ARCHITECTURE and LITERATURE

VIA

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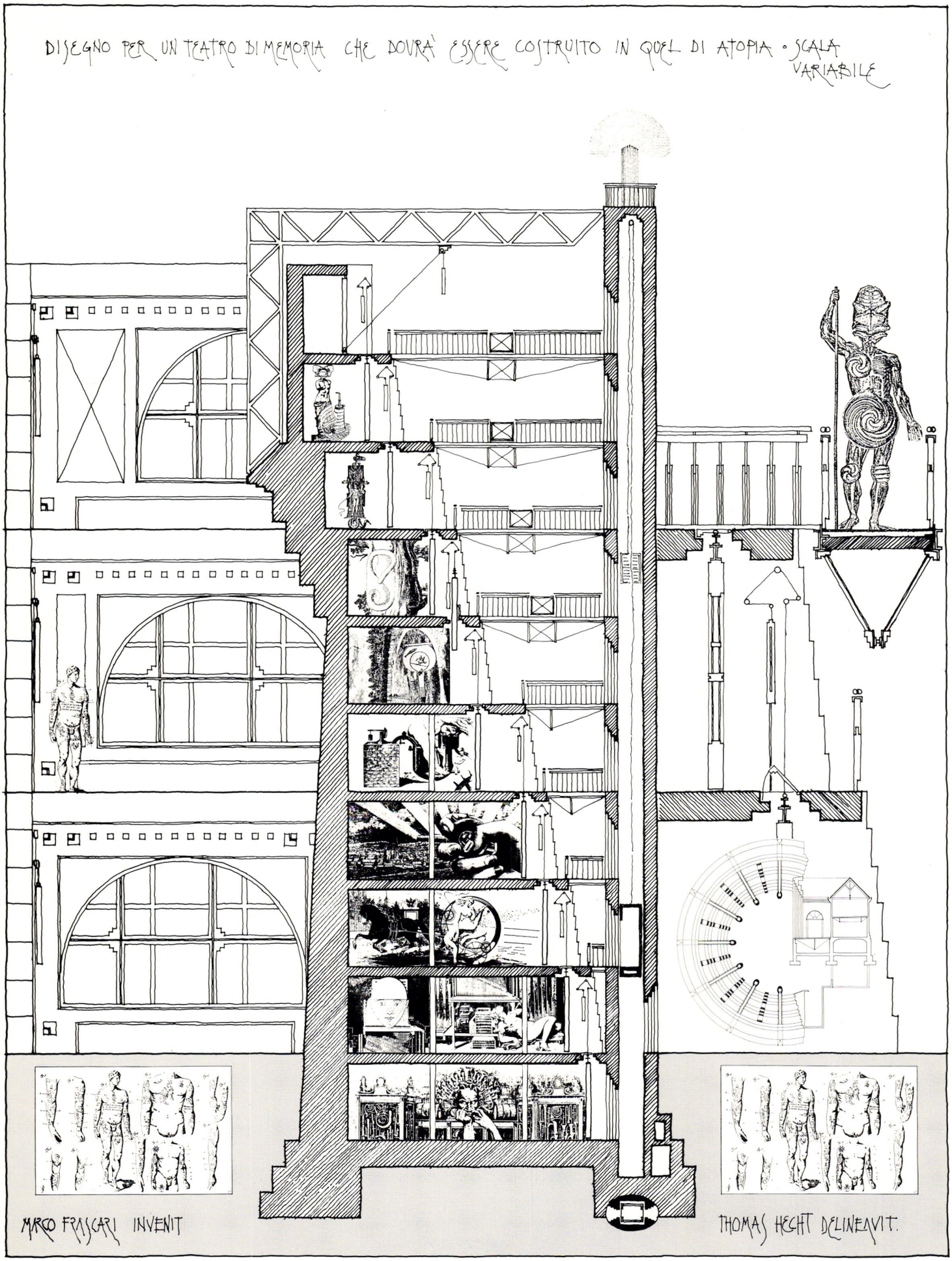
UNIVERSITY OF PENNSYLVANIA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Patreese Martin
Jennifer Pearson
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Deborah Gorman
Louis Gross

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CONTENTS

David Leatherbarrow	7	THE POETICS OF THE ARCHITECTURAL SETTING: A STUDY OF THE WRITINGS OF EDGAR ALLEN POE
Judith Wolin	17	THE RHETORICAL QUESTION
William Alexander McClung	33	THE ARCHITECTONICS OF *PARADISE LOST*
Richard Selzer	41	THE SLAUGHTERHOUSE
Jaime Alazraki	47	ARCHITECTURE AS OUTLOOK IN BORGES'S FICTION
Donald Kunze and Wesley Wei	55	THE VANITY OF ARCHITECTURE: TOPICAL THINKING AND THE PRACTICE OF DISCONTINUITY
Narciso G. Menocal	71	LOUIS SULLIVAN AND VICTOR HUGO: TWO APPROACHES TO READING BUILDINGS
Rodolfo Machado	77	FICTIONS ON FICTIONS
Umberto Eco	89	ARCHITECTURE AND MEMORY
Werner Oechslin	97	ARCHITECTURE AND ALPHABET
Rosemarie Haag Bletter	127	PAUL SCHEERBART AND EXPRESSIONIST ARCHITECTURE
William H. Gass	137	INVISIBLE CITIES
	156	CREDITS AND ACKNOWLEDGEMENTS
	159	CONTRIBUTORS

THE POETICS OF THE ARCHITECTURAL SETTING: A STUDY OF THE WRITINGS OF EDGAR ALLEN POE

David Leatherbarrow



1. René Magritte, The Empire of Lights, *1954. Poe treats the night, the house, the family, and the individual as equivalent symbolic forms. The "fall" of the House of Usher is the disintegration of a landscape, a building, a family, and a man.*

Son coeur est un luth suspendu;

Sitot qu'on le touche il resonne.

De Beranger

We abandon ourselves in literature. A story invites us to cancel important plans and to delay unfinished projects. Some books, the better ones, hold our attention; others fail to move us. Good books first distract, then absorb, and finally possess—this is one measure of their success; reading literature is an uncontested surrender. When we open the covers of a volume and move across its pages and through its chapters and lines we leave what is familiar and enter into the *novel*. A good book is a ticket.

In the practice of professional architecture there seems to be no place for the subject matter of literary fiction, nor for the abandon of the reader; the worker who reads stories neglects his duties. For a long time, perhaps two centuries—since the time of Durand's redefinition of the curriculum of architectural education at the newly formed Ecole Polytechnique, at least, architects have conceived literature to be distinct from the business of designing buildings: it is something to be enjoyed occasionally, at one's leisure, like swimming or sleep. Before Durand however, architecture and literature, as well as the other arts, were not separated from one another so clearly. Theoretical principles concerning decorum, mimesis and invention were shared by the arts.[1] Also, literature situated its narratives within architectural settings that were envisaged or designed imaginatively by the author, and architecture embodied ideas that were elaborated in literary texts. This intermixing of principles and sharing of contents can be seen as a confusion that should be corrected by a redefinition of the subject matter and techniques of each art form, but this is to take a narrow view of the issue. Let us take a broader view and try to recover the affinities between these two art forms. Perhaps then we will be in a position to reveal the contributions each can make to the success of the other. My aim is to clarify the contribution literary description can make to architectural understanding.

The literature of Edgar Allan Poe will serve as my point of focus. Poe's tales are well known; his essay entitled "The Philosophy of Furniture" is less familiar but no less relevant to my purpose. We shall see that the tales exemplify the arguments set forth in the essay. A misapprehension about Poe and his works must be corrected before we proceed. For some readers, still, Poe has the reputation of being dark, fantastic, and if not mentally unbalanced, certainly intellectually eccentric; he is seen commonly as a "purveyor of thrills for adolescents." Against this rather crude and uncritical estimation many recent critics, as well as a number of early twentieth century artists and authors, have given Poe enthusiastic and unqualified praise. Baudelaire felt "an unbelievable sympathy" for Poe. Valery, Mallarmé, and Magritte confessed the same. Perhaps this overstates the case. Poe's narratives are certainly highly structured, perhaps overly so. He overworks his descriptions and his themes are handled almost obsessively. Yet, his fiction merits study because it rests upon a number of important ideas, chief among these being the fallibility of man, the limits of reason or its constant shading off into dream and reverie, and the ego's radical inherence in its physical surroundings. This last idea, which we shall elaborate at length in consideration of both the fiction and the criticism, will point us toward the common ground between architecture and literature.

The concept of "keeping" was central to Poe's "philosophy of furniture." For this reason I shall take it as my point of departure. In his essay Poe did not present a definition of "keeping," nor did he compare it to the concept of decorum, which seems to be its basis. Instead he proposed an analogy, that between the keeping of a room and the keeping of a painting; he stated that "both the picture and the room are amenable to those undeviating principles which regulate all varieties of art; and very nearly the same laws by which we decide on the higher merits of a painting suffice for a decision on the adjustments of a chamber."[2] These "laws" govern arrangement, composition and coordination. Here Poe is abstract, not especially original, and vague; these analogous laws and principles have been named but not elaborated. Elsewhere in the essay Poe made it clear that keeping is an agreement or harmony among the parts of a work, or in other terms and negatively, an apartment without defect in the matter of keeping is an image of "repose."[3] Repose is a preferred state of equilibrium or balance, a condition of stability. Poe presented no more precise definition of the term. But the examples of architectural keeping he described in the essay allow us to isolate two specific meanings.

Poe described the reigning taste of different nations in the following way: the English have supreme taste, and the French have just enough sense to appreciate household proprieties; the Chinese have a warm but inappropriate fancy, while the Dutch understand that a curtain is not a cabbage; the Russians have not felt the need to decorate, they do not, and the Yankees, the Yankees alone are preposterous.[4] As Poe continues, we discover that interiors express national taste and are "in keeping" with local cultural values. Keeping in this sense is a way of observing and maintaining custom; it presupposes or bases itself upon a sense of propriety and appropriateness—in most general terms, the way people live. Presumably this understanding could be reduced to what Poe called the "laws" of home furnishing, or before such a reduction it could stand as the ethical basis for architecture; but more about this later.

Poe's second sense of keeping pertains to matters of "character" and "effect" (which are two terms to be exact with when considering eighteenth and nineteenth century aesthetic theories). Furnishings for Poe were not to be placed randomly; each had its proper place and therefore would fit either poorly or well in different interiors. Curtains, for example, were judged to be out of place in a room with formal furnishings, and similarly, dimunitive paintings, although fine in themselves,

would look spotty on a vast expanse of wall surface—they could be positioned nicely on a smaller background (the walls of a stairway landing, for example). Good keeping in this sense is the recognition and acknowledgment of the meaning of the whole arrangement, the significance of the unified configuration, "the character of the general effect."[5] Obviously this, too, requires a sense of propriety. Poe gave no criteria of judgment nor techniques of composition; his home furnisher seems to work with a stock of typical settings. Suitability in this sense is regulated by a kind of architectural common sense. A home furnisher must know the significance of his materials and be able to coordinate those that contribute to the intended effect. The degree to which this composition is an exercise in pattern making, or better, a creative interpretation of dwelling habits remains to be seen.

So far we have two ideas of keeping: preserving or maintaining customary forms and contributing to the character of the intended effect. However, these ideas do not exhaust the meaning of the term. Poe used it in another way, and this usage is his strongest and most frequent, if his least obvious. This meaning can be overlooked easily because its articulation is intertwined in the narratives, not described in the essay. Like any good novelist or storyteller, Poe does not state his ideas thematically but presents them indirectly, tacitly. This other sense of Poe's principle of keeping is this: the character of an architectural setting should be in keeping with the character of its regular inhabitant. This principle is similar to the idea that settings are in keeping with customs, but it makes a more specific requirement—that the interior suit a lifestyle. This seems a simple and straightforward concept, but we shall see that for Poe it is complicated and contains surprising implications about furnishings and architecture as well as about man's physical being and psyche.

Let us begin with "The Fall of the House of Usher." In this tale we read that "the House of Usher [was] an appellation which seemed to include, in the minds of peasants who used it, both the family and the family mansion."[6] The character of the premises was in keeping with the accredited character of the people so exactly that the two (the family and the mansion) had come to be, in time, identified by the same name. Poe's narrator described the "house" as a "mansion of gloom . . . with the first glimpse of the building, a sense of insufferable gloom pervaded my spirit."[7] Its tenant Roderich Usher presented the same dark physiognomy: "The now ghastly pallor of the skin and the now miraculous lustre of the eye, above all things started and even awed me. The silken hair too. . . . I could not, even with effort, connect [Usher's] Arabesque expression with my idea of simple humanity."[8] The sentiments that were conveyed by the facade were likewise manifest in the face. The interior of the house expressed these characteristics, too: "through many dark and intricate passages in my progress to the *studio* [of Usher] much that I encountered contributed, I know not how, to heighten the vague sentiments of which I have already spoken. . . . the carvings of the ceiling, the sombre tapestries of the walls, the ebon blackness of the floors, and the phantasmagoric armorial trophies which rattled as I strode" engendered the same ideas of darkness, melancholy, and despondency.[9] The inside of the house was thus in keeping with its outside and with the bodily characteristics of its resident too. Finally, the "psyche" of Usher expressed the same ideas. He confessed a certain nervous agitation, "an acute bodily illness—a mental disorder which oppressed him. . . . I dread [he declared] the events of the future. . . . I shudder at the thought of any incident which may operate upon this intolerable agitation of soul. . . . in this pitiable condition I feel that the period will sooner or later arrive when I must abandon life and reason together."[10] In sum then, the facade, interior, physique, and psyche of the "house" of Usher are all in keeping, all express the "sense of insufferable gloom."

In fact, Usher claimed that his melancholy mood was caused by the gloomy characteristics of his house. Apparently the residence he tenanted all his life exercised a strong influence over his spirit: "the form and substance of his family mansion (the *physique* of the gray walls and turrets, and the dim tarn into which they all looked down) influenced the *morale* of his existence."[11] This is, however, an oversimplification. Poe's characters sometimes try to explain themselves and their behavior by claiming the influence of their surroundings, but at other times Poe describes relationships of mutual correspondence or complementarity between his subjects and settings, and these relationships differ essentially from those of cause and effect or influence in that neither the individuals nor the interiors have the degree of priority or autonomy that would be necessary for the exercise of influence or cause. Each presupposes the other's existence; for one to influence the other it would have to be external to it, or at least separate from it. This is not the case in Poe's narratives. Poe's characters are really inseparable from his interiors. Usher, for example, rarely left his house. The same was true for his sister and, we assume, for his predecessors. The identities of the family members and the family mansion are interrelated; their boundaries were never marked out clearly. In the development of his narrative Poe describes the character of each (the people and the place) by comparing it to that of the other; this is the reason for "the equivocal appellation of the House of Usher." Poe's tale requires that we suspend our assumptions about cause and effect or influence in architectural experience and that we try to understand a kind of dwelling where the subject and setting are just different ways of expressing a certain way of life, neither being the cause of the character of the other. This observation leads to two general questions: how does something specific, like an individual or an architectural setting, become something general, like a character, and how can both an individual and an interior express the same character?

Let us look more closely at the various settings in the story and try to answer these questions. First, the house in the landscape. The story begins at dusk, when the "dull and dark soundless day of autumn" gives way to the "shades of evening." Dusk and night are important times for Poe. Most of what he wants to reveal shows up best after sunset, and most of his stories are set in external darkness. Here the poetic sense of night, like that of autumn (when signs of life are barely visible) introduces the mood of the whole story. At night we are presented with the "melancholy House of Usher" where the visitor experiences an "utter depression of soul, an iciness, a sickening of heart and an unredeemed dreariness of thought." Why these reactions? Before the spectator stands a dark pile of excessive antiquity and extensive decay; disintegration seems imminent. No sentiment other than that of gloom could be experienced. Every part of the image expresses despondency. So does the surrounding landscape. Decayed trees form the backdrop for the house, and a "black and lurid tarn that lay in unruffled lustre" encircles the edifice. The tarn (which means "small lake" and conveys the sense of tarnish or stain and tarnation or damnation) is elsewhere in the story qualified as rank and miasmatic, but here it is a horizontal and directly sensible version of the black heavens. But there is more to it. Looking into the tarn, the visitor recalled the history of the Usher race, the singularity of its line of descent, without an "enduring branch, deficient of collateral issue." This account seems to have been suggested by the image of the house "reduplicated" in the lustre of the black pool. The water, we see, is also an image of the "house," a "house" in all the senses described above! Here Poe is playing upon the double, now triple, meanings of the house already mentioned. This becomes clear in the explanation of Usher's theory of inorganic sentience. I quote what seems to be the most important passage of the story:

The belief [in inorganic sentience] *was connected with the gray stones of the home of his forefathers. The conditions of sentience had been here, he imagined, fulfilled, in the method of collocation of these stones in the order of their arrangement, as well as in that of the many fungi which overspread them, and of the decayed trees which stood around—above all in the long undisturbed endurance of this arrangement, and in its reduplication in the still waters of the tarn. Its evidence—the evidence of sentience—was to be seen, he said, in the gradual yet certain condensation of an atmosphere of their own about the waters and walls.*[12]

The family mansion and Roderich Usher represent one another; this has been established already. In this passage we see that the family, in other words, the line of Roderich's ancestors, is also manifest in the setting. Just as the house is Usher's architectural double, its "reduplication" in the tarn is a watery double of the family; the reflected facades embody the family's history. The sentience of the whole site manifests itself in a process of condensation.

Poe admitted that an explanation of the physics of this process of condensation would require "considerations beyond our depth." He cited the efforts of his contemporaries.[13] This process also strains common sense. Most basically Poe has strained the conventions of English grammar. Let us focus on one word, the "their" of the final sentence. When I read this sentence for the first time I thought that there was a printing error in the text, that this "their" should have been printed "its," referring, I imagined, to the Usher mansion, it being singular. Now, however, I think the "their" makes sense, in plural—even if it strains grammar, logic, and common sense physics. I think this "their" is a kind of knot which binds together the multiple meanings I have outlined—in other words, that it is the focus of a carefully constructed symbolic image. We can take it to refer to the stones of the edifice or to its copies in the water; it refers to both. There is, as I read it, a correspondence between the physical presence of the house, its effigies in the tarn, Usher himself, and his family. The medium through which this correspondence is effected is the "atmosphere" of the place.

This radical substance, a lively medium through which the *genius loci* manifested itself, is described more elaborately in the following passage: "about the whole mansion and domain there hung an atmosphere peculiar to *themselves* and *their* immediate vicinity an atmosphere which had no affinity with the air of heaven, but which had reeked up from the decayed trees, and the gray wall and the silent tarn—a pestilent and mystic vapor, dull, sluggish, faintly discernible, and leaden-hued."[14] This passage establishes connections between the landscape objects, the immediate site, and the building by means of a local vapor which has the power to "reek up" and "condense" onto the the Usher house and Usher family. This powerful agent, particularly in its dullness and sluggishness, is also connected to (or identifiable with) Usher and his family. They too manifest its character—Roderich claimed that "it had moulded the destinies of his family . . . and made him . . . what he was."[15] Poe's theory of inorganic sentience, which is in fact his translation of the old idea of *genius loci*, is the key to his idea that individuals and places manifest the same character. Before Poe, in the history of architectural theory, and in the early history of medical science (in the Hippocratic texts for example), the idea that a people can be identified with a place, that both can have the same character, was a commonplace. Poe has reformulated this idea by presenting the family and house of Usher as different embodiments of the local vapor. This neighborhood effluvium has made Usher, his family and house what they are. Poe's version of this idea differs from earlier accounts in two ways: the *genius loci* has been attenuated to a very specific and wholly identifiable character, and "its subjects," the inhabitants, have been wholly subsumed within this character—life has become a matter of topographical destiny. This reduction parallels the amplification of interior design to a matter of articulating the fate of an inhabitant.

The subject of the family's destiny brings me to the other two references to the tarn in the story. Both occur near the end, when one night the narrator rose from bed and was joined by Usher in a room within the mansion that sat directly over the small vault into which both men had (temporarily) entombed Usher's sister a few nights before. Usher was hysterical. His countenance was, as usual, cadaverously wan—but, moreover there was a species of mad hilarity in his eyes. . . ."[16] Claiming to have seen the living spirit of his sister, Usher "hurried to one of the casements, and threw it freely open to the storm."[17] The storm was tempestuous, terrifying, and beautiful, but odd. Neither stars nor the moon nor lightning could be seen. A whirlwind (one of Poe's favorite symbols) composed of dense clouds that pressed in upon the house (and would not leave it) had arisen, apparently out of the local vapor. "All terrestrial objects immediately around . . . were glowing in the unnatural light of a faintly luminous and distinctly visible gaseous exhalation which hung about and enshrouded the mansion."[18] The source of the "life like" tempest was none other than the "rank miasma of the tarn." Its influence agitated Usher's condition, so the casement was closed.

But that was not the end of it. The last image of the tarn was precipitated by the appearance of Usher's sister. She had arisen from the tomb and made her way to the room already mentioned, where she threw open the door (with the assistance of the "rushing gust") and then stood bloodstained at the threshold for a moment until she "fell heavily inward upon the person of her brother, and in her violent and now final death-agonies, bore him to the floor a corpse. . . ."[19] Our narrator, aghast, fled from the chamber. Turning back, he was presented with the final image of the house: a crack, once barely discernible in the facade, had widened and spread vertically from the roof to the base. Through this fissure came first a whirlpool, then the face of the blood red moon, and finally "a long tumultuous shouting sound like *the voice of a thousand waters*—then the tarn . . . closed sullenly and silently over the fragments of the 'House of Usher.'"[20]

This phrase "the voice of a thousand waters" is the final and most poetic symbolic image. The thousand voices, the Usher family, have been joined by Roderich and his sister; in other words, the house, the landscape, and the water have become one in the reconciliation of the differentiated forms with their source.

From the exterior let us now turn to the interior of the house. There we will see the same correspondence between the subject and his architectural setting. The room which is best to consider is Usher's studio. Its characteristics are not surprising. Its tall windows are so far above the black floor that they are inaccessible. Its perimeter is differentiated into recesses and vaults that are neither fully visible nor indeed prominent. Dark draperies hang over the walls. The furnishings are comfortless, antique and tattered. Nothing in the room gives any sign of vitality: "I felt I breathed an atmosphere of sorrow. An air of stern, deep and irredeemable gloom hung over and pervaded all."[21] This is, obviously, a close approximation of the character of Usher; he, too, lacks comfort and is tattered, sorrowful, and irredeemably gloomy. There is a perfect correspondence between the setting and its tenant. The interior is like the exterior in that it, too, is "in keeping" with Usher's physiognomy.

The exact correspondence between Usher and his dwelling space is expressed analogically in his poem entitled "The Haunted Palace." The poem is as follows:

I

In the greenest of our valleys,
By good angels tenanted,
Once a fair and stately palace–
Radiant palace-reared its head.
In the Monarch Thought's dominion–,
It stood there!
Never seraph spread a pinion
Over fabric half so fair.

II

Banners yellow, glorious, golden,
On its roof did float and flow.
(This–all this–was in the olden
Time long ago)
And every gentle air that dallied,
In that sweet day,
Along the ramparts plumed and pallid,
A winged odor went away.

III

Wanderers in that happy valley
Through two luminious windows saw
Spirits moving musically
To a lute's well-tunéd law;
Round about a throne, where sitting
(Porphyrogene!)
In state his glory well befitting,
The ruler of the realm was seen.

IV

And all with pearl and ruby glowing
Was the fair palace door,
Through which came flowing, flowing, flowing
And sparkling evermore,
A troop of Echoes whose sweet duty
Was but to sing,
In voices of surpassing beauty,
The wit and wisdom of their king.

V

But evil things in robes of sorrow,
Assailed the monarch's high estate;
(Ah let us mourn, for never morrow
Shall dawn upon him, desolate!)
And, round about his home, the glory
That blushed and bloomed
Is but a dim-remembered story
Of the old time entombed.

VI

And travellers now within that valley,
Through the red-litten windows see
Vast forms that move fantastically
To a discordant melody;
While, like a rapid ghastly river,
Through the pale door,
A hideous throng rush out forever,
And laugh-but smile no more.

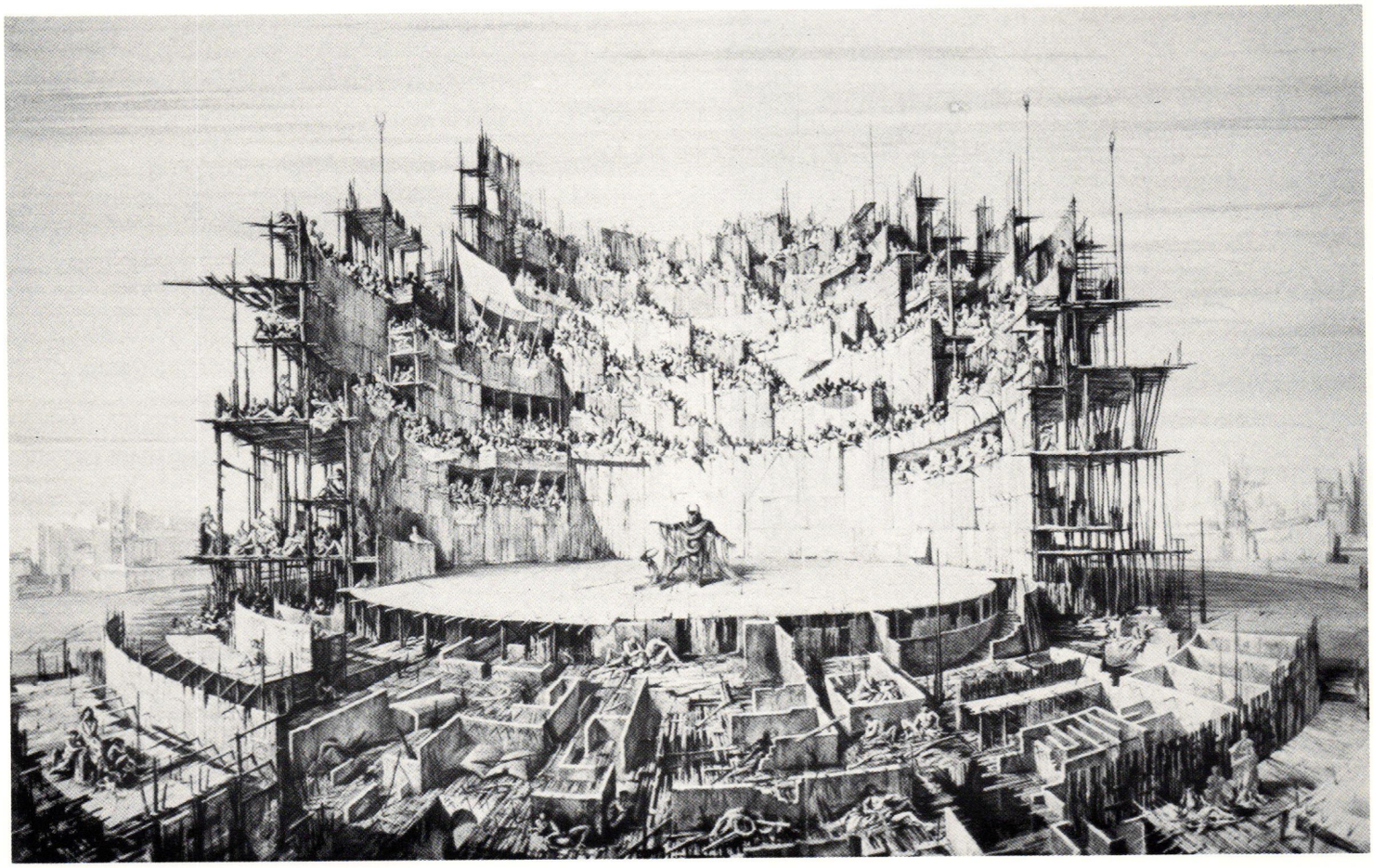
The "palace" is an image of Usher's head; both are "houses" of "Monarch Thought's dominion." For example, the building's yellow and glorious banners represent Usher's "silken hair"; its luminous windows are his eyes; its pearl and ruby door obviously stands for his mouth; and, finally, the "Echoes" within are his words. But this physiognomy changes towards the end of the poem. In the fourth and fifth stanzas we see that the windows have become "red-litten" (that is bloodshot), the door pallid and the forms within the palace have become discordant. This change signifies "the tottering of lofty reason upon her throne." Changes in Usher's state of mind were duplicated in the architecture of the "palace."

Richard Wilbur, in his essay on Poe's architectural imagery, has suggested that this "tottering of lofty reason" signifies the advent of sleep and dream, that this poem is an allegory of dreaming.[22] Wilbur distinguishes three mental states: reasoning, reverie, and deep sleep. The fall of the house at the end of the story is, by his account, "falling into deep sleep," and the "tottering" of the house throughout the narrative is a kind of musing or reverie. If this interpretation is true the analogy between mental states and architectural forms is another indication of the close correspondence between Poe's settings and inhabitants.

Poe's treatment of the relationships between individuals and dwelling situations was not limited to the narrative of "The Fall of the House of Usher"; he dealt with this issue in all of his tales. It is impossible and, we hope, unnecessary to examine each in detail. For purposes of demonstrating Poe's preoccupation with this issue and elaborating its full significance it will be sufficent to consider the architectural settings that appear frequently in Poe's narratives in order to decipher the meaning of each. I shall try to demonstrate that Poe's typical architectural settings express typical meanings, and are, therefore, appropriate for or "in keeping" with his typical characters. Poe worked with character types. His descriptions presuppose that settings and subjects can be typified, that individuals can have the same character, and that this character can manifest itself differently. How this can happen will become clear in my examination of four different settings: the labyrinth, the vortex, the library and the tomb-cave-cellar. Decayed mansions and circular or roughly circular chambers appear in most of Poe's stories (they appear as commonly as the night), but what has been outlined in the foregoing description of the house of Usher applies to these settings directly enough to make any further treatment unnecessary.

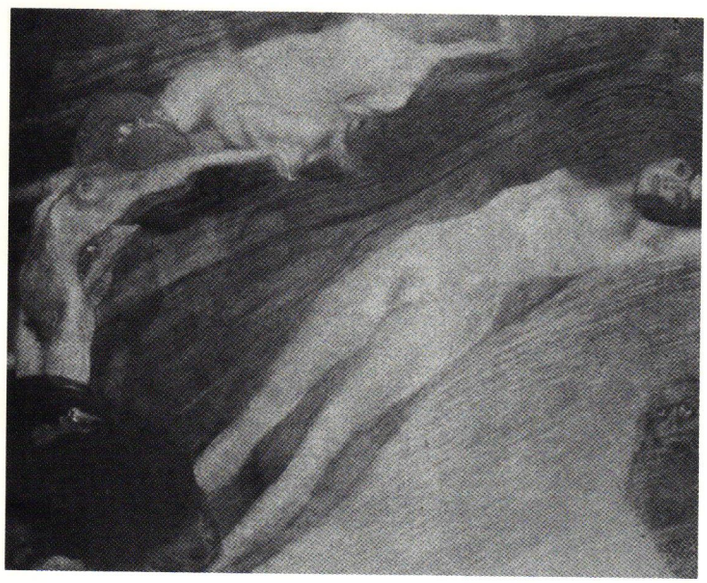
The labyrinth is the form of most of Poe's interior passages. Spatial movement in Poe's fiction is typically an ongoing negotiation with unexpected obstacles and unforeseen changes in direction. In the House of Usher, for example, the narrator is conducted through "many dark and intricate passages" on his way to Roderich's studio.[23] A similar path leads the narrator through the abbey of Prince Prospero in "The Masque of the Red Death." The apartments are so irregularly disposed that vision embraces little more than one at a time.[24] These spatial sequences resist stationary comprehension; one must move through Poe's interiors in order to grasp their coordination as a whole: "There was a sharp turn at every twenty or thirty yards and at each turn a novel effect."[25] The abbey in its entirety is, in fact, nothing more than this highly differentiated spatial sequence. So is the school in which William Wilson passed his formative years. "There was really no end to its windings–to its incomprehensible subdivisions."[26]

In such a place one was always without external reference and fixed orientation. Any sequence is alternately redirected by intermediate walls and panels as well as being altered vertically by steps in ascent or descent. "And the lateral branches were innumerable–inconceivable–and so returning in upon themselves, that our most exact ideas in



2. *Fabrizio Clerici,* The Minotaur in the Labyrinth. *The labyrinth is the essence of the form of most of Poe's interior passages. Labyrinthine passage is a representation of purposeful movement that is uncertain of the whereabouts of its desired destination.*

regard to the whole mansion were not very far from those with which we pondered on infinity." [27] In other words, in the labyrinth one is basically lost, and if not lost, at best searching. The terminus of labyrinthine passage is a distant image of repose or centered being—for example, a study, a studio or a tomb. The "innumerable narrow passages" in the hold of the ship described in "The Narrative of Arthur Gordon Pym" led to an ironbound box; the sequence of stairways and low arches that were supposed to lead to "The Cask of Amontillado" eventually terminated in the freshly fashioned tomb of Fortunato. Any point of rest is a complement to the labyrinth; the winding passage is a representation of purposeful movement that is uncertain about the whereabouts of its intended destination. In Poe's spatial symbolism the labyrinth expresses not only experiences of aimlessness and wandering but also those of revelation and discovery (the second seems occasioned by the first!). The mental equivalents of the labyrinth are reminiscing, imagining, and musing.



The vortex or whirlpool is similarily disorienting, but it is not directed towards an object or destination. We have seen already the action of the whirlpool of vapor in the house of Usher. The same form reappears in "The Purloined Letter" as a spiral of smoke encircling Dupin's head,and again in "MS. Found in a Bottle" as a gigantic aquatic amphitheater. It appears as a "vortex of prodigious suction" in "Descent into the Maelstrom", and as a "whirl of violent emotions" in "Ligeia." An experience of giddiness or spinning bewilderment characterises these settings: "down we came with a sweep, a slide and a plunge, that made me feel sick and dizzy, as if I was falling from some lofty mountain-top in a dream." [28] This is, I think, a clear statement of the bodily meaning of this symbol.

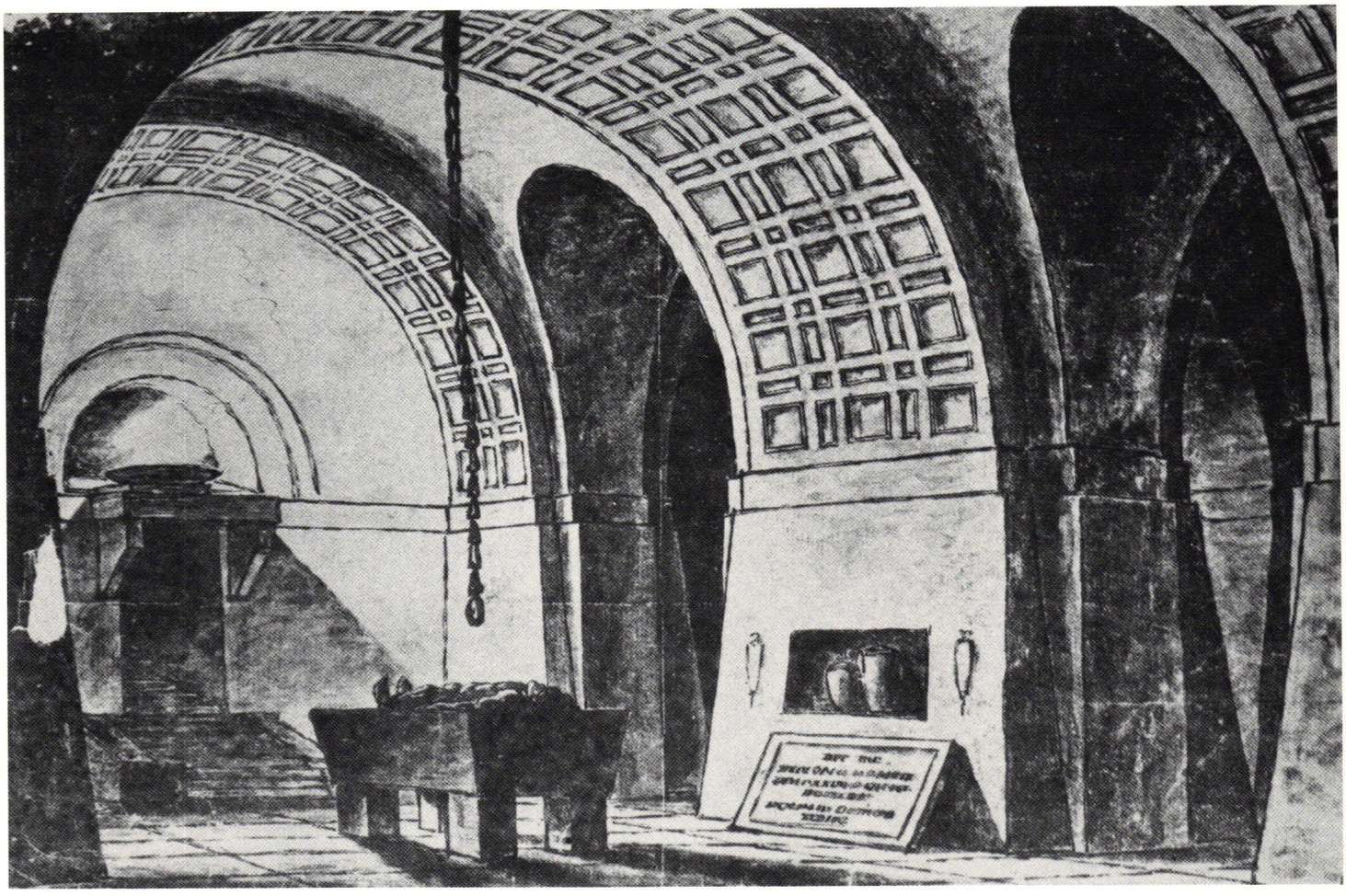
Poe's library is a place of abandon. We are never informed about the contents of the space, its books, their arrangement, catalogues, references and indicies—this information seems to be unimportant. Nor, for that matter, are we informed about the architectural details or the furnishings of the place. What we are told is that it is a place where the reader/dreamer is solitary, undisturbed, disengaged from external connections, confined, and, most important, abstracted. Poe's readers are known to us only after they have been interrupted, startled, and awakened. Berenice, in the story titled with her name, is seen as "the Berenice of a dream, not as a being of the earth." "Sitting alone (in the library) . . . I was awakened from a confused and exciting dream." [29] The library is a space of waking dreams where the "I" seems to be lost—to the reader and, apparently, to himself. In the library Dupin is lost in reverie. It is the place where he reasons best, but his reasoning is a kind of "transport of the fancy" which is closer to the warm light of poetic reverie than to the cold steel of analytical thought. The library is the darkness Poe's narratives need to show up their arabesque images of a victim, spouse, or close friend. It is the site of a reassembly of fragmented being in reverie; to call it poetic is not far off the mark.

The last setting I shall consider is the underground chamber. Although the tomb, cave, and cellar have different architectural characteristics, they are similarily "dark," "deep," and "intolerably close," and therefore can be treated as equivalent symbolic forms that accommodate and express the experience of absolute confinement. The experience of confinement has two important and unexpected consequences in Poe's fiction: one, that when confined underground men confront not only what they are not, but also they confront and, in a sense, discover *what they are*; and two, that this discovery always involves a "decentering" or self-transcendence of the individual.

When an individual is enclosed in one of Poe's caves and totally separated spatially from all that is familiar and taken for granted, when,

3. Gustav Klimt, Moving Waters, *1898. Poe uses the vortex or whirlpool to represent experiences of giddiness and bewilderment: "as if falling from some lofty mountain top in a dream."*

4. Friedrich Gilly, The Tomb, *ca. 1790. Poe uses tombs, caves, and cellars to express the sense of absolute confinement and solid enclosure—what he calls "the rigid embrace." Settings which sustain this experience appear in different specific forms in most of his tales.*



for example, one of Poe's characters is buried prematurely, he is not really alone; instead he is confronted physically by the mute body of his container. Whenever Poe's characters seem to be unto themselves unconditionally, they are in fact face to face with the opaque presence of solid mass, silence, darkness, and nature. Consider "The Pit and the Pendulum." A victim of the Inquisition who has been confined, apparently unjustly, in a deep subterranean vault, describes the content of his encounter with the chamber in the following terms: "all was not lost. In the deepest slumber—no! In delirium—no! In death—no! even in the grave all is not lost. Else there is no immortality for man. Arousing from the most profound of slumbers we break the gossamer web of *some* dream." [30] Enclosed in stone vault within the black mass of the earth man is not alone and "all is not lost." What remains? Obviously there is a loss of much that is normally associated with the person—a prisoner takes little to prison, the dead even less to the grave. Furthermore, the captive loses his reason in the underground chamber. Poe described many experiences of underground delirium and dream, and his descriptions of basement violence (in "The Black Cat," for example) always involve spontaneous and passionate action, never well-considered or preconceived operations. But even with the loss of reason something remains; that is, quite simply, the individual's bodily presence, which the cave "brings to light" better than any other place.

The thinking subject disintegrates when it is confined absolutely. But the power of the thinking subject is not lost in these circumstances; instead, consciousness infiltrates and takes up residence in its physical frame, the body. The darkness of the cave precipitates a sort of decentering of the thinking subject whereby the power that is normally entrusted to the "Monarch thought" is taken up into its corporeal constituency. The human body in Poe's dark and sunken rooms is portrayed as a corporeal consciousness, a fleshy center of desire and intentions. The truth of this transference of power and more generally the truth of Poe's fiction is that this redistribution of consciousness throughout the body happens quite normally and commonly—constantly, in fact—even though it is revealed most dramatically and convincingly in experiences of "the rigid embrace" of the underground chamber. Poe's "The Pit and the Pendulum" is a critique of false consciousness, like that of his near contemporaries—Marx and Freud. Poe reveals that the ego is not always and only what it thinks it is. The body, too, has a presence.

