part, is veiled in myths and in words containing dim reflexions and adumbrations of the truth, as they themselves intimate beyond question by appropriately placing sphinxes before shrines to indicate that their religious teaching has in it an enigmatical sort of wisdom."[81]

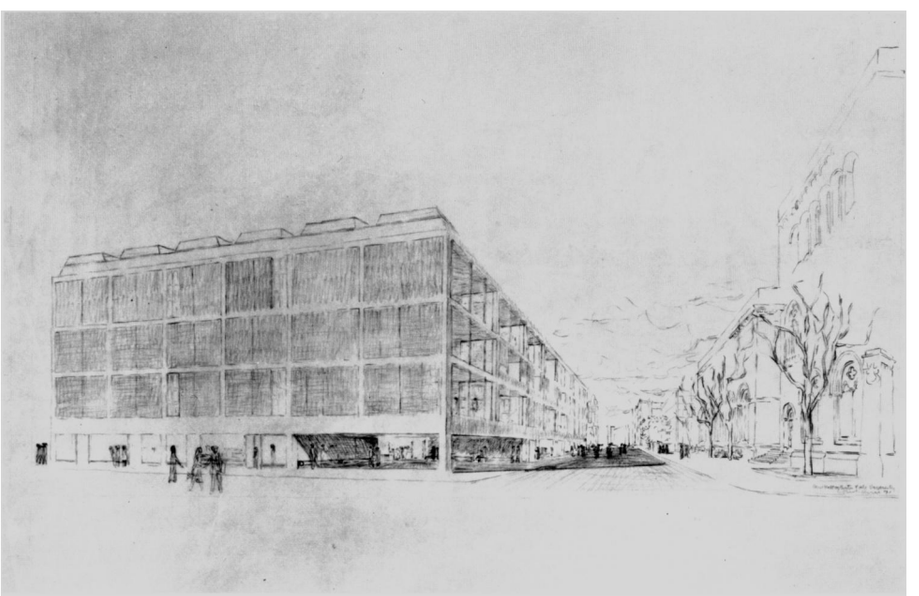
Lastly and most important, Kahn's refusal to discuss his architectural allegories in detail probably rests upon his belief that

80
Dieckmann, p. 8.

78
Gode-von Aesch, p. 236.

79
McLaughlin, p. 6.

81
Plutarch, "Isis and Orisis", *Moralia*.



31
Yale Center for British Art, sketch.

his articulation of the language of God, indeed, stands on its own without need of explanation, being felt as an universal presence, eternally valid.

Until the end of his life, Kahn apparently retained his romantic belief that a work of art speaks a kind of universal human language which indicates an invisible and ageless face behind the human spirit, the omnipresent Psyche. With the manifestations of Silence into the phenomenal world through singularities, the eternal script of *Volume Zero*, "the language of God" is imprinted upon nature, the human psyche, and art. His aesthetic theory proposes this psychic existence located within every human heart as a significant determinant in the creation of an architectural image of simultaneous, multi-leveled meanings. Kahn's belief in Form manifesting in his master work was ultimately religious and is perhaps best described in his notebook of 1959:

> Form is the religion of Beginning, Design is the inspired writing of its Scripture in the layers of order. It is the containing text that binds thought and feeling, prophecy and religion and aspiration. Reading it one experiences renewal of form as immanent, immaterial, undefinable yet characteristic reality, that is ever beginning. And when we celebrate a work which achieves this kind of sacred realization, we partake in man's worshipful likeness to perpetuate the transcendency of form by that of himself.[82]

82
Kahn, personal notebook, K 12/22, c. 1959.