In fact, Poe's characters are never isolated nor circumscribed. Often, as we have seen, they merge with their physical surroundings—Usher's psyche and physique merged with the body of his house of Usher. Equally often the self-identified or self-conscious subject merges with its anonymous corporeal frame. At other times Poe's characters merge with one another. The twin or alter ego is a figure that appears frequently in Poe's stories. "William Wilson" is really a story about a two-sided figure, a split personality that is united in an act of "self"-destruction. Usher had a twin sister, and we have seen how they ended up. Poe's female characters are almost always two part. Ligeia is the complement of Lady Rowena Trevanion, and Morella is doubled by her daughter of the same name. This doubling does not indicate a crisis of

identity as much as the subject's reappearance or re-presentation in the body of another. In Poe's fiction the subject corresponds to his or her circumstances. In the social world this takes the form of a reciprocity between siblings or lovers; in the spatial and built world this integration exists in the reciprocity between the individual and the architectural setting. This is the most important sense of Poe's concept of "keeping." It verges on the pathetic fallacy and implies an impossible identity between people and places, but it specifies character—which is its purpose.

This leads us to ask, however, whether Poe, in describing settings in this way, has over-characterized or over-determined the architectural order of his interiors. Do we or can we really expect to find such a close correspondence (even identity) between our habits or patterns of behavior and our spatial enclosures? Did Poe specify too much when he established such a close connection between people and places, between human characteristics and architectural qualities? The answer must be, at least partially, yes. We have seen that the determination of character in the Usher story became a matter of determining a man's fate. The "fall of the House of Usher" was foreshadowed at the beginning and repeatedly throughout the story. This is certainly an extreme form of character specification. The "characteristic" image of the man and the place are in fact so specific and coordinated so precisely that the final events can hardly be taken as human events. The novelist has assumed complete control; the relentless pace and repetitious message of the narrative precludes deviations, free choices, and modes of behavior that we would recognize as genuinely human. Poe has established a ratio between the precision of character definition and the predictability of human action. Usher as a person has been replaced by Usher as a narrative figure. Here character is becoming caricature, and character traits have been exaggerated. The consistency of Poe's narrative parallels exactly the integrity of his architectural settings. Both exhibit the author's desire to express and represent so clearly and forcefully that the ultimate grounds for any representation, human life in its temporal and spatial richness and diversity, is lost sight of or reduced—atrophied.

This reduction is not Poe's problem alone. More generally, it is a problem with the idea of character as an instrumental version of the concept of decorum. This reduction is also a problem with the nineteenth century attempt to codify and control compositionally architectural representation. The idea that an author/designer can represent the character of a subject or setting by composing monothematic physiognomies is profoundly problematic. Faith in the representational power of images rests upon a forgetfulness of the complexity and fullness of human affairs.

However, leaving the character problem aside for the moment, let us return to our original point of departure, the relationship between architecture and literature.

With Poe's tales and theory of "keeping" in mind we can see quite clearly that the common ground between architecture and literature is nothing other than the world as we inhabit it. Both architecture and literature can be seen as imitations of what men do. Poe understood this concept clearly; it is what makes possible the correspondence between people and place. Poe's creative transformations of symbolic topographies, like the labyrinth and the cave, exemplify instructively how architecture, in narrative, can embody and re-embody typical dwelling situations—Poe's labyrinths, for example, embody the familiar movement from aimlessness or wandering to place of rest or centered being. Although the labryinths in the various stories manifest themselves differently, each form being appropriate to its context, each represents the same situation or event. In interpretations and transformations of this kind Poe is helpful. The character problem, its tendency towards stasis, and its susceptibility to instrumental manipulation and attendant total control of phenomena emerges in the context of the representational potential of these reinterpreted situations (labyrinth, cave, circular room, etc.). Poe was perhaps overambitious in manipulation and control of action through precise character definition, but was certainly helpful in reinterpretation and transformation of typical dwelling situations. Thus, Poe's works, perhaps like good stories generally, are in some ways instructive. They are certainly interesting, also distracting—stories are like that. At best they represent aspects of the world known tacitly or secretly to all of us. Revealing a shared but otherwise secret world is, no doubt, the success of literature. This is the success of good architecture, too.

NOTES

1. This sharing of theoretical principles is discussed fully in Rensselar W. Lee, *Ut Pictura Poesis: the Humanistic Theory of Painting* (New York: Norton, 1967). Lee does not examine architectural theory in detail but does demonstrate that architectural theorists in the fifteenth, sixteenth, and eighteenth centuries transferred theories of painting and poetry to their subject. See Per Palme, "Ut Architectura Poesis" in *Idea and Form*, Acta Universitatis Upsaliensis, Figura Nova Series 1, ed. N.G. Sandblad (Upsala, 1959) 95–107, for an extension of this parallelism between poetry and the visual arts to architecture. Per Palme discusses the ideas of I. Jones, Alberti, and Palladio, while referring to Vitruvius and ancient and modern theorists of literary form.

2. Edgar Allen Poe, "The Philosophy of Furniture," in *The Works of Edgar Allen Poe*, ed. M. Clemm (Harper and Brothers: New York and London, 1910) 3:70. All citations from Poe's works hereinafter will be from this edition.

3. Poe, "Furniture" 75.

4. Poe, "Furniture" 69.

5. Poe, "Furniture" 71.

6. Poe, "The Fall of the House of Usher," *Works* 2:151.

7. Poe, "Usher" 149.

8. Poe, "Usher" 155.

9. Poe, "Usher" 162.

10. Poe, "Usher" 150, 156.

11. Poe, "Usher" 157.

12. Poe, "Usher" 162.

13. Poe cited three authors who had previously expressed the ideas outlined here by Usher: "Watson, Dr. Percival and Spallanzani–especially the Bishop of Landaff [sic]." Richard Watson (1737–1816) lectured and published on chemistry at Cambridge where he later became a Doctor of Divinity, the subject on which his attention in his later years was focused. Watson experimented with condensation of fumes and the sulphurous acid produced by roasting ores. He suggested that air would condense to liquid and solid if greatly cooled. We shall see that this really is the basis for Usher's theory of "inorganic sentience." Thomas Percival (1740–1804) was a physician and author who was associated with David Hume and was a member of the Royal Society. He was interested in the health of those who worked and lived in industrial areas. Lazaro Spallanzani (1729–1799) was the most famous of these authors. He was even popularized in Hoffman's *Tales* as a sort of wizard genius. His interests were focused on problems of digestion, fermentation, and respiration, particularly the way air is absorbed into the blood, and the effect of stagnant air on an organism. This subject, too, forms part of Usher's idea of sentience.

14. Poe, "Usher" 152.

15. Poe, "Usher" 162.

16. Poe, "Usher" 166.

17. Poe, "Usher" 167.

18. Poe, "Usher" 167.

19. Poe, "Usher" 172.

20. Poe, "Usher" 173.

21. Poe, "Usher" 154.

22. Richard Wilbur, "The House of Poe," in *The Recognition of E. A. Poe*, ed. E. Carlson, (Ann Arbor: Univ. of Michigan, 1966) 254–278.

23. Poe, "Usher" 152.

24. "The Masque of the Red Death" in *Works*, 2:214.

25. Poe, "Masque" 214.

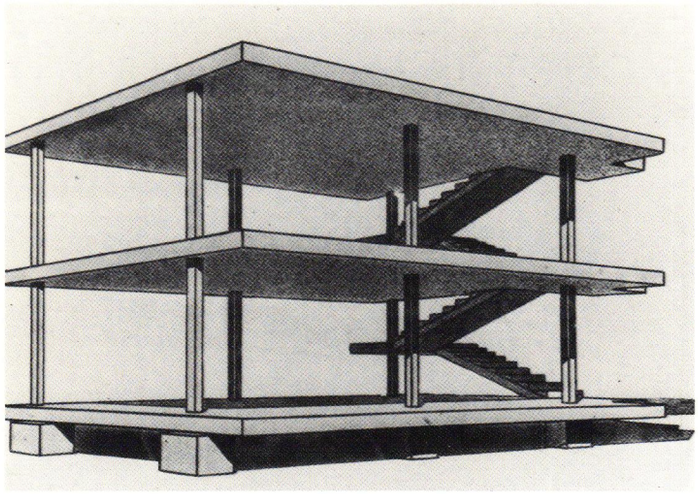
26. "William Wilson" in *Works*, 2:315.

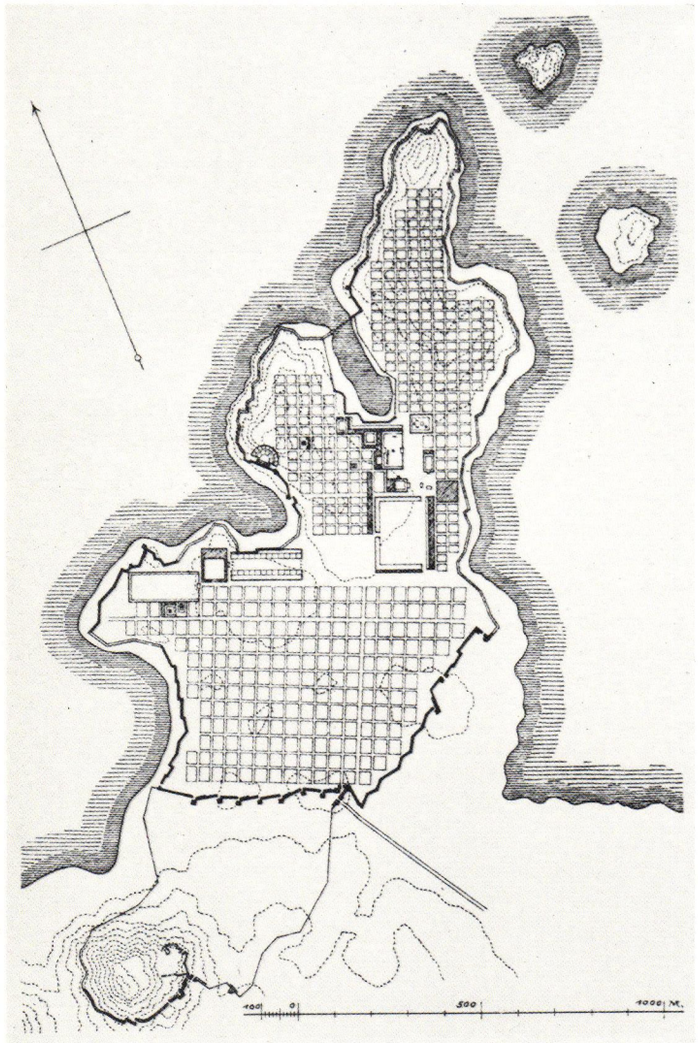
27. "Wilson" 315.

28. "A Descent into the Maelstrom" in *Works* 1:312.

29. "Berenice" in *Works* 3:10.

30. "The Pit and Pendulum" in *Works* 3:175.





2. *Le Corbusier: Maison Domino*

3. *Plan of Miletus.*

architecture with a rigorously repetitive, regular, and symmetrical ordering of the building fabric, governed by the diameter of its column. This *schema* persists, augmented in the twentieth century by new cultural influences that have reinforced the conventions of classicism. The modularity of the Japanese house and the "necessity" (not the reality) of the standardization of industrialized building components have been used to shore up arguments in favor of ancient practices.

Le Corbusier's Maison Domino is a vivid and succinct example of the basic figure of repetition; its bare bones echo the structural purity of the classical temple and propose a pragmatic resolution of the demands of industrial construction. On the other hand, it is probably *too* succinct; Giulio Romano's interior of the cathedral of Mantua, with its full-fleshed columniation and fugal intricacy of pattern is both ferocious in its disciplined regularity and abundant in its rhythmic complexity.

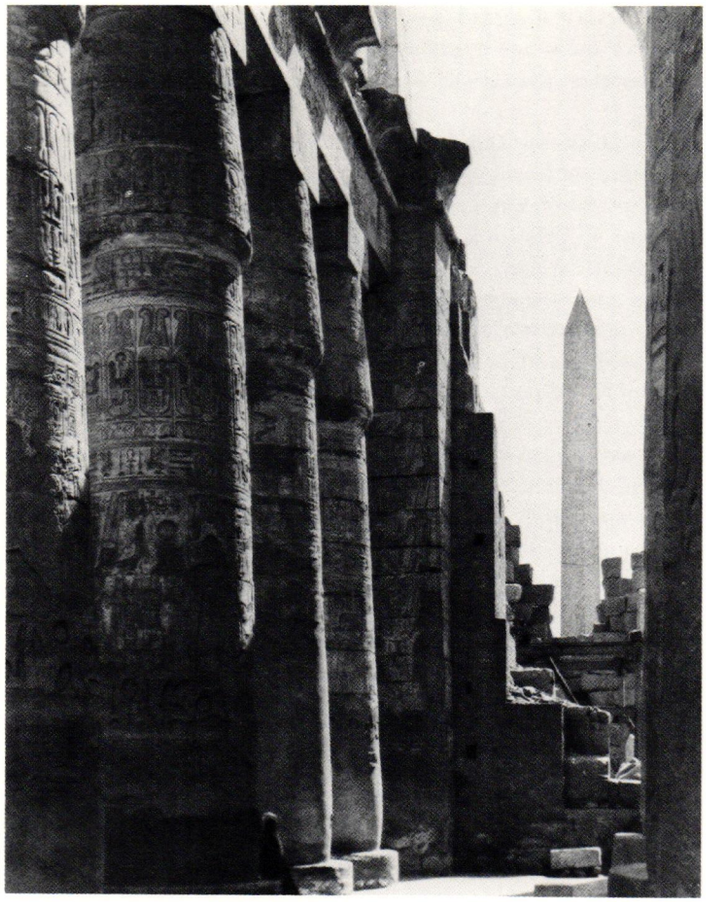
The column grid may "put in an appearance even when not structurally necessary"; similarly, regular window patterns often override the variety or irregularity of the spaces behind them.[4] Other examples of structured repetitions include the regularity of colonial city plans (from Miletus to Philadelphia), the cadenced procession through hypostyle halls at Karnak, the spacing of term statuary in the casino garden of the Palazzo Farnese, or the intricate mosaic floor patterns of Early Christian churches. All of these supplant emptiness and accident with order represented through figures of repetition.

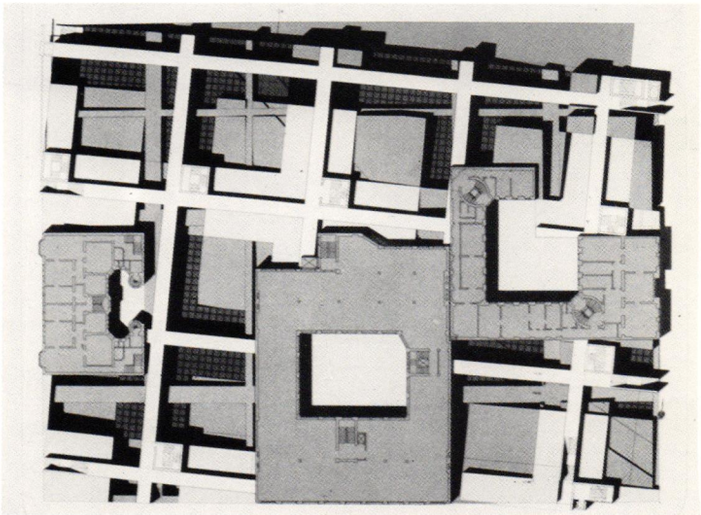
Some patterns are unambiguously closed or finite—even the Maison Domino could be said to have a beginning, a middle, and an end—while others are simply serial and indeterminate, though there must be a separate term for nonfigural repetition. The endless graph-paper curtain walls of Third Avenue, the interminable corridors of modern airports: these are simply meaningless repetitions. Their very indeterminacy has already been put to work rhetorically in projects such as Peter Eisenman's Checkpoint Charlie project for Berlin, wherein the featureless grid becomes a metaphor—a figure of resemblance.

Figures of Resemblance or Relationship

The proposition of figures of resemblance or relationship is probably the most intriguing and difficult subject on this list of architectural tropes. It subsumes all the last ten years' discussion on typology, for example, into one subheading, resemblances of type to type. These must be distinguished from stylistic resemblances or similes, and separated also from metaphorical associations such as the resemblance between the Unité d'Habitation and an ocean liner. Other figures of resemblance might include the synecdochal part-for-the-whole of sticking something like a temple front on an otherwise un-temple-like structure or the "personification" that transforms the door of the Palazzo Zuccaro into a yawning mouth. Replication, which we see at the Nashville Parthenon, is something else again.

When an architect chooses a pre-existing model on which to base the general configuration of a building (whether the model is a specific precedent or an abstraction "sedimented out" from many versions of the type), the equation employed is one of resemblance or relationship. In order to *be* a church, a structure must, in significant ways, resemble other churches. As Alan Colquhoun made clear, typological modeling is a procedure fundamental to design, and his "Typology and Design Method" is only one pioneering contribution to a now voluminous literature on the subject.[5] Again, as with figures of repetition, we are dealing with very basic operations, not rhetorical flourishes. The use of typological models is not a historicist game; it is the use of



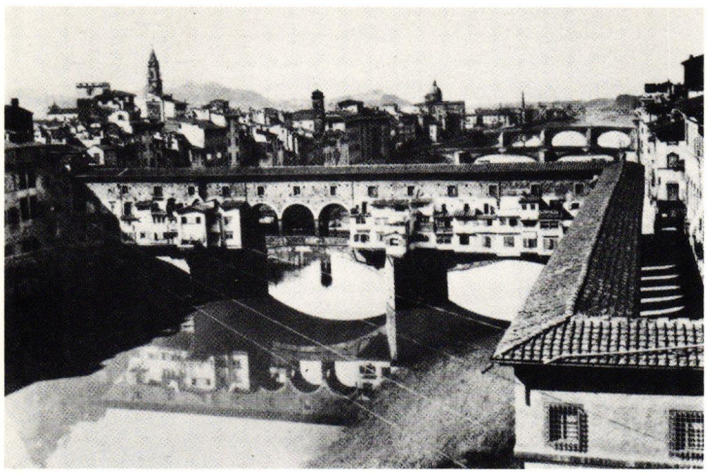




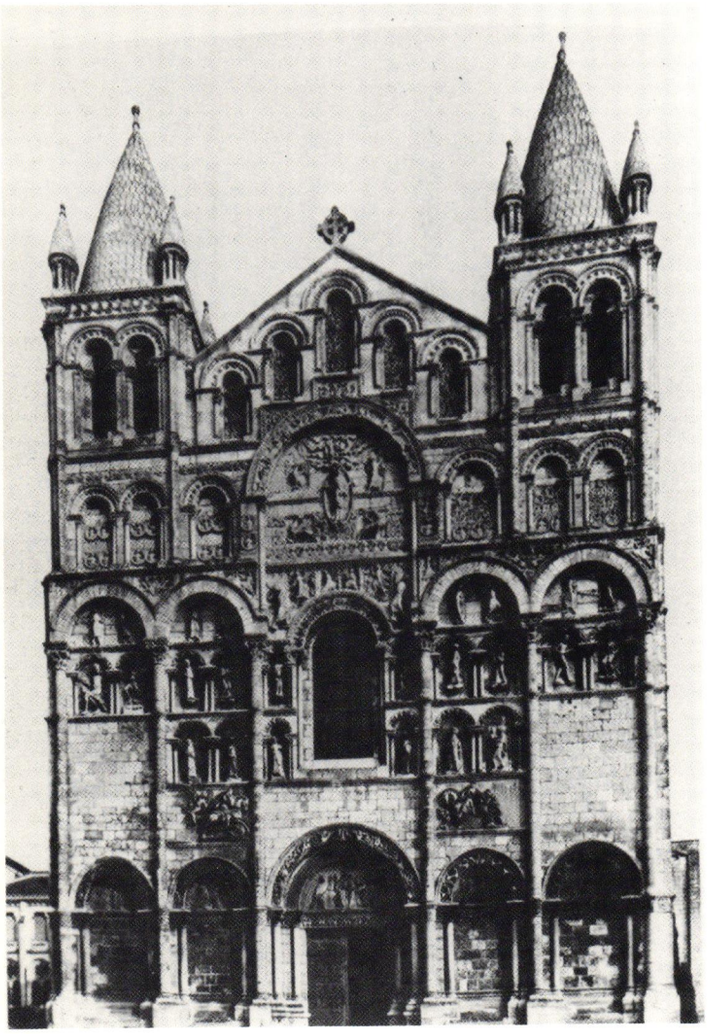
4. *Karnak, Egypt.*

5. *Peter Eisenman: Checkpoint Charlie project for Berlin.*

6. *Palazzo Zucarro in Rome, garden portal.*







analogical thinking to solve many problems of function and meaning simultaneously and to channel inventiveness to those aspects of the design where adaptations are required to meet changed circumstances.

If one accepts the legibility of typal similarity, it is not too big a leap to the notion of *kenning* or the hyphenization of types. A "tower bridge" can serve for an example; the Ponte Vecchio, a "street bridge," would be another. E. Baldwin Smith, in *Architectural Symbolism of Imperial Rome and the Middle Ages*, demonstrates how the imagery of fortified city and palace gates, used on imperial Roman coins to signify the power of the emperor was transferred to the turreted west front of medieval Christian basilicas and carried with it the connotation of the Church as the City or Fortress of God.[6]

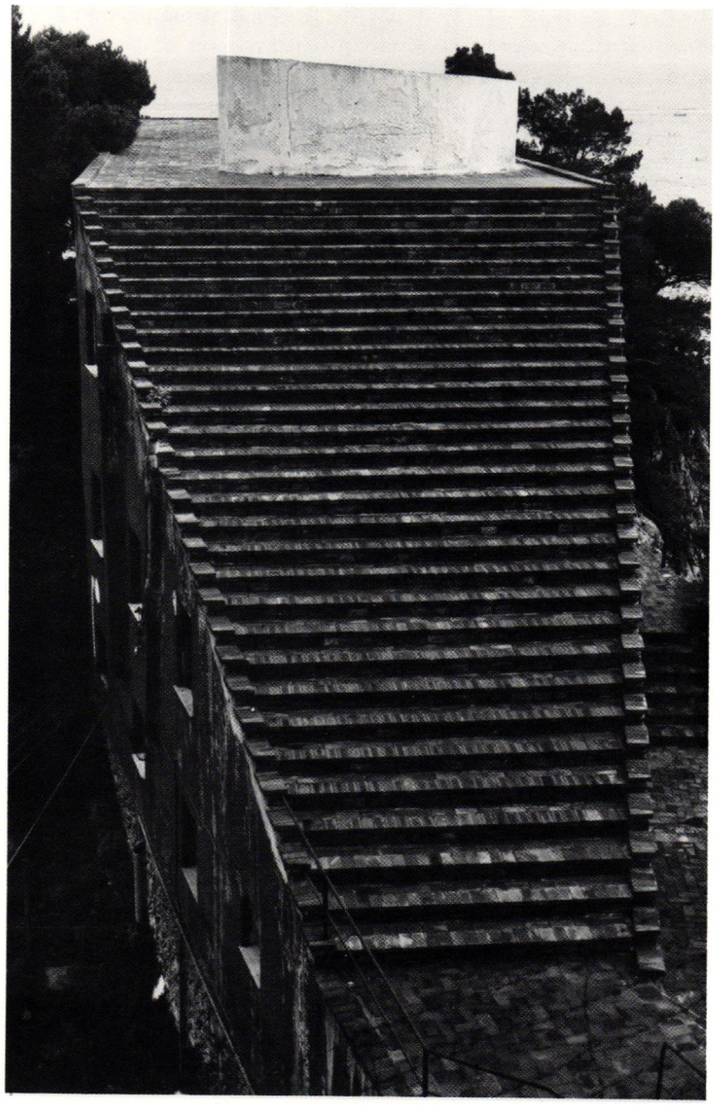
The circular plan-type of the Christian *martyrium* formed the typological basis of Bramante's Tempietto, marking the spot where St. Peter was martyred. The further compounding, then, of the Tempietto form onto the great crossing of St. Peter's (along with the compounding of basilical and circular plan-types) created an extraordinary new type, broadly inclusive in its references but also pointedly specific in its symbolism of the cathedral as the seat of the martyr.

Although it may be argued that since the eighteenth century we have witnessed the destruction of a culturally vital panoply of types with specific associations, twentieth century examples of kenning are both available and arresting. Adalberto Libera's "stair house" in Capri of 1940, on its rocky seaside site, compounds the image of monumental garden stairs and terrace with an unexpected domestic interior. The stair-terrace-house is a most eloquent and elegant monster—a "sphinx" created with the head of one species and the body of another. Allegorical monsters—sphinxes, satyrs, and minotaurs, are also the products of a process of kenning; they select and combine symbolic attributes to say something about human courage, menace, or erotic appetite.

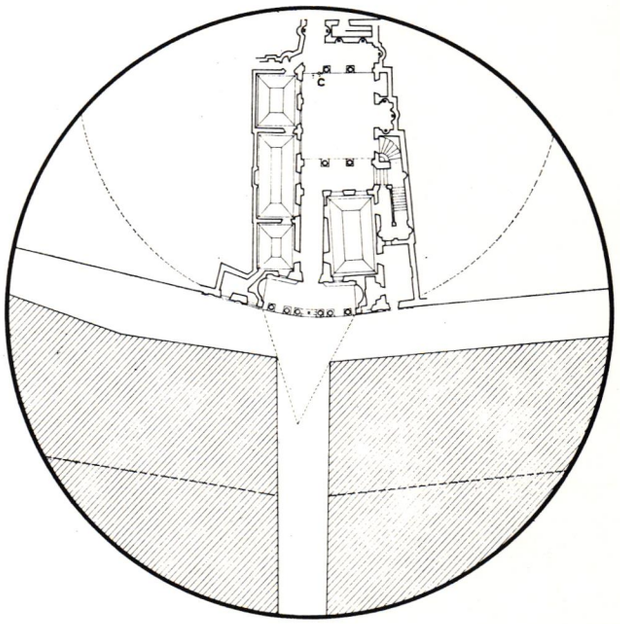
There are times when stylistic similarity stands in for typal likeness; there is nothing inherently evil in such a substitution. It seems to have served its purpose at the Gothic-garbed British Houses of Parliament, which cohabit respectfully with Westminster Abbey and assert the ancient lineage of democratic institutions in Britain. And though Abraham Lincoln is sitting sideways in his Greek temple in Washington, D.C., the conventional association of those Greek forms with democracy makes the whole improbable melange perfectly plausible. Other stylistic similes, such as the commonplace appearance of International Style vocabulary (developed in Europe with a revolutionary socialist milieu) draped by the square mile over American corporate headquarters and banks, are hollow and nonsensical.

There is an important line between stylistic simile and synecdoche, the figure in which the part stands for the whole. At the Palazzo Nuovo on the Campidoglio, the facade implies the existence of a complete palazzo behind; in the service of the regularization of the urban space, Michelangelo has played on our propensity to complete a figure from partial clues. Peruzzi may have intended a similar reading (or misreading) of the facade of the Palazzo Massimo, whose curved surface, viewed frontally within a tightly constricted cone of vision, could have created the impression that the palace's overall form was cylindrical and vast.[7] The actual, ingeniously eccentric palazzo relies on the same synecdochal process repeatedly—the *cortile*, for instance, is "side-loaded" (it has rooms only on three sides but is articulated as if it were the center of a conventional, foursided plan).

Synecdochal temple fronts have been pinned to such a random assortment of buildings—including ice cream parlors and gas stations—that I









7. *Ponte Vecchio, Florence.*

8. *Coin of Commodus, Anchialus, Thrace.*

9. *The west front of the church at Echillais, France.*

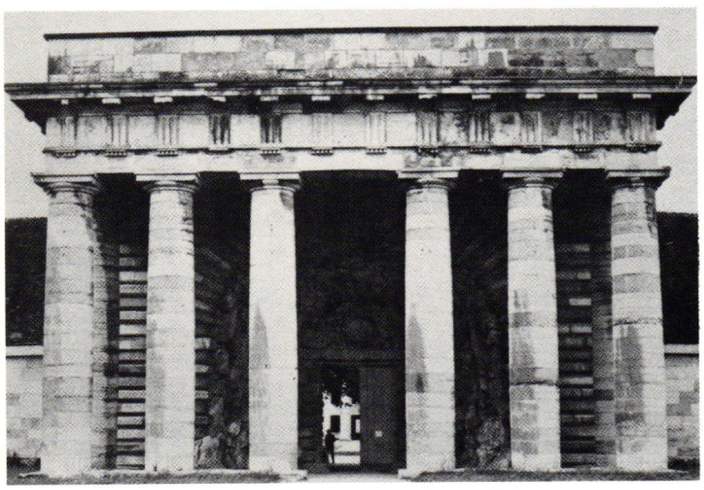
10. *Adalberto Libera's Stairhouse, Capris.*

11. *Michelangelo: Palazzo Nuovo, the Campidoglio, Rome.*

12. *Peruzzi: Palazzo Massimo, Rome.*

13. *Front view of the Palazzo Massimo.*





14. *Edwin Lutyen's elephants at New Dehli.*

15. *Ledoux: portal at the Saltworks at Arc et Sens.*

hestitate to use them as an example of synecdochal operation. Yet I suppose if there is rhetoric, there is also empty rhetoric.

However abused the temple front, the reputation of direct mimetic figuration has suffered more, and more unjustly. Now relegated to the status of freaks, follies, and *capriccios*, the only place to find a good piece of mimetic architecture these days is in an amusement park or along an old highway strip. This was not always so: the Erectheon has its caryatids; the weight of many fine Baroque palaces was borne by Atlases; elephants do the job for Lutyens in New Delhi. What Italian Renaissance garden designer would have forsaken the *rocaille* (the ossified moss and stalactites) that encrusted his grottoes? And should Ledoux have restrained himself when he designed the extraordinary cave-portal of the saltworks at Arc et Senans?

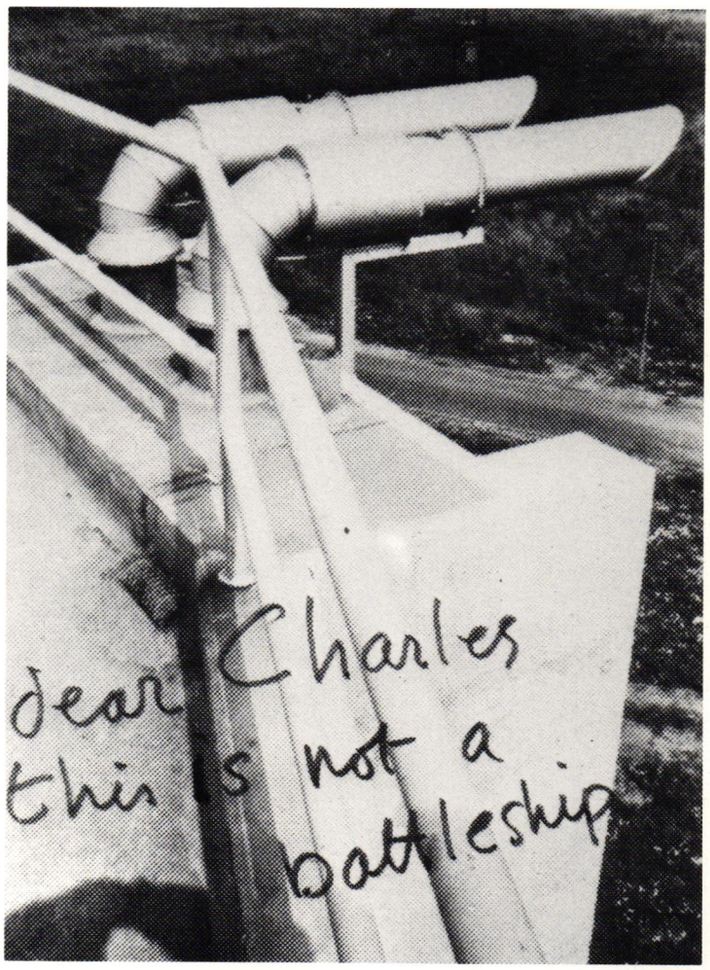
Replication—the conscious, line-for-line copying of a building—is another taboo subject. There is no question that there is something bizarre about finding a 7/8 scale Parthenon in a green park in Nashville, Tennessee, or the soulless ghost of the Doge's Palace (complete with Library and Piazzetta) in Epcot Center, Florida. But we don't find it strange at all when we are told that the Greeks rebuilt their temples as copies of previous ones, perhaps to insure that the gods would feel at home in their new quarters. The carrying over of something precious from the old to the new place is inseparable from the act of cultural colonization. Nostalgia is too pallid a term for such a vital process.

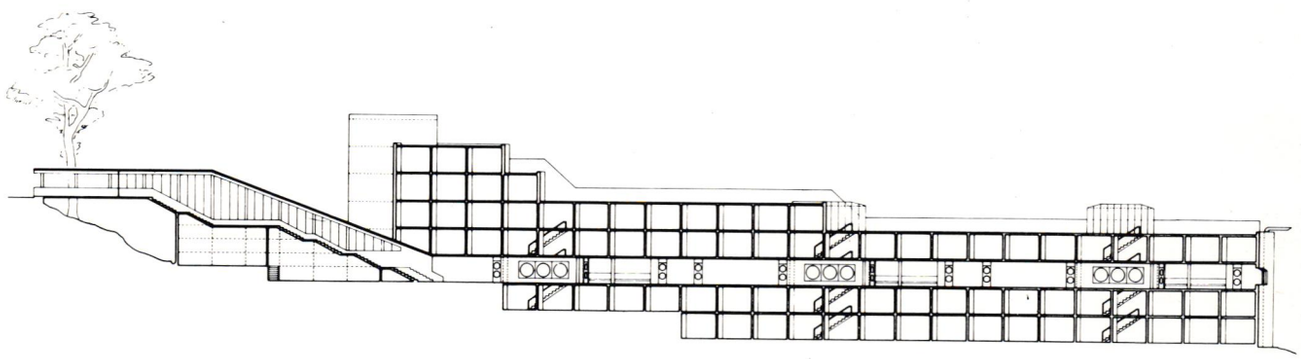
It is easy to say that mimesis and replication are outside architecture, that these things are "cheap tricks," "low art," "kitsch." In fact, they are just plain explicit, and there are times when explicit communication is wanted. Explicitness can be didactic as well as pornographic, and who is to say that architecture should never operate in either of these modes?

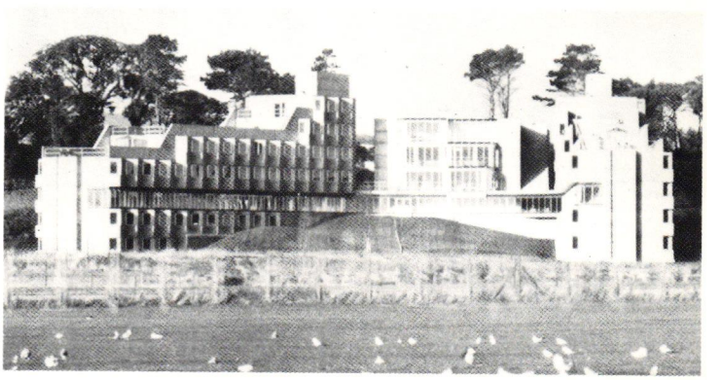
Quotation and self-quotation (what rhetorician could live without them!) belong under the heading of replication. They imply only a replicated fragment, used as a topic for commentary, and imbedded in a larger argument. James Stirling has made the process of self-quotation itself a sort of argument against originality; once one has found a good detail—glass shed, mushroom column, or handrail—why invent another, when the new context itself will change our perception of the replicated element?

Metaphor has been put to such treacherous use by the popular architectural press that I have a great deal of anxiety about introducing the subject; I will stick to tried and true examples rather than to try to read into buildings whose architects keep their metaphors private. In *Towards a New Architecture*, Le Corbusier gave us the comparison between the clarity and rationality of the machine and the clarity and rationality of the Greek temple. He then transferred images and formal relationships from the machine to his own buildings. The chassis of the car and the frame of the Maison Domino are analogous; the ribbon windows of the ocean liner *Normandie* and the Maison LaRoche are actually similar. (In a metaphor we can isolate certain aspects of the thing referred to—the self-containment and internal complexity of the ocean liner, its promenade decks and public rooms—and at the same time ignore the fact that it floats and is made of steel.) Although Le Corbusier does not provide us with a statement of intent, it is highly likely that he later allowed the ocean liner metaphor to inform the Unité d'Habitiation both as a physical and a social organization. And even if James Stirling protests, "This is not a battleship, Charles," his St. Andrews dormitory is undeniably a "Unité" of sorts, augmented by promenade decks and "prows" pointing out to sea. Certainly they are buildings, not battleships; perhaps they are more aptly likened to







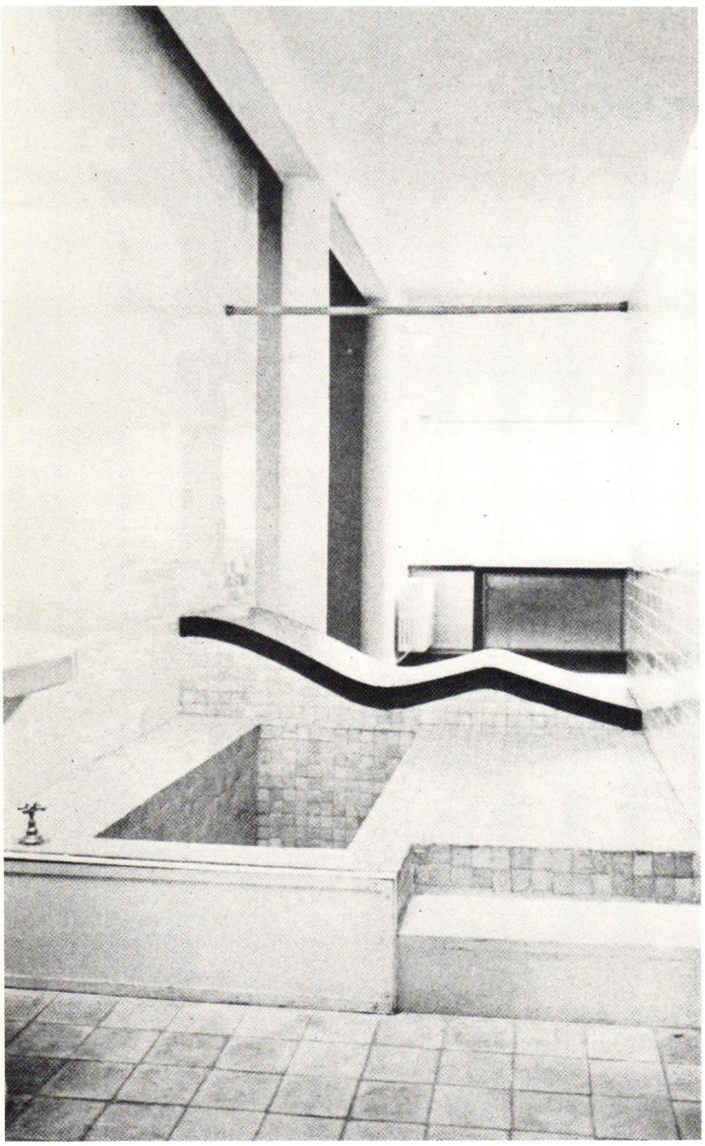


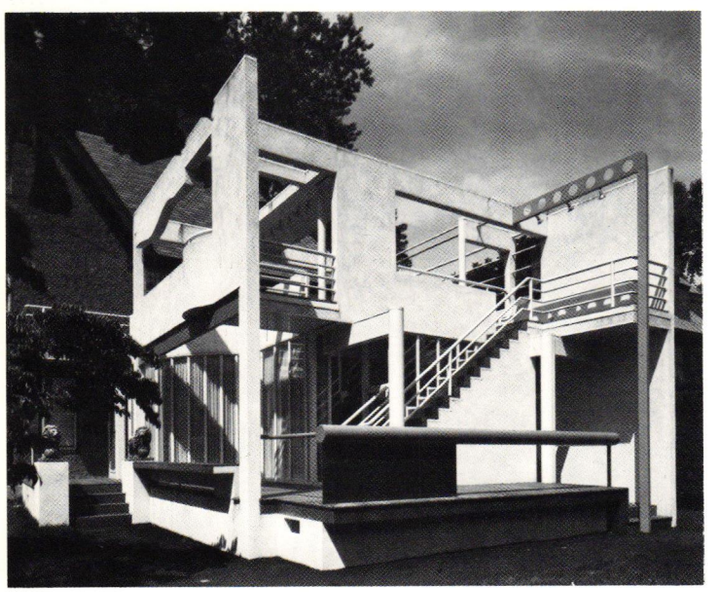
16. The Doges Palace, Epcot Center, Florida.

17. James Stirling: St. Andrew's University dormitories, ". . . not a battleship."

18. St. Andrew's dormitories, section.

19. St. Andrew's dormitories, general view.





20. *Le Corbusier: chaise at Villa Savoye.*

21. *Michael Graves: the roof terrace of the Benaceraf house.*

sister cruise ships meant to be the first of a whole fleet docked against the green ridge and riding the rolling grassland of St. Andrews. The ship metaphor is the key to both their message and their physical organization; it gives sense to the pattern of circulation and to details as small as pipe railings and porthole windows.

At certain points in his career Frank Lloyd Wright (not to mention Bruno Taut) turned to metaphors of crystals and seashells. These natural phenomena do have some spatial and structural characteristics that resemble architectural space and structure, but they are detached from human social referents either at the functional or symbolic level. The "return to nature" expressed through the notion of dwelling in a chambered nautilus is one that rejects both history and culture, rather than searching out its origins.

Metaphors of cave and womb, of cell and organism, permeate the work of the so-called bio-morphic architects who, Charles Jencks thought, were surely the wave of the future in 1970. Here explicitness *is* a problem; the organic shapes completely supplant, rather than enrich, architectural language—we are given orifices rather than windows, entrails rather than corridors. The similitude becomes leaden and literal, and begins to suggest that those who enter are merely recently ingested morsels rather than human inhabitants.

On the other hand, both Le Corbusier and Michael Graves have used nature metaphors with a light (and artificial) touch to add a grace note of wit and lyricism to their work. The aquamarine blue tiled "chaise" at the edge of the bath "pool" at the Villa Savoye and the sculptural play equipment (which echoes the form of the mountains beyond it) on the roof of the Marseilles block are two of Le Corbusier's most charming flourishes. The use of a sky/earth color palette and the collage of contextual elements into the facades of Graves's buildings (i.e., the "cloud" cut-out through which one views the garden from the roof terrace of the Benacerraf house addition) distinguishes his early work from his more doctrinaire colleagues of the "New York Five."

Figures of Emphasis or Understatement

Hyperbole is easiest to characterize when it has to do with size or scale: windows that are "too big" cottages that are "too small." Exaggeration can also be accomplished by deepening or flattening conventional features, compressing them or stretching them out. What is most curious about this is how easily we identify something as an exaggeration, without any published canon of the norm; the process seems similar to the reading of cut, color, and fabric in fashion design. The fashion-conscious public can tell you a man's income, professional status, likely leisure activities, perhaps even address, by the cut of his suit; yet the suit, in all its gross typal attributes (legs, sleeves, lapels, buttons) is roughly similar to every other garment called a suit. Similary, in an old New England shipping town like Salem or Providence, a deviation of less than a foot in the dimension of a window casement or a door will tell you whether you are looking at the house of an artisan or a shipping magnate. But enlargement (or diminution) is only one form of emphasis; redundancy, centralization, isolation, and negation are equally powerful. Three staircases where one would do; six doors to the same room; double colonnades; these are redundant elements that, while functional, are primarily used to strengthen or underline a visual impression. When Russian revolutionary artists staged a recreation of the storming of the Winter Palace in 1910, they commandeered battalions of workers and soldiers to represent "the people." They soon discovered that their single Kerensky figure was an insufficiently formidable foe against the spectacle of the vast mob, so they decked out

fifty identically costumed Kerenskys to speak and gesture in unison against the insurgents.

The piling up of architectural elements such as stairs, porches, serlian windows, and roof gables around the entry to a building concentrates attention on the rituals of arrival and departure. This centralization is so common in traditional architecture that now only its absence becomes startling. In some recent Italian neo-rationalist work, the refusal to employ centering devices forces us to search for the center of a facade and makes us feel unwelcome and alienated by the unceremonious door we are offered.

The isolation of normally contiguous and interdependent elements is another form of exacerbation. Single columns, facades detached from (or larger than) the building behind them, free-standing partition walls that neither turn corners nor touch the ceiling; all of these "disintegrate" normal relationships, calling the language itself forward for scrutiny.

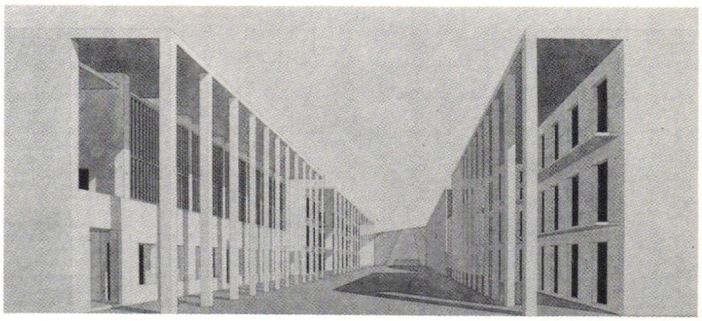
The period since the Second World War has seen many projects by architects who depend on the device of litotes. Projects by Raymond Abraham, Peter Eisenman, and Daniel Liebeskind strive to render architectural perceptions more vivid by the refusal to employ architectural conventions of one sort or another. But in their built work, none of them has yet surpassed Ludwig Mies Van der Rohe, who could reduce a room to a square of carpet, a single marble plane, a table, and a chair. With isolated and "purified" fragments, Mies created a rhetoric of absence, of a missing or lost architecture whose image is nonetheless architectural, even classical, in form. The absence of windows in John Soane's street facades for the Bank of England, the absence of the "ground floor" and the "roof" in Le Corbusier's villas, the absence of any architectural articulation at all from the Pei and Cobb designed John Hancock Tower in Boston—these are not simply omissions, but haunting vacancies, as convincing in their way, as the more overt (and antithetical) argument of Michael Graves's Portland Building.

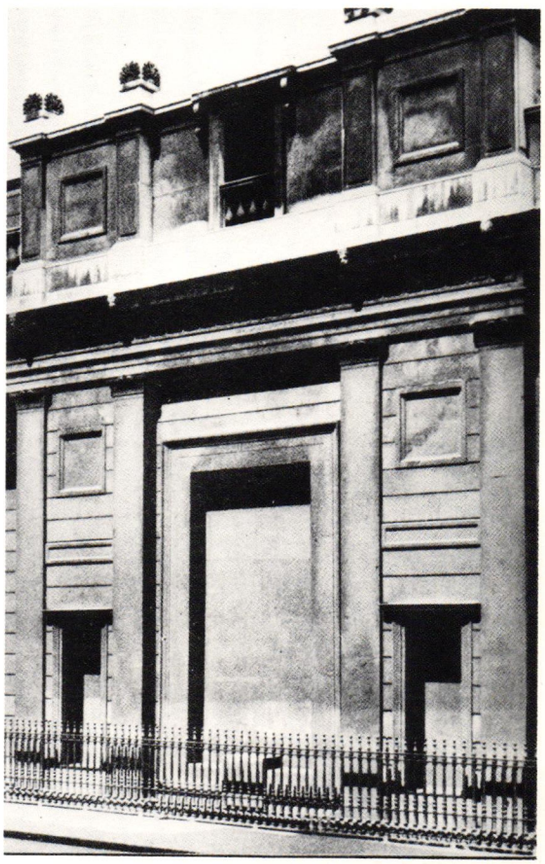
Figures of Overlay, Displacement, or Disruption

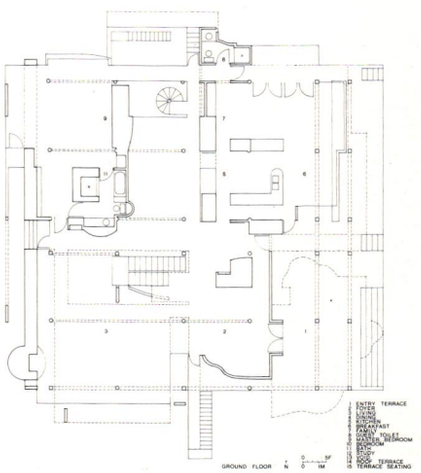
In the landmark essay "Literal and Phenomenal Transparency," Colin Rowe and Robert Slutsky make a critical distinction between two oft-confused concepts, one pertaining to the literal transparency of the glass house, the other to the perceptual phenomena that allow us to see two objects or patterns occupying the same pictorial space.[8] We often discuss the phenomenon of transparency in terms of "overlay"—a habit closely related to the use of tracing papers and films holding information that can be laid over other images, producing a layered collage or drawing.

It is not difficult to translate the idea of pictorial transparency from a painting to a facade; in both we are talking about a represented space on a two-dimensional surface. Confusion arises when overlay techniques are used in the plan drawing to generate two co-existing patterns of order in three-dimensional space. Once built, (as opposed to drawn), they can no longer be called virtual or phenomenal effects. The Rowe and Slutsky article has inspired a generation of experiments with the possibilities of plan transparency; the Snyderman house in Fort Wayne, Indiana, by Michael Graves explores the outer limits of this proposition.

Recently, the idea of transparency has been compounded by two further interpretations—that of an artificial archeology of overlaid, independently motivated spatial systems, and the intentionally collisive



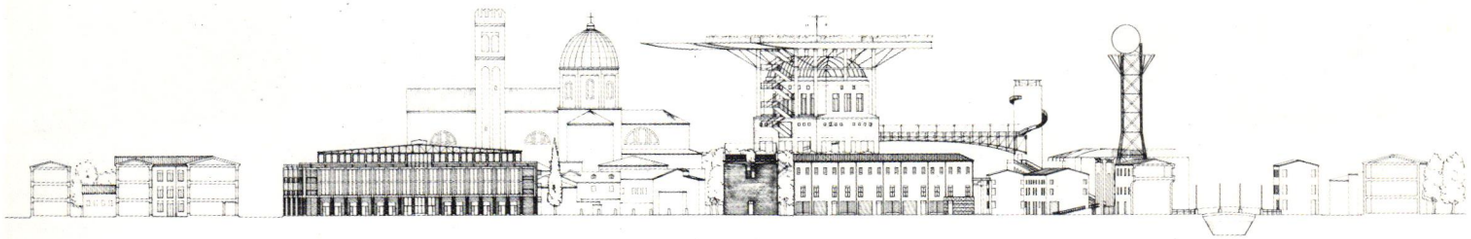


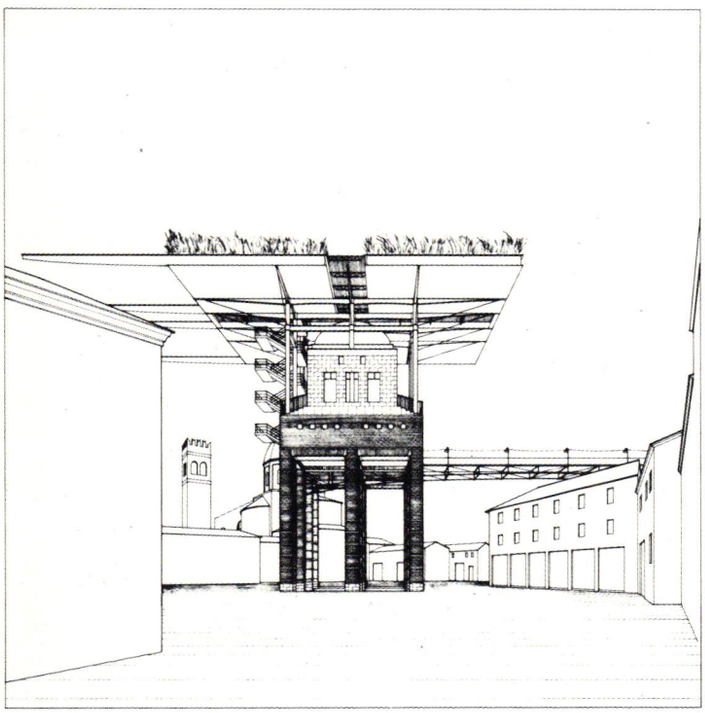


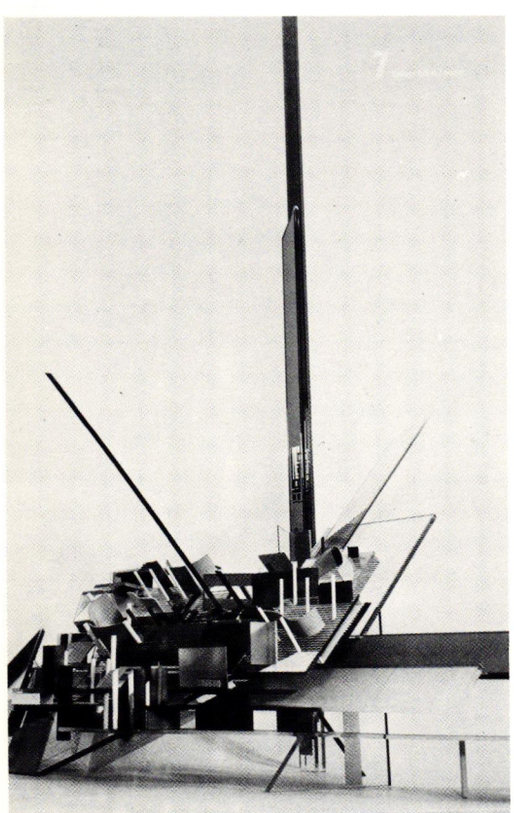
22. Neo-rationalist facade: Giorgio Grassi, Casa dello Studente.

23. John Soane: windowless facade of the Bank of England.

24. Michael Graves: Snyderman house, plan.







25. *Rodolfo Machado: Tower of Estes project, section.*

26. *Tower of Estes project, view of the tower from the street.*

27. *Daniel Libeskind: Rebus 2 project, view of the model.*

28. *James Stirling: Derby Town Center, section.*

29. *Iakov Chernikhov: "the Construction."*

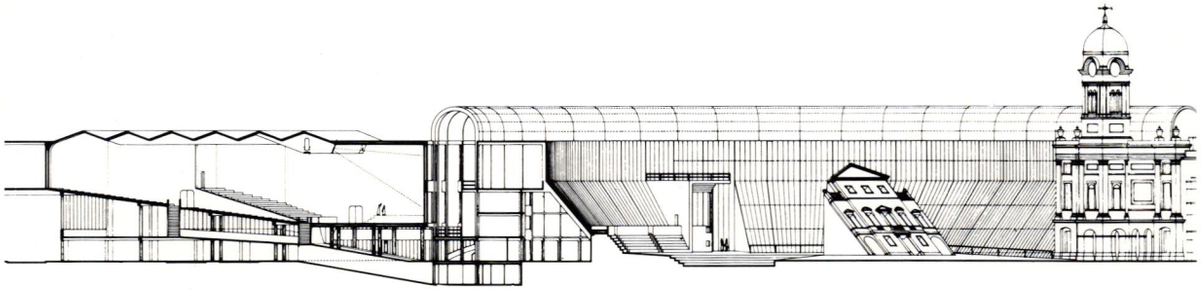
30. *Hans Hollein: Vienna jewelry shop.*

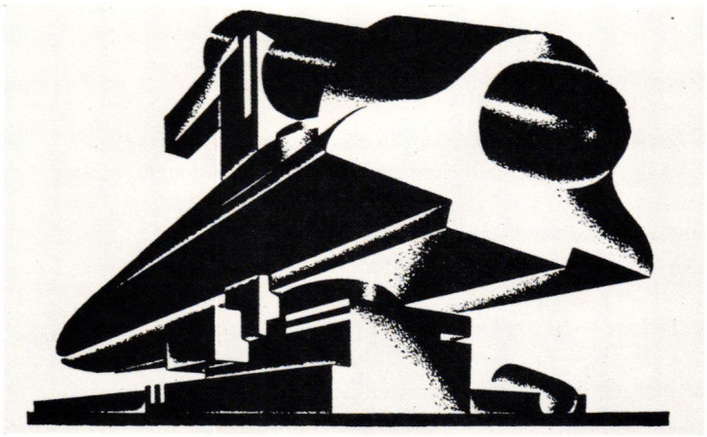
31. *Michael Graves: Rockefeller House.*

"deconstruction" of order created by the multiplication of superimposed figures. In order to create a meaningful taxonomy for these deliberately antitaxonomic operations, certain distinctions drawn earlier in this article must be respected. Collisions and superimpositions may be generated by the impaction of typologically identifiable fragments such as loggias, bridges, or domes; this operation, closely akin to kenning, has been used repeatedly by Rodolfo Machado in work such as his current 1984 Venice Biennale project for the town of Este, carried out by a team of students at the Rhode Island School of Design. The term sometimes used to describe the result is heterotopia—literally, the mixing up of places, or "misplacement."[9] The work of Daniel Liebeskind (for example, his *Rebus 2* project of 1980) is categorically different; the elements that we find assembled there are sufficiently atomized and abstracted as to defy both typological identification and any notion of placement. Peter Eisenman's Berlin project, cited earlier, lies somewhere between; his systems are abstract but coherent, overlaid but not implosive. This last distinction will make more sense if we attempt to define the way static architectural objects can be set in (virtual) motion.

Although there must be dozens of subspecies of figures of displacement, two examples, both well-defined elsewhere, should give an adequate picture of these maneuvers. The first is inflection; I illustrate this in the classroom by suddenly pointing my finger at a student and demanding "Look at him!" Every head in the class turns toward my victim. Every head in the class has made the precise inflection that will focus all visual attention on him. If a painting or photograph were made of us all at that instant (even without my pointing finger), he would clearly be its central point of interest. In James Stirling's Derby Town Center projects, the tilted facade (an intentional error in its own right) inflects toward the main portal of the proposed building, much in the same way that small gate and treasury structures inflect toward the great temples of a Greek acropolis.

The second subspecies of displacement can be called phenomenal kinesis: asymetrical displacement used to create the impression that a per-

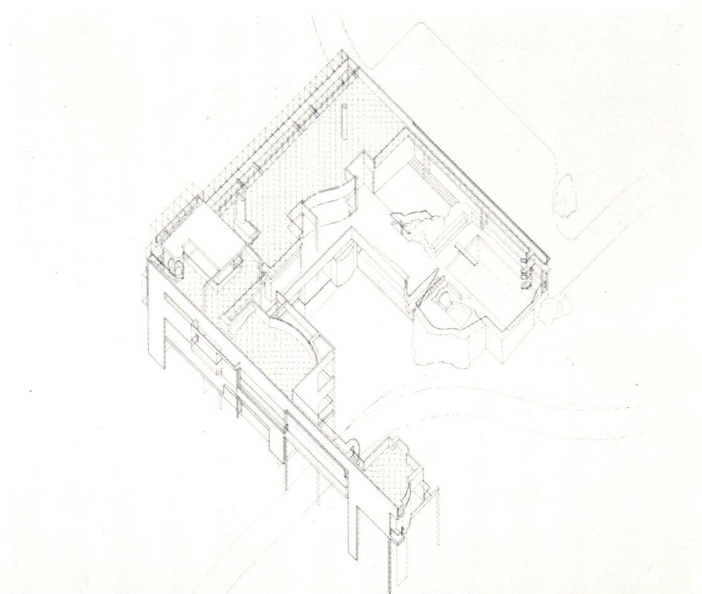






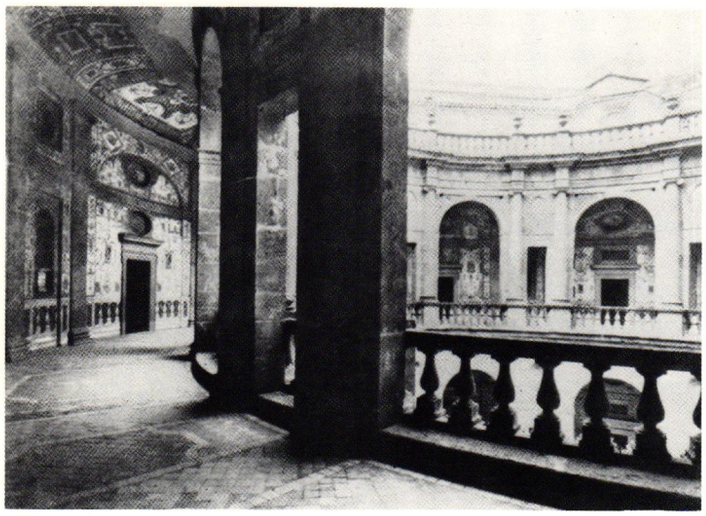
fectly stationary building is on its way somewhere, usually at high speed. The Russian constructivists loved this—Chernikov's architectural fantasies, Golossov's Club Roussakov and Ministry of Agriculture, and Melnikov's USSR Pavilion for the Exposition of Decorative Arts in Paris exploit our propensity to read motion in elements that seem to be displaced from a more static, referent position. Rotation and shearing describe two possible varieties of this imaginary motion.

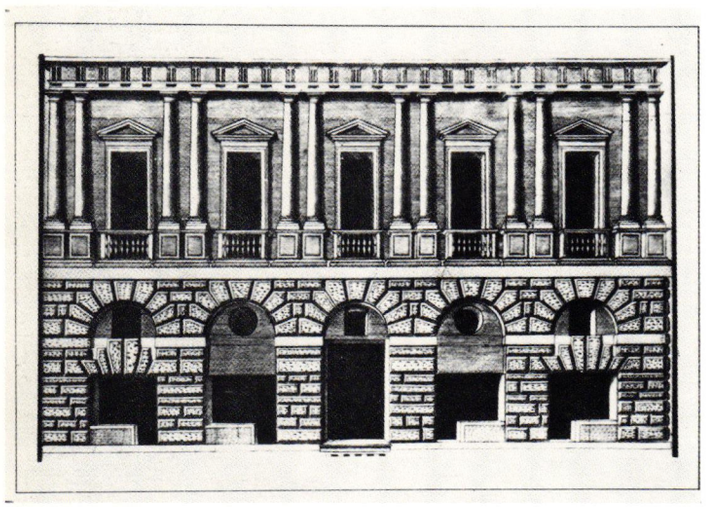
Referent stasis (the imagined whole) is also critical to the legibility of images of incompletion, interruption, and erosion. The deliberately ruinous garden follies of the eighteenth century depend on a mental representation of the temple (or castle or church) *before* it was ruined; they call up ideas about the slow, erosive process of time and perhaps more cataclysmic human events. But the rhetoric of disturbance does not necessarily depend on the pretense that something is old. "Broken" pediments, for example, are not ruinous; their semblance of a functional role is broken, so we know that they are there for another ornamental or allegorical reason. Hans Hollein has provided us with an example of the broken facade; James Stirling has proposed several broken plans, most notably for his museums in Düsseldorf and Stuttgart.

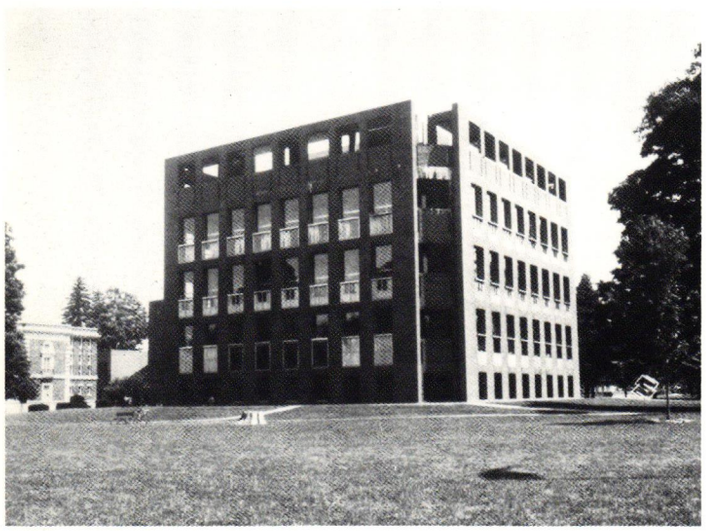


In Michael Graves's proposal for the Rockefeller house of 1969, it becomes almost impossible to make a distinction between the "transparency" or overlay of plan figures, their partial "erasure," or their "displacement." There is a courtyard, partially unbuilt; there are elements pulled out of their conventional location in a courtyard or palazzo type house; there are episodic fenestration patterns that seem to be fragments of larger, complete walls.

Most architectural elements are forced by rain and gravity to have definite bottoms and tops, so turning them upside down would best be called a deliberate error. But turning the inside out, or the outside in, may deserve the special title, inversion. The facades of the Circus at Bath is the Roman Colosseum outside-in; my guess is that Perruzzi's facade of the Palazzo Massimo in Rome is the interior elevation of the







32. *Vignola: cortile at the Palazzo Farnese in Caprarola.*

33. *Bramante: House of Raphael, Rome.*

34. *Louis Kahn: Exeter Library.*

Parthenon, inside-out. The cortile of the Palazzo Farnese at Caprarola may be the facade of the House of Raphael rolled up on itself; on the other hand, if you pull it (Caprarola) inside out like a sock and put a dome on it, you get something pretty close to the Radcliffe Camera at Oxford.

By now you may have noticed that my five points have some likeness to the hierarchically arranged interdependency of a Neoplatonic *scala*: one can't have *inversion* if there aren't *resemblances* to invert; *resemblances* are very often based on patterns of *repetition*, *et cetera*. This worries me, actually. Nothing can be so simple without being a deception. But then I remind myself that "it is not truth I seek, but veri-similitude . . ." [10]

Intentional Errors

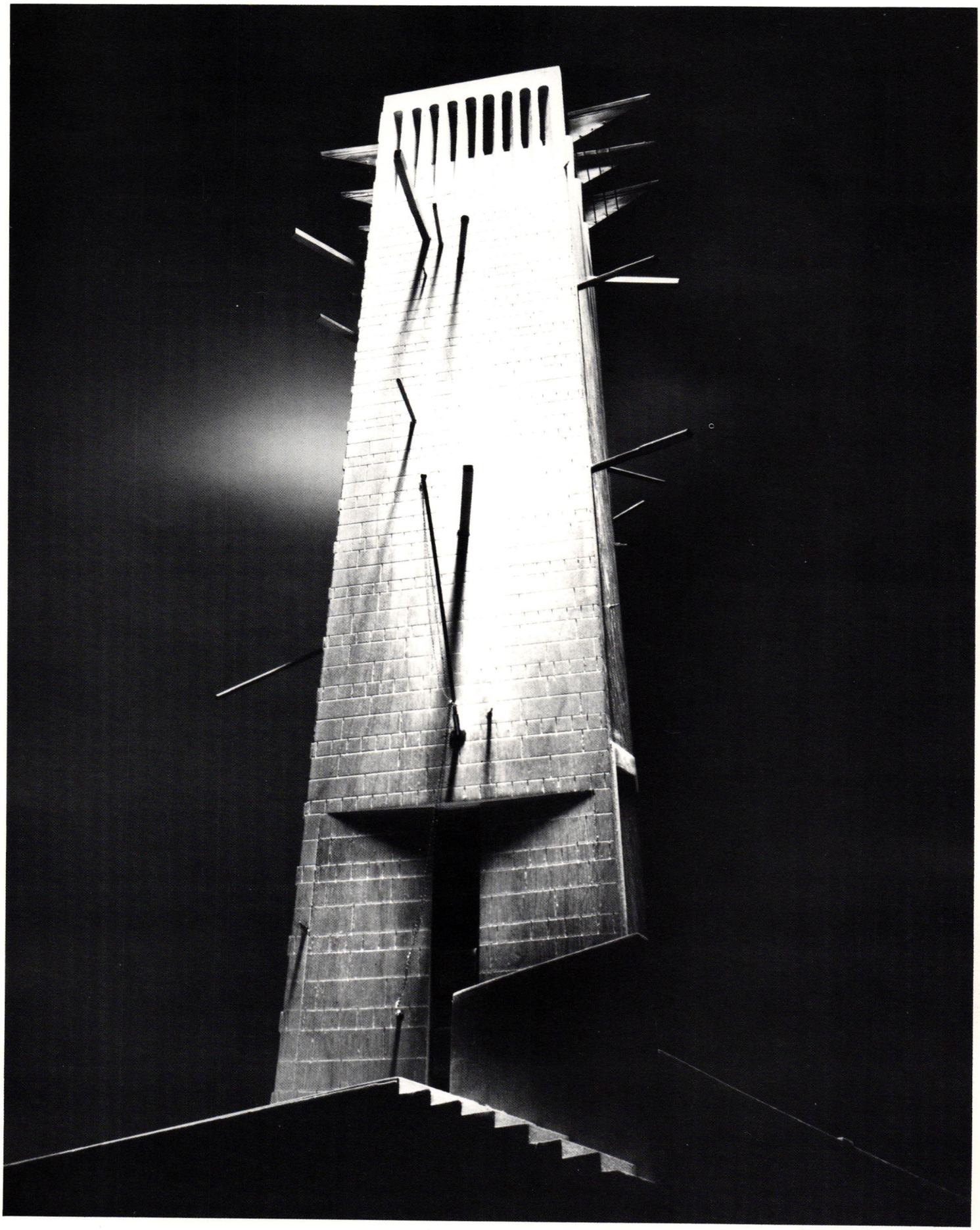
To be absolutely evenhanded about this, the same amount of space should be devoted to deliberate errors as to the other four categories already dicussed. But I must confess to a growing weariness at the popularity of these devices over the last few years. Perhaps an example from pre-"post-modern" days will seem fresher.

Louis Kahn's persistent mis-placement (some are yet to be found) of the front doors of his buildings is too consistent, and from too well trained an architect, to be called a mistake. The obscurity of his entrances creates an impression of opacity, difficulty, and monumentality at the same time that it denies the classicism of his otherwise classical plans. Unlike so many deliberate errors, this difficulty is neither coy nor ironical.

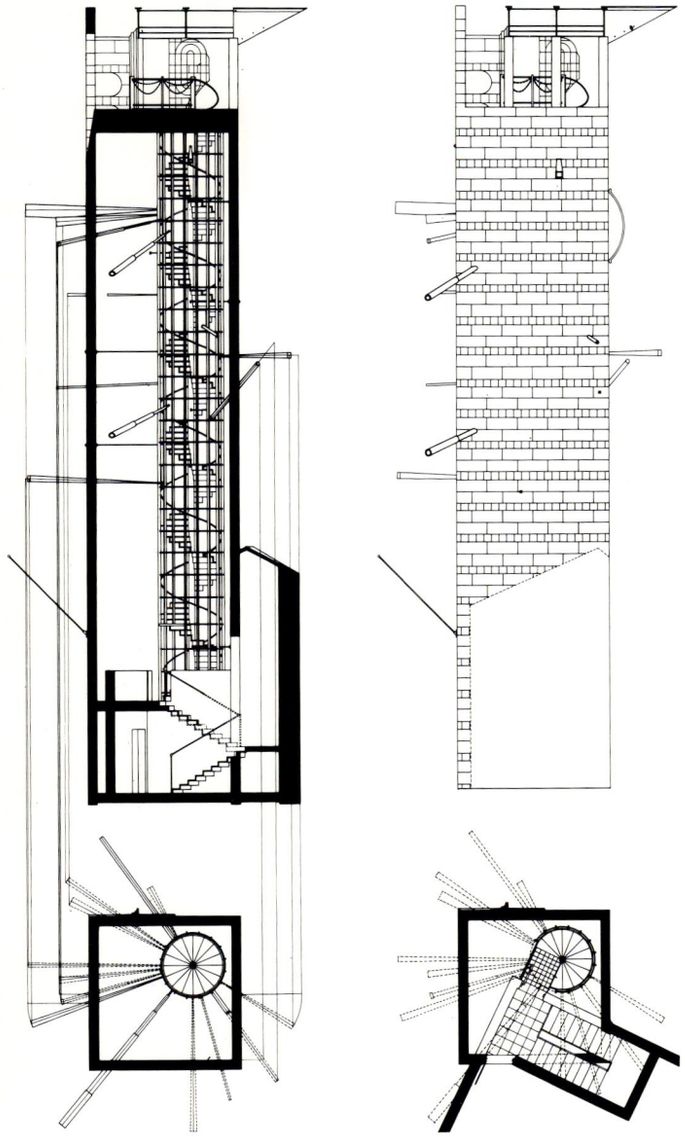
Robert Venturi's invention of "the grand entrance from the garage" in the Brandt House in Greenwich, Connecticut, has the merit of sharp social commentary; Charles Moore's "falling windows" in his latest house for himself are genuinely funny. The list could get very long without getting any better.

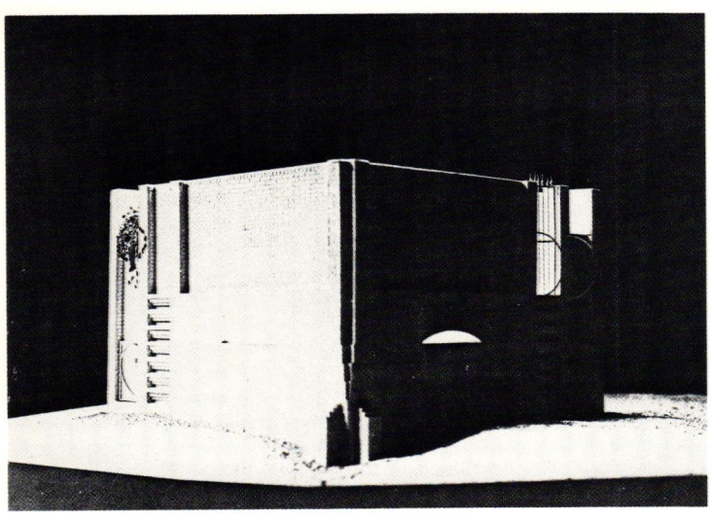
It was Venturi's *Complexity and Contradiction in Architecture* that first described and defined the deliberate error as well as the parenthetical expression and several other figural operations (inflection, redundancy, hyperbole) included here. [11] Colin Rowe, without pushing a rhetorical analogy, has written several essays that have laid the groundwork for a discussion of these terms. [12] Alan Colquhoun, in both "Typology and Design Method" and his more recent essay, "Form and Figure" has directly addressed the tradition of classical rhetoric. [13] Colquhoun, however, did not make the distinction critical to the extended usefulness of this analogy—that, rather than see a figure as a *thing*, we should understand it to be an *operation*, a *way of forming* material, a process of assembling elements of language, without which only literal statements would be possible. Figures of association or resemblance (historical reference) represent only a fraction of the territory within the realm of architectural rhetoric.

A recent project by Jorge Silvetti offers us the opportunity to test the usefulness of the descriptive vocabulary we have just fabricated. He has proposed, as part of a large urban intervention, the construction of a *campanile* (sans bells) in the small Sicilian town of Leonforte. [14] Although our first impression may be that it is a bizarre and unprecedented object, a mysterious shaft inscribed with indecipherable hieroglyphs and bristling with metal darts, a second look will allow anyone who can read architectural drawings to observe that almost all the typal attributes of a tower are present. Not only is the object considerably taller than it is wide and higher than all the buildings around it, it is square in plan, with a circular stair to the top, and



35. Jorge Silvetti: Tower for Leonforte, view of the model.





36. *Tower for Leonforte, plan, section, elevation.*

37. *Machado/Silvetti:* Taberna Ancipitis Formae, *model.*

crowned by a synechdochal belvedere or viewing porch. Moreover, the tower flanks and frames the facade of the adjacent church in a traditional manner, even taking an inflected position vis-à-vis the church portal. We might even even say that the typicality of these features has been emphasized by figures of isolation—the stair is free-standing within the hollow shaft, the square floor at the top is isolated from the walls by a pool of water, and one arcaded wall of the belevedere stands alone. Indeed, one begins to suspect a parodic or self-parodic impulse behind the abundance of these devices.

The darts are actually telescopes, permanently aimed at significant episodes in the spatial definition of the city. They are, in a sense, exacerbated windows, transforming the observation tower into an "optical machine" which directs the eyes to those elements that most strongly characterize the nature of the place. Silvetti derives the metaphor of the optical machine from his impression of an extraordinary seventeenth century fountain situated beside the opposite gate of the original walled town. The old fountain is a wall-window-fountain, itself an excellent example of kenning; through its twenty-two arched openings one looks out over the countryside and the ancient road to Palermo. The resemblance or relationship of the old fountain and the new tower is asserted several ways. The tower is exactly as high as the fountain is long, and their functions are analogous. The tower is a fountain, too; the basin at the top is to be filled to the sills of the arcaded windows, which are compressed and elongated in the isolated belvedere wall; wind or rain could cause the water to overflow down the stone wall. To make the likeness (and dialogue) between the two objects more explicit, without literal imitation, Silvetti has inscribed the elevation of the old fountain (full scale) on the wall of the new, although, of course, it only fits sideways (an inversion?) rather than horizontally. The inscription-quotation of the elevation is incomplete, or partially erased. This device sustains an equivocal balance between the presence of the figure and the presence of the wall itself.

Another metaphor, a figure of anthropomorphism, is latent in this project, as it is in the earlier Machado and Silvetti project of 1982—the *Taberna Ancipitis Formae*—the "house in the form of a head." In the earlier project, certain physiognomic elements are suggested by the windows and the brickwork, creating a Janus-headed pavilion whose features even begin to suggest the representation of emotion. In the tower (any tower may be said to have a certain likeness to the standing human figure, just as any cross-plan basilical church recalls the crucified body of Christ), the presence of the telescope-darts, arranged in a spiral following the ascent of the stair, evokes memories of the icons of St. Sebastian writhing in his martyrdom at the stake. This semblance may be gratuitous, but in the context of Silvetti's continuing efforts to explore "what architecture can represent and how it can do this," it is safe to assume that this tower is a late twentieth century observer of the city; perhaps a character like the Marco Polo created by Italo Calvino in *Invisible Cities*, or perhaps Silvetti himself.

My purpose in calling attention to this tower is neither to applaud it, nor to "pull plums from the pudding" like an old-fashioned English teacher dismantling a poem into its constituent figures of speech. Rather, it is to demonstrate that, despite its strangeness, this object is entirely legible and coherent, not only decipherable but open to many interpretations. It uses elements we *already know* and subjects them to operations that allow them to be read *as if for the first time*. Those operations are not the private property of Jorge Silvetti any more than metaphor or alliteration belong to the poet who uses them. *The operations belong to the language*, and language is held in common between the speaker and the listener. Only certain utterances make sense, and fewer still can be called poetic.

NOTES

1. In addition to other articles that are cited below, Jorge Silvetti's "The Beauty of Shadows," *Oppositions* 9 (1977) should be mentioned.

2. Marjorie Boulton, "Figures of Speech," *Encyclopedia Brittanica*, 1972 edition, 9: 257–262.

3. Allain Robbe-Grillet, *In the Labyrinth*, trans. Richard Howard (New York: Grove Press, 1960). See the introduction, "Objective Literature" by Roland Barthes, 19–20.
Umberto Eco, "A Componential Analysis of the Architectural Sign-*Column*", in *Semiotica*, 6 (1972): 97–117.

4. Colin Rowe, "Chicago Frame," *Mathematics of the Ideal Villa and Other Essays* (Cambridge: MIT Press, 1976). (First published in *Architectural Review*, 1956.)

5. Alan Colquhoun, "Typology and Design Method," *Essays in Architectural Criticism: Modern Architecture and Historical Change* (Cambridge: MIT Press, 1981).

6. E. Baldwin Smith, *Architectural Symbolism of Imperial Rome and the Middle Ages* (Princeton: Princeton University Press, 1956).

7. Paolo Portoghesi, *Rome of the Renaissance*, trans. from the Italian by Pearl Sanders (London: Phaidon, 1972).

8. Colin Rowe and Robert Slutsky, "Literal and Phenomenal Transparency," *Perspecta 8* (1963).

9. The current use of this term in architectural circles derives from Michel Foucault's discussion of heterotopia in *Words and the Order of Things: An Archeology of the Human Sciences*, (New York: Pantheon Books, 1970).

10. Count Francesco Algarotti, "An Essay on Painting," written in Italian, presented to the Royal Academy of Art, London 1764. In the section entitled "Of Invention" he says, "I do not say true things, but probable things; because probability or verisimilitude is in fact, the truth of those arts, which have the fancy for their object."

11. Robert Venturi, *Complexity and Contradiction in Architecture* (New York: The Museum of Modern Art, 1966), in association with the Graham Foundation for Advanced Studies in the Fine Arts, Chicago.

12. Colin Rowe, "Transparency."

13. Alan Colquhoun, "Typology", and also "Form and Figure," first published in *Oppositions* 12 (1978).

14. *Progressive Architecture*, 66: 86 ff.

THE ARCHITECTONICS OF *Paradise Lost*

William Alexander McClung



1. *William Blake,* Raphael conversing with Adam and Eve.

Literary architecture is properly studied not only as literature but as architecture. It is only incidentally a kind of metaphor or verbal analogue for what is primarily understood through narration or argument and differs in nature and effect from other arts such as painting and music that can have little or no substantial existence within a text. Literary architecture mediates between the discursive, immaterial values of the text and the implicit, material ones of organized spaces and constructed phenomena. While typically expressing the central preoccupations of the work within which it is located, literary architecture at the same time expresses the nature and values of architectural forms independent of the text. It thereby associates two otherwise mutually exclusive modes of understanding and judging: that of language, acting discursively through the unfolding of events and commentary in time, and that of phenomena, acting memorially through the linkage of discrete visual and tactile perception in combinations of the mind.

These constructed and organized spatial phenomena include not only buildings but also enclosed or merely delimited spaces. They may lie either at the center or on the periphery of the narrative or discursive content of a literary work; that is, a reader's attention may be called to them to greater or lesser degrees, and their presence in the work may be variously static or dynamic in relationship to the development of plot, the mutation of character, or whatever otherwise governs the achievement of intention in the disposition of the elements making up the text. But literary architecture always can and often does offer the most immediate access to dimensions of the text otherwise embodied immaterially. Its advantages are both its capacity for relatively complete and persuasive reconstitution in the reader's mind, by contrast with other kinds of nonliterary art, and the status of its referents as remembered components of the reader's experience.

The first advantage depends upon the extreme precedence in architecture of generic form over particular instance. Generic forms dominate literary architecture as they do the common understanding of architecture; cottages, cathedrals, enclosed gardens, even arks or ocean liners require little elaboration to function as imagined visible and tactile components of a text. The experience of generic architectural forms is universal, at least among those who read books, and literary architecture itself constantly reinforces the understanding of works of architecture as instances within a species or genre that has some kind of authoritative existence beyond the sum of its parts. It is difficult to draw a line between the seen and felt experience of architecture and the mediation of phenomena through language. Recognition of architecture in literature is swift: it is a kind of thing we understand independently of the text, described—unlike painting or music—not by esthetics but by phenomenology.

That recognition, of course, depends upon the status of architecture and organized space as phenomena that have to a large extent framed, shaped, and dominated our memory, our sense of the coherent progression of the past into the present. We are born into and exist actually, and to a large extent imaginatively, within a world of craft, of which the most manifest and omnipresent is architecture. As the arena of most of our experiences, architecture is not only a powerful mechanism of memory; it is scarcely to be distinguished from reality. Literary architecture characteristically directs our appreciation and "use" of the text by imposing the authority of generic memory over whatever spaces and structures are generated rhetorically, that is, by the text itself. As literal loci of organization—places where things happen—and as figurative manifestations of immaterial phenomena (like cultural values or psychological states) literary architecture constitutes a counter-text within a text, a phenomenological equivalent of discourse.

Milton's epic *Paradise Lost* is for several reasons a point of departure for understanding literary architecture. Its architecture is the imagination of what is first and therefore what is best, at least at the levels of Heaven and Paradise, and its architecture is ultimate, the goal in Christian mythology to which man tends. The buildings and organized spaces of Heaven, Paradise, and Hell appear in *Paradise Lost* not only as supreme realizations of ultimately blissful or miserable existences, but as dynamic systems in a process of self-realization, actuating their potential within the context of the dramatic episodes that make up the epic's plot. This dimension of Milton's architecture is broadly the equivalent of the epic's central concern with becoming over being, a concern manifested in the integration of historical time into the representation not only of the earth but of Heaven and Hell as well. Architecture thus functions not only passively, as an epitome of things as they are, but actively as an agent of process.

Milton stands, furthermore, at the end of the European Renaissance, and at the end therefore of some three centuries of effort to integrate Judaeo-Christian mythology with the inherited and revived culture of classical antiquity. His is the last literature of its kind and scope, rivaling Virgil in universality and Dante in metaphysics. As the inheritor of a vast tradition of classical and Christian argument about the proper and ideal state of man's existence, Milton seeks in *Paradise Lost* to assimilate the arcadian dream of timeless existence in a beneficent Nature to the utopian vision of fruitful progress through historical time. His most accessible representation of this synthesis is found in his organization and depiction of the spaces and surfaces of the created and constructed universe.

The complex intellectual history to which Milton was heir offered both the conception of organized spaces as transcendent and ideal and the fear of them as interruption of man's proper relationship with nature.[1] Milton also inherited a tradition of synthesis between these two conceptions, one in which craft is accommodated to nature generally at

the expense of architecture. As developed by classical Stoic moralists and satirists like Seneca, Martial and Juvenal, that synthesis restated an antagonism towards wealth and urbanity deeply rooted in antique culture and popular with medieval Christian philosophers. To the Stoic temperament and within Stoic ethical systems, where passionless detachment from the world is both a spiritual and a civic ideal, architecture is tolerated if it obeys a functionalist formula that requires identity of form with content and the abolition of the inessential in content (and therefore in form). The Stoic position on architecture is to a large extent an aspect of the argument against luxury, and it flourished in medieval and Renaissance ethical systems. Indeed, it flourishes today.[2] Milton recognizes the value of this formula up to a point, but reverses its anti-architectural bias. In general it may be said that Milton is anti-arcadian, having no interest in unimproved landscapes that satisfy all legitimate needs and that can be affected only adversely by change. He represents the states of things as they are at the celestial, paradisal, and infernal levels as unions of nature and artifice; both are components of reality and neither is intrinsically flawed.

on the building of Pandaemonium

Anon out of the earth a Fabrick huge
Rose like an Exhalation, with the sound
Of Dulcet Symphonies and voices sweet,
Built like a Temple, where Pilasters *round*
Were set, and Doric pillars overlaid
With Golden Architrave; nor did there want
Cornice or Freeze, with bossy Sculptures grav'n,
The Roof was fretted Gold. Not Babilon,
Nor great Alcairo *such magnificence*
Equal'd in all thir glories, to inshrine
Belus *or* Serapis *thir Gods, or seat*
Thir Kings, when Ægypt *with* Assyria *strove*
In wealth and luxurie. Th' ascending pile
Stood fixt her stately highth, and strait the dores
Op'ning thir brazen foulds discover wide
Within, her ample spaces, o're the smooth
And level pavement: from the arched roof
Pendant by suttle Magic many a row
Of Starry Lamps and blazing Cressets fed
With Naphtha *and* Asphaltus *yeilded light*
As from a sky. The hasty multitude
Admiring enter'd, and the work some praise
And some the Architect: his hand was known
In Heav'n by many a Towred structure high,
Where Scepter'd Angels held thir residence,
And sat as Princes, whom the supreme King
Exalted to such power, and gave to rule,
Each in his Hierarchie, the Orders bright.
Nor was his name unheard or unador'd
In ancient Greece; *and in* Ausonian *land*
Men call'd him Mulciber; *and how he fell*
From Heav'n, they fabl'd, thrown by angry Jove
Sheer o're the Chrystal Battlements: from Morn
To Noon he fell, from Noon to dewy Eve,
A Summers day; and with the setting Sun
Dropt from the Zenith like a falling Star,
On Lemnos *th' Ægæan Ile: thus they relate,*
Erring; for he with this rebellious rout
Fell long before; nor aught avail'd him now
To have built in Heav'n high Towrs; nor did he scape
By all his Engins, but was headlong sent
With his industrious crew to build in hell.
(1.710–51)

The architectonics of the three realms are carefully correlated. In Hell the unique architectural feature, Pandaemonium, lies vaguely and conjecturally at the "center" of a disorderly and incomprehensible landscape explored only tentatively by bands of Angels (2.570-628) and probably not revisited. In Heaven there is a clearer focus, the mount of God, center of *Orbs/Of circuit inexpressible* (5.594-95) of adoring angels who are arranged across a vast and varied landscape that is firmly bounded by battlemented walls.[3] In Paradise the design shares elements of both Heaven and Hell, being a succession of enveloping landscapes—those of Paradise, of the larger enclosure Eden, and of Earth itself—centered approximately on the world's only designed shelter, Adam and Eve's bower, and punctuated by a natural or earthen wall at the borders of the innermost perimeter, Paradise itself *in the East/of* Eden *planted* (4.209-10). Though Hell is a place of no exit except through an iron and rock gate, nevertheless its boundaries are indeterminate. Heaven by contrast is precisely defined by its wall, but its shape is tantalizingly *undetermined square or round* (2.1048), synthesizing the two perfect geometrical figures in a manner beyond our grasp. Paradise, although distinguished by its wall, is not truly differentiated from the Earth of which it is an epitome and whose boundaries, being global, are coterminous with itself.

By their nature epics are dramatic poems, full of action, and in *Paradise Lost* action is always a choice for good or for evil. History is both the record and the consequence of those choices, and architecture functions as a parallel text with the poem, not as passive exempla of vices or virtues, like the moral buildings in Spenser's *Faerie Queen*, but as environmental phenomena pressing upon the course of events and participating in their forward motion. Literary critics have tended to seize upon the mass and splendor of Pandaemonium as evidence that Milton associated those properties, in the Stoic manner, with vice or at least with moral weakness, but such a position is obtuse. Like its equivalents in Paradise and Heaven, the architecture of Hell corresponds to that realm's ethical status in its siting and its planning: site, or relationship of the built to the unbuilt, and planning, or relationship of parts to part and of solid to space, are the architectural indices to which Milton's phenomenological subtext is keyed.

Pandaemonium, to begin with, is not outlandishly large or ornate, although it corresponds to the largest of mere human structures. But it is not a human but an angelic achievement, and its architect Mulciber was accustomed to building (in Heaven) *many a Towred Structure high,/ Where Scepter'd Angels held thir residence,/ And sat as Princes* (1.733-35).[4] It is altogether appropriate that a hierarchy of angels should build

according to their rank. What is alarming about Pandaemonium is not mass, materials or decor but the fact that the urbanity of Hell is confined to one structure, and that the vast empire of which it is the capital is from the outset hostile ground to be shut out rather than enclosed and populated. Returning from his mission to ruin Adam and Eve, Satan finds the environs of Hell *desolate*, his followers

Farr to the inland retir'd about the walls
Of Pandaemonium, *Citie and proud seat . . .*
As when the Tartar *from his* Russian *Foe*
By Astracan *over the Snowie Plains*
Retires, or Bactrian *Sophi from the horns*
Of Turkish *Crescent, leaves all waste beyond*
The Realm of Aladule, *in his retreat*
To Tauris *or* Casbeen. *So these the late*
Heav'n-banisht Host, left desert utmost Hell
Many a dark League, reduc't in careful Watch
Round thir Metropolis . . . .
(10.420, 423-24, 431-39)

Pandaemonium has only one virtue: It gives "retreat." But the cost is high. For all its apparent immensity, the building is claustrophobic, inadequate to contain the angels unless most of them shrink to fit in, and the lighting and atmosphere are chemical (Naphtha *and* Asphaltus *yielded light* [1.729]). It is a dystopia of the indoors, ordering and epitomizing the wild landscape of chaotic materials and turbulent waters and fires in its domed, orderly, evenly lit interiors and Doric articulation. Intelligible, crafted and defensive, Pandaemonium is an admission of defeat, a response to the implacable hostility of the four elements of nature as found in Hell, and a prefiguration of the disjunction between fallen man and fallen nature that has made architecture, epitomizing all craft, the object of centuries of hostile ethical argument. Milton makes the point clearly: Pandaemonium is an epitome of Hell and an improvement upon it. It is bad only because all Hell is bad, and it is not so bad as what's outdoors.

Even if that architecture, then, is a confession of failure, failure is not inherent in architecture itself, as the architectonics of Heaven show us. For even before the events leading to the revolt of the angels—the first events in the chronology of *Paradise Lost*, narrated in Book 5—Heaven contradicts Aristotelian norms of perfection as a condition of timeless immutability by being designed to repel agents of pejorative change, that is, by having fortified walls. The walls are central to Milton's location of all realms of creation within the context of history, wherein movement forward in time—history—is the consequence of willed obedience or disobedience to God's word. The possibility of good or evil acts with the consequent shaping of an otherwise undetermined future is the dramatic basis of *Paradise Lost* and constitutes the central dramatic analogy between Heaven, Earth, and Hell. Here the architectonics of the epic particularly exemplify that accessible and pictorial dimension of a general truth or value that is otherwise worked out through immaterial dimensions of the poem: the walls of Heaven both signify and constitute the tension between actual and potential that lies in the barrier of the willed moment, the moment of choice in which the achieved and perfected condition of celestial civilization is maintained in its proper organization or is deformed.

From the classical myth of the Golden Age and a long conflation of Edenic and classical "ideal landscape" motifs Milton inherited a conception of Heaven as arcadian rather than urban in nature—Eden rather than Jerusalem transferred to the skies. His civilized Heaven, a polity, with hierarchical organization, assemblies, and rituals, is arcadian to the degree that it is oriented to "nature," to the vast outdoors that is

on the Gate of Heaven

farr distant he descries
Ascending by degrees magnificent
Up to the wall of Heav'n a Structure high,
At top whereof, but farr more rich appeerd
The work as of a Kingly Palace Gate
With Frontispice of Diamond and Gold
Imbellisht, thick with sparkling orient Gemms
The Portal shon, inimitable on Earth
By Model, or by shading Pencil drawn.
The Stairs were such as whereon Jacob *saw*
Angels ascending and descending, bands
Of Guardians bright, when he from Esau *fled*
To Padan-Aram *in the field of* Luz,
Dreaming by night under the open Skie,
And waking cri'd, This is the Gate of Heav'n.
(3.501–15)

on the landscape of Heaven

No sooner had th' Almighty ceas't, but all
The multitude of Angels with a shout
Loud as from numbers without number, sweet
As from blest voices, uttering joy, Heav'n rung
With Jubilee, and loud Hosanna's filld
Th' eternal Regions: lowly reverent
Towards either Throne they bow, and to the ground
With solemn adoration down they cast
Thir Crowns inwove with Amarant and Gold,
Immortal Amarant, a Flowr which once
In Paradise, fast by the Tree of Life
Began to bloom, but soon for mans offence
To Heav'n remov'd where first it grew, there grows,
And flowrs aloft shading the Fount of Life,
And where the river of Bliss through midst of Heavn
Rowls o're Elisian *Flowrs her Amber stream;*
With these that never fade the Spirits Elect
Bind thir resplendent locks inwreath'd with beams,
Now in loose Garlands thick thrown off, the bright
Pavement that like a Sea of Jasper shon
Impurpl'd with Celestial Roses smil'd.
(3.344–64)

on life in Heaven

Forthwith from dance to sweet repast they turn
Desirous; all in Circles as they stood,
Tables are set, and on a sudden pil'd
With Angels Food, and rubied Nectar flows:
In Pearl, in Diamond, and massie Gold
Fruit of delicious Vines, the growth of Heav'n.
On flowrs repos'd, and with fresh flowrets crownd,
They eat, they drink, and in communion sweet
Quaff immortalitie and joy, secure
Of surfet where full measure onely bounds
Excess, before th' all-bounteous King, who showrd
With copious hand, rejoycing in thir joy.
Now when ambrosial Night with Clouds exhal'd
From that high mount of God, whence light and shade
Spring both, the face of brightest Heav'n had chang'd
To grateful Twilight (for Night comes not there
In darker veil) and roseat Dews dispos'd
All but th' unsleeping eyes of God to rest,
Wide over all the Plain, and wider farr
Then all this globous Earth in Plain outspred,
(Such are the Courts of God) th' Angelic throng
Disperst in Bands and Files thir Camp extend
By living Streams among the Trees of Life,
Pavilions numberless, and sudden reard,
Celestial Tabernacles, where they slept
Fannd with cool Winds, save those who in thir course
Melodious Hymns about the sovran Throne
Alternate all night long:
(5.630–57)

on the Expulsion from Heaven

The overthrown he rais'd, and as a Heard
Of Goats or timerous flock together throng'd
Drove them before him Thunder-struck, pursu'd
With terrors and with furies to the bounds
And Chrystal wall of Heav'n, which op'ning wide,
Rowl'd inward, and a spacious Gap disclos'd
Into the wastful Deep; the monstrous sight
Strook them with horror backward, but far worse
Urg'd them behind; headlong themselvs they threw
Down from the verge of Heav'n, Eternal wrauth
Burnt after them to the bottomless pit.
(6.856–66)

actually indoors, inside the circuit of walls. Though unimaginable in extent, it is the kind of landscape human beings can at least hope to understand, with mountains, valleys, meadows, forests, rivers, and calculated alternation of light and twilight. Yet it is a heroic landscape, the arena of the great war of Book 6, in which angels lead pious but military lives despite their mandated dispersal across the landscape (*inhabit lax*, i.e., dispersed, God orders [7.162]).

Their resemblance to the Hebrews in the desert suggests that, like Israel, they will evolve in customs and social organization towards more complex realizations of virtue and more sophisticated returns of divine love. Education, a central occupation in *Paradise Lost*, occurs among angels as history unfolds and new understandings of the godhead are required (e.g., the disclosure of the Son, 5.600-15), as circumstances require complex and heroic response (e.g., the war in Heaven of Book 6, but also the confrontation with Satan in Book 4), and as terrifying challenges are issued (e.g., God's call for a volunteer to die for man, 3.213-16). The angels enjoy the conventional blessings of the paradisal day—rest, feast, and the sight of God—but these recreations are integrated into a rhythm of labor that includes performance of the duties of court and camp. The space of Heaven is thus a highly organized and "improved" arcadian landscape, and not to be distinguished in its supportive purposes from the architectural elements of Heaven—the battlemented defensive walls from which patrols make sorties (1.129-34) or Mulciber's palaces, plausibly proconsular seats, and, like Satan's Palace in *the limits of the North* (5.755), possibly integrated into the structure of the walls. Seats of authority rather than domestic shelters, the buildings of Heaven fulfill the promise of the organization of the military camps. As the palaces institutionalize and promote the order of Heaven, so the walls, at the crucial moment of the expulsion of the rebel angels, actually roll back to precipitate them over the edge, becoming, however briefly, sentient and even moral participants in the direction of celestial history.

In so "building" his Heaven, Milton rejects the ethical and literary tradition that confined craft, and in epitome, architecture, to the emblematic representation of the contraries of Pride and Humility, and to their derivative manifestations in Luxury and Utility. Distinctions between the architecture of Heaven and of Hell are not distinctions of magnificence, manifested primarily in mass and luminosity, or of architectural articulation, apparent primarily in the particularization of structures (e.g., gates, palaces), forms (e.g., domes) and grammar (e.g., the Doric order). All this is the common property of Heaven and Hell, and the occasion of the famous irony of Mammon's rhetorical question,

> *This Desart soil*
> *Wants not her hidden lustre, Gemms and Gold;*
> *nor want we skill or Art, from whence to raise*
> *Magnificence; and what can Heav'n shew more?*
> (1.270-73)

The soil of Heaven likewise furnishes the identical *Gemms and Gold* (6.475), the raw material of architectural display as well as the finished artifacts, and neither the elemental substances of Heaven nor the uses to which those materials are put clearly differentiate Heaven from Hell. But the phenomenologies of enclosure are vastly different: where one enclosing structure is inclusive and nurturing, the other is exclusive and poisonous. All three realms participate in a common "nature" or at least in an order of created existence that makes it possible, even easy, for creatures of one element to exist in another. The angel Raphael has lunch with Adam and Eve and discourses on the intimacy of all created things. It is to be expected, then, that good and evil will be bodied forth in the uses to which creation is put rather than

in the essential properties of created beings and things, and so it is with architecture. There is no taxonomy of good and bad architectural styles or forms or languages, and Milton places no limit on the formal and material potentialities of the craft.

His elevation of architecture to the role of active participant in the organization of historical time depends in large part upon a second major property of his three realms: in addition to their union and differentiation according to a common model of spatial enclosure and exposure, they are all three organized along an axis of metaphorical language wherein organic and inorganic nature are juxtaposed and, in Paradise and Heaven, fused. This fusion or synthesis is fulfilled first in the architecture of each realm, where the virtues implicit in the organic and the inorganic are manifested in the union of Nature and Craft, and second in the spatial organization of the realms, where the disjunction between architecture and nature is either conspicuous (in Hell) or nullified (in Paradise and Heaven) by the interpenetration of the essence of each by the other.

The metaphorical language of *Paradise Lost* has been the object of criticism since at least 1753, when Joseph Warton complained of the phrase *vegetable Gold* (4.220), the most familiar but not the most challenging instance of paradoxical language uniting phenomena that to our sensory experience are necessarily distinct. The synthesis of organic and inorganic properties in the natural landscape of the garden of Eden is the first instance in a sequence of increasingly complex fusions of apparently distinct phenomena. The second instance occurs in the world's unique building, the bower and its subsidiary artifacts, and an even more elaborate resolution of opposites characterizes the celestial landscape. The last and most complex instance is the architecture of Heaven. In each case contraries are reconciled in syntheses impossible to achieve in postlapsarian experience and difficult to conceptualize in either sinful postlapsarian or sinless prelapsarian imagination.

The landscape of Paradise is the simplest: here we are asked to visualize a fusion of contraries, like *vegetable Gold*, in which the virtue appropriate to each realm, organic nature and inorganic nature, is transferred to the other. Vitality is fused with permanence. The mind's eye, at least, can visualize this, and Milton admits that the descriptive problem is to say not "what" but "how":

> *rather to tell how, if Art could tell,*
> *How from that saphire Fount the crisped Brooks,*
> *Rowling on Orient Pearl and sands of Gold. . .*
> *Ran nectar. . . .*
>
> (4.236-38,240)

Within the realm of inorganic nature the common is magnified by the precious, and the precious harnessed to uses of the common: water to sapphire, gold to sand, and so forth; and the whole emerges as nectar, feeding the flowers of the garden. No clear hierarchy of metaphor exists; one term is not subordinated to another, and each participates equally in the visual image.

Paradisal nature is fulfilled in paradisal architecture, in the bower, a purposefully ambiguous word meaning dwelling (from the Anglo-Saxon *bur*), a secluded area in a grove (elsewhere *the unpierc't shade/ Imbrownd the noontide Bowrs* [4.245-46]), and bedroom, a meaning it has had since before the Norman Conquest. Where the constituents of architectural form are synonymous with nature, or where nature rises to a degree of organization conceivable only at the level of craft, Nature and Art are simultaneous:

on Paradise

So on he fares, and to the border comes
Of Eden, *where delicious Paradise,*
Now nearer, Crowns with her enclosure green,
As with a rural mound the champain head
Of a steep wilderness, whose hairie sides
With thicket overgrown, grottesque and wild,
Access deni'd; and over head up grew
Insuperable highth of loftiest shade,
Cedar, and Pine, and Firr, and branching Palm,
A Silvan Scene, and as the ranks ascend
Shade above shade, a woodie Theatre
Of stateliest view. Yet higher than thir tops
The verdurous wall of Paradise up sprung:
Which to our general Sire gave prospect large
Into his neather Empire neighbouring round.
(4.131–45)

Beneath him with new wonder now he views
To all delight of human sense expos'd
In narrow room Natures whole wealth, yea more,
A Heav'n on Earth: for blissful Paradise
Of God the Garden was, by him in th' East
Of Eden *planted;* Eden *stretch'd her Line*
From Auran *Eastward to the Royal Towrs*
Of great Seleucia, *built by* Grecian *Kings,*
Or where the Sons of Eden *long before*
Dwelt in Telassar: *in this pleasant soil*
His farr more pleasant Garden God ordaind;
Out of the fertil ground he caus'd to grow
All Trees of noblest kind for sight, smell, taste;
And all amid them stood the Tree of Life,
High eminent, blooming Ambrosial Fruit
Of vegetable Gold; and next to Life
Our Death the Tree of Knowledge grew fast by,
Knowledge of Good brought dear by knowing ill.
(4.205–22)

the roof
Of thickest covert was inwoven shade
Laurel and Mirtle, and what higher grew
Of firm and fragrant leaf; on either side
Acanthus, *and each odorous bushie shrub*
Fenc't up the verdant wall; each beauteous flowr,
Iris all hues, roses, and Gessamin
Rear'd high thir flourisht heads between, and wrought
Mosaic; underfoot the Violet,
Crocus, and Hyacinth with rich inlay
Broiderd the ground, more colour'd then with stone
Of costliest Emblem:

(4.692-703)

Only William Blake among illustrators of *Paradise Lost* has even partially succeeded in rendering Milton's demanding visual imagery, integrating into the living architecture of the bower the crafts by which the materials of inorganic, insentient and inanimate nature (stone, wood, plants) are raised to higher terms and fulfilled in the arts of roofing, walling, and flooring, expressed as woven, fenced, embroidered and inlaid materials; the acanthus is the leaf of the Corinthian column.[5] Paradise has been conventionally understood as a place or condition where the kinds of virtues now realized through the crafts might have in some general sense been present. By suppressing terms of comparison and by "implying" in his literal sense of "wrapping together," Milton creates a physical universe of Art coequal and in harmonious tension with Nature.

Architecture thus is validated by its identity with the nature it transcends; the literary image summarizes thousands of years of speculation on the form and matter of the house that is best because it is first, and integrates the crafts epitomized by architecture into the Christian mythology of history. That history is not only postlapsarian: within a series of nurturing enclosures it operates in Eden before the fall. The bower is history's central and most important mechanism. The entire Earth is Adam's, and Eden *his neather Empire neighbouring round* (4.145), but Paradise is the arena of labor and education, where Adam and Eve work the garden, observe the rituals of morning and evening song, entertain angel guests, educate, and are educated—Adam by Raphael, Eve by Adam, in matters of history, theology, and natural and moral philosophy: an entire curriculum. Theirs is a paradise of progress, and essential to it is sexual love, the source of the race promised by God (4.473-75; 732-34), and *sole proprietie,/In Paradise of all things common else* (4.751-52). Passionate wedded love lies at the center of Milton's epic and is intimately associated both with the meaning of Paradise as a laboratory for the generation of the future and with the disobedience that ultimately perverts man, craft, and nature from their intended destinies. As the precondition for exclusive sexuality, the bower institutionalizes private space, the special property of architecture, at the center of the divine plan for mankind. Architecture retains a timeless validation by virtue of its identity with nature, but in Milton's system it possesses also the status of the most essential mechanism for making possible the creation of fruitful historical time. Milton's paradisal program is ultimately antiarcadian, despite its subsuming of great motifs of timeless arcadian bliss: in the bower, as in the garden and ultimately over the entire Earth, mankind is invited to joyful participation in the processes of growth and change.

Raphael, our source and Adam's for the narratives of Heaven, the revolt of the angels, and the Creation in Books 5, 6, and 7, grounds his discourse on a typological association between earthly and heavenly phenomena: *Earth . . . the shaddow of Heav'n* (5.574-75). In both the natural and constructed phenomena of Heaven we find an analogy to Earth: nature raised to a higher power through the reconciliation of organic and inorganic, and Nature itself united with Art, epitomized in architecture. The soil of Heaven produces fruits, flowers, gems and gold indiscriminately; they all *grow/Deep under ground* (6.476-77). But Heaven's speculative form, oscillating indeterminately between square and round, announces a series of calculated ambiguities woven into the descriptive language.[6] Thus we find living sapphire (2.1050) and vines fruitful of pearls, diamonds, and gold (5.633-35), but the sea is *Of Jasper, or of liquid Pearl* (3.518-19), a double image of uncertain color and luminosity. Elsewhere the *bright/Pavement that like a Sea of Jasper shon* (3.62-63) is evidently neither a sea nor jasper, much less a combination.

These incertitudes characterize the mount of God at the center of Heaven, mysteriously described as a temple (6.890, 7.148) with rites like those in Jerusalem (7.576). In the Psalms, "mountain" and "temple" are interchangeable terms, and "the Temple ritual itself was instituted and first performed on Mt. Sinai."[7] A powerful symbol thus unites architecture, nature, and history: the house of God succeeds, yet is identical with the mountain of God. The vital properties of the architecture of Heaven exist within a synthesis beyond not only our understanding (the *how* that the poet cannot explain [4.236ff]) but also our perception, our mind's eye. Nevertheless the architectural rhetoric of Heaven is powerful: walls, battlements, palaces, even an armory (7.200) represent God's seat not only as the place where precious, inorganic nature finds full validation in a mysterious synthesis with its contrary but also as the place where that synthesis is expressed at the highest architectural levels, royal and urban. The two modes of Miltonic phenomenology merge at this point; spatial organization and massing are meaningful not only in their structuring of nature within or around architecture but also because the dichotomy between architecture and nature is counterpointed by the transference of the particular virtue of each—permanence, or vitality— to the other. And it is in the architecture rather than in the landscape of Heaven that this transference is most evident.

Hell fails especially in failing to achieve any such transference; the landscape is neither structured nor amenable to structure, but remains forever a wasteland of disorderly natural forms, *many a frozen, many a fierie Alp,/Rocks, Caves, Lakes, Fens, Bogs, Dens, and shades of death* (2.620-21). The architecture of Pandaemonium possesses no organic modifiers; in reordering and epitomizing the boiling metallic landscape from which it springs (1.700ff), it achieves a sterile stability and stands as a prototype for all postlapsarian disquiet over the alienation between architecture and nature.

Milton brings to a close, within the boundaries of Judaeo-Christian mythology, centuries of representations of arcadian and utopian visions of the setting and structure of "the good life." His bias towards architecture and towards the crafts generally is a profound rejection of the Stoic contempt for the arts of civilization and for faith in the possibility of fruitful historical time. Literary architecture of the kind found in *Paradise Lost* enriches architectural thought and practice by fully articulating the imaginative potential of mute structures. As such, literary architecture may be thought of as a chain of intellectual history itself—a vital response in language to the powerful phenomena of the constructed environment.

NOTES

1. see W. McClung, *The Architecture of Paradise: Survivals of Eden and Jerusalem*, (Berkeley: University of California Press, 1983) ch. 1.

2. see W. McClung, "The Matter of Metaphor: Literary Myths of Construction," *Journal of the Society of Architectural Historians* 40, 4 (1981), 279-88.

3. Verses from *Paradise Lost* are taken from the edition of J. Shawcross, *The Complete Poetry of John Milton*, rev. ed. (Garden City: Anchor, 1971).

4. Mulciber is Hephaistos or Vulcan, the only god who is a craftsman, mentioned in the *Iliad* as architect of several heavenly mansions.

5. *The Poems of John Milton*, ed. J. Carey and A. Fowler (London: Longmans, Green, and Co., 1968) 653n.

6. I am indebted to M. Murrin, "The Language of Milton's Heaven," *Modern Philology* 74, 4 (1977), 350-65.

7. Murrin, 354.



2. *William Blake,* Adam and Eve Sleeping.

THE SLAUGHTERHOUSE

Richard Selzer



1. Jerome Liebling, South St. Paul, Minnesota, 1962.

It is May, and for whatever reason, I have been invited to serve on a jury that is to pass judgment on the final projects of a group of candidates for the degree of Master of Architecture. But I am not an architect. I am a surgeon. Nor do I know the least thing about buildings, only that, like humans, they are testy, compliant, congenial, impertinent. That sort of thing. Faced with blueprints and drawings-to-scale that are the *lingua franca* of architecture, something awful happens to the left half of my brain. It shrinks, or dessicates, collapses, and I fall into a state of torpor no less profound than that of the Andean hummingbird when it is confronted with mortal danger. Sadly, my acceptance of such an invitation by a school of architecture is just another example of the kind of imposturage of which otherwise honest men and women are capable.

The charge that has been given the students is to design and build an abattoir. It is understood that prior to this undertaking they have, as a class, made a field trip to a slaughterhouse. For months afterward they have been working toward this date. Now it is two days before we are all to meet for the examination in the seventh floor "pit" at the School of Architecture. But if I cannot know what they know of buildings, at least I can have seen what they have seen, and so I telephoned the owner of the slaughterhouse on the outskirts of the city, the one that the students visited months before. "Yes," he says, "by all means." His voice is genial, welcoming.

It will be no great shock, I think. A surgeon has grown accustomed to primordial dramas, organic events involving flesh, blood, and violence. But before it is done, this field trip to a slaughterhouse will have become for me a descent into Hades, a vision of life that perhaps it would have been better never to know. Shall we see?

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In a way, it is the last place on earth that seems appropriate to the mass slaying of creatures. Just another grinding truck stop, really, off Route 1. With the easiest access for large vehicles, and nearby an old cemetery tossing in the slow upheaval of resurrection. Revisited, it will seem to hang doubtfully back from the road. Discredited somehow and aware of it, yet with a brutal resilient strength. It is 7 a.m. Outside, another truck rumbles into the corral. THERMOKING is the word painted on both sides of the cabin that pulls a huge open-sided car filled with cattle. Each cow has a numbered tag punched through an ear. Outside, the enclosure is already ridiculous with lambs. What a sinister probability this truck gives out. Inside it, they are, for the most part, silent until one lifts its head and moos wildly. Now another joins in, and another, until the whole compound resounds with the terrible vocabulary of premonition.

The building itself is low and squat—a single story only, made of cement blocks and corrugated metal and pre-stressed concrete. Behind it is a huge corral. Such a building does not command but neither does it skulk. Only that it carries out its business in secret and decides what you will see, hides from you what it chooses. If only I can come upon it—the undiscovered heart of this place that I know, must believe, is here. Does this building breathe? Has it a pulse? It must.

Now the gate at the rear of the truck is opened. The cattle mill about like bewildered children until, prodded from behind, they move sightless and will-less down the ramp and into a gated pen. As if in sleep through an incurable dream. Here they come, slowly, their hooves weighted down with reluctance. What! no muster roll to call them in? The wooden floor of the entryway is scarred, packed, and beaten. The hooves staggering, thump the timbers. There is a quick lateral skid on manure. It is the sound of these skidding hooves that months later you will hear while waiting in line at the bank or getting a haircut, hear as if through a closed door which then someone opens a little to let the sound in louder for a moment until the door is closed again and the sound softer but not gone, never really gone.

The cowherd urges them on. They seem afraid of displeasing him. With gentle callings and whistles he inveigles them into the pen. I keep my gaze on a pair of mourning doves waddling among the droppings until, threatened by a hoof, one takes to the air with a muted small whistling of its wings. The other follows in a moment. Against a nearby fence a row of fiery tulips spurts. Into the narrow passageway the cattle go single file, crowding at the mouth of it, bumping into each other, clopping sidewise so as not to lose their place. As if, once having passed through that gate, they would be safe. As if what lay ahead were not extinction but respite; and there was not there, just ahead, death bobbing like clover in a pasture, but life. Only the first two or three begin to suspect. One after the other these lift their heads at the sound of the stunning gun. But then there is the sweet assuaging voice of the cowherd and the laughter of men inside to draw them on. Now the one at the van shies as she encounters some hard evidence. She balks, stops; the others press against her until with a toss of her horns she throws her new knowledge down before the herd like an impediment, then moves on. Just then, without warning, (do I imagine it?) the leaves on the trees at the periphery of the corral begin to siffle, the grass to stir. Tails rise as if in a wind. Ears and flanks shiver in a cold blast. Then, as abruptly, all is still. But I see it had not been the wind. Only death, again, that had swept across the corral, then whooshed away.

Inside, the men are waiting for them. All are dressed in identical uniforms—overalls, ankle-length rubber aprons, high rubber boots, and orange plastic hard hats. The hooks, tracks, scales, tables and trays have an air of brutal metallic strength; there are no windows nor anything made of wood. The room echos like a gymnasium. From somewhere too far off to be heard clearly, a silken radio voice announces the morning news. Something about famine in Ethiopia. . . . There is the

smell of cowhide and tobacco. One of the men clicks over the multitude in the pen. ". . . Six, eight, ten, fourteen . . . ," he counts. "Plus one hundred sixty. Jesus! a day's work."

The process begins. There is a muffled whump from the stunning pen, like the firing of a mortar shell. A body arches, the tail blown forward between quivering legs. She goes down, folding on all fours at once, as though the air had been let out. They drag her a foot or two to the hoist. A chain is placed about one hind leg and the winch activated. A moment later she is aloft above the Killing Oval—a kind of theater with a centrally slanting stone floor and a drain at the lowest point. Hanging upside down, her coat seems a bit loose, shabby, with all the points and angles of her skeleton showing. The throat-slitter is ready. It is clear even now that he is the star. Enisled in his oval space, alone there with his cattle who one at a time stretch out their necks to him, he shines beneath his hard hat. He is blond; his eyes blue knife blades; hefty; a side of beef himself, though not at all fat. No part of him shakes with the thrust. Still, if physiognomy is any hint of character, he has found his rightful place. The eyes boil from her head; saliva drips from her limp tongue. Up on his toes for the sticking, and oh those chicory-blue eyes. For just so long as the blade needs to burrow into the neck—one second, two—the pudgy hand of the man grasps the ear of the cow, then lets go. He is quick with the knife, like a robin beaking a worm from the ground. The slit is made just beneath the mandible, the knife moved forward and back and then withdrawn. In this manner the jugular vein and carotid artery are severed. The larynx, too, is cut through. He has a kind of genius, I see. His movements are streamlined, with no doubt about them. How different from my own surgery where no single move but is plucked at by hesitation. In the abattoir there is gradation of rank at the bottom of which hierarchy is the hoser, often the newest member of the group. Only after a long dedication to the hose will he be formally instructed in the art of stunning and hoisting. Then on to bunging, decapitation, amputation of the hooves, gutting, skinning, and, if his dream is to be realized, killing, which is at the pinnacle. In this, it is not unlike a surgical residency training program. Never mind.

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The stunner turns their brains off like spigots; the slitter turns on the faucet of their blood which squirts in a forceful splash toward the stone floor. For a moment the cows are still, megaliths, then a mooing, flailing, kicking as the effect of the stunning wears off. Now and then the slitter must step out of the way of a frantic hoof. It takes so long! Until all of it stops. As the bleeding slackens the hose is used and the business dilutes into wateriness. The hose flogs across unblinking eyes. It is a storm of weeping. I am tempted to reach out, I am that close, and lift a velvet lip, finger a horn, but I do not. There is rebuke implicit in such acts.

"Two hundred and fifty gallons per second," the hoser tells me. It does not occur to me to doubt him. I peer through the scrim of blood and water to the stunning pen where the next has just been felled. It is in the stunning pen that they seem the most exposed. There, no tiny shield of leaves, no small tangle of brambles, such as any captured thing is entitled to hide behind. And all the while the flat mooing of the already-slit, a hollow blare pulled up and out from their cavernous insides that stops abruptly and has no echo. And the howl of the stunned. Now *there* is a throatful of hot vowel if ever you heard it.

Each cow is impaled at the groin on a ceiling hook and detached from the hoist to make room for the next. These ceiling hooks are on tracks and can be pushed along from station to station. A second hook is used in the other groin. A light touch sends the splayed animal sliding on the rack like a coat in a factory. Already there is a second cow bleeding from the hoist, and the third has been stunned. The efficiency of the men is a glittering, wicked thing in itself. They are synchronous as dancers and for the most part as silent. It is their knives that converse, gossip, press each other along. The smallest faltering of one would be felt at once by each of the others. There would be that slackening which the rest would have to take up. But now and then they laugh, always at each other, something one of them has said. There is always one who is the butt. It does you good to hear this chaffing. I see that without laughter the thing could not be done. They are full of merriment, like boys. Or like gods, creating pain and mirth at the same time. A dozen times a day, the hoser, who is younger than the rest and a little simple, I am told, turns his hose on one of the other men who roars with outrage each time. Everyone else dies of laughter, then rises again redder in the face. What are their minds like? Bright and light and shadowless, I think. Disinfected.

There is a sequence to it: stun, hoist, slit, hose, bung, behead, amputate, and gut. Each step in the process is carried out by one man at his station. The cattle are slid from one to the other on the racks. What a heat! what an uproar! Already the sink and scales, all the ghastly furniture of this place retreats into far corners and I see nothing but the cattle. At one end of the room the heads are lined up on a folding rack, such as might otherwise be used to dry clothes. Voiceless at last, tranquillity has been molded into their mouths. The once swiveling lips are still; the brown eyes opaque. Here they are axed open and the brains examined by the Inspector.

"What are you looking for?" I ask the Inspector. With scissors and forceps he cuts into the base of one brain.

"Pus, spots, lumps," he says. I peer over his shoulder and see instead at the back of her eyes all the black and white of her tribe puddled there. At the base of her brain a sloping pasture green with, here and there, a savory buttercup to which all of her life she had lowered her muzzle. And in her throat, pockets of retained lowing which I think to hear escaping even as he prods the tissue with his forceps.

The beheader is not yet twenty. When he turns to see who is spying there, his smile is hesitant and shy. Around his waist a chain belt holds a bone handled sharpener and a spare knife. He flashes his wrist and there is the quick hiss of the blade against the rasp. Later he will show me his knife, let me heft it, turn, flip, feint.

"Nice?" he asks me.

"Nice," I say. "Nice."

Abruptly, he kneels to his work as though he were giving first aid to the victim of an accident. Not Judith at the nape of Holofernes nor Salome working her way through the gorge of John the Baptist were more avid than this youth who crouches over his meat like a lion, his blade drinking up blood. And now the first slitter has been replaced by another. This one is an Italian. His hair is thick and black with just a spot of russet like the flash of a fox's tail. His shoulder is jaunty, his cheek shadowed by eyelashes as he sinks the knife. It is less a stab than a gesture, delicate and powerful, like the thrust of a toreador. Against the tang of his knife, the loaded artery pops, and the whole of her blood chases the blade from the premises. A triangular piece of the man's neck shows above his flannel shirt. I see the slow, wave-like pulse of his jugular vein. Once he laughs out loud. It is sudden and unexpected. I turn to watch the mirth emerging from so much beauty of

lips and teeth and throat. At eyelevel a posthumous hoof flexes, extends, flexes again.

All at once, a calf, thinking, I suppose, to escape, wallops through the half-open gate at the stunning pen and directly into the Killing Oval. She is struck on the flank by a bloodfall from the hoist. Her eyes are shining pits of fear. The men view this with utmost seriousness. Immediately two of them leave off their tasks and go to capture the miscreant, one by the tail the other by an always handy ear, and they wrestle the calf back into the pen to wait her turn. Now here is no Cretan Bull Dance with naked youths propelled by the power of horns, but an awkward graceless show, as the calf robs them of their dignity. They slide on the floor, lose their balance. At last calm is restored. Half an hour later, writhen and giving up the ghost, it is her turn. So. There is a predetermined schedule, an immutable order. Why?

". . . Nine, ten, eleven, twelve. One dozen." Someone is counting a cluster of impaled and hanging calves. They are like black and white curtains ungirt, serious. The men part them with the backs of their hands in order to pass through. They are not just dead; they are more than dead, as though never alive. Beyond, trays of steaming guts; another rack of heads, all clot and teeth. Each head is tagged with the number of its own carcass, just so each plastic bag of viscera. Should a beast be found diseased in any part, the Inspector discards the whole of it. The men do not wear gloves but plunge boldly into the swim. Are they in a kind of stupor of blood? Oddly spellbound? And so caught up in the repetition of their acts. Perhaps it is the efficiency of the Process which blinds them. I think of the wardens of Auschwitz. At the final station, barrels of pelts. For leather, rugs.

"A guy in New Jersey buys them," the skinner tells me.

I see that one of the slit and hoisted continues to writhe; all at once she gives a moo less through her clotted muzzle than from the gash in her neck. It is a soft call straight to my heart. And followed by little thirsty whispers.

"It's still mooing," I say.

"Oh that," says the slitter.

"How can that be?" I ask. "The larynx has been severed. Hear that?" He cocks his head. There is a soft sucking sigh from the veal cluster farther on, as though someone were turning over in his sleep.

"They do that sometimes," he explains, "even that long after they've been cut." There is an absolute absence of any madness in him which might explain, mollify, soften. He is all cool reserved intent.

But today they have not been able to kill them all. Some will have to wait overnight in the corral. Thirty minutes after the command has been given to stop, everything in the slaughterhouse has been made neat and tidy, as much as rinsing and scrubbing can make it so. The tools have been scraped clean; the planks scoured and freshly swept. When it is all done, the beheader snatches a hose from the youngest, the one who is simple, and sprays him in the crotch. Another joins in the play. How young even the older ones look now. They are eager to go home, where I should think them the gentlest of men. This slaughterhouse is a place one leaves wanting only to make love. In the courtyard my nose is feathered by the smell of fresh air. Overhead a gull blows by, beaking at the sky. From my car I see a cow swing her muzzle at a fly, lash with her tail, and fall still. On the roof, along the eaves, doves mourn.

In the morning I arrive just before the men. I wait for them to come. Soon they do. One of them has brought a little dog, a terrier, who scampers along with the men bouncing sidewise and snapping high-pitched chunks out of the silent air. The sight of the dog tickles the men, each of whom stops to pet or scratch. "You, Fritzie," they say, and growl, "little pecker." Now the building awakens, accepting clatter and water gushing into its basins. It begins again.

II.

For two days my new colleagues and I watch and listen as the twelve students present their models, their blueprints. Never, never have there been abattoirs more clever, more ingenious, than these. For ease of access the "plants" are unequaled. Railroad sidings, refrigerated trucks contiguous at one end, attached meat markets. It is all there. And inside, disposable plastic troughs for collecting the blood, fluorescence. "Here," they say, pointing "is where they are stunned." And "I have placed the killing alcove here." The faces of the students do not change; they do not tremble at the reenactment of Dante's Inferno. Rather, a cool, calm correctness is what they own. Like the slaughterers the students have grown used to the awful facts; what concerns them is the efficiency of the process. When they speak of the butchers, they commend their technique. And so do I. So do I. And if ever I should wish to own an abattoir, I would be wise to choose any one of these student architects to make it for me. But there is another abattoir that concerns me now. It is the real abattoir that lies just beneath the abattoir that these architects and I have seen.

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In the design and building of an abattoir one must remember that once it was that the animals were the gods. Slaughtering was then no mere step in the business of meat preparation but an act charged with religious import and carried out in a temple. The altar was sprinkled with blood. The flame of animal life partook of the sacred and could be extinguished only by the sanction of religion. But, you say, what can architecture do in the face of slaughter. Beauty and spirit stop at the first splash of blood. Better to settle for efficiency, you say. But efficiency gives way before the power or the mythic imagination. And so we shall try:

First, the location. No grinding truck stop on the highway, but a cool glade at the foot of a ridge with, beyond, another ridge and another. Some place beautifully remote, I think, on a small elevation from which the sky and the sun might be consulted. Yet not so high as to be seen silhouetted against heaven from the sea. That is for temples and lighthouses. Nor ought it to be easily seen from any road but must be out of sight, like certain sanatoria, oracular pools, surgical operating rooms. A place without a vista, turned in upon itself. And hidden by trees. The gods always play where there are trees that invite mist to their branches. I should build it in a grove, then, to benefit from the resident auspicious deities. And yes, trees, not so much to lend mystery and darkness as for companionship, to bear witness. Let a vivid spring leap nearby with water that is cold and delicious. To listen to its quick current is tantamount to bathing in its waters. Just so simply are ablutions performed. Hand-scooped from the stream such water will, if drunk at certain susceptible times of the day—twilight and dawn—summon visions, induce dreams. Pulled up into the throats of the doomed beasts, it will offer them peace, make them ready.

At this place let there be equal parts of sun and shade and at night the cold exaltation, the lambent flood of moonlight. And no nearby houses,

for the shadow of this building must not fall across the dwellings of human beings. Killing of any kind, you know, has its contagious aspect. Place it thus and the abattoir becomes a god—distant, dignified, lofty, silent. Gaunt and stark until the beasts are ushered in. Only then does its blood begin to flow. Only then is the building warmed and colored, completed. Made human. Such a building is a presence. I would want anyone looking at my abattoir for the first time to fall under its spell, to believe it particularly his as well—there would be that certain tilt of a roof, the phantom shadow of leaves cruising over tile. One glance at such a site and you will say as Oedipus said at Colonus: "as for this place it is clearly a holy one."

David, it is reported in the Bible, purchased a threshing floor from Araunah the Jebusite upon which to build the altar of his temple. Alas, the Jebusites are no more, neither are their threshing floors to be found in the land. So I would use stone for the floor, rough-hewn granite quarried nearby, granite that will wash black in the rain, turn gold in the setting sun. Granite with beveled edges cut to fit neatly, the gaps between to be filled with mortar. Brick too is permissible as the elements of earth and fire are combined to form it. Brick is earth that has gone through fire. It is sacrificial. None of this will be understood by those who see but a stone in a stone, a brick in a brick. It is in the precise placement and the relationship of these materials wherein lies their sacramental quality. The roofs of the inner passageway will be of slate raftered with the bisected trunks of oak trees upon which strips of bark have been left. These trees should be felled in October, as in the Spring all of the power of the tree is devoted to the making of leaves. In the Fall the wood is more compressed and solidified. Oak is preferred above all others as much for its strength and resistance to water as for the news whispered by its leaves that nothing is annihilated! There is only change and the return of matter to a former state. Stone, brick and wood, then. The earth has been burnt; the stone has been cut from its place; the tree has been felled; and all three rise in the form of the abattoir. Yet their texture must survive. The memory of the original tree, clay, earth, stone, is made permanent by the form in which each is made. The builder with his hand and his eye must do justice to the talent and potential of the material. Nor are these materials passive but offer their own obstacles and tendencies.

Centrally, there is to be a vast open atrium flanked by columns whose capitals are carved as the horned heads of beasts. Everything, you see, must reflect the cattle. They are the beating heart of the place. So let there be columns and an unroofed atrium. Since nobody can live without the ample to and fro of air, so will the building be dead that does not permit the internal play of abundant air. Between the columns of the atrium place lustral stone basins in which water from the stream may be collected for the washing of hands. Columns too, for avenues of light that in the company of the breeze and the high fountain will rinse the air of reek. The building faces east to receive the morning sun in which it is best for the men to work. There are to be no steps in any part of the abattoir, only timbered ramps curved like those of a zigzgurat along which the animals are led up to the porch or vestibule. This antechamber measures in cubits twenty by twenty. (The cubit being the length of the forearm from elbow to fingertip.) It is the function of this room to separate the profane world from the sacred area, which is the atrium. In order to enter the atrium the cattle must pass in single file beneath an arch. It is well known that to pass through an archway is to be changed forever in some way. Who is to say that such a passage does not purify these beasts, make them ready to die? The atrium itself is vast, measuring in cubits sixty long, forty wide, and thirty high. As I have said, it is roofless in order to receive the direct rays of the sun. Nor has it any walls on either side but open colonnades. To the rear of the atrium is a third and smaller room where the men take their rest. Inside, the corridors, vestibule, and resting room must be brilliant with light from wall lamps and skylights. Shadows are dangerous in an abattoir. They make you think. There is to be no rebirth here, as we know it. It is a place for endings. Where residue is hosed away, nor any decay permitted.

Let us dwell upon the interior of the building. If a stable has the odor of manure, why, that is fitting to the stable. The smell increases the stable-ness of the building, confirms it in its role as the dwelling place for beasts. Just so is the odor of fresh-spilled blood apt for an abattoir. You would not expect perfume. Still, I would be grateful for the sacred smell of sawdust or straw—for the sake of the cattle, to conceal it from them. Blood has no smell, you say? And it is true that there is no odor of it in the operating room. But I think that to catch the whiff of blood is a talent beyond human olfaction. Tigers smell blood and hunt it down precisely. And sharks, who, having shed a single drop of their own blood will devour themselves. Are you certain that domestication blunts the noses of these animals? No, compassion dictates that we separate the about-to-be-slain from those crossing over. Listen! The stones ring with hooves. And in a corner of the atrium, the sawdust is roiled where one of them had floundered, the cloven hoofprints brimming with red shavings. And no reek in the air. When, as happens, they cannot all be slain in one day, the cattle are led at dusk from the clearing in front of the abattoir down a narrow tortuous path lined by thick shrubbery. It is the same path by which they left the world at dawn. Here and there the path forks suggesting a labyrinth. Such a serpiginous route emphasizes the immense apartness of the abattoir. They are ushered into a pasture at some remove. Here they spend the night in a world cast in frost and moonlight. Stay with them through these hallucinated hours white as foam and filled with heightened meaning. Be there just before dawn, waiting. Long before you see them you will hear the sound of their lips pulling at the grass of the pasture. Ah, there! look! the first one—all white, breasting the mist, then coming clear of it, like a nymph stepping out of the woods.

Now they are led back to the slaughterhouse. I hear the soothing swageing murmur of the herder making his sweet deceit.

"Come along now, ladies. Be polite. No need to crowd. It's all the same in the end." A moo interrupts.

"Hush, now." Again the labyrinthine path must be navigated. In the early morning the climate of the place is that of a cellar—cool and cavernous. There are the pillars caught in the very act of rising. There is the sibilance of insects and a throbbing of frogs. The mist lifts and soon there are drifting veils of water and sunlight, something piny in the air. Pious the feet that pace the stone floor of this atrium. The heads of the men are covered with small capulets. Prayers are recited. One of them holds the knife up to the sunlight, then turns to examine its larger shadow upon the floor. Any nick or imperfection that might cause suffering to the animal is now magnified and corrected before the beast is led to it. At the last moment the blade is smeared with honey for sweetness and lubrication. All the energy of the place emanates from the edge of that knife blade. It is a holy object, a radiant thing. In the dazzling sunlight is is like a silver thorn to be laid upon the willing neck of the beast.

† † †

But a cow is not much, you argue. A cow is not beautiful as a trout, say, is beautiful. A trout—made of river water, and speckled stone, and tinted by the setting sun. Nor are cows rare, as peacocks are rare, or certain blue butterflies. These cattle bring with them no paraphernalia

of the past. They have none. I tell myself that. For a cow, the sun that rises each day is a brand new sun, not the one that set the day before and rose the day before that. Humans are the only ones afflicted with a past. But I think of the many-cattled pastures of my childhood in the milk-drenched upper counties of New York State. I close my eyes and see again a herd upon a green slope. There! one lifts her dripping muzzle to stare at a trusted human being. Nonsense, you say, to deplore this slaughter when with each footstep we erase whole histories. Besides, they do it humanely. What! Would you rescue them? Burst upon the scene with a machine gun and order the animals to be loaded on the truck and driven away? To the country, to the middle of the meadow and then set them free?

I know, I know. But to one who watches from the periphery there seems no place for this event in human experience. But why you ask, bring myth and metaphor into a place of flesh and blood? Because there is a vast difference between fragments of flesh and cuts of meat and no man has the right to dictate to any other man where or under what circumstances he may seek transcendence over the fact of life.

Hypocrite, you say why don't you give up meat instead of professing all this outrage?

Give up meat! Oh no, I couldn't do that, I have eaten meat all of my life.

No. No. We are all meat-eaters here in the slaughterhouse. The desire for meat is too deeply seated in us. As deeply seated as the desire for romance, I think. The difference between those butchers and you is that they do not come to the abattoir each day with their hearts gone fluid with emotion. They have no patience with the duplicity of sentiment.

† † †

It is the next day, and already the event is too far away for grief or pity. How quickly the horror recedes. I pass a butcher shop whose window is neatly arranged with parts of meat labeled shank, loin, T-bone. For a long time I stand gazing at the display. For one fleeting instant it occurs to me that this window full of meat is less than dead, that, at a given signal, the cut-up flesh could cast off its labels and cellophane wrappers and reassemble, seek out its head and hooves, fill with blood and *be* again. But the thought passes as quickly as it came.

"Is the veal fresh?" I ask the butcher.

"Slaughtered yesterday," the man says, "can't be much fresher than that."

"Let me have a pound and a half of the scallopine," I tell him. "Nice and thin, and give it a good pounding."

THE END

2. *Edward Hopper,* American Landscape, *1920.*



ARCHITECTURE AS OUTLOOK IN BORGES'S FICTION

Jaime Alazraki



1. Jerry Uelsmann, 1976.

Borges's fiction is often referred to as "fantastic." This description is imprecise at best and vague at worst. It is a term borrowed from a literary genre that produced its masterpieces in the nineteenth century, and although there are substantive differences between the fantastic as understood by Hoffmann, Poe, or Maupassant and Borges's treatment of that form, the name is often used to characterize and define his fiction.[1] When alluding to his stories, we speak of "fantastic situations," "fantastic characters," and "fantastic architecture." Yet, compared with the architecture or "the planners for the future" (Doxiadis, McHale, Fuller), with Hans Hollein's "Aircraft Carriers City," with Dick Higgin's architectural projects, with Geoff Hendrick's Floating Cities, or with the "Labyrinthine Architecture" of Franz Mon, Borges's City of the Immortals, his ordered planet Tlön, his Circular Ruins, his Library of Babel, his Garden of Forking Paths, his House of Asterion, and other of his architectural structures impress us as much less fantastic than what we have been inclined to accept in the context of his short stories.

Furthermore, Borges's cities and buildings have been subjected, and as such limited to the narrative functions they were assigned to perform within the story. Those functions are deeply grounded in his literary outlook, and in order to understand the former one must first understand the latter: Is there a relationship between the outlandish architecture summoned in his fiction and the world view underlying that fiction? Raoul Hausmann posits in his "Appeal For Fantasy" that since "life is fantastic, let the architectural surroundings of man be equally fantastic."[2] What distinguishes "fantastic architecture," as defined by Wolf Vostell and Dick Higgins in their 1969 collective volume, and Borges's architecture as it appears in his literature, often loosely referred to as "fantastic"? Let us explore these questions.

In the epilogue closing his best collection of essays, *Other Inquisitions* (1952), Borges acknowledges:

As I corrected the proofs of this volume, I discovered two tendencies in these miscellaneous essays. The first tendency is to evaluate religious or philosophical ideas on the basis of their aesthetic worth and even for what is singular and marvelous about them. The other tendency is to presuppose (and to verify) that the number of fables or metaphors of which men's imagination is capable is limited.[3]

These two tendencies constitute, by odd coincidence, the ordinate and the abscissa on which he has woven his narrative world. Borges believes, as do the inhabitants of his planet Tlön, that metaphysics is a branch of fantastic literature. Referring to an anthology of fantastic fiction he compiled with two fellow writers, he admits "the embarassing omission of the unsuspected and greatest masters of the genre: Parmenides, Plato, John Scotus Erigena, Albertus Magnus, Spinoza, Leibnitz, Kant, Francis Bradley." He further ponders:

In fact, what are H.G. Wells' or Poe's wonders—a flower that comes to us from the future, a dead man under hypnosis—compared with the inventions of God, with the laborious theory of a being that in some way is three and that solitarily endures beyond time. [4]

The implication is clear: philosophical theories and theological speculations are by far more fictional, and even more fantastic, than any piece of fantastic fiction. Bertrand Russell provides an explanation for this paradox. In *Our Knowledge of the External World* he writes:

In the classical tradition of philosophy, since the Greeks, the world has been constructed by means of logic, with little or no appeal to concrete experience . . ., and while it liberates imagination as to what the world may *be, it refuses to legislate as to what the world* is. [5]

If this is indeed the case, if theology and philosophy are the true repositories of human imagination, why bother forging new (and imperfect) stories? Why not use the fabrications of metaphysics and the beliefs of religions as the raw material for fiction? This is what Borges has done. His story "Tlön, Uqbar, Orbis Tertius" is a disguised metaphor for our own planet as conceived by philosophical idealism.

The nations of this planet are congenitally idealist. Their language and their derivations of their language—religion, letters, metaphysics—all presuppose idealism. The classic culture of Tlön comprises only one discipline: psychology . . . There are no sciences on Tlön. The paradoxical truth is that they do exist, in an almost uncountable number . . . Who are the inventors of Tlön? This brave new world is the work of a secret society of astronomers, biologists, engineers, metaphysicians, poets, chemists, algebraists, moralists, painters, geometers . . .directed by an obscure man of genius. [6]

As fantastic as Tlön may seem, it is our planet in disguise, our planet as a creation of human culture, from the houses we inhabit up to the ways we die. Lévi-Strauss confirms this conclusion when he defines human culture as "that artifical universe in which we live as members of a given society." [7]

Borges conceives the universe as a labyrinth constructed by gods, and since only angels can penetrate a divine mind, he reasons, man is condemned forever to wander on its fringes (a reverberation of K's quest in Kafka's *The Castle*). Confronted with this insoluble labyrinth (the original universe), man has created by means of culture his own labyrinth, his own planet, Tlön. "How could one do other than submit to Tlön, to the minute and vast evidence of an orderly planet?" asks Borges, to reply:

It is useless to answer that reality is also orderly. Perhaps it is, but in accordance with divine laws—I translate: inhuman *laws—which we never quit grasp. Tlön is surely a labyrinth, but it is a labyrinth addressed to be deciphered by men.* [8]

The First Encyclopaedia of Tlön stands for any encyclopaedia, as its parody in the sense that encyclopaedias store the sum of information about the world created (or invented) by human culture. The fantastic in Tlön stems from a strategic ruse: the idealist theory, its epistemological premises and figuration are assumed and presented literally, as if Bishop Berkeley's idea of reality were indeed reality.

Borges is, of course, far from believing that reality can be at all grasped, let alone described. He has given it up long ago, at least as a human possibility. As early as 1932 he wrote in the preface to his second most important volume of essays, *Discusión* (1932), this lapidary statement:

My life is devoid of life and death. From this poverty stems my laborious love for these minutiae. [9]

Many years later, in his "Autobiographical Essay" of 1970, he reiterated his loyalty to the planet Tlön, that is, to the world of books:

If I were asked to name the chief event of my life, I should say my Father's library. In fact, I sometime think I have never strayed outside that library. [10]

His story "The House of Asterion" can be read without fear of overinterpretation, as Borges's own metaphor. In it, the Minotaur *chooses* to stay in the labyrinth where he has been imprisoned:

One afternoon—he confesses—I did step into the street; if I returned before night, I did so because of the fear that faces of the common people inspired in me. [11]

Confronted with the chaos of the world, Asterion the Minotaur chooses the orderly space he has found in a human construction, Daedalus's labyrinth. Borges has made a similar choice: confronted with the chaos of the world, he has chosen the order of the library, the safety of a decipherable labyrinth. His books grew out of other books. He wrote fiction based on theologies and philosophies, literature founded in literature. He knew that the hard face of reality lingers on every corner of life, but he renounced it he said, because of its impenetrable nature. Instead, he anchored his writings in the order of the intellect, in the chartable waters of the library. What he wrote about Paul Valéry is applicable to himself:

"a century that adores the chaotic idols of blood, earth, and passion, he always preferred the lucid pleasures of thought and the secret adventures of order. [12]

In an early essay of 1939, before he even wrote his first short stories, he laid the foundations of what was to become the edifice of his narrative world:

Let us admit what all idealists admit: the hallucinatory nature of the world. Let us do what no idealist has done: seek unrealities which confirm that nature. We shall find them, I believe, in the antinomies of Kant and the dialectic of Zeno. [13]

Many of his short stories do precisely that: they present unrealities (a man who dreams a man and inserts him into reality, a library of unreadable books, a year contained in one minute) in which the reader recognizes the conceptualization of metaphysics and the hypostases of theology. Yet they are stories, plots in whose sets of events and interplays of characters a resemblance of life as we know it has been conveyed. But it is only a resemblance, since the story aims not so much—like conventional fiction—at capturing a "slice of life" as at advancing an *argumentum theologicum* or *philosophus*.

This strategy evolved from the conviction that "the inventions of philosophy are no less fantastic than those of art," and from a definitive abhorrence to literary realism often equated with the trite, predictable, and fastidous sides of life. [14] It also evolved, as we have seen, from Borges's perception of his own life as lacking any drama worth recording or commenting on, at least as far as fiction is concerned. Any form of knowledge that challenged his skeptical understanding of the world met with his strong disapproval and even condemnation: "the meritorious mission that Valéry performed (and continues to perform) is that he proposed lucidity to men in a basely romantic age, in the melancholy age of . . . dialectical materialism, the age of the augurs of Freud's doctrine and traffickers in *surréalisme*." [15] Borges indicts and harshly condemns literary movements (romanticism and surrealism) and forms of thought (Marxism and psychoanalysis) that deal not so much with sheer abstract reasoning (although *in* a highly abstract fashion), but with questions concerning life: distrust of and revolt against rational order, class order, and ego order. Life as adventure and chance, as struggle and desire, seems to horrify him, and any human effort addressed to exploring or charting the depths of those waters has been

met with resistance and frowns. Borges is an intellectual animal, a solipsist locked—like the Minotaur of his story—in a labyrinth of his own construction.

If everyday life was thought of as a swarm of miseries, the fantastic was seen by him as the embodiment of art. The question he faced in attempting to write fiction with "the inventions of philosophy" was how to flesh out those abstractions, how to render them into literature. Since for Borges literature meant "fantastic" or, more precisely, anti-realist fiction, it was only natural—given his strong bent for metaphysics—that religious and philosophic ideas would lend him those marvelous and singular elements he considered worthy of becoming literature. But how to go about this process of re-generation? *How to turn one system into another?*

Pantheism constitutes the axial notion around which his story "The Immortal" is built. Borges is not seeking to prove either the merits or the demerits of this doctrine. He knows that the time of this theological relic has past, and that much ink, as well as blood, has been spilt over it. But what if one were to assume its tenets as the true laws governing reality? What if one were to describe life as if pantheism were its underlying principle? The result is a character who through the narrative becomes several characters, an individual who, having been given immortality, can become any individual, born or unborn, dead or alive—Homer, for example, or even the same writer telling the very story that is recording the phenomenon. Borges was repeating the feat accomplished by Leopoldo Lugones, his predecessor in Argentina, who wrote fiction with bits and pieces of theosophical doctrine.[16] Lugones felt strongly that theosophy, in its various creeds, was fantastic enough to become fiction by means of his simply quoting or paraphrasing some of those ideas. Borges expanded on this idea. He probed the fantastic appeal of other religions and he ventured into the more variegated territory of philosophy. Science becomes fiction when the yet unfulfilled potentials of the former are rendered factual by the writer's imagination. The accomplishments of science have been so magnified, so hyperbolically aggrandized—in the same way that the edge of a used razor blade becomes a mountain range when seen under the microscope—that they generate a new space whose scale is popularly referred to as "sci-fi." The reality of scientific accomplishment has been turned into the unreality of fiction. The narrative process followed by Borges, although not quite the same, is similar: by transferring the dogmas of religion and the "proven truths" of philosophy from their respective systems to the realm of fiction, he has made those dogmas and truths become fictional. Semiotics has shown that each human endeavor, each discipline seeking to establish and organize human knowledge constitutes a system of signs that can operate and "make sense" only within the bounds of its own framework. Transfer those same signs that are part of a given system to a different one and the "sense" becomes non-sense, their relevance loses ground, their "reality" turns into unreality or, what amounts to the same, into fiction.

But then, Ernst Cassirer has already warned us that all forms of human knowledge are but "arbitrary schemes, airy fabrics of the mind, a kind of fiction." "A fiction," he adds, "that recommends itself by its usefulness, but must not be measured by any strict standard of truth, if it is not to melt away into nothingness."[17] Borges seems to have understood and accepted this conclusion, hence his insistence on defining himself as "a skeptic who turns that respected system of perplexities we call philosophy into the forms of literature"[18] Transferring the signs of one system to another—doctrines from theology to the narrative of literature—defines an operation rhetoricians call *hypallage*. The figure designates "a change in the relation of words whereby a word, instead of agreeing with the word it logically qualifies, is made to agree grammatically with another word ('Kindred strife of men' for 'Strife of kindred men')."[19] Borges has made frequent use of this stylistic device in his own prose, but the rhetorical figure also defines a narrative strategy by means of which the relation of two systems, philosophy and fiction, has been changed, and one idea, instead of agreeing with the system it logically qualifies, has been made to agree grammatically with another system.[20]

In religion, pantheism is in a logical as well as a grammatical relation with its system. Switch pantheism to a different system, that of literature, and it becomes fiction (grammatical relation), but fiction, in turn, acquires a new urgency borrowed from religion. This new relation establishes a link which, if it is not logical in the conventional sense, elicits nevertheless a different kind of logic contained in the notion that religious ideas are more inventive, and even more fantastic than the inventions of fiction. By exploring the philosophical possibilities of fiction, Borges has also dramatized the fictive nature of philosophy, and vice versa—by positing the fantastic nature of philosophy, he was able to discover the philosophical possibilities of fantastic literature.

But since literature is not philosophy, and since the laws controlling one system are different from those governing the other, Borges had to acclimatize his borrowings from philosophy and religion to the requirements of fiction. He had to bestow on those ideas and beliefs a fictive reality appealing to his reader. Sometimes this was achieved through a strong and well developed plot; at other times, through the beauty of his prose and the pleasure of his style; at still other times, by means of exact and symmetrical structures and labyrinthine patterns (mirrors, Chinese boxes, Russian dolls); and on occasion, by resorting to architecture. In most instances, the architecture tends to emphasize the abnormal. The deliberate intention is to underline the monstrous nature of those narrative environments where a fantastic event is occurring or is about to occur.

Architecture participates in this effort to envelop a given notion or belief—immortality, for example—in weird clothes. Immortality is an idea as old as mankind, yet one thinks of it as realistically untenable. To make it believable, not as a theory or doctrine but as an event, Borges followed the advice given in the classic Shakespearean formula:

One fire burns out another's burning.
Turn giddy, and be helped by backward turning.
One desperate grief cures with another's languish.
Take thou some new infection to thy eye,
And the rank poison of the old will die."[21]

Likewise, Borges seems to be saying that a fantastic environment lends credibility to an otherwise incredible event; the unreality of a singular architecture induces the reader to accept as more real the otherwise uncanny or too intellectual nature of the story. Borges is fully aware of this principle of compensation.[22] When he sought to explain the magic produced by the confrontation of two events, one real and one unreal, and its effect on the reader, he asked at the close of his essay "Partial Enchantment of the *Quixote*":

Why does it make us uneasy to know that the map is within the map and the thousand and one nights are within the book A Thousand and One Nights*? Why does it disquiet us to know that Don Quixote is a reader of the* Quixote*, and Hamlet is a spectator of* Hamlet*? I believe I have found the answer: those inversions suggest that if the characters in a story can be readers or spectators, then we, their readers or spectators, can be fictitious.*[23]

Early in the essay he noted that Cervantes "delights in fusing the objective and the subjective, the world of the reader and the world of the book." [24] Borges shares this delight and this play of reversibility. He mixes, in his fiction, apocryphal books with authentic ones, fictive characters with real ones, bogus authors with true ones, historic events with invented ones. The effect is similar to the one noted regarding Cervantes: the reader loses his grip as to what is and what is not real. Pantheism, or for that matter, any other reputed doctrine or theory, is presented as fantastic and, vice versa, the fantastic situation narrated in the story takes on a transcendental aura elicited by the doctrine. Architecture plays a similar role in his stories: it reinforces the fantastic intent to compensate for the intellectual indulgence of the story. Immortality and pantheism are abstract catagories, but in the story "The Immortal" they resolved themselves in narrative terms. To undergo this change, a literary machinery—of which architecture is only a piece—had been put together. If immortality is no longer an intellectualization but a "living experience," how do immortals live? What kind of emotions and feelings do they have? In what type of dwellings do they live? How are their cities? This is Borges's answer to the last two questions as presented in "The Immortal":

Thus I was afforded this ascension from the blind region of dark interwoven labyrinths into the resplendent City. I emerged into a kind of little square or, rather, a kind of courtyard. It was surrounded by a single building of irregular form and variable height; to this heterogeneous building belonged the different cupolas and columns. Rather than by any other trait of this incredible monument, I was held by the the extreme age of his fabrication. I felt that it was older than mankind, than the earth. This manifest antiquity seemed to me in keeping with the work of immortal builders. At first cautiously, later indifferently, at last desperately, I wandered up the stairs and along the pavements of the inextricable palace. (Afterwards I learned that the width and height of the steps were not constant, a fact which made me understand the singular fatigue they produced.) "This palace is a fabrication of the gods," I thought at the beginning. I explored the uninhabited interiors and corrected myself: "The gods who built it have died." I noted its peculiarities and said: "The gods who built it were mad." I said it, with an incomprehensible reprobation which was almost remorse, with more intellectual horror than palpable fear. To the impression of enormous antiquity others were added: that of the the interminable, that of the atrocious, that of the complexly senseless. I had crossed a labyrinth, but the bright City of the Immortals filled me with fright and repugnance. A labyrinth is a structure compounded to confuse men; its architecture, rich in symmetries, is subordinated to that end. In the palace I imperfectly explored, the architecture lacked any finality. *It abounded in dead-end corridors, high unreachable windows, portentous doors which led to a cell or a pit, incredible inverted stairways, whoe steps and balustrades hung downwards. Other stairways, clinging airily to the side of a monumental wall, would die without leading anywhere, after making two or three turns in the lofty darkness of the cupolas. I do not know if all the examples I have enumerated are literal; I know that for many years they infested my nightmares; I am no longer able to know if such and such detail is a transcription of reality or of the forms that unhinged my night. "This City" (I thought) "is so horrible that its mere existence and perdurance, though in the midst of a secret, contaminates the past and the future and in some way even jeopardizes the stars. As long as it lasts, no one in the world can be strong and happy." I do not want to describe it; a chaos of heterogeneous words, the body of a tiger or a bull in which teeth, organs and heads monstrously pullulate in mutual conjunction and hatred can (perhaps) be approximate images.* [25]

And thus, with the exception of the palace, the city goes undescribed. Yet, what the reader has been told is enough to allow him to picture it as a structure befitting Immortals, in other words, a city where nothing needs to be functional or even beautiful since these are human, and therefore *mortal* concepts. It is a city of Immortals, all meaning and order, since—as Borges explains—"in an infinite period of time, all things happen to all men." From which it follows that "all our acts are just, but they are also indifferent. There are no moral or intellectual merits." [26]

We are not dealing here with a fantastic architecture as conceived by Vostell and Higgins in their collective volume, but with a rather dehumanized architecture. Even Franz Mon's "Notes On a Labyrinthine Architecture," which at times recall Borges's "region of interwoven labyrinths," are a call for freeing imagination in the search for new architectural spaces or, as he put it, "for an architecture which will be the enactment of spatial and motion imagination." [27] Furthermore, Mon closes his notes with an appeal for "man's confrontation with his reality." [28] Borges's City, on the other hand, is a flight from human reality. It is an exploration of what an architectural space for Immortals is like, and, as such, it only induces us to accept our own world, if not as the best of all possible worlds, at least as the one where human life has been carved to conform to its hard reality. The dehumanized architecture of the City is a direct consequence of its inhuman dwellers:

Death makes men precious and pathetic . . . Every act they execute may be their last. . . . Everything among the mortals has the value of the irretrievable and the venturesome. Among the Immortals, on the other hand, every act (and every thought) is the echo of others. There is nothing that is not as if lost in a maze of indefatigable mirrors. Nothing can happen only once, nothing is preciously precarious. The elegiacal, the serious, the ceremonial, do not hold for the Immortals." [29]

The implication is clear: the City of Immortals is a negation of human life. Its monstrous architecture is but a reflection of immortality as an inhuman condition.

"The Library of Babel" offers another example of this type of dehumanized architecture. The "infinite Library" is not, cannot be, a human creation. How could it be if its books are unreadable, at least by human beings? Since the story opens with the phrase "The universe (which others call the Library)," we know from the beginning that the library is a metaphor for the universe: its stairways are abysmal, its distances remote, its books impenetrable, its hexagons infinite. The conclusion advanced in "Tlön, Uqbar, Orbis Tertius" is reiterated here: the Library is a divine creation and as such it is inaccessible to a human mind. If it has an order, its order is in accordance with inhuman laws no human can decipher.

These instances illustrate that for Borges there are two basic types of architecture: one, the product of God, and one that is built by humans. Both have their laws and embody a certain order, but while the former is a space created by a super being and therefore meant to accommodate the mind and the presence of this superior creature, the latter is a human space tailored and suited for human beings. The story "The House of Asterion," as I have anticipated, best dramatizes this duality. It recreates the legend of the Minotaur as told by Apollodorus. Borges hides the identity of the monster until the very last line of the narrative, but throughout it there are clear indications and hints that the narrator of the story is the mythological Minotaur. To justify the rewriting of this ancient myth, Borges patterns his story after the riddle as a literary form. This approach alone would have been insufficient to warrant the retelling of an old story if it were not for the fact that the same myth has been infused with new meaning. Pierre Menard, Borges's character from the story of the same name, did the same: he rewrote Cervantes's *Don Quixote* in the twentieth century, and while his text was identical to Cervantes, Menard's, Borges adds, was infinitely richer.

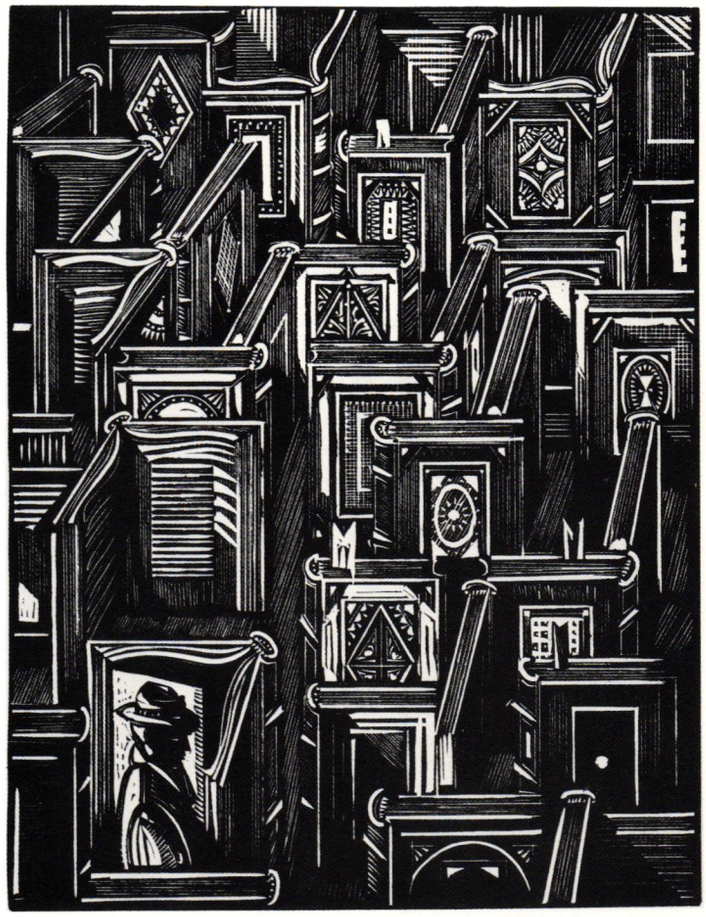
Borges has no qualms in rewriting old stories. Furthermore, he believes that since the storehouse of stories has long ago been emptied, a writer's task *is* to retell old ones. Retelling, of course, is not repeating them. The operation has been accurately described by modern semiotics: literature is a process by means of which "the content of a former expression becomes the expression of a further or new content." [30] In Borges's version of Apollodorus's legend, the new content lies in the confrontation between a divine labyrinth (the world) and a human one (Daedalus's construction). What this confrontation tells us is that Daedalus's labyrinth is a human architecture, a product of culture, and as such, an environment where the Minotaur—a metaphor for man—can find his habitat and one that he can understand and accept as his way of living in the world. Beyond this human construction, there are the fourteen seas and the fourteen temples—Nature, the cosmic labyrinth created by gods and terrifies Asterion and forces him to return to his own labyrinth where he can live and even enjoy some moments of happiness. In that human labyrinth, he has found an alternative to the other one, an alternative to infinity and chaos, a human alternative.

Borges's fiction seems to pivot round these two poles: men and gods, the human and the inhuman, culture and Nature. But culture, being an artificial product of humankind, stands not so much for what man or woman is, as for what he or she should be. What Russell has pointed out about idealism could be said of Borges's world: "It has been constructed by means of logic with little or no appeal to concrete experience." His stories deal with the adventure of human knowledge, with people entangled in a net of philosophical theories and religious doctrines, with the world of culture, but they teach us very little or nothing about the human condition as a flesh and blood experience. Since his narrative world stems from the confines of his personal library, from books (and books are for Borges a great part of his deepest personal experience), he has tempered this intellectual and bookish side of his fiction by means of beautifully crafted plots, elegant symmetries and dazzling mirror images; also, by means of inversions, he has promoted fiction to the rank of philosophical fantasies, and he has demoted metaphysics and theology to the rank of fiction. He has enacted a similar inversion with respect to architectural spaces. If the world appears in his fiction as an unresolvable labyrinth, as a construction too abstruse and complex to be grasped by humans, as an incomprehensible and uninhabitable architecture (the City of Immortals), the space designed and built by people, the products of human culture, tend to be presented as fantastic or even as phantasmagorical: the house of Asterion (not in relation to the Minotaur but to the man for whom the monster stands), the mysterious tower where a fleeing student meets a despoiler of corpses in "The Approach to al-Mu'tasim," the destroyed temple in "The Circular Ruins," the chaotic book in "The Garden of Forking Paths," the symmetrical and "infinite" house in "Death and the Compass," the strange prison in "The God's Scripture," the basement in Carlos Argentino's house with its irridescent Aleph, and the labyrinth in "Ibn Hakkan al-Bokhari, Dead in His Labyrinth."

All these structures can be included in a catalog of eerie architecture with captions provided by Borges's stories. Under the labyrinth built by Daedalus one would read:

All parts of the house are repeated many times, any place is another place. There is no one pool, courtyard, drinking trough, manger; the mangers, drinking troughs, courtyards, pools are fourteen (infinite) in number. The house is the same size as the world; or rather it is the world. [31]

The tower presented in " The Approach to Al-Mu'tasim" is none other than a *dakhma* of the Tower of Silence where the Parsees in Bombay



2. Stephen Alcorn.

dispose of their dead. Although Borges chose not to identify this construction, he has given enough information to warn the alert reader.[32]

The student seeks refuge in a circular tower. He climbs an iron ladder and on the flat roof, which has a blackish pit in the middle, comes upon a squalid man in a squatting position, urinating vigorously by the light of the moon. The man confides to him that his profession is stealing gold teeth from the white- shrouded corpses that the Parsis leave on the roof of that tower.[33]

Of the ruined temple where a magician arrives to dream a man, Borges writes:

The circular opening was watched over by a stone tiger, or a horse, which once was the color of fire and is now the color of ash. This opening is a temple which was destroyed ages ago by flames, which the swampy wilderness later desecrated, and whose god no longer receives the reverence of men.[34]

Of the infinite "Garden of Forking Paths" one character says: After more than a hundred years, Ts'ui Pên must have said once: *I am withdrawing to write a book*. And another time: *I am withdrawing to construct a labyrinth*. Every one imagined two works; to no one did it occur that the book and the maze were one and the same thing.[35] And so on with other buildings mentioned in other stories.

These are all products of human manufacture, space and structures made to accommodate human life, but in order to compete with divine spaces and construction they have to be dehumanized and made to look inhuman. Why compete with gods? Because for Borges, life in its everyday flow, in its struggles and passions, in its daily pains and joys, miseries and accomplishments, failures and successes, is too trite, too poor, too uninteresting to merit literary attention. For him, the intellect is the true adventure, the mind is true passion, the world is a library, and life is but a dream (at least in literary terms). He has, consequently, avoided human experience in favor of intellectual knowledge. He has maintained an aloof attitude towards things too human and he has denounced "the tendency of modern literature to reveal men's weaknesses and to delight in their unhappiness and guilt."[36] Instead he has sought a more heroic side of human nature, one that brings people closer to gods, in deeds as well as in intelligence. Hence his preference for the epic. Hence his exaltation of human knowledge. As the builders of the Tower of Babel sought to reach for their God in order to become his equal, human labyrinths too are the counterpart to divine ones because, as Borges says in his poem "The Golem," man too "yearns to know that which God knows."[37] Architecture is, therefore, one more pawn in this game with Heaven, an additional stretch in this race with the unattainable. Human spaces are like scientific pursuits in relation to science fiction: too much part of the pragmatic world and, consequently, undeserving of any attention. The challenge lies in the purely intellectual, in that sphere of the imagination uncontaminated yet by the imprints of human use.

NOTES

1. I have discussed this question at greater length in my *En busca del unicornio: los cuentos de Julio Cortázar* (Madrid: Gredos, 1983). A summary can be found in my article "The Fantastic as Surrealist Metaphors in Cortázar's Short Fiction," *Dada/Surrealism* no. 5 (New York, 1975) 28–33.

2. Wolf Vostell and Dick Higgins, *Fantastic Architecture* (New York: Something Else Press, 1969).

3. Jorge Luis Borges, *Other Inquisitions, 1937–1952* (New York: Washington Square, 1966) 201. The second tendency–the assumption that the number of fables or metaphors is limited–is the subject of my book *Versiones/inversiones/reversiones; el espejo como modelo estructural del relato en los cuentos de Borges* (Madrid: Gredos, 1977).

4. Jorge Luis Borges, *Discusión* (Buenos Aires: Emecé, 1957) 172.

5. Bertrand Russell, *Our Knowledge of the External World* (New York: Mentor, 1960) 15.

6. Jorge Luis Borges, *Labyrinths* (New York: New Direction, 1962) 7–10.

7. Claude Lévi-Strauss, *Arte, lenguaje, etnologia* (Mexico: Siglo XXI, 1968) 132.

8. Borges, *Labyrinths* 17–18.

9. Borges, *Discusión* 10.

10. Jorge Luis Borges, *The Aleph and Other Stories, 1933–1969* (New York: Bantam, 1971) 140.

11. Borges, *Labyrinths* 138.

12. Borges, *Other Inquisitions* 78.

13. Borges, *Labyrinths* 208.

14. Borges, *Other Inquisitions* 47.

15. Borges, *Other Inquisition* 78.

16. See Borges's best collection of short stories, *las fuenzas extrañas*, published in 1906.

17. Ernst Cassirer *Language and Myth* (New York: Dover, 1953) 7–8.

18. Jorge Luis Borges, foreword to Ronald Christ, *The Narrow Act* (New York: New York University, 1969) ix.

19. Alex Preminger, ed., *Encyclopedia of Poetry and Poetics* (Princeton: Princeton University, 1965) 358.

20. I have studied this device in *La prosa narrative de Jorge Luis Borges*, third edition (Madrid: Gredos, 1983) 215–223.

21. William Shakespeare, *Romeo and Juliet*, Act 1, Scene 2.

22. In "The Immortals" Borges writes: "The concept of the world as a system of precise compensations influenced the Immortals vastly." *Labyrinths* 115.

23. Borges, *Other Inquisitions* 48.

24. Borges, *Other Inquisitions* 46.

25. Borges, *Labyrinths* 110–111.

26. Borges, *Labyrinths* 114.

27. Vostell and Higgins, *Fantastic Architecture*, no page number.

28. Vostell and Higgins, *Fantastic Architecture*, no page number.

29. Borges, *Labyrinths* 115–116.

30. Umberto Eco, *A Theory of Semiotics* (Bloomington: Indiana University, 1976) 55.

31. Borges, *Labyrinths* 138.

32. For my discussion of this element in the "Approach to Al- Mutasim, see my article "Kabbalist Traits in Borges' Narratives," *Studies in Short Fiction* vol. 8, no. 1 (Winter 1971) 78–92.

33. Borges, *The Aleph and Other Stories* 29.

34. Borges, *The Aleph and Other Stories* 34.

35. Borges, *Labyrinths* 25.

36. Rita Guibert, *Seven Voices* (New York: Vintage, 1973) 97–98.

37. Jorge Luis Borges, *Selected Poems 1923–1967*, edited with an introduction and notes by Norman Thomas Di Giovanni (Delacorte Press/Seymour Lawence, 1972) 110.

THE VANITY OF ARCHITECTURE: TOPICAL THINKING AND THE PRACTICE OF DISCONTINUITY

Donald Kunze and Wesley Wei



1. Perseus with Medusa-shield. Apotropaic lore and prophylactic images guarded "interior" mysteries: secrets of professional shamans as well as artisans, who required initiates to undergo trials of purification. Such images frightened away the uninitiated but contained secret meanings related to religious and artistic practices.

I don't know whether it happens with others as with me; but when I hear our architects puffing themselves out with those big words like pilasters, architraves, cornices, Corinthian and Doric work, and such-like jargon, I cannot keep my imagination from immediately seizing on the palace of Apollidon; and in reality I find that these are the paltry parts of my kitchen door. When you hear people talk about metaphor, allegory, and other such names in grammar, doesn't it seem that they mean some rare and exotic form of language? They are terms that apply to the babble of your chambermaid.[1]

Michel Eyquem de Montaigne

During periods of rapid change and development, architecture intensifies its relationship with texts. Architects become readers, readers become architects; the question of architecture's ability to "speak" is again brought to bear in every case. To borrow a phrase from Borges, architects hold up to their art a mirror of ink.[2] Only a few would hold that this act aims to reduce architecture to a matter of literature, as the scholars of the Renaissance had done in the doctrine of *ut pictura poesis*, "as it is with poetry so it is with painting" (reversing Horace's phrase). On the contrary. It is rather a case of finding, in texts and in built form, a common ground or origin. To put it in terms of a response to G. E. Lessing's warning that each art should remain within the proper bounds of its medium: the relationship between architecture and poetry is not to be sought by subordinating one to the other, making poetry the gnostic basis of referential form. Rather (in the course of proposing a form of criticism based on topical thinking) we shall argue that a dialectic is established that exchanges words for space, space for words. Ultimately, both meaning and space collapse and transform. The principal elements of this process can be described through the terms of rhetoric, for the basis of rhetoric, the topic, is a "place" at once signifying both a spatial and a poetic idea.

This calls for a re-examination of the place of rhetoric, as "topical thinking," in modern thought. In seeking an alternative to the Enlightenment heritage of reason and conceptualizion, we turn to the "philosophy of place" of Giambattista Vico, a Neapolitan philosopher of the eighteenth century. Vico's interest in the topic led to the discovery of the nature of mythic thought, the elaboration of a method of humanistic study, and a highly spatialized idea of culture and history. With this program in mind, it is possible to turn to the question of architecture's origins and, at the same time, specify a means of humanistic study in which the object of study and the method of study exchange essential geometries.

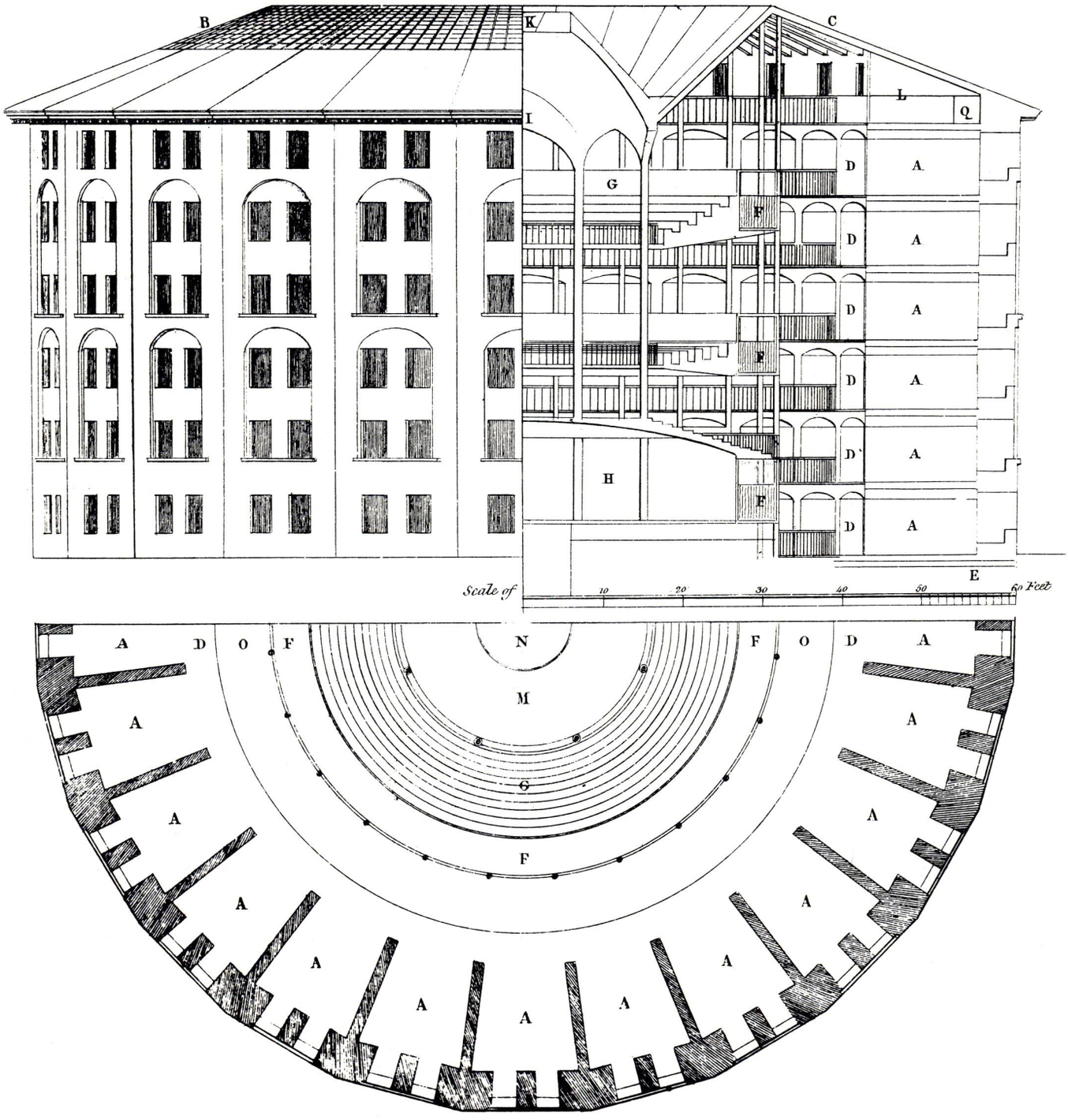
I. Writing and the Enlightenment's Window of Reason

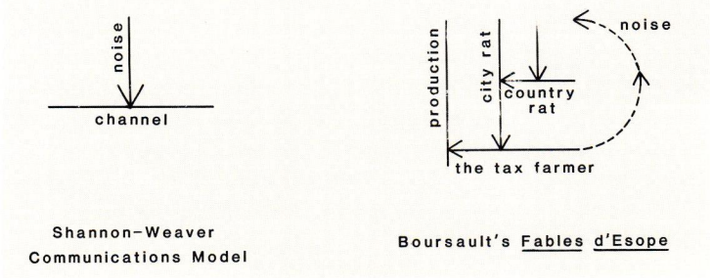
The modern necessity to juxtapose architecture and texts comes from the Enlightenment's revised views concerning those subjects thought worthy or essential in curricula; the idea of study itself was radically revised.[3] Across the traditional landscape of philosophy, a reticule of expository lines directed thought away from its former basis in argument and towards a new, empirical center. History, rhetoric, and the study of language yielded to logic, mechanics, and the natural sciences. As Descartes had boasted, it matters not whether one speaks in Latin or the tongue of Lower Brittany, it is logic and not rhetoric that proves the case.[4]

Descartes discredited the humanities by showing them to be a matter of subjective caprice and chance. History had its particulars, but lacked laws. Language's particulars were nothing more than conventions wrapped around real things; the study of grammar became the job of an "outsider"—the professional—who also functioned as a disciplinarian and arbiter, as did Antoine Arnauld and Pierre Nicole in their *Logique de Port Royal*. It was necessary only to establish the superiority of reason and, then, to subordinate all other mental activities to it. Possible knowledge was to be understood as a knowledge of *extrinsic* (empirical) *features*, a science of appearances selected and ordered to serve in the logical determination of super-sensible truths. In this way, humanistic objects—which, properly considered, have no "extrinsic features"—were excluded *by denying the principle of their visibility*. Diagrammatically, the relation between the Cartesian subject and the extrinsically understood object was one of core to periphery, where not only perception but also centralized power and authority flowed outward to a line that marked the sensible limit of the object—the line dividing the visible from the invisible. Michel Foucault rightly calls this resulting spatial structure "panoptical," for it realized Jeremy Bentham's dream of the perfect research mechanism, which was also a prison (fig. 2).[5] The object was trapped within a double wall, one admitting vision and surveillance, the other preventing escape. This was also the device of the scientific experiment, where a context was manipulated in order to permit the interrogation of natural phenomena.

Cartesian method built a panoptical double wall not only around objects but also around writing, which then turned alternatively between "subjective" and "objective" modes of reality. On the side of the subject, all that was "non-objective" was, in complement, irrational and private: "idiotic." On the side of the object, all roads led to the *cogito*, the ideal of sense-certainty.

In his characteristically anecdotal fashion, Foucault locates this modern situation in the example of the precautions against the plague taken by the French town Vincennes in the late seventeenth century. Dividing the town into quarantined districts, a central committee ruled over a web of guards, intendants, and syndics whose outermost defense was the facade of each house, turned into an empirical surface. Residents were required to appear at the same window each day, to give their names, and to report the state of their health. At the window, the citizen stared down at reason itself: the syndic poised to report any development to his superiors. Behind the window, in a darkened interior, inhabitants silently waited on the unpredictable and unmistakably *subjective* reality of death.[6] Through reason, space was reduced to a line, a facade. The subject no longer spoke the rhetoric of the *agora* or forum, but only the schizophrenic language of a world divided into facts and nonfacts. Architectural writing took up its station at this window of reason, turning alternatively from theory to poetry. On the theoretical side, an apology had to be made for architecture's fragmentariness, its discontinuity, amidst the seamless demands of building that called for a strategy whereby the fragments of architecture were





Shannon–Weaver Communications Model

Boursault's Fables d'Esope

2. Jeremy Bentham's design for the ideal prison, or "Panopticon."

3. Serres uses the convention of the Shannon-Weaver communications model to describe the structure of Aesop's fable about the city rat and the country rat. "Noise," frightful and quasi-divine, interrupts the banquet where guests parasite hosts and are parasited in return.

joined together rationally as historical or functional wholes. On the poetic side, fragmentation was celebrated as a mark of the distance separating architecture from building and the domination of reason. Both architecture and writing's "poetic" functions became ornaments set to shimmer on the surface of socially regulated, disciplined forms: building and ordinary language.

II. Exchange and Substitution as Gestures

These alternatives were really not two different choices but, instead, two expressions conditioned by the same phenomenon: the privilege of reason. At the window of reason, the choice between the fact and the lie engendered two independent forms of discourse. We would like to put this in different terms, so that an alternative to this window, a translation to a spatial situation, might be possible. These terms are "substitution" and "exchange," and the significant contrast is between what may *take the place* of something, and what things may *exchange* places. Substitution is unidirectional; exchange is reciprocal. While these terms may seem to exemplify only a formal distinction, they can in fact demonstrate a fundamental but somewhat complex ability of symbolic thought, namely, the art of transporting meaning from one realm of phenomena to another.

Substitution. Substitution is born of a gesture, the indicative gesture, the pointing finger that Wilhelm Wundt claimed is an attenuated grasp, a "grasping at a distance."[7] The essence of substitution, as of the indicative gesture, is the grasp as possession. Indicative meanings presume the possibility of categories, in which particulars may be grouped and represented by some class characteristic. Categories, in turn, presume an idealized access to objects. Amidst this possession, power and words flow smoothly and continuously from universal to particular. Meaning is defined as a link, part of a catena binding the lowest things to the highest, and determining their positions.

Exchange. The indicative gesture's logic of touch is complemented, in human expression, by the mimetic or imitative gesture's intention to reproduce the content of its referent directly, through the medium of bodily movement, expression, or sound. Unlike the pointing finger, which epistemologically isolates the knower from the known, the mimetic gesture initiates an exchange that alters both the signifier and the signified. Substitution functions symbolically as a means of "standing for," where the sign lexically and conventionally represents an independent state of affairs. Exchange involves a logic of poetic balance between the world of things and the world of signs. Ernst Cassirer suggested that this opposition of substitution and exchange represents basic bipolarity in the human consciousness and colors not only every form of symbolic thought—language, art, myth, science, etc.—but also the entire development of mental life.[8] The indicative, the symbolic possession of the object by the subject, works through a logic of touch. The mimetic gesture, by attempting to relive in detail the concrete aspects of its referent, makes expression essential to the being of ordinary things.

In primitive society, the separate logics of the indicative and mimetic gestures are elaborated through specific forms of magic.[9] The indicative develops as a doctrine of contagion, including such phenomena as the evil eye and apotropaic spatial defenses against contamination (fig. 1).[10] The mimetic gesture, in contrast, is expressed as sympathetic magic—ritual enactment where the sign takes on the power of the signified by re-presenting its essential form. Contents are not simply copied from one medium to another. The hand undulates to mimic a wave: at the same time a sign is given, an essence is identified. Through mimesis, the referent itself is brought into reality, but this act—what Mircea Eliade called a "hierophany"—necessitates a rupture of space.[11] This rupture is illustrated most simply in the ancient mummers' practice of clearing a space for actors to perform. With the arc formed instinctively or enforced with the swing of a broom, an inside-outside relationship is created that divides player from audience. Were this distinction not made, the audience could not participate vicariously—and mimetically—in the acting. Just so, it is the smallness of the toy that enables the child to enter into a world of mimetic things. This discontinuity contrasts directly with the unified structure of indicative substitution. In mythic thought, this discontinuity is attributed to a divine source. As mythic practices are displaced into more ordinary phenomena, this divine element becomes what Michel Serres has aptly called "the parasite," which in French also means "noise."[12] As defined by the Shannon-Weaver model of communication, noise interrupts the technical flow of information (fig. 3). But, all cultures maintain traditional character-types who "parasite" normative social exchanges in much the same way. The Western prototype is the Greek parasite, the poet who crashed banquets and parties of antiquity and paid for his food with words. Poetry itself came to be regarded as parasitic on the normative meanings of prose as language evolved more rational forms of discourse. Plato's allusion to the exile of the rhapsodes in *The Republic* restated an already widespread practice of regarding poetry as disruptive or trivial.[13] Yet, Socrates proved the demonic element of poetry essential to philosophy, as a form of eros penetrating wisdom. In contrast to the continuity established by the indicative—by reason—mimesis is an act of discontinuity, and its practitioners are artists, poets, Socratics, fools, or other "liminal" characters who parasite systems of continuous substitution, producing signs and space in place of things.[14]

While it would be useful to study the demography of the parasite, it is more important to determine the *technique* of discontinuity—how, in fact, the mimetic interruption of "fools" or "artists" amounts to a way of thinking, and not just a destructive act. In this regard, Andrea Battistini has provided an unusually useful description of this act in his idea of myth as "reversed antinomasia."[15] Antinomasia is ordinarily the rhetorical practice whereby some universal quality substitutes for a particular person or thing. Instead of naming Socrates, one says "Snub-nose." Reversed antinomasia is the process of using the particular to instantiate the universal. When the Zuni dancer puts on the mask of the god, he must execute correctly every particular of the god's motions, attributes, and signs. The dancer represents the god by actually becoming the god. The god as a referent is actually inchoate and unstable without such an act of representation. The mimetic sign makes itself *and* its referent. It effects universals by remaining within the world of particulars. Universals and particulars are reciprocally conditioned in the symbolic act. In short, the sign does not substitute itself for some meaning or thing not present; it becomes the meaning or thing in an act of exchange.

III. Mimesis as Meaning of and Approach to Architecture

The indicative and mimetic gestures, with their logics of substitution and exchange, have led to and conditioned two distinctively different approaches to the question of method. Indicative method, the panopticism of reason, sees mimesis as simply a matter of copying one domain of *givens* into another domain of *created objects*. Whether this copying takes place in the form of artistic naturalism or architectural historicism, the implication is the same. The second, the "mimetic" approach to method, begins with the primacy of the symbolic. In our development of this approach, we have purposefully vacillated be-

tween a use of mimesis as something characteristic of the *object* of critical study and as something employed as a *method* of that study. This has been, in part, to reflect the fact that mimesis is both an anthropological phenomenon of language, myth, and culture in general and a perspective that takes its place opposite the "indicative" view born of the Enlightenment. Another motive has been to connect our argument to Giambattista Vico, whose predicament as a student of culture resembles our own, as students of architecture (fig. 4).[16] What are Vico's connections to architectural theory? There are two. The first is historical. One of Vico's admirers was the famous Carlo Lodoli, the architectural theorist and alleged author of the sentiment, "form follows function."[17] This unusual connection, between the "father of functionalism" and Vico, the "late son of the Italian Renaissance," must be left for other scholars. Vico's second connection to architectural theory is philosophical. Faced with the unanimous popularity of Cartesianism, Vico began a comparison of "study methods" that showed the "topical wisdom" of rhetoric to be uniquely capable of revealing humanistic wisdom. By "topic," Vico meant metaphor, but he also intended the idea of place, as both a mental and physical aspect of culture. In the *New Science*, he discovered the poetic nature of the origins of thought. Building on this discovery, he elaborated an "ideal eternal history," which cultures "narrate" in their progress from primitive thought and institutions to modernity. Vico found myth to be a form of topical thinking, opposed in both history and logic to Cartesian rationality. The connection between the "Cartesian" end of history and mythic origins is, significantly, synomorphic with the question of the scholar's mental difficulty in comprehending the topic as a means of thought.

Vico's architectural relevance springs from three sources:

(1) His principle of mythic thought, the "imaginative universal," which was the "master key" of the *New Science* of the human world, a science placed opposite Descartes's methodic approach to the natural world.

(2) The relation of this principle, as an object of study, to the method of its discovery, namely Vico's idea of humanistic wisdom.

(3) The spatiality of both the object and method of humanistic wisdom—Vico's philosophy as a "philosophy of place."

Under these headings, it may be seen that mimesis, as a practice of discontinuity, has been given three aspects. As a principle of mythic thought, it is the ability of the particular to speak of the universal. As a principle of access to that thought, it is a means of discovering humanistic truth topically, rather than conceptually. And, as a primarily spatial idea, it is a means of approaching culture through the architecture of exchange, especially the exchange of words and space. Not only mimesis but also spatiality has been obscured through the modern preference for reason, and architectural theory depends crucially on some means of breaking this rational and temporal hold. "Exchange" ultimately comes to stand for this break, and for the possibility of a collateral relationship between the "spatial" and the "temporal" arts—or, rather, the spatial and the temporal *in* art.

The Imaginative Universal

Kant approached aesthetics in terms of a subjective universality that led to a series of logical antinomies.[18] Vico discovered the means by which a single mental act resulted in a perceptual whole, whose antinomies were concretely represented in terms of the liminal connections between day and night, summer and winter, life and death, the world of the gods and the world of men. The imaginative universal (*universale fantastico*), or "sensible topic," grew out of Vico's earlier understanding of metaphor in terms of its use in rhetoric, its irrationality and opacity to literal thought, and its relation to the perceptual or certain, as opposed to the conceptual or abstract.[19]

Vico's view of primitive mentality is mirrored in Lévi-Strauss's assessment that myth is a means of "thinking through things."[20] That is, myth lacks the ability to abstract universals from particulars, so it must, in the face of this indigence, construct universals concretely. This first occurs when primitive men imagine that the sky is the body of Jove, the thunder his voice, and that the physical connection between sky and earth is a fecundating sexual relationship between male and female.[21] Vico's practical reasoning in this case was that when men are uncertain about something, they use what is known and close at hand to judge what is distant and unknown. For primitives unable to abstract the idea of cause and effect, the world is unknown as a physical entity, but it is knowable in terms of natures properly human: emotion, corporality, and character.

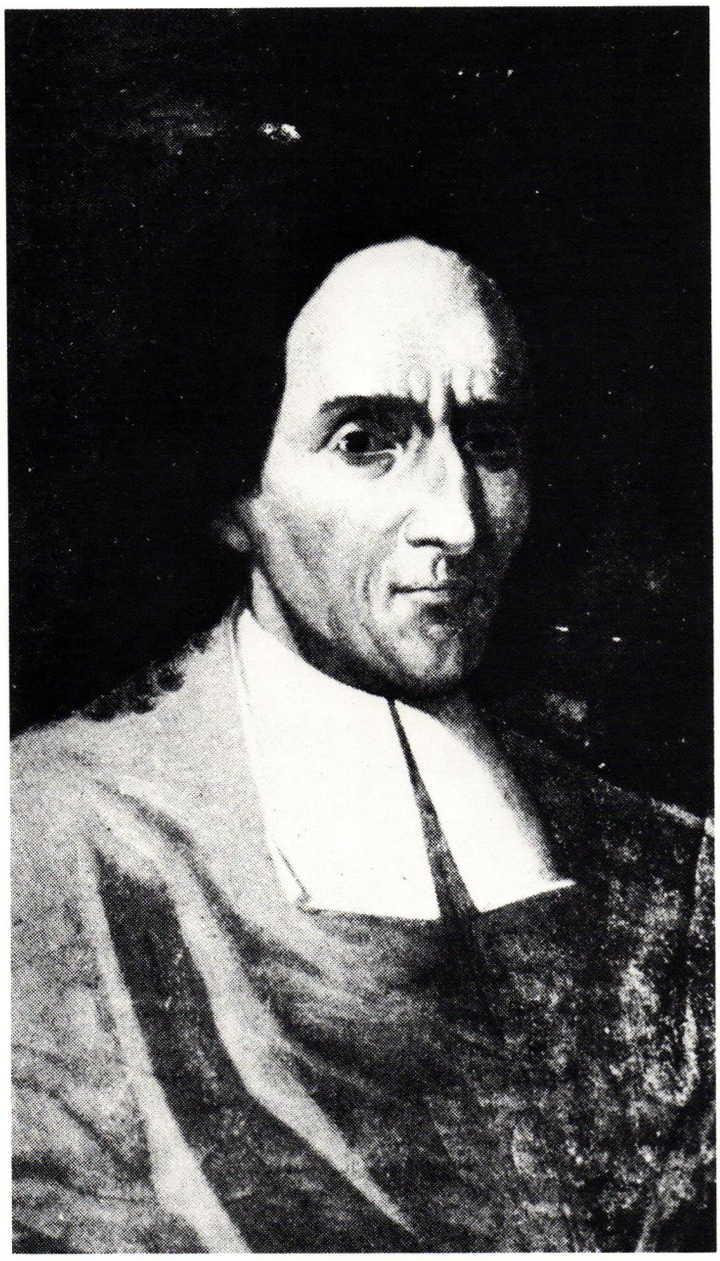
Study Methods

In his essay, "On the Study Methods of Our Time," Vico revived the topics ignored and even scorned by Cartesianism. He saw that rationalism had not only deleted certain topics but that it had methodologically made them invisible, by promoting a science of the extrinsic. Vico's method acted on the particulars of history and culture: anthropological details about the origin and development of civilization were its "matter." Amidst these, Vico applied a version of the logic of reversed antinomasia. At the beginning of his work, the *New Science*, he inserted an engraving, *la dipintura allegorica*, to serve as an aid to the imagination of the reader (fig. 5). Vico referred to the example of Cebes' Tablet, the famous Greek manuscript mistakenly thought by the Renaissance to have been authored by the disciple of Socrates, describing a conversation between a wise man ("Genius") and a group of pilgrims.[22] Vico's interest was in Cebes' *penax*, or "table" of moral institutions, an engraving accompanying most translations showing a spiral-walled mountain crowned by Happiness, with gates crowded by Sphinx-like temptors ready to lead the pilgrim astray (fig. 6).

Vico's "method" was to begin with an image, just as history itself had begun with an image, the sky of the divine Jove. The text then narrates the universal history that Vico wished to explain. But, instead of giving explanations, Vico repeated his narrative in sections titled in parody after scientific studies: "Elements;" "Principles;" "Method." Among the "axioms," "corollaries," and "proofs," Margharita Frankel notes that Vico simply traveled the same paths in different contexts and at increasingly larger scales.[23] The narrative spirals across a set of fixed radial lines, establishing a link between the form and content of the work. Vico's theory thus physically mirrors the mazed structure of history.

Method as Place

By making his own text as an example of his ideal eternal history, Vico exchanged the particulars of culture (words, ideas, customs, linguistic practices, etc.) for a *place*, universalized in the act of exchange. His earlier concept of the topic, as a metaphor in the rhetorical sense, was fully developed through a "mimetic" logic whereby particulars spoke of universals by becoming images and places. The truths of culture became such because of an architecture that was the same for the knower as it was for the maker.





4. Giambattista Vico, in a copy of a painting by Francesco Solimena, 1742–1743.

5. The frontispiece to Vico's New Science, *1730/1744.*

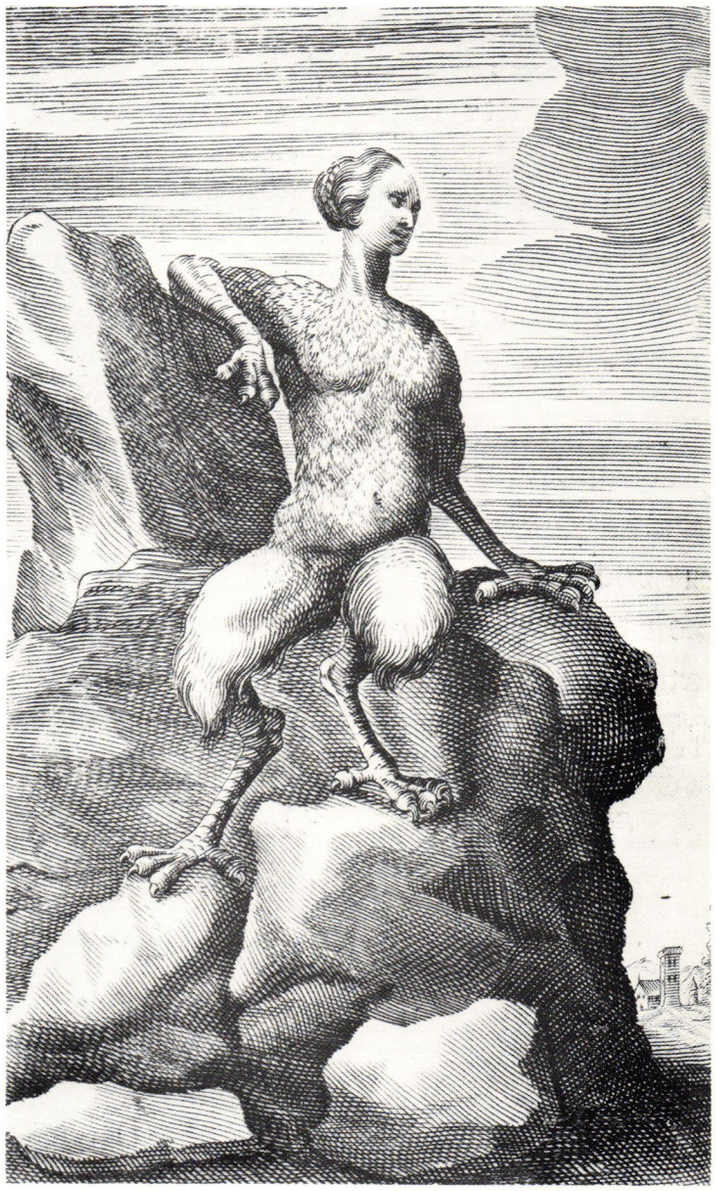


How architectural was this "architecture"? One approach to this question would be through Vico's relation to Plato, who held that the essential form of truth (*eidos*) and the ideal form of society (*polis*) ultimately converged.[24] The implicit utopianism in the dialogues yielded few actual plans, but a tradition was established where "architecture" stood to "building" as the "civic" stood to extant urban environments. Vico put this in negative terms. Opposite the utopian connection between *eidos* and *polis* is the dystopian inverted or fallen world. Vico's native Naples, factioned by political intrigue and the Inquisition, offered much in the way of dystopian scenery; and, his personality fit well the Renaissance tradition of the "dark genius."[25] Vico saw thought's "utopian" period as a heroic interlude separating two forms of barbarism: the barbarism of myth that held men prisoners of their own sensations; and the barbarism of modern thought that divided and isolated men through the device of the Cartesian *cogito*. The first kind of barbarism had opposed the establishment of civil place, the other had brought civil place to ruin. The first barbarism was a "barbarism of sense"; the second, a "barbarism of reflection."[26]

The barbarism of sense is myth as a *vera narratio*, or true speech, that has no irony and thus no capacity to distinguish between appearance and reality. From the side of myth, overcoming barbarism is a matter of learning to lie—or, in more technical language, learning to unravel the riddle of metaphor. This ability and its relation to civic place is abundantly illustrated in poetry. Two examples will suffice to show the relationship between the hero's *ingegno* and barbarism, as well as the architectural structure of the transition between the two.

Oedipus became the king of Thebes by virtue of his clever answer to the Sphinx's riddle. Both the Sphinx and her riddle were "monsters" (*monstrare*, "to make think"). Just as myth bound primitive society, which took it to be a true speech, the Sphinx prohibited all passage in and out of Thebes. As a composite image, the Sphinx was herself a riddle, representing the Theban year: a woman's head, lion's body (summer), serpent's tail (winter), and eagle's wings (fig. 7). Monstrosity resulted from myth's inability to pose such relationships in terms of parts subordinated to abstract or conceptual wholes (hypotaxis). Mythic mentality, limited to juxtaposition (parataxis), could only place particulars side by side, forcing their simultaneous unity and diversity into the sharpest opposition.[27] When Oedipus answered the Sphinx's riddle, he was undoing just such a paratactic structure. The monster who shed two legs at noon only to grow another back at evening was "man in his three ages." Time thus collapsed, the Sphinx relinquished her hold on Thebes and cast herself off Mount Phicium into the valley below.

Another well-known example of the heroic approach to myth's parataxis is the Homeric tale of Odysseus's visit to the Cyclops, Polyphemus (Poly-phemus, "full of the din of voices," i.e., the assembly, the "many-voiced"). Vico referred to mythic society as "cyclopian," drawing from the etymological connection to the "single eyes" in the forest cleared by primitive men to observe the skyward auspices of Jove. The Cyclops episode contains some surprisingly explicit details about the semiotic enterprise of converting parataxis to hypotaxis. Realizing that killing Polyphemus would leave the problem of how to roll the large stone from the cave door unsolved (Oedipus's riddle of the Sphinx), Odysseus's strategy is to blind Polyphemus and escape clinging to the bellies of the rams in the Cyclops' flock. Polyphemus is unable to detect the ruse or decode the trick of Odysseus's name, Oudeis, "Nobody." The two animals that stride as one—Odysseus's fleecy "monsters" of men strapped to rams—are set loose by the blind Cyclops. The two "names" in Oudeis that make it an ironic joke, to be found again in Parminides' argument about nothing, are similarly unnoticed by the ingenuous



6. *Cebes' Table.*

7. *The Sphinx of Thebes.*

Cyclops. Polyphemus does not notice what is placed beneath; that is, he does not understand the logic of hypotaxis. He can only, to his own ridicule, repeat the word for nobody, which rides hypotactically astride Odysseus's alias, with every call for help.

Other spatial metaphors in these narratives are not to be ignored: the labyrinthine cave as both a monogram for the ancient city and yet an anti-city; the role of the hero as a voyager and conqueror of the cyclopian precincts; the connotation of subterranean death-cults, such as Minos's tribute of Greek youths to the Minotaur/bull-leaping ceremony. As Joseph Rykwert notes, it is the hero's function to found civic space.[28] This is true not only literally, in the sense that Rome was traditionally founded by Romulus, but in a spatial sense as well—where the mental motion away from myth corresponds to a place where such a motion is enacted, as a heroic trial.

From the side of modern thought, overcoming the barbarism of reflection was similarly "heroic" in Vico's theory. He compared the *ingegno* common to both heroes and scholars. Borrowing from the Renaissance lore of associations connecting heroes, artists, and melancholy, he drew a parallel between the hero's traditional divinity and the scholar's relation to providence. But, the most striking feature of Vico's pairing of scholar and hero is its spatiality, which translates the complex semiotic situation of the scholar into metaphors of place.

The hero's relation to civic space had been direct—the release of society from the literal obligations of mythic parataxis. The scholar's relationship begins with a similar image of a city strangled by a literalism proceeding from the refined operation of reason.

If the peoples are rotting in that ultimate civil disease and cannot agree on a monarch from within, then providence for their extreme ill has its extreme remedy at hand. For such peoples, like so many beasts, have fallen into the custom of each man thinking only of his own private interests and have reached the extreme of delicacy, or better of pride, in which like wild animals they bristle and lash out at the slightest displeasure. Thus no matter how great the throng and press of their bodies, they live like wild beasts in a deep solitude of spirit and will, scarcely any two being able to agree since each follows his own pleasure or caprice. By reason of all this, providence decrees that, through obstinate factions and desperate civil wars, they shall turn their cities into forests and the forests into dens and lairs of men. In this way, through long centuries of barbarism, rust will consume the misbegotten subtleties of malicious wits that have turned them into beasts made more inhuman by the barbarism of reflection than the first men had been made by the barbarism of sense.[29]

Vico's ruined city of men turned into beasts through "the misbegotten subtleties of malicious wits" meets or exceeds the mythic requirements for a labyrinth. The scholar, like Theseus, must escape such a labyrinth. The labyrinth is decayed civil form, where "cave" equals "grave." It is a transposed image of the underworld, as it had been for Dante. The scholar/hero's descent thus takes on the universal geometry of the traditional literary *katabasis*, the heroic journey to the underworld.[30]

With this parallel in mind, it is easier to understand why Vico continued to emphasize the relation between humanistic wisdom and eloquence, which to rationalism is nothing more than a "paratactic" concern for order and expression. Eloquence begins with such a parataxis, but it ultimately seeks a counterpart to the hero's "golden thread" to reveal the hypotaxis, the *plan*, of the labyrinth. Dante appropriated the theme of the *katabasis* as a means of mapping Florence onto Hell, equating poetic vision with the revelation of divine spatial order. Before Dante, Virgil had made the *katabasis* a central element of his poem devoted to civil origins. Aeneas's descent had been given the strategic position of the sixth book. The middle of the text equals the middle of the universe, in this logic, just as it corresponds to the "middle" role of judgment in thought, and to the role of the topic or metaphor as the "middle term," or *argumentum*. Descent into the earth is a descent into matter, into particulars. It is mimesis's aspect of discontinuity put in the terms of a liminal space. The spiral path is the barbarism of parataxis, where one tortured soul after another is arrayed according to the degree of his corruption. Discovery occurs at the middle, at myth, at the point of chiastic convergence of two historically opposed phenomena—the hero and the scholar. In this vein, Vico placed his chapter on "The Discovery of the True Homer" in the middle of the *New Science*, a zone where scholars, poets, and heroes converged.[31] Just as Aeneas had discovered the "civil truth" of Rome's future in the Empyrean center of matter, Vico discovered the "civil truth" of mankind's poetic origins in the nature of the topic, or middle term. By working from the philological particulars of the Homeric epic, Vico showed "Homer" to be the three ages of civilization, expressed in the terms of authorial genius. The method of "reversed antinomasia" had the ability of discovering humanistic truth by projecting a space—in this case a spiral form where each age "enclosed' the last by appropriating its forms for new uses—and by then threading that space "hypotactically," as a means of discovering humanistic truths through anthropological evidence. Vico's epithet, *verum ipsum factum*, was a compact motto of this logic, which claimed that we can know only what we have made. Another implication of the *verum/factum* principle was that the true and the made are "convertable," through a logic of reversed antinomasia. The certain facts of culture become truths not through concepts or generalities but through a vision that converts them to paratactic particulars and makes a true measure of the distance separating the scholar from myth. Through this logic, particulars and universals exchange places. The particular, the *factum*, becomes the mimetic means of finding the true, *il verum*.

IV. The Origins of Architecture

Two ideas haunt the theory and practice of architecture. The first is of method: how, in fact, form can be generated in the context of the functional, cultural, and symbolic demands made on it. The second is of origins: whether architecture begins with an ingenuity arising out of primitive need or whether, like myth, primordial architectural forms embody a form of truth or wisdom. We see these two questions as related. Vico, in fact, makes this relation necessary, since the first question is one of making (*factum*), while the second question concerns the true (*il verum*). Where Vico had demonstrated the necessity for philosophers to concern themselves with the humanistic topics of history, language, and culture (just as he had required students of culture to read these topics in terms of humanistic truth or wisdom), our approach is to see questions of method and questions of origin as two aspects of the same question, the question of exchange.

The phenomenon of exchange, in contrast to substitution, marks the beginning of a truly symbolic consciousness. The symbol is not an index or sign that simply *indicates*, but a means of mediating stimulus and response that transforms reality and makes a "world" out of words, gestures, and re-presentations. Its origins are to be found in the nature of mythic thought, and its development parallels the "ideal eternal history" Vico outlined as a narrative of human institutions. There are two anecdotes that provide us a preliminary view of the role of exchange in architecture. One is well-known and traditional: the story of Daedalus, the apocryphal "first architect" and inventor of the Cretan labyrinth (fig. 8). The second is less well known today, but was influential in the Classical world as a kind of folktale about the invention of



8. Daedalus and Icarus, whose "oarage of wings" (Virgil) is a complex metaphor for art's gnostic relationship to its own work.

the rhetorician's art of artificial memory: the story of Simonides of Ceos. The "exchanges" found in these stories demonstrate two kinds of relationships possible between words and space. The Daedalus narrative exemplifies a constructive relationship, in which the ruined form of the labyrinth is the scene of discovery and heroic trial. It is a subspecies of the same theme used by Odysseus in the story of the Cyclops' cave. Simonides' invention of artificial memory posits a destructive exchange, where words are given for places in the aftermath of destruction and death. In both cases, the practice of discontinuity interrupts ordinary space and ordinary language to give rise to poetry and architecture.

Our representations of these narratives are determined by the need for compactness. For Daedalus's tale, we have chosen the historically and poetically more recent episode contained in Virgil's *Aeneid*, where Aeneas pauses briefly before his descent into the underworld to gaze at the Daedalan gates of the temple of Apollo. Simonides' story is preserved with austere brevity in Cicero's *De Oratore*.



9. *Aeneas before the Daedalan gates of the Temple of Apollo, Book VI.*

Aeneas Before the Temple of Apollo. In Book VI of the *Aeneid*, Aeneas visits the famous shrine at Cumae to consult the Sibyl about the future of the exiled Trojans. At the temple of Apollo, erected by Daedalus after his flight from King Minos of Crete, Aeneas gazes at two golden doors decorated with icons describing the events surrounding the invention of the labyrinth (fig. 9). Before he can finish inspecting them, the priestess Deiphobe leads him to the Sibyl, who in the ecstasy of a trance predicts future woes. Desiring to speak to his dead father Anchises, Aeneas is granted the "heroic" privilege of traveling alive to the land of the dead. The structure and purpose of Virgil's *katabasis* has been established by scholarship: the scene before the Daedalan gates is an *ekphrasis*, a description in full "cut" into the narrative.[32] Daedalus "speaks" through his images, the figure of *prosopopoeia*. *Ekphrasis* and *prosopopoeia* are a cut and a voice, a sacrifical trench dug and filled with blood to attract a prophesying ghost. They are the theme of Book VI in miniature, allowing the labyrinth scenes to presage Aeneas's visit to the underworld. Our quote is from W. F. Jackson Knight's prose translation:[33]

A party of young Trojans eagerly darted ashore onto the Western Land. Some searched for the seeds of flame which lie embedded in the veins of flint. Others penetrated the forests and raided the tangled shelters of the wild creatures, signalling when they found a water-stream. But Aeneas the True made his way to the fastness where Apollo rules enthroned on high, and to the vast cavern beyond, which is the awful Sibyl's own secluded place; here the prophetic Delian God breathes into her the spirit's visionary might, revealing things to come. They were already drawing near to Diana's wood, and to the golden temple there.

Daedalus, for this is the story, when he was in flight from the tyranny of Minos, adventured his life in the sky on swooping wings, and glided away towards the chill north by tracks unknown. At last he hovered lightly above the Euboean stronghold. In these lands he first found refuge, and straightway he consecrated his oarage of wings to Phoebus Apollo, for whom he founded a gigantic temple. On the temple-gate he pictured the death of Androgeos, and, lower down, the Athenians obeying the ghastly command to surrender seven of their stalwart sons as annual reparation; and there was the urn from which the lots had just been drawn. The island on which Cnossos stands, rising high above the sea, balanced the scene on the other leaf of the gate. There he had depicted the Bull's brutal passion, and Pasiphae's secret union with him; and there in the midst, as a warning against wicked love, their hybrid offspring, child of two breeds, the Minotaur. Here was the Cretan building in all its elaboration, with the wandering track which might not be unravelled. But Daedalus him-

self, who because her love was strong had taken pity on the Princess Ariadne, guided the sightless footsteps by means of a thread and unlocked the building's treacherous, winding ways. And, O Icarus!—you too would have a prominent place in this splendid sculpture, but for the power of grief; for Daedalus had twice tried to express your fate in the gold-work, but each time his hands, a father's hands, had dropped. The Trojans would certainly have read on, scanning every message there, if Achates, who had been sent on ahead, had not just then returned, and with him Deiphobe, daughter of Glaucus and priestess of Phoebus and Diana. Deiphobe spoke to the prince: 'This is no time for such sight-seeing. Better were it now to sacrifice seven bullocks from a never-yoked herd and seven rightly chosen two-year sheep.' Thus she addressed Aeneas. With no delay the Trojans offered the commanded sacrifice. The Sibyl's priestess then invited them into the temple on the height.

Simonides Praises a Nobleman but Is Not Paid in Full. Cicero, in *De Oratore* II, 86, relates the rudiments of the tale:[34]

There is a story that Simonides was dining at the house of a wealthy nobleman named Scopas at Crannon in Thessaly, and chanted a lyric poem which he had composed in the honour of his host, in which he followed the custom of the poets by including for decorative purposes a long passage referring to Castor and Pollux; whereupon Scopas with excessive meanness told him he would pay him half the fee agreed on for the poem, and if he liked he might apply for the balance to his sons of Tyndarcus, as they had gone halves in the pangyric. The story runs that a little later a message was brought to Simonides to go outside, as two young men were standing at the door who earnestly requested him to come out; so he rose from his seat and went out, and could not see anybody; but in the interval of his absence the roof of the hall where Scopas was giving the banquet fell in, crushing Scopas himself and his relations underneath the ruins and killing them; and when their friends wanted to bury them but were altogether unable to know them apart as they had been completely crushed, the story goes that Simonides was enabled by his recollection of the place in which each had been reclining at the table to identify them for separate interment; and that this circumstance suggested to him the discovery of the truth that the best aid to clearness of memory consists in orderly arrangement. He inferred that persons desiring to train this faculty must select localities and form mental images of the facts they wish to remember and store those images in the localities, with the result that the arrangement of the localities will preserve the order of the facts, and the images of the facts will designate the facts themselves, and we shall employ the localities and images respectively as a wax writing tablet and the letters written on it.

The Chi

Daedalus, the first architect, Aeneas, founder of the civil space of Rome, and Simonides, diviner of ruins, all trace a single figure in space, the Greek letter, *chi* (X). The chi (chiasmus) is at once rhetorical and spatial, a "place." Literature, especially ancient literature, abounds in the use of chiasmus as a stylistic and thematic technique. A series of words, images, or episodes is arranged in a sequence leading to a pivot, a "trope" or turn, about which narrative direction is reversed, as in a palindrome.[35] The briefest chiasmus is *A-B-B′-A′*: "A wit with dunces, and a dunce with wits" (Pope). But more extended forms are common: *A-B-C-D* becomes *D′-C′-B′-A′*, often with no change in the central element: *A-B-C-D-C′-B′-A′*. As David Freedman has commented, the significance of chiastic form lies more in its use in arranging themes and ideas than as a means of constructing single verbal expressions.[36] But this is an area where scholarship must inevitably give way to a sense of the poetically true, for what is or is not "chiastic" is largely a matter of interpretation.



10. Bellerophon and the dragon, an image taken up into the iconography of Rome's patron Saint Sylvester.

With this qualification in mind, we see two kinds of chiasmus in these narratives: (1) a structural chiasmus that determines an overall dramatic form and a corresponding architectural "emblem" of this form; and (2) *chis* particularized as literal forms of verbal crossing, or "troping." An example of a physical chi is the Daedalan gate itself. A verbal chi often takes the form of a riddle, such as the paratactic "monster" of the myth of Bellerophon, whose name, Chimaera, leaves no doubt about this connection (fig. 10). Often, the connection to chiasmus is indirect. Simonides chants a pangyric to the hero Scopus, a speech form traditionally filled with hyperbole, or "abundance" of praise. But, the Greek word "hyperbole" also means a crossing, as in a road through a mountain pass. And, the pangyric was originally a speech for funerals—praise of the dead to prevent the soul from haunting the living.

The chi as an abrupt trope or turn is also a dramatic device. Daedalus breaks off his artwork out of grief, the rhetorical device of *aposeopesis*. The priestess Deiphobe enacts *aposeopesis* when she calls Aeneas away from his survey of Daedalus's sculptured doors. In *aposeopesis*, the meaning of the unspoken part of the speech must be supplied enthymemically by the audience. This division of speech into spoken and silent parts is translated into the terms of payment and nonpayment in the Simonides story, when Scopus refuses to pay for the part of the pangyric devoted to Castor and Pollux. As myth tells, such chiasms lead to a collapse of ordinary spatial relations. The banquet hall mysteriously but literally collapses. Aeneas is led to the "liminal" space of the dead, in which the Empyrean paradise is concentrated in a nondimensional point. The essence of the chi is expressed as a discontinuity leading to a collapse of space—extension reduced to a point, time to eternity. This *V* of descent and ascent, the *katabasis*, defines the chi, by converting the unknown to the known, going down to going up, losing with "seeing again," *Wiedersehen*. Simonides relates this return journey explicitly to the art of memory. Having been called out by the gods, he is called back in by the relatives of the dead. Surveying the flattened banquet hall, he discovers the art of artifical memory by realizing that places can be used to store images and names. Scopus had refused payment, sending Simonides "to the gods." Scopus himself goes to the gods and Simonides is paid silently: the places give the names. The names, in turn, are given to the dead, who may be buried. This may be described as a seven-term chiasmus, *A-B-C-D-C′-B′-A′*. After the catastrophe (*D* meets *D′*), each episode preceding it is paired with an opposing meaning that "resolves" the impiety of Scopus. The call out of the hall, *C*, is echoed by the call in, *C′*. Scopas's refusal of payment, *B*, is converted to an exchange of places for names, *B′*. (This is reminiscent of the Homeric exchange between the Cyclops's refusal of hospitality to Odysseus and the later escape, where the place of the cave was exchanged for the name, "Nobody.") And, finally, the *encomium* to the live Scopus, *A*, is exchanged for a naming of the dead in order that they might be buried, *A′*.

Aeneas's narrative also suggests an art of memory, but more subtly. W. F. Jackson Knight, in tracing the anthropological origins of themes used in the *Aeneid*, ran across a parallel episode in the mortuary myths of the tribes of New Hebrides.[37] Quoting A. Bernard Deacon, Jackson Knight relates that the Melekulan land of the dead is guarded by a female ghost, Temes. Drawn on the ground before here is a geometric figure known as the "Nahal," or Path. The ghost must travel through the design to complete his journey to the underworld, but before he can memorize it, Temes rubs out half, leaving the ghost with only the knowledge of the complete figure he had gained during his lifetime. The figure is one of a series used in games of skill, in which the goal is to move smoothly and continuously through a drawn maze. In other myths, the "Nahal" or Path is represented in pictures, as in the icons on the Daedalan gate. Only ghosts who remember the design of the path from games and initiations of their youth rest in the underworld.

Aeneas's *katabasis*, so much like the traditional "rite of passage" found in primitive myth and ritual, makes the chiasmus of descent and ascent intelligible as a passage not only from one social state to another, but from one form of thought (mythic/paratactic) to another (heroic/hypotactic). Aeneas enters the underworld through the gate of horn, the Western entrance to the land of the dead depicted in primitive myth as a kneeling sacrificial bull.[38] But, when he returns, he leaves by the gate of ivory. The gates of horn and ivory are the Homeric "gates of dreams" that gods send to mortals. True dreams pass through the gate of horn, false through the gate of ivory. Aeneas, pious but not without heroic guile, returns not through the same gate, A, the gate of true dreams, but through A′, the ivory gate of false dreams. In so doing, he establishes his chiastic lineage, shared by epic heroes, Hermetic tricksters, and (inevitably) magicians civically responsible for relating the world of men to the world of the gods.

At the same time, his journey reveals an architecture of words, actions, and places: a passage effecting a transition between two architecturally opposed kinds of space. A linear sequence "transcends itself" without departing from its narrative medium; the text works "mimetically" to produce spatial and semantic structures that enact the universal space it describes. The transition from mythic to heroic thought is also the transition from mythic place, the labyrinth, to heroic place, the city. Aeneas is a hero who founds the civic space of Rome. His heroic *katabasis* is a repetition of the ancient custom of foundation rites, in which the descent (usually a literal sacrifice) of a hero ("hero" originally signified only "the dead" in Greek) protects a shared civic space from spiritual and human invasion by constructing an "apotropaic" defense, which "turns away" invasion, hauntings, and contamination.[39]

Aeneas is the Virgilian counterpart to the more primitive hero, Curtius, who rode into the marshland of the Roman Forum in order to expel the river-spirits that prevented it from being used as civic space. Later, when the myth was Christianized, the river-spirit was changed to a dragon, and the Curtian sacrifice made into a version of the St. Sylvester legend.[40]

V. Conclusions

The hero, who founds civil space, and the scholar, who must escape the labyrinth of continuity set up by reason, face the same task. Each must invent a practice of discontinuity, one to penetrate a labyrinth, the other to escape. They face in opposite directions, in the sense that the hero finds parataxis in the form of a mythic logic he must unravel or a chain of corridors he must unwind, while the scholar must first see that the forms of universality given by the Enlightenment are, in reality, particulars side by side, a chain transmitting power and discipline.

The practice of discontinuity comes from ritualized madness, the sympathetic magic of the shaman who built miniature worlds in order to influence the remote world of the gods. But, through the descendents of this practice—magic, folly, art, architecture, rhetorical eloquence, and poetry—it becomes clear that the counter-trope to rationalism is itself a kind of method, an anti-method; and that its "topical" form of thinking is no less disciplined than scientific method.

Clearly, our view of the Enlightenment has been reduced to a few brief details—Descartes's geometric method, the rejection of the humanities,

and (especially) the purging of rhetoric. These sentimental clippings cannot serve to represent a whole age, but they do show how our own age, which never ceases to kill and revive the positivism that gave it over to reason, is still transfixed by the idea that thought operates through successive measures of decontamination. The parasite becomes the hero and the pariah of the world, much as Don Quixote is alternatively ingenious and brutal in his campaign against the literal. Foucault calls Quixote "the hero of the same." Just so, the strategies of discontinuity suggested by mimesis, which open up chasms, or chiasms, in words and space, are no less methodic or rigorous than the practices of rationalism. The essential difference is, of course, the final result. The methods of discontinuity induce a change in the object of study. They are a means of transformation rather than passive conduction, and thus they are primarily aligned with the practice of architecture as an art. We say this not to distinguish them from scientific methods as much as to say that no method can do otherwise. The knower "makes" the known; and the explicit recognition of this was the historical beginning of science, in Galileo's concept of experiment put forward in the essay *Il Saggiatore*. The experiment constrains nature, makes of it a thing of number; the creative act precedes the scientific act, or perhaps there is really no distinction.

There is a distinction, however, between the civic physical and mental space "opened up" by the practice of discontinuity and the panoptical labyrinths that abound in the thought and architecture of the present. This distinction seems to be based on the choice between techniques of substitution, which divide space according to a rule of surveillance and control, and the use of exchange, which leads to a study of myth, an interest in the detail, and the general appreciation of the correspondences between architecture, rhetoric, and poetry.

The landscape open to the logic of exchange seems to contain: (1) a means of comprehending the meaning of civic space, and thus, the nature of the city; (2) a zone shared by architecture and myth, as operations of metaphor leading to a silent language common to all cultures; and (3) a common locus of place and thought, at the apocalyptic convergence of meaning and form. Perhaps we have done no more than to substitute a "window of memory" for the "window of reason." Perhaps, too, there is no way to avoid the destructive consequences of such convergence. In a recently discovered manuscript from Hegel's Jena period, translated here by Donald P. Verene, this sense of necessity and melancholy is conveyed in a fable:

[The artist] *is like someone who finds himself among workers who are building a stone arch, the scaffolding of which is invisibly present as an idea. Each puts on a stone. The artist does the same. It happens to him by chance to be last; in that he places the last stone, the arch carries itself. By placing the last stone, the artist sees that the whole is one arch; he declares this to be so and thereupon is taken to be the inventor. Or, as in the case of workers who are digging for a spring, he to whom it falls to take up the last layer of earth has the same work as the others. And to him the spring bursts forth.*

It is the same with a revolution in a state. We can think of a people as buried under the earth, above which there is a lake. Each intends to be working only for himself and the preservation of the whole by removing a piece of stone from above and employing it in the general subterranean construction. The tension in the air, the general elements begin to change; it produces a desire for water. Uneasy, the people do not know what it is they are lacking and to help they dig even higher in the belief of improving their subterranean condition. The crust becomes transparent. One catches sight of it and calls: "Water!" Tears the last layer away and the lake rushes in and drowns them all by giving them a drink. So is the work of art the work of all. There is always one who brings it to its final completion by being the last to work on it and he is the darling of Mnemosyne [Memory].

When in our time the living world does not form the work of art within it, the artist must place his imagination in a past world; he must dream a world, but the character of dreaming, of not being alive, of the past, is plainly stamped on his work.[41]

NOTES

1. Michel Eyquem de Montaigne, "Of the Vanity of Words," *The Complete Works of Montaigne: Essays, Travel Journal, Letters*, trans. D.M. Frame (Stanford: Stanford University Press, 1948) 223.

2. Jorge Luis Borges, "The Mirror of Ink," *Borges, A Reader: A Selection from the Writings of Jorge Luis Borges*, ed. Emir Rodriguez Monegal and Alastair Reid (New York: E. P. Dutton, 1981) 55–56.

3. James S. Ackerman summarizes the transition from the Middle Ages to the twentieth century in terms of the tendency to identify science with technique in "On Scientia," in *Science and Culture*, ed. Gerald Holton (Cambridge, Massachusetts: The Riverside Press, 1965) 14–23. This transition accompanied the intellectual preference for empirical over reflective methods of inquiry, just as it tended to define reflection purely in terms of Descartes' "clear and distinct" ideas. Reflection concerned the regulation of the subject, while the object was understood through its empirical properties. Subjectivity could thus "contaminate" the object because both were essentially *signs*-the artificial language of culture obscured the "natural language" of nature, as evoked by Galileo in his essay "Il Saggiatore." For an introduction to the concept of Enlightenment study and its influence on modern thought, see Elio Gianturco, Introduction, in Giambattista Vico, *On the Study Methods of Our Time* (1709) (New York: The Library of the Liberal Arts, 1965), ix–xxxiii. The contrast between Vico's and Descartes' thought as a contrast of "study methods" has been developed by Donald Phillip Verene in his *Vico's Science of Imagination* (Ithaca, New York: Cornell University Press, 1981) 36–64.

4. René Descartes, *The Philosophical Works of Descartes*, trans. Elizabeth Haldane and G. R. T. Ross (Cambridge: Cambridge University Press, 1931) 10: 85.

5. Michel Foucault, "Panopticism," chapter 3 in *Discipline and Punish: The Birth of the Prison*, trans. Alan Sheridan (New York: Vintage Books, 1979) 195–230. Jeremy Bentham, "Panopticon; Or, the Inspection-House," *The Works of Jeremy Bentham* (Edinburgh: William Tait, 1848) 4: 195–230.

6. Foucault, "Panopticism."

7. Wilhelm Wundt, *Die Sprache*, vol. 1 of *Volkerpsychologie: Eine Untersuchung der Entwicklungsgesetze von Sprache, Mythus, und Sitte* (Stuttgart: Alfred Kroner Verlag, 1921) 2nd ed., 1: 129–130. *Volkerpsychologie*, 2nd ed., 1: 129 ff.

8. Ernst Cassirer, *Language*, vol. 1 of *Philosophy of Symbolic Forms*, trans. Ralph Manheim (New Haven: Yale University Press, 1957) 1: 180–185.

9. Michel Foucault, *The Order of Things* (New York: Vintage Books, 1973) 17–24.

10. Alan Dundes (ed.), *The Evil Eye: A Folklore Casebook* (New York: Garland Press, 1981); Clarence Malony (ed.), *The Evil Eye* (New York: Columbia University Press, 1976).

11. Michel Serres, *The Parasite*, trans. Lawrence R. Schehr (Baltimore: Johns Hopkins University Press, 1982).

12. Mircea Eliade, *The Sacred and the Profane: The Nature of Religion*, trans. Willard R. Trask (New York: Harcourt, Brace, and World, Inc., 1959), 26.

13. Erwin Panofsky, *Idea: A Concept in Art Theory*, trans. Joseph J. H. Peake (Columbia, South Carolina: University of South Carolina Press, 1968).

14. Michel Foucault, *Order*. Also see William Willeford, *The Fool and His Sceptre: A Study in Clowns and Jesters and their Audience* (Evanston, Illinois: Northwestern University Press, 1969).

15. Andrea Battistini, *La degnita della retorica: Studi su G. B. Vico* (Pisa: Pacini, 1975).

16. We will refer to several of Vico's works in English translation: Giambattista Vico, *The New Science of Giambattista Vico*, trans. Thomas G. Bergin and Max H. Fisch (Ithaca: Cornell University Press, 1948), hereinafter abbreviated as *New Science*. *On the Study Methods of Our Time*, trans. Elio Gianturco (New York: Bobbs-Merrill Library of Liberal Arts, 1965), will be cited as *Study Methods*. *The Autobiography of Giambattista Vico*, trans. by Thomas Goddard Bergin and Max Harold Fisch (Ithaca: Cornell University Press, 1944), will be cited as *Autobiography*. For bibliographies of work on Vico, see Robert Crease, *Vico in English: A Bibliography of Writings by and about Giambattista Vico* (Atlantic Highlands, New Jersey: Humanities Press, 1978); Molly Black Verene, "Critical Writings on Vico in English," in *Giambatista Vico's Science of Humanity*, ed. Giorgio Tagliacozzo and Donald Phillip Verene (Baltimore: Johns Hopkins University Press, 1976); and Molly Black Verene, "Critical Writings on Vico in English: A Supplement," *Social Research* 43 (1976) 904–14.

17. Lodoli offered to print the second edition of Vico's major work, the *New Science* but was forced to withdraw the offer when the book turned out to be much larger than expected. The following studies by Kaufmann, Rykwert, and Frascari show that Lodoli's character and architectural theory were more complex than previously thought. How much Vico's concepts influenced Lodoli's architectural ideas is not clear. Lodoli's writings were destroyed, and his protegés, Algorotti and Memmo, were at odds over interpretation. See Edgar Kaufmann, Jr., "Memmo's Lodoli," *The Art Bulletin* 46, 2 (New York: The College Art Association of America, 1964) 159–75. See also Joseph Rykwert, "Lodoli on Function and Representation," *The Architectural Review* 160, 953 (London: The Architectural Press, July, 1976) 21–26, and Marco Frascari, "Sortes Architectii," Ph. D. dissertation, University of Pennsylvania, 1981.

18. Immanuel Kant, *Critique of Judgement* (1790), trans. James Creed Meredith (Oxford: Clarendon Press, 1911).

19. Donald Phillip Verene, "Vico's Philosophy of Imagination," *Vico and Contemporary Thought*, a special issue of *Social Research* 43, 3 (Autumn 1976), 410–25.

20. See Claude Levi-Strauss' discussion of "bricolage" in *The Savage Mind* (trans. unlisted) (Chicago: University of Chicago Press, 1966), 16–22.

21. See Max Harold Fisch and Thomas Goddard Bergin's "Notes to the Autobiography," in the *Autobiography*, 218.

22. Kebetos Thebaiou Penax, Polyglot, *Cebes' Tablet: Facsimiles of the Original Text, and of Selected Latin, French, English, Spanish, Italian, German, Dutch, and Polish Translations* (New York: The Renaissance Society of America, 1979).

23. Margharita Frankel, "The Dipintura and the Structure of Vico's "New Science" as a Mirror of the World," in *Vico Past and Present*, ed. Giorgio Tagliacozzo (Atlantic Highlands, New Jersey: Humanities Press, 1981).

24. Paul Friedlander, *Plato*, Introduction, trans. Hans Meyerhoff (New York: Pantheon Books, 1958).

25. For the definitive study on the lore of melancholy, see: Raymond Klibansky, Erwin Panofsky, and Fritz Saxl, *Saturn and Melancholy: Studies in the History of Natural Philosophy, Religion, and Art* (New York: Basic Books, Inc., 1964).

26. The authors thank Donald Phillip Verene for having pointed out the importance of Vico's sense of barbarism to the development of his philosophy. See Donald Phillip Verene, "Wisdom and Barbarism," chapter 7 in *Vico's Science of Imagination* (Ithaca: Cornell University Press, 1931), 193–221.

27. See Alarik Rynell, *Parataxis and Hypotaxis as a Criterion of Syntax and Style, Especially in Old English Poetry* (Lund: C. W. K. Gleerup, 1952).

28. Joseph Rykwert, *The Idea of a Town: The Anthropology of Urban Form in Rome, Italy, and the Ancient World* (London: Faber and Faber, 1970).

29. Vico, *New Science*, par. 1106.

30. For an introduction to the use of myths of descent in classical literature, see August Friedrich von Pauly, "Katabasis," *Real-Encyclopaedie der Classischen Altertumswissenshaft* 10 (Stuttgart: J. B. Metzler, 1919).

31. Vico, *New Science*, 301–334.

32. Vergilius Maro, *Aeneidos, Liber Sextus*, with commentary by R. G. Austin (Oxford: Clarendon Press, 1977) 38.

33. Vergilius Maro, *The Aeneid*, trans. W. F. Jackson Knight (New York: Penguin Books, 1979), 147–148 (lines 5–41).

34. Marcus Tullius Cicero, *De Oratore*, trans. E. W. Sutton (Cambridge: Harvard University Press, 1948), 465–66 (lines 352–55).

35. John W. Welch (ed.), *Chiasmus in Antiquity: Structures, Analyses, Exegesis* (Heldesheim, West Germany: Gerstenberg Verlag, 1981).

36. David Noel Freedman, Preface, in Welch, *Chiasmus in Antiquity*, 11–12.

37. W. F. Jackson Knight, *Cumaean Gates: A Reference of the Sixth Aeneid to the Initiation Pattern* (Oxford: B. Blackwell, 1936), 14–15.

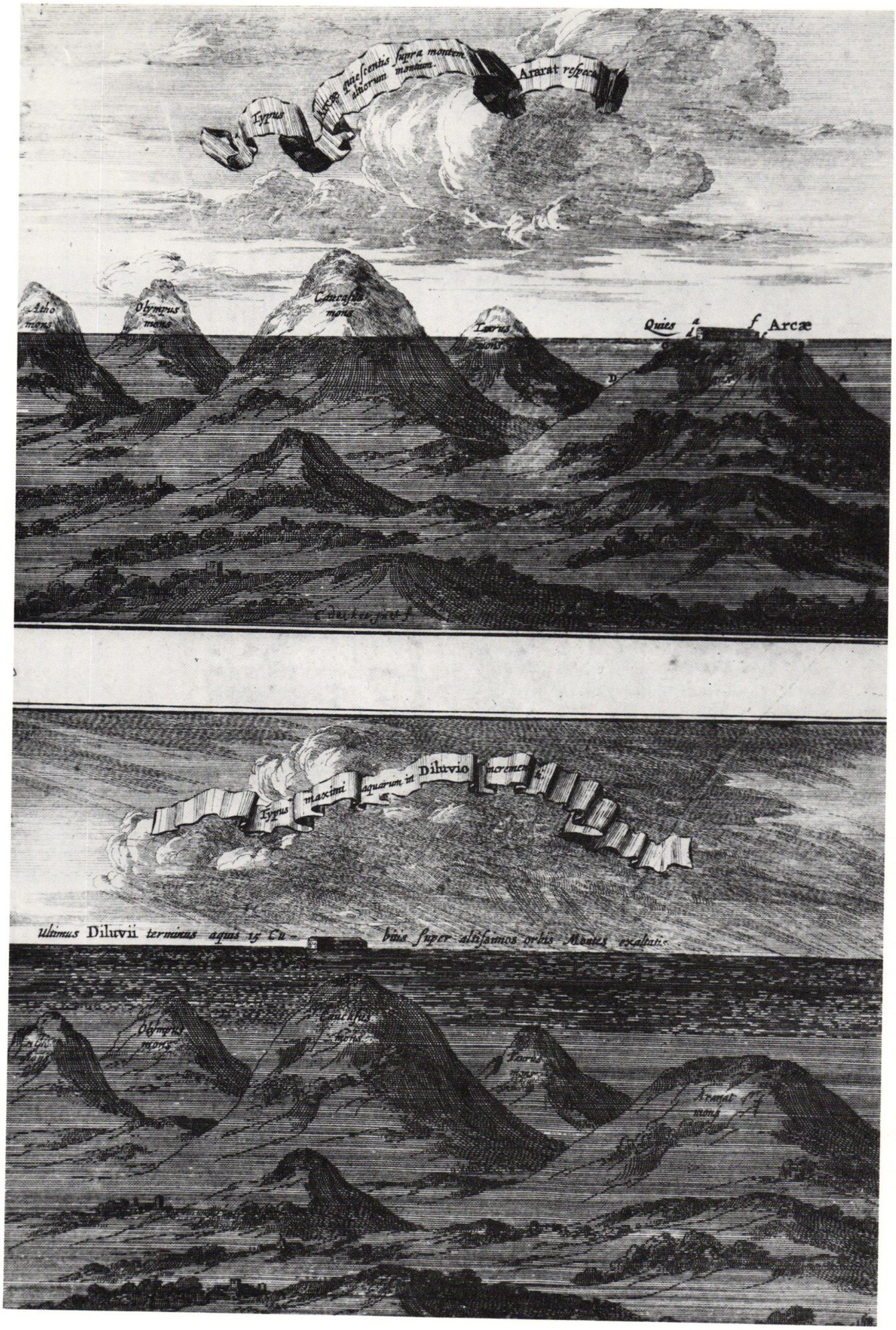
38. Gertrude Rachel Levy, *The Gate of Horn: A Study of the Religious Conceptions of the Stone Age, and Their Influence upon European Thought* (London: Faber and Faber, 1948).

39. For an introduction to the use of apotropaic magic in foundation rites related to architecture and urban settlement, see Joseph Rykwert, *The Idea of a Town*.

40. An interesting connection between securing a building's future solidity and the use of magic to insure the curing of mortar may be found in Lewis Dayton Burdick, *Foundation Rites, with Some Kindred Ceremonies* (New York: The Abbey Press, 1901).

41. G. W. F. Hegel, "Uber Mythologie, Volksgeist, und Kunst," Fragment (from the Jena period) in Donald Phillip Verene, *Hegel's Recollection: A Study of Images in the Phenomenology of Spirit* (Albany: State University of New York Press, 1985), 36–37. See n. 13, 130–131.

11. Noah's arc.


Typus
Arcæ quiescentis supra montem altiorum montium.
Ararat respecta
Atho mons
Olympus mons
Caucasus mons
Taurus mons
Quies
Arcæ
Typus maximi aquarum in Diluvio incremen
Ultimus Diluvii terminus aquis 15 Cu- bitis super altissimos orbis Montes exaltatis
Olympus mons
Caucasus mons
Taurus mons
Ararat mons

LOUIS SULLIVAN AND VICTOR HUGO: TWO APPROACHES TO READING BUILDINGS

Narciso G. Menocal



1. Paris a Vol d'Oiseau (15e Siècle). Engraving by Pernot in Victor Hugo, Notre-Dame de Paris, *1844.*

American architecture of the mid-to-late 1800's was profoundly influenced by French romantic rationalism, the leading movement at the École des Beaux-Arts from the July Monarchy to the early days of the Third Republic.[1] Many strong stylistic and theoretical similarities exist therefore between French and American architecture of that period, but there are marked differences as well, especially those caused by discrete national characteristics. This article explores an example of such differences.

Louis Sullivan's ideas on the meaning of architecture lend themselves admirably to gauge the extent to which Americans moved away from their French sources, especially on a purely intellectual level. Two reasons justify the choice. First, Sullivan's thinking had been molded since early childhood by a strong Gallic influence that eventually predisposed him to seek an architectural ambiance shaped by French romantic rationalism, both in the United States and in France. Second, Sullivan produced what is perhaps the largest written *oeuvre* of any American architect, expressing the same idea over and again from different perspectives and in different ways. Important among his ideas is the notion that buildings must express a message about the unity of architecture and nature. To him not only architecture but all human endeavor had to seek such unity, which in turn became the fundamental characteristic of culture. Previously, Victor Hugo had advanced the thought that architecture was a form of literature expressing national culture, an idea that became the cornerstone of French romantic rationalism. Similar as Sullivan's and Hugo's beliefs seem to be on the surface, their concepts of culture were far apart from each other. The purpose of the present work is to present that basic difference, and to show how it impinged on their respective understanding of the meaning of architecture, as well as the function of that meaning.

To most French romantic rationalist architects, especially to those who were close to the events of July 1830, the "definitive" edition of 1832 of *Notre-Dame de Paris*, the novel where Victor Hugo set down at length his ideas about architecture, had the force of a manifesto. Hugo's conception of the function of architecture held a preeminent position among those ideas. According to Hugo, architecture had been the most important repository of knowledge throughout the Middle Ages, but literature had progressively usurped that premier role with the invention of the printing press. "Not only every religious symbol," wrote Hugo, "but even each human thought, has its pages in this vast book [of Medieval architecture]."[2] But eventually "architecture was dethroned. To the stone letters of Orpheus succeeded the leaden letters of Gutenberg."[3] His mention of Orpheus as architect is part of a metaphor he used in a number of passages where he considered that in architecture "Daedalus is the basement; Orpheus is the wall; Hermes is the building itself—the whole."[4] Further along in the book he explained the meaning of his words. Daedalus stands for intelligence in planning, as he had constructed the labyrinth where the Minotaur was kept at Knossos. Orpheus, on the other hand, symbolizes poetry, since he had enchanted everyone with the lyre Apollo had given him and the Muses had taught him to play. Hugo offered no explicit meaning for Hermes in the metaphor, but several passages in *Notre-Dame* make it safe to assume that Hermes signifies universal knowledge in an allusion to Hermes Trismegistus, founder of alchemy and other occult sciences.[5] In the Middle Ages hidden and overt symbols in architecture held the key to absolute knowledge, and each subsequent generation, according to Hugo, felt compelled to seek for adumbrations of the mysteries lurking behind the beauty of buildings.[6] In the Middle Ages, he insisted, "whoever was born a poet, became an architect."[7] But from the moment the printing press gained power to transmit knowledge to increasingly wider circles of readers, it was no longer convenient, in fact it became impossible, to couch universal knowledge in terms of mystery and symbols. What was gained in clarity was lost in poetry, and architecture became a dry exercise of erudition on the classical orders. "Architecture," wrote Hugo, "now crawled like a pitiful beggar of the studios, from copy to copy of the Greek, Roman, and barbaric works of professors according to Vitruvius and Vignola."[8] Under these circumstances, there was only one thing that architecture could do. It could make itself useful as a witness to the passage of time; monuments would henceforth serve to tell about the civilizations that had produced them. The book of architecture, no longer serving to record universal mysteries, would become a chronicle.[9]

Such views of Hugo's were shared fervidly by the young men who in the late 1820's and 1830's launched the romantic rationalist movement; these were as well some of the ideas that Sullivan received in Paris as late as 1874. But in spite of his romantic rationalist training, Sullivan, like most nineteenth-century American romantic architects, chose to ignore Victor Hugo's ideas because they had little to offer the New World. Victor Hugo's model of society demanded several centuries of development to determine a national cultural tradition because his romanticism was based more on history than on nature. To a lesser extent it also required a tacit or an overt acceptance of a political or of a religious machinery channeling the taste of the bourgeoisie, as well as furnishing it with models from which to borrow ideas. In nineteenth-century France it was the government who provided most of the buildings serving as models of style for the rest of the people, and these models, in one way or another, were based on past examples of French architecture. Thus a national tradition was both continued and assured.[10] Such circumstances were not prevalent in the New World. To most Europeans, the United States lacked a history and therefore a tradition, an opinion that many nineteenth-century Americans shared. Moreover, in America it was private enterprise and not the state that served as the most significant provider of architectural commissions throughout the nation. This factor served to reinforce in no small measure the strong flavor of pragmatism and individuality that pervaded American architecture. In Chicago especially, from the Great

Fire of 1871 to the Columbian Exposition of 1893, and even thereafter, tall office buildings comprised practically the only important type of commission architects received.

Sullivan, a product of that Midwestern culture, fully endorsed the American notion of progress, and believed that the present was better than the past, but less good than the future. His optimism was based on an unwavering faith in the entrepreneurial system. By extending railway lines, building bridges, putting up skyscrapers, and fostering in general the advancement of civilization, financiers clearly played an important part in nature's grand scheme of moving humanity toward the utopia. The idea of such noble strength evoked in Sullivan a heroic mental picture of titans: of "a company of naked mighty men, with power to do splendid things with their bodies." [11] Industrialists were performing beneficent acts of power; beauty, to Sullivan, was the forceful assertion of a heroic ego. And herein may be found an explanation for a fundamental difference between Sullivan's and Hugo's romantic conceptions of the city.

For Victor Hugo the city was similar to a Gothic cathedral, where each capital, each altar, each statue, each portal, each feature in fact, although clearly distinct from the rest, is nevertheless subordinated to the whole, as are the parts of a paradigm. To construct a model to help one understand the French position, one could consider nature as an absolute that sets in motion something akin to Heraclitus's river. Cities, being in this case like lines stretched across the stream, would become impregnated by the many ripples flowing by and would retain in the process some of the flavor of each subsequent swelling of the flow. [12] In Victor Hugo's terms, in cities "time is the architect, the nation is the mason." [13] The beauty of a city was for Victor Hugo more a product of a heterogeneous accumulation established by the passage of centuries than a result of straight avenues and important monuments. [14] For him and his followers time was the active element in the equation of nature and architecture because history was the dynamic or verbal factor in it, while architecture played mostly a passive and receptive role. [15] Buildings, *qua* works of literature, served mainly a taxonomic function that helped to identify the historical moment each structure characterized. Such a mandate required the use of a nominative syntax, one in which buildings would stand more like nouns than any other part of speech. In Hugo's mind, as long as the printing press held sway, architecture, insofar as it is a language, would not become "hermetic" again. Consequently, its syntax would neither be active nor therefore verbal.

Sullivan never thought that architecture was inferior to the printed word. He often advanced the idea that architecture was undoubtedly the best vehicle for expressing the universal message of nature. [16] Another difference between the two men is that Sullivan never considered such a message to be "hermetic," one that only sages could interpret. On the contrary, in a clearly American vein, he thought that anyone could understand it, if he accepted the idea that he is a work of nature living within nature. To Sullivan each building in a city had the moral and esthetic duty to proclaim as clearly as possible its idiosyncratic character. The individual features of each specimen were to him far more important than a nationalistic expression of race. Since he considered that architecture is an individualistic art, he also held that in the urban fabric, the parts were more important than the whole. To Hugo, the opposite held true; in his opinion architecture was a collective art. By adopting such a standard American transcendentalist position, Sullivan extended into architecture an American intellectual tradition that Emerson had inaugurated to all intents and purposes in 1836 with the publication of *Nature*. Also, and in contrast with the French position of considering the syntax of architecture mainly as a nominative one, Sullivan brought to full maturity a verbal and therefore active conception of the language of architecture. The facades of his skyscrapers, for instance, are dynamic paradigms symbolizing the heroic aspirations of matter in quest of the transcendent. Time, that all-important factor in Victor Hugo's historicist program, had little or no value in Sullivan's scheme since his style was constructed on the model of nature and was therefore not contingent on historical development. The role of architecture was clearly delineated in Sullivan's mind. It was a highly moral and didactic one, helping to carry humanity to the utopia by showing the beauty and joy of a communion with nature.

The similarities of Sullivan's ideas with those of Victor Hugo are only superficial ones, and find a common denominator only in the most general aspects of romanticism. Other than that, the differences are profound. To Hugo, the message of architecture was to be based on the *Hermetica*, that is, on the corpus of knowledge sages had put together in the process of unravelling the mysteries of the universe, and which they expressed in arcane symbols. [17] To Sullivan, on the contrary, architecture was to be a celebration of the joy of nature for everyone's delight. Hugo looked at the past and was awed by it. Modern man, at best, could only hope to imitate how the Middle Ages had brought together architecture and learning. His view, in that sense, was revivalist, subservient, and therefore traditional. Sullivan's view was utopic. He attempted to foresee what the future held in store and thought that he could bring that vision of perfection into the present. By favoring American transcendentalism over Victor Hugo's romantic ideas, he broke a circle of cause and effect, and unintentionally established a new bond between American thought and French architectural theory. This creation was typically American at least on two counts. It was totally spontaneous, and it issued out of an amalgam of native and foreign ideas, some new and some traditional, some architectural and some intellectual.

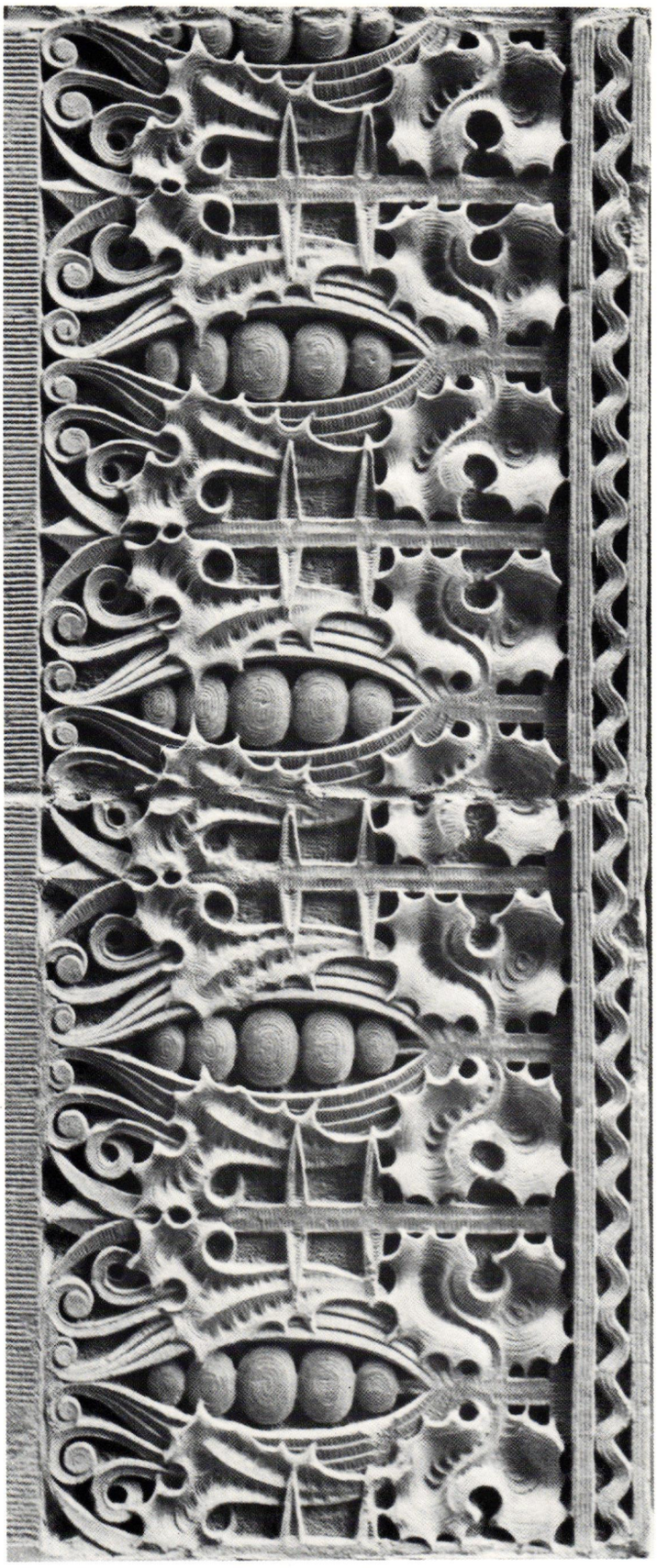
There was a purpose behind Sullivan's aims. He once stated, "Without sustained desire, no fruitful action." [18] Such a notion was related to Emerson's conception that ecstasy was nature's reward for the final yielding of one's self to the cosmos. [19] Sullivan interpreted that message in terms of the architect's joy, as creator, as well as the layman's, as the user of architecture. Like Emerson, Sullivan believed that one's identification with the good, the true, and above all, the beautiful, grew and developed. His "Essay on Inspiration," of 1886, possibly his most important statement of his intellectual position, may be considered an amplification of the opening sentence of Emerson's essay "On Art." "Because the soul is progressive," Emerson had written, "it never quite repeats itself, but in every act attempts the production of a new and fairer whole." From that Emersonian perspective, Sullivan saw himself as the discoverer of the way to "true architecture," and came to consider himself almost as a new Prometheus. His conception of "true democracy" complemented these ideas. For him democracy consisted of the final binding together of humanity and nature in a transcendent communion, as Whitman has described it in *Democratic Vistas*. [20]

To Sullivan, the function of architecture was distinct from that of planning and construction. Architecture, properly speaking, served exclusively to portray the transcendental essence of a building as eloquently and as characteristically as life reveals itself in "the sweeping eagle in his flight, or the open apple blossom, the toiling work-horse, the blithe swan [or] the branching oak." [21] Correspondingly, Emerson, in his essay "On Art," had advanced the idea that the essence of each being existing in nature was best symbolized by the external appearance of that being. Sullivan identified the true function of architecture as the expression of that peculiar relationship between appearance and character, and called it *style*. Developing further the idea, he wrote



2. *Detail of the* Wainwright Building, *St. Louis, Missouri, Louis Sullivan, 1890–91.*

about the *style* of running water, the *style* of a pine tree, the *style* of a cow grazing in a meadow as examples architects should study when seeking for the style of the building they were designing.[22] From that point on, Sullivan's life became a search for *style*. Seeking analogies between the *raison d'être* of external appearance in natural entities and in architecture, he concluded that the only means by which a building's essential vitality could be expressed were facade composition and ornamentation, and that these were the only constituents of the art of architecture. Planning and construction, depending as they do on the physical needs of society and on technological progress, were not at all related to nature, but only to the material development of civilization. Only with ornamentation could the gorgeousness of nature be echoed in architecture. In a magnificent bird, for instance, it is its dazzling plumage, not the anatomical structure that lies under it, that excites the admiration of the observer. It was this sensuous relationship between art and observer that Sullivan considered to be of paramount importance. Hence, to achieve his aims, he had no qualms about concealing structure under ornamentation, or as in the case of the Wainwright and of the Guaranty buildings, to make mullions look like structural elements. His conception of form was mostly intuitive; his adoption of it was empirical; and his vision was consistently romantic. A building was to Sullivan something like a carefully printed and luxuriously bound book. Its gorgeousness was meant to attract the "reader" to tell him a tale of communion with nature and of the state of perpetual bliss that such a communion would bring. To Hugo, on the other hand, a building was an intensely urban statement, constantly referring to the city as the seat of culture and as the repository of the evidence of history. To Sullivan the message of architecture was timeless, transcendental, and universal; to Hugo, it was evolutionary, contingent, and particular; and never the twain shall meet.



3. Detail of the Wainwright Building, *St. Louis, Missouri, Louis Sullivan, 1890–91.*

NOTES

1. On romantic rationalism, see Neil Levine's, "Architectural Reasoning in the Age of Positivism: the Néo-Grec Idea of Henri Labrouste's Bibliothèque Sainte-Geneviève," doctoral dissertation, Yale University, 1975; "The Romantic Idea of Architectural Legibility: Henri Labrouste and the Neo-Grec, in Arthur Drexler (ed.), *The Architecture of the Ecole des Beaux-Arts* (New York: Museum of Modern Art, 1977); and "The Competition for the Grand Prix in 1824," in Robin Middleton (ed.), *The Beaux-Arts and Nineteenth-Century French Architecture* (Cambridge: MIT Press, 1982.) By David Van Zanten, see "Architectural Composition at the Ecole des Beaux-Arts from Percier to Charles Garnier," in Drexler; and "Felix Duban and the Buildings of the Ecole des Beaux-Arts," *Journal of the Society of Architectural Historians* 37 (1978): 161–174. There are other essays relevant to the subject in Drexler and Hamilton. Another useful work is Donald Drew Egbert, *The Beaux-Arts Tradition in France*, ed. David Van Zanten (Princeton: Princeton University Press, 1980).

2. Victor Hugo, *Notre-Dame de Paris*, 2 vols. (New York: Booklover Press, n.d.), 1:211. For Victor Hugo and architecture, see Ronald Bradbury, *The Romantic Theories of Architecture of the Nineteenth Century in Germany, England and France* (New York: Dorothy Press, 1934) 73–74; Paul Frankl, *The Gothic: Literary Sources and Interpretations Through Eight Centuries* (Princeton: Princeton University Press, 1960) 483–485; and Levine, "The Book and the Building: Hugo's Theory of Architecture and Labrouste's Bibliothèque Sainte-Geneviève," in Middleton, 138–173.

3. Hugo 1:217.

4. Hugo 1:205, 210.

5. See, for instance, the reference to "hermetics," in Hugo 203. Hermes Trismegistus was an Egyptian sage, or perhaps a succession of sages, whom the Greeks identified with the Egyptian god Thoth. He was the custodian of wisdom, learning, and literature, and was known as Thrice Greatest due to his vast learning and rank of Philosopher, Priest, and King. The teachings of Hermes cover astrology, priestly education, temple ritual, and medicine. His writings parallel the Judaeo-Christian scriptural tradition, and some early Christian fathers, mainly Justin Martyr and Lactantius, praised him. Through the ninteenth century his antiquity was considered greater than it actually was. Recent scholarship places his writings in Alexandria at the end of the first century or in the early second century A. D. For Hermes Trismegistus, see Hermes Trismegistus, *Corpus hermeticum*. Texte établi par A.-D. Nock et traduit par A.-J. Festugière, 4 vols. (Paris: Société d'Éditions Les Belles Lettres, 1945); and *The Divine Pymander and Other Writings by Hermes Trismegistus*, translated from the Greek by John D. Chambers (New York: Samuel Weiser, 1972). For an analysis of the writings of Hermes Trismegistus, see A.-J. Festugière, *La révélation d'Hermès Trismegiste*, 4 vols. (Paris: Gabalda, 1950).

6. Hugo (conversation between Frollo and Louis XI) 1:205–206.

7. Hugo 1:214.

8. Hugo 1:220.

9. Hugo 1:224.

10. In that respect, Julien Guadet wrote shortly after the turn of the century: "Depuis un siècle, et dans le monde entier, les arts et l'architecture sont anémiés par leur subordination à l'archéologie. . . . Seule, la France s'est enfin défendue, et ainsi il y a encore une école francaise!" Julien Guadet, *Elements et théories de l'architecture*, 4 vols. (Paris: Librairie de la construction moderne, 1901–1904) 1:84–85.

11. Louis Sullivan, "Kindergarten Chats," in Louis Sullivan, *Kindergarten Chats and Other Writings* (1947), ed. Isabella Athey (New York: Wittenborn, 1968) 30.

12. See Victor Hugo's conception of the growth of Paris in Hugo, 1:136–137.

13. Hugo 132.

14. Hugo 1:135–163 ("A Bird's-Eye View of Paris"). Felix Duban's buildings at the Ecole des Beaux-Arts created a microcosmic image of Hugo's city. By making his design evoke an accretion of centuries, and in fact by incorporating into his composition the Arch of Gaillon, the facade of Anet, and the many pieces of medieval architecture that remained from Alexandre Lenoir's Musée des Monuments Français, Duban created a model any architecture student at the Ecole could understand and follow. See Van Zanten, "Felix Duban and the Buildings at the Ecole des Beaux-Arts."

15. "Printing. Let no one be deceived: architecture is dead, irrevocably dead; killed by the printed book; killed because . . . it was more costly. Every cathedral represents a thousand million francs. Think, then, what a capital would be required to rewrite the architectural book." Hugo 1:222.

16. The notion that buildings are superior to books appears often in Sullivan's writings connected with the Architectural League of America. See Narciso G. Menocal, *Architecture as Nature: The Transcendentalist Idea of Louis Sullivan* (Madison: University of Wisconsin Press, 1981) 78–94.

17. Concerning the readings of the mysteries by a priestly caste, Hugo wrote in *Notre-Dame*, 1:210–211: "Solomon's Temple, for instance, was not merely the building of the Holy Book, it was the Holy Book itself. In each of its concentric halls the priests could read the Word translated and made manifest; and thus they followed its transformations from sanctuary to sanctuary, until they grasped it in its innermost tabernacle, in its most concrete form, which was again architectural–the arch. Thus the Word was contained within the edifice, but its image was upon its exterior as the human figure is upon the case of a mummy." This attitude was totally contrary to Sullivan's views, who stated his message on his facades for all to see, not in a *Sanctum sanctorum* where only the elect could enter.

18. Sullivan, "Essay on Inspiration," in Menocal 166.

19. Ralph Waldo Emerson, *Complete Works*, 12 vols. (Boston and New York: Houghton Mifflin, 1903), 1:214.

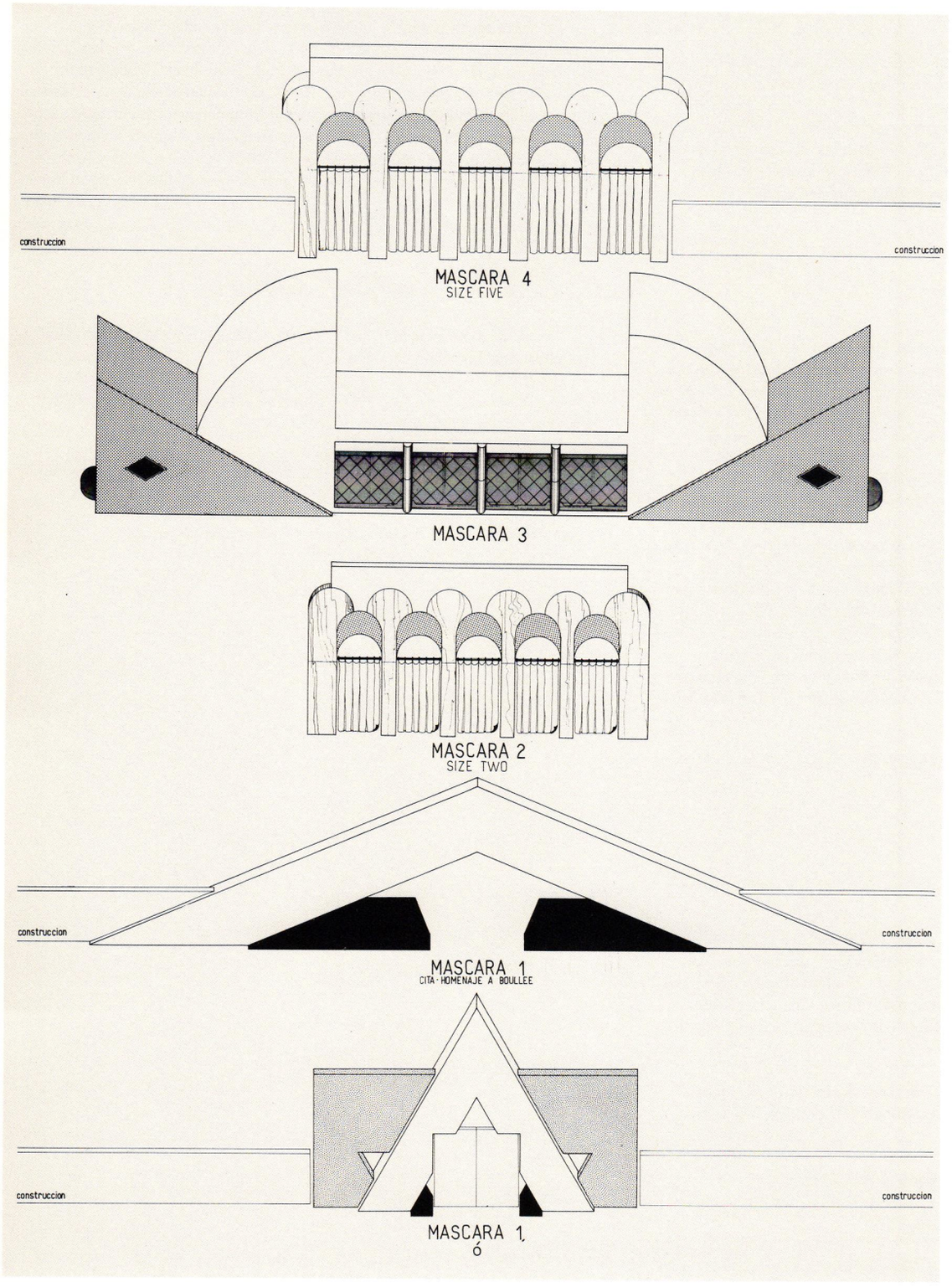
20. For *Democratic Vistas*, see Walt Whitman, *The Complete Writings of Walt Whitman* 5 (New York: Putnam, 1902).

21. Sullivan, "The Tall Office Building Artistically Considered," *Kindergarten Chats and Other Writings* 208.

22. Sullivan, "Style," *Inland Architect* 11 (May 1888): 59–60.

FICTIONS ON FICTIONS

Rodolfo Machado



1. Facade/Mask House.

Filmscript for Facade/Mask House

A scene takes place outside of Facade/Mask House on the outskirts of Cuernavaca, Mexico. All images are in color unless otherwise noted.

Shot 1: *The camera is positioned in front of Mask I, precisely on its bisecting axis, at eye level. From the road it frames symmetrically the entrance gate.*

Silence.

Hold for some time.

The rhythmic percussions of a rope lightly whipping the ground are heard. At first faint, they gradually increase in volume. In the early, very early morning hours the pre-dawn silence prevails, the stars have set, and the sky is void. An unusual hour for a little boy to skip rope outside his house, by the solitary road . . . Inexplicable hours of an empty, premonitory time . . . The boy enters the frame, advancing from right to left, mechanically, slowly, like a little automaton displacing himself parallel to Mask I along a line six feet in front of it. Hypnotically he reaches the center of the frame, which is the center of the image. The line traced by his path having touched perpendicularly the bisecting axis that locks the camera's eye to the house, he stops abruptly. The tip of his shoe raises a cloud of red dust, of powdered brick and sandy grounds, which grows disproportionally in the windless hours.

Shot 2A: *Black and white.*

Sound of strong wind.

On a sacrificial ground, timeless and placeless, someone approaches a pyre and, with a torch, ritualistically ignites it.

Shot 2B: *Loud sound of crackling fire.*

The pyre blazes instantly.

Shot 3A: *Black and white.*

Silence.

Hold 10 seconds.

A Piranesian print of a fireplace, represented in plan and elevation, in the foreground of which is a print of a different fireplace in which there is a fire burning: small logs, little flames, and a large, voluptuous and smoky cloud, lovingly engraved.

Shot 3B: *Loud sound of crackling fire.*

Closing in on the kindling hearth, the fire becomes a real fire of real flames, intensely colored, burning anachronistically inside an engraved Egyptian mantelpiece.

Shot 4A: *Black and white.*

Silence.

Hold 10 seconds.

A view of the desert in Nevada. The horizon slices the image into two equal parts.

Shot 4B: *Distant thundering of explosions.*

A nuclear detonation in the desert: a test.

Shot 5: *The camera is positioned as in Shot 1.*

Silence.

The boy has not moved. Nothing has changed but the dust: it has settled. Still holding the ends of the rope he raises the right hand toward his face and attentively looks at his nails, fingers wrapped toward the palm.

Shot 6: *Closeup, 3 seconds.*

Silence.

A right hand turned upward, fingers wrapped toward the palm and holding a rope: a set of immaculate, feminine nails perfectly oval and glossy red.

Shot 7: *The camera is positioned as in Shot 1. Everything is as it was at the beginning of Shot 5.*

The boy smiles knowingly as he looks down and discovers, amid the dusty grounds, semi-buried, awaiting disinterment, a piece of glass, reddish-brown, common and cheap bottle glass. Dropping the right end of the rope and simulating slow motion, he bends at the knees without moving his feet. Crouched, he lifts the glass to his eye like a precious monocle or a found jewel. Pivoting on his right foot, he turns to face the house, his back to the camera.

Shot 8: *The camera takes the subjective point of view of the boy (low on center closer to Mask I) as he crouches at the end of Shot 7.*

Through a slightly wide angle lens the frame is re-framed by the triangular opening, the entrance gate.

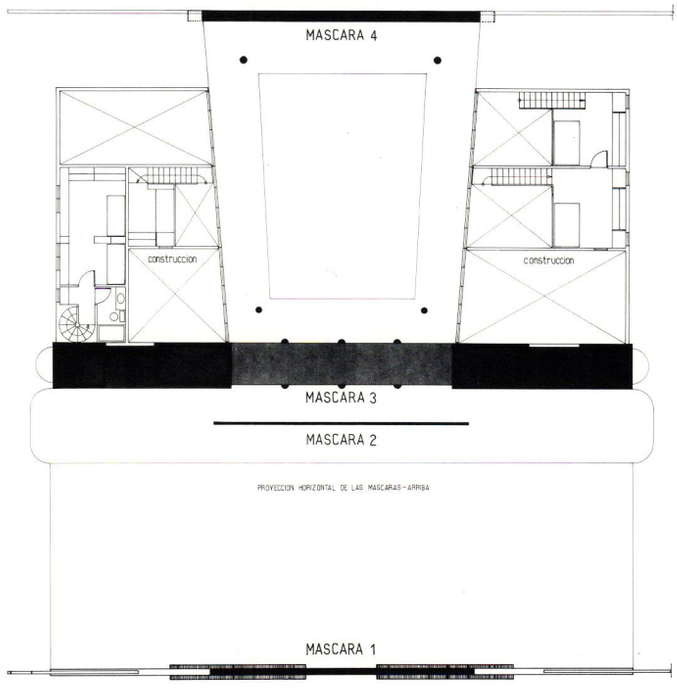
The triangle appears in its entirety, its apex touching the top margin and its base colinear with the bottom one. The following images are framed, successively, adjusting the focus and zoom.

Crackling sound of burning coals. This should begin inaudibly, gradually reach maximum volume during the penultimate image, and sustain for the last image, when it is combined with the sound of flapping wings.

In the foreground Mask I is in darkness. Beyond, the gravel and pebbles in the forecourt are a veritable ground of crepitant Pompeiian volcanic lava, a field of diaphanous rubies and incandescent diamantine ashes. Further back is Mask II, its various colors reduced to two: a light yellowish red and a very dark sanguine red. It appears aflame as the vapors distort its contours. Further yet the water in the pool is (it does not appear to be, it *is*) blood. At the very back on the arches of Mask IV hang heavy curtains that are the freshly skinned, viscous skins of vivisected animals. The camera pans up, framing an empty patch of sky, and zooms in on a hovering flock of vultures.

Shot 9: *The camera is positioned as in Shot 1. It is, however, lower and equipped with a telephoto lens.*

The back of the head, the sweet nape, and the shoulders of the boy appear in the center of the image as he crouches. In the background, slightly out of focus, is a center fragment of the entrance gate, void, the apex of the triangle touching the top margin of the frame.



2. Facade/Mask House, plan.

The Voices

A dialogue

"A" is an architect. "B" is A's "other," A's victim. The statements contained in parentheses spoken inside A's or B's texts may be understood as the conscious silent voice of A or the equally silent unconscious voice of B.

A: You approached the house by the entrance road, running.

B: Yes. My gaze was cinematographic, recalling a handheld camera sequence with a soundtrack of heavy breathing, footfalls on gravel, and a background of rural silence. When I finally saw the house, the specular triangles jostled about, seeming to shatter the bond at their common point; they reflected, slashed, the trees that flanked the road behind me. There was no door in sight. Above and afar, curtains set into empty arches hollowed on an almost white wall silhouetted against a crepuscular sky . . . I noticed the curtains seemed to dissolve, to become water; their materiality fusing, they frayed and continued in folds of water.

I descended the steps two at a time. I saw, without meaning to, and registered: accumulations of pebbles in the corners of the brick steps; dry leaves and a gecko; weeds and motley mosses growing in the joints of the retaining walls.

A: There, you had two options.

B: Then, I was not aware. I paused before the steel gate on the right side. . . . I wonder why; with both hands pulling on the handle, I slid open the gate, cumbersome notwithstanding the careful upkeep of the rails and bearings. I entered and saw nothing. A dense curtain hung in front of my face. Drawing it aside revealed two parallel mirrors and a second similar curtain. Drawing aside the second revealed: the rest of the corridor, somewhat dark; slightly lower, the grotto and the water in shadows with reflections and sparks; rising from the water, a marble wall with large rectangular openings that became the planter of a hedge, very green and meticulously trimmed. The floor that delimited the water on the far side, resembling the floor in the grotto, was simpler: amorphously eroded on the side facing the house and rectilinear toward the lawn at the rear of the house. In the distance I saw trees, arranged in little forests.

Billowing from a door ajar on my right, steam (animal breath of the house, I thought). . . . I noticed when the cloud lightened that the ceiling in the room beyond the door was made of caramel-colored glassblock; the place was bathed in a mellifluous light. . . . it impressed me as tender.

I peered in the door; a foggy mirror returned my face, still agitated. On the shelf were some jars, uncovered. I recognized their contents; in anticipation, I smiled.

A: Then you went down five steps into the grotto.

B: Are they truly five? I did not count. There are two immense columns there, and they are glazed in red, China red (I remembered then from childhood, the word *punzó*); they support the arch; on the arch perched a mourning dove and another bird. I looked up: the space was angular, tense, deformed, its borders softened by shadows . . . ah, the beauty of shadows. Just beyond the mouth of the river (a miniature version scored into the floor of the grotto) was a small boat with two seats and oars. The effect was like that of a cistern: laps of water, trickling murmurs, an atmosphere of hermitage, of secrecy. It brought to mind two images, one Venetian, the other Germanic, or more precisely, Bavarian (that grotto with swans and roseous lights).

A: You thought you had heard footsteps. Did you?

B: . . . quick metallic ones overhead. I glanced up at the footbridge and the handrail was still quivering. I detected in the diamond-shaped window above and to one side, a possible diminishing in the intensity of the light which filters through. Deciding to give it a few more minutes, I walked across in front of the white-tiled seat (the cushions give it an Ottoman flavor). From the center of its base flows the meandering river, toward the pool. I saw symmetrical fires burning already in the two corners of the room, casting reflections on the Miesian columns, on the dining table, and on the chromed curl of the spiral staircase.

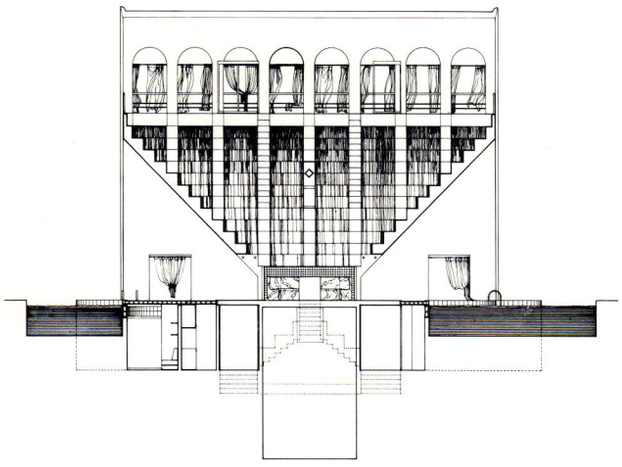
A: You mounted to the corridor opposite the one you entered.

B: On my right was a door with a porthole of translucent glass. In that room the light was on, projecting two shadows: women's heads, leaning. There was a strong aroma of food, something unrecognizable.

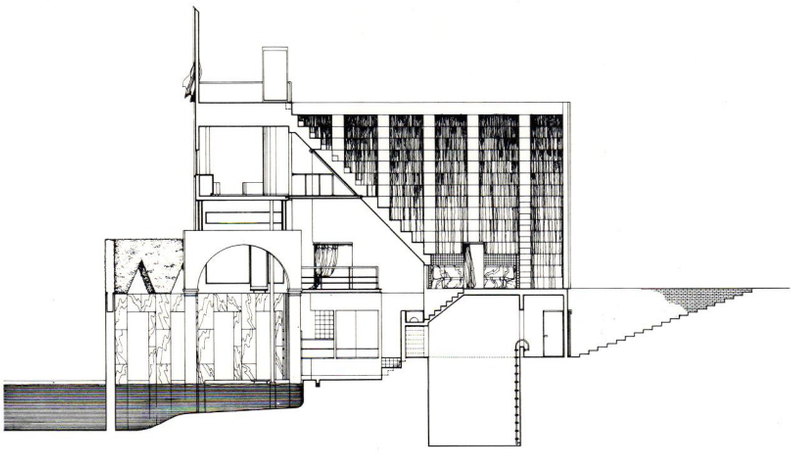
I zigzagged up the steps behind the seat and appeared on the patio, at the center of the Fountain. Feeling as if prompting an empty stage, I occupied accordingly a series of concentric squares, a scientific theater of sorts. In the corners of the patio, four seats of white marble with rounded, typical Tadema profiles, stood just off a membrane of tiles over which glided the fountain's water; the water vanished behind their backrests. Facing forward, I saw the road I had just run.

A: You beheld the vegetable tunnel-mouth out of which springs the road-tongue that touches the house. . . .

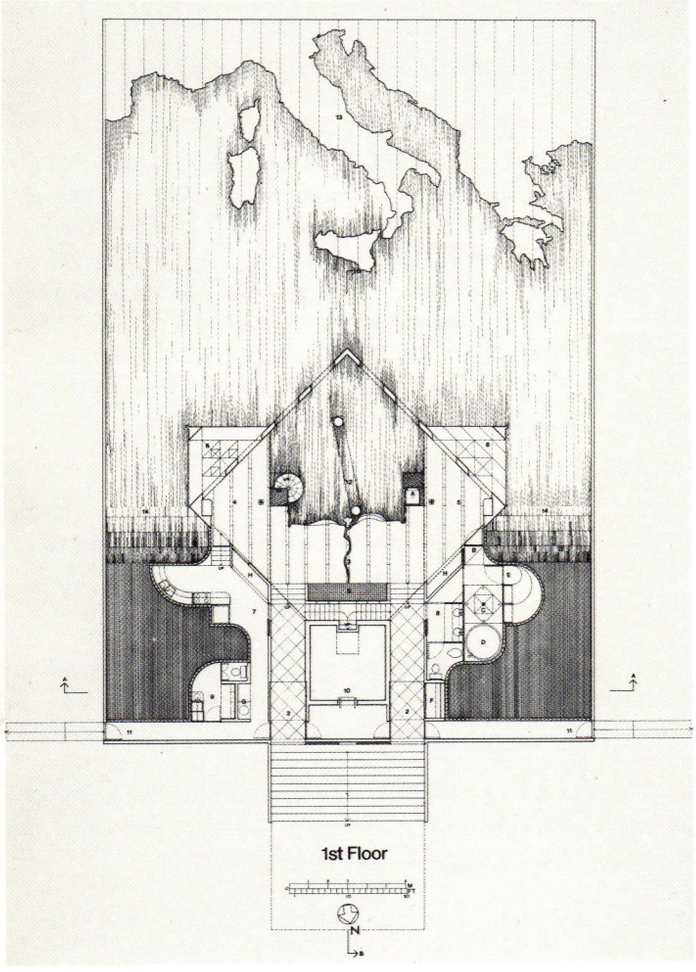
B: Then I looked to the sides. The curtains that hang on the patio's doorways are double-sided and have different colors. They are uncolored toward the inside, where I was; toward the outside, one blue, the other yellow. I was enraptured. Spinning, taking a deep breath, I delighted in looking at the cascades of water that seemed tame, and at the potted plants on the dry steps: orange trees with orange blossoms, laurels in white, pink, and red. It was an Andalusian carmen, an aquatic theater, Tivoli or Granada, although uncertain, different.



Section A·A



Section B·B



3. Fountain House, plans and sections.

A: You left by one of the doorways.

B: . . . and I was in a place that was a cave, open and blue, that was a beach. The sand is caramel glass. The shores are serene and sensual. It was a crepuscular hideaway, it is the Night Beach, it is a tropical place, *c'est la falaise de l'ouest*. The water is not deep there, and it recedes in cascades. I saw over these a marble slide with stainless steel bannisters and on the vitreous sand a piano on wheels mounted on rails. On the floor there is a row of black goblets with twigs of wisteria. On either side of the doorway into the patio there are "windows" with curtains of water as in a Roman fountain. From the outer edge of the cave, very, very, high, hangs a swing; infantile, denotative, of wood and ropes. Clean. There was no wind, yet it was swinging. Circumventing the piano, I entered another space.

The beach became a triangular balcony with a floor of glass. There was halflight.

A: You looked above and below.

B: And I understood the grotto.

A: Then, at the same level you saw the fields outside.

B: Indeed . . . the view . . . an opportune solace, a welcome reminder of things natural.

A: You entered the music room and saw from the window the Italian Garden.

B: I saw a couch situated approximately over Macedonia, and two hens pecking at something—a tiny mountain on the hard floor. I debated for a moment whether or not I should take the elevator that was stationed there. The upholstered velvet seat was inviting . . . yet vaguely incongruous; for a moment I thought where was I, really. I hesitated and delayed a bit more. Retracing a portion of my itinerary, I noticed in the center square of the patio, a brass plaque set into the stone. There was a date and some names I was not inclined to read. I thought it was flint, or calcite, I was not sure.

A: You moved then to the other doorway.

B: The Morning Beach: a yellow cavity that, I know, becomes intensely orange as the sun rises. The water washes the cliffs of glass which plummet into the sea. On the floor, doubling the curve of the shore, a row of red goblets with twigs of broom. . . .

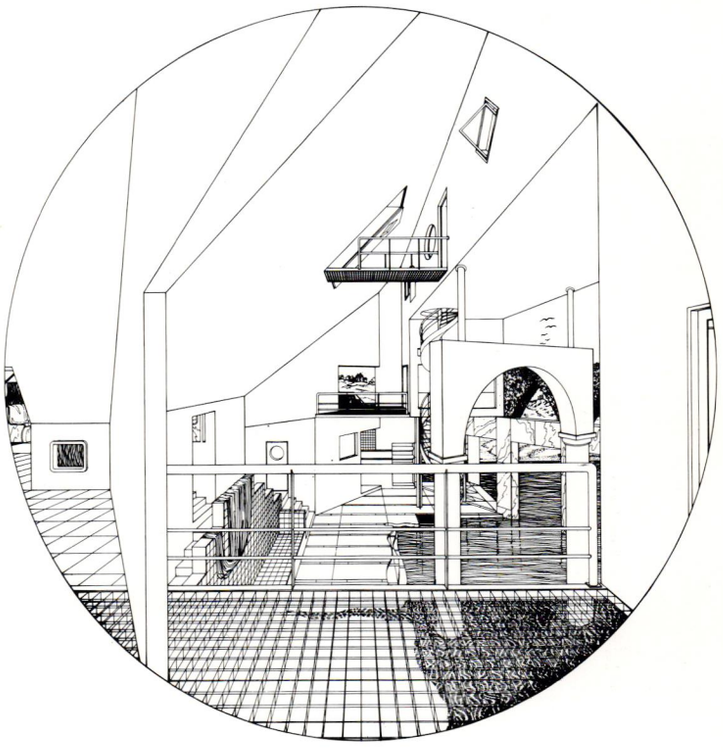
(I/you could have fled to the lawn. I/you could have opened the gate. I/you could have run and rolled on the meadow, free from all this, free from each other at last. I/you could have seen the Facade . . . But it had to happen, we had to proceed . . . did we not?—knowing all was as it should be. For ever . . .)

But instead, I passed again through the patio only to leave at once. Leaning over the edge of the house I saw the entrance steps; in particular, I noticed a brick—I wonder why?—which now I remember vividly.

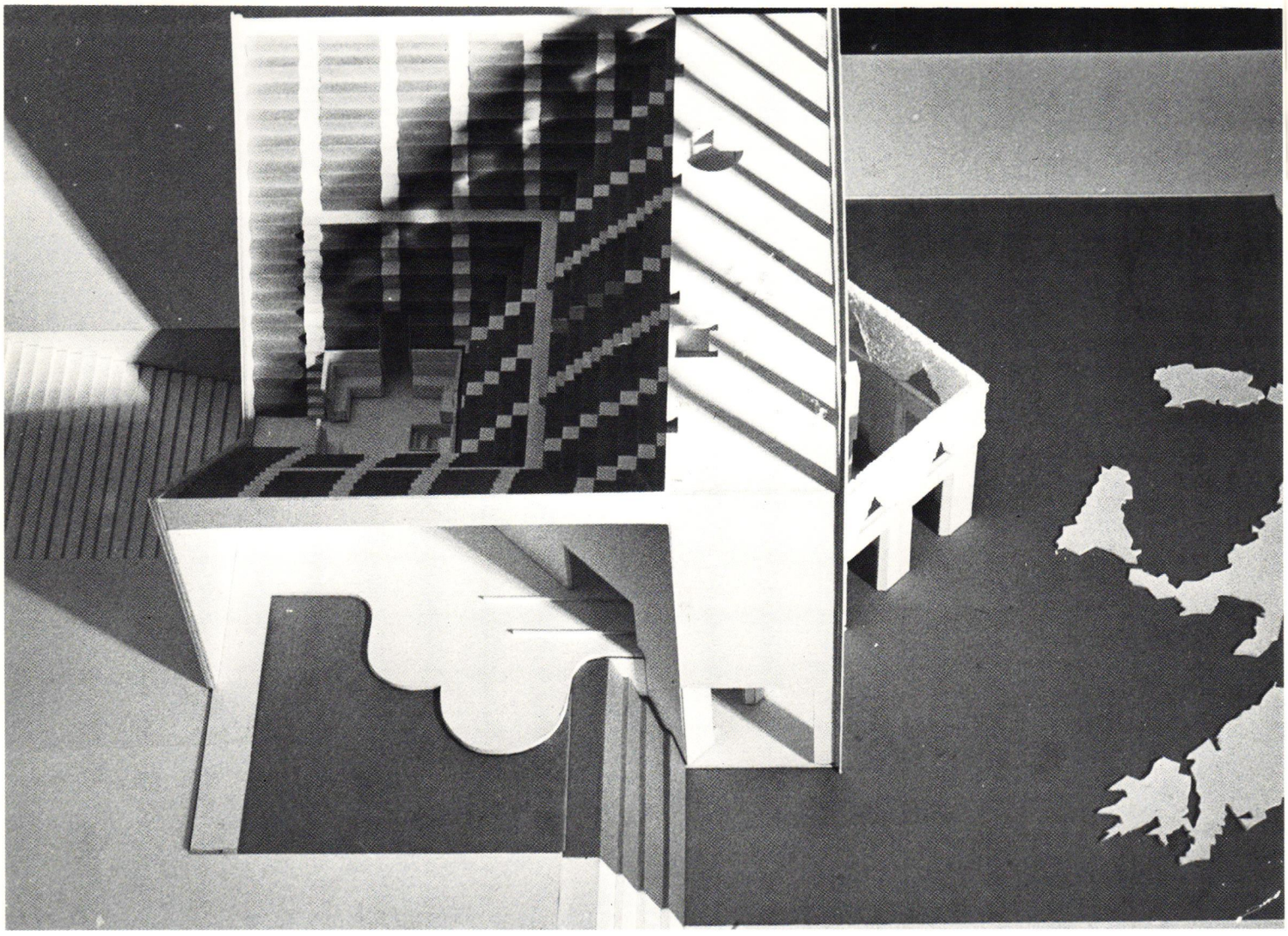
I began to climb, scaling the fountain, steep and ever so Mayan.

A: You walked on the dry paths. . . .

B: I stopped for a moment to wet the edges of my ears, my nape, and the veins in my forearms. I advanced, following the perimeter of one of



4. Fountain House, perspective.



the squares. I entered through the narrow hiatus onto the footbridge. Below, like the arena of a circus, I saw the omnipresent grotto, a stage under a concrete tent. . . . I passed quickly from the boudoir to one of the bedrooms. No one was there. Nor in the other. . . . On one of the beds the furs were white, the wood mahogany, the borders and edges rounded, the light filtered through screens of Japanese silk.

A: Each time a little faster. . . .

B: Now I stood before the spiral stairs (those that are the curling silverish lock of the house, I told you that, had not I?). Below, the water gleamed. With leaps and bounds, with the wild hammering of my heart and blood in my temples I arrived upstairs. Held in the glass cylinder that protects the stairs, I felt for an instant—eternal instant—like a caged bird.

In the center of the terrace there was a cow, a life-sized polychromed plastic sculpture, very realistic. The cow was a bar: a rectangular incision in its side, which was open, exposed an interior of aluminum, bottles and glasses. . . .

A: A bit further on the floor . . .

(I saw first your feet, your legs, the rest of your body, the opalescent, warm whiteness of your skin against the granite/sky. Then, I saw the face. I saw the dark reddish old gold of your hair and the topazine amber of your eyes made yellower by the honeyed light. And I saw the lips; the strange and delicate way in which your lips seemed to rest or set in your face, their painterly curve, their unbearable fullness, their maddening tremor, the darkness at their parting. And beyond. Ah, the excruciating power of your beauty all. . . .)

B: I noticed once again on the elbow, affixed, a pearl.

Curtains pressed against batons and handrails, creased, swelled became splitting bodies constrained by strings, epitome of an elemental erotic.

5. *Fountain House, view of the model.*

Images

Taberna Ancipitis Formae

Part I: Remembrances

"I remember that early summer morning, walking toward the pool—its bronze ears blurred with dew and drops from the jasmine above—and seeing, noting really—there where the ground goes down and the grass is unkept and rather tall—a grayish fresh cloud floating low, and thinking that it seemed like breath coming out from its mouth under the ground, 'It breathes,' I said to myself.

"One evening after dark I was approaching the pool house. A beam of light poured out of the eye's pupil. But above all it was the light shooting out of the roofless building and up to the sky, tinting the humid air yellow and shaping a veritable halo or a luminous crown that I remember the most. Music followed a similar path and inundated the park, like fireworks.

"I have always enjoyed watching the pool fill, when the water begins to silently rise from the center of the floor. There is a particularly exquisite moment, always too brief, when the water is perhaps three or four feet deep and lovingly—it seems—raises around the marble body in its niche, epitome of beauty and perfection. It is equally sublime, Venetian in fact, when the submerged room is filled to capacity and slowly begins to overflow, water cascading down the steps, to finally disappear through the grate in the center of the room below.

"How splendid the building looked in that painting by Burleson! Trent and I were then colleagues at RISD and I remember he made the long trip just to paint it: he composed it like a Claude and rendered it so calm, in golden light, with golden leaves on the grass and golden splashes of light on the brick walls. There it stood, crisp against a purplish stormy sky, with something of Parrish on the dark trees, something of Hopper in the somber tones, with much of Burleson on the enigmatic air. I wonder where that painting is now . . . it was much like monumentalized fiction, or like a monument to fiction.

Ah—those are indeed happy memories.

Part II: A story.

Since then, most terrible things have happened to us all. . . .

Years after the building had to be sold, and it was somehow remodeled. The newcomers were young and ignorant (isn't that always the case with predators). They could not accept the gestures. They hated the eyebrows, they plastered and suffocated and erased the face with cement and painted it gray. They washed away the simulation, wiped off the make up, suppressed and repressed pleasure for ever.
I was still living nearby and when I heard what had happened, one evening, surreptitiously, I entered the grounds knowing there was no one there. It was dark when I finally reached the building. Getting close, I saw cracks in the cement where the eyes once were. These had begun to leak: it is crying, I thought, of pure sadness, missing us. Comming closer, I pressed my body hard against the outer wall of the pool, like a desperate lover does against the body of one who can love no longer. With my arms up the wall and stretched I traced arches, I was a compass, I became a sad version of the Renaissance figure of man at the center, the palms of my hands pressed even harder against the cement veil, trying to feel the curb of the eyebrow, trying to discern the joints that once drew it. Gripping nothing, my fingers bled from under the nails from anxiety to touch that curve again. But I could not touch it or feel it, I could not see it nor could I believe the ferocity of the repression! I remember nothing more. I experienced much pain and left, asphyxiated.

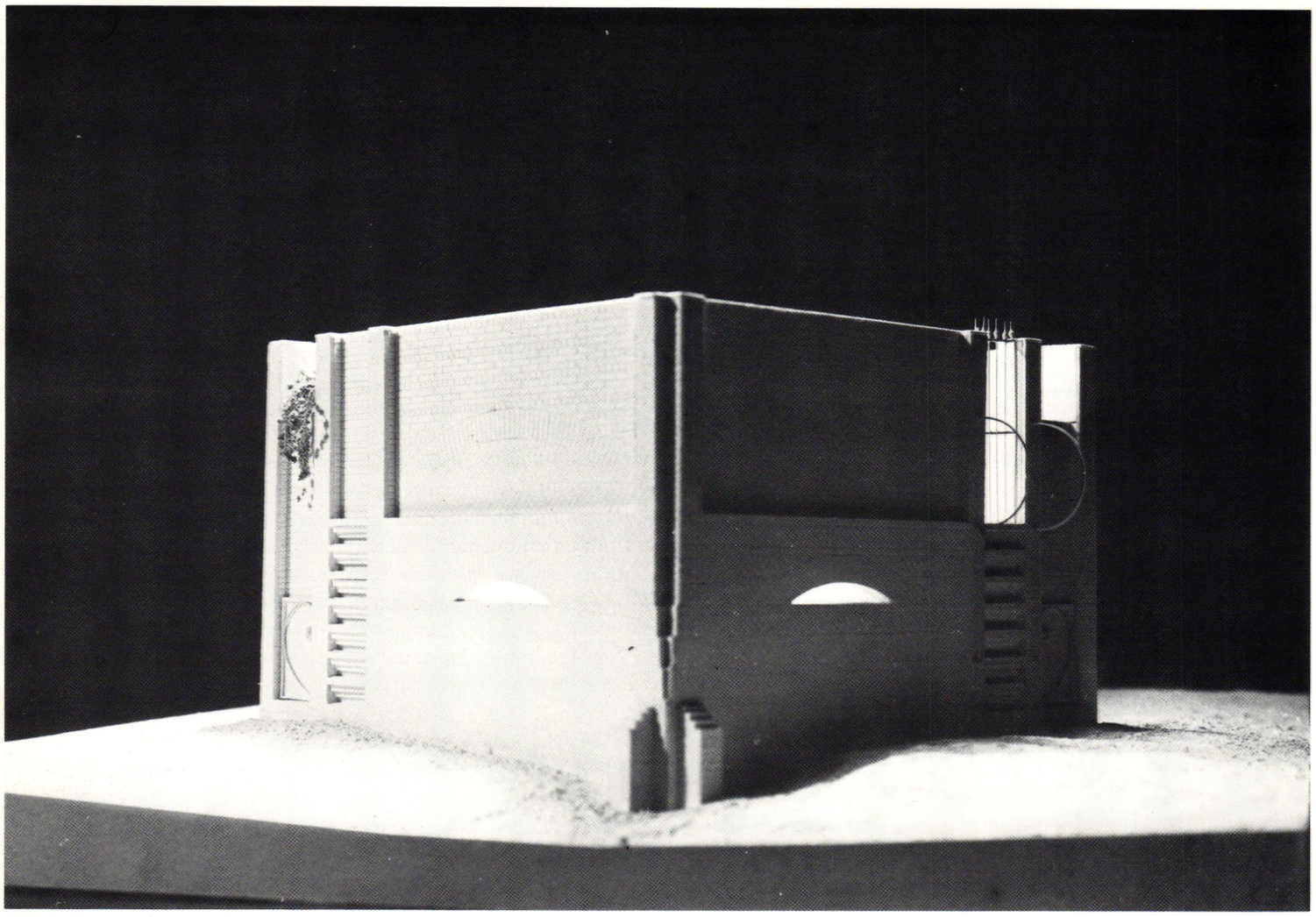
The following day I learned that a friend of mine, Siggie, had seen me entering the grounds and, afraid I could do something foolish, followed behind me at a distance: "You mourned like a man spinning spread-eagle in a circle of loss," she told me.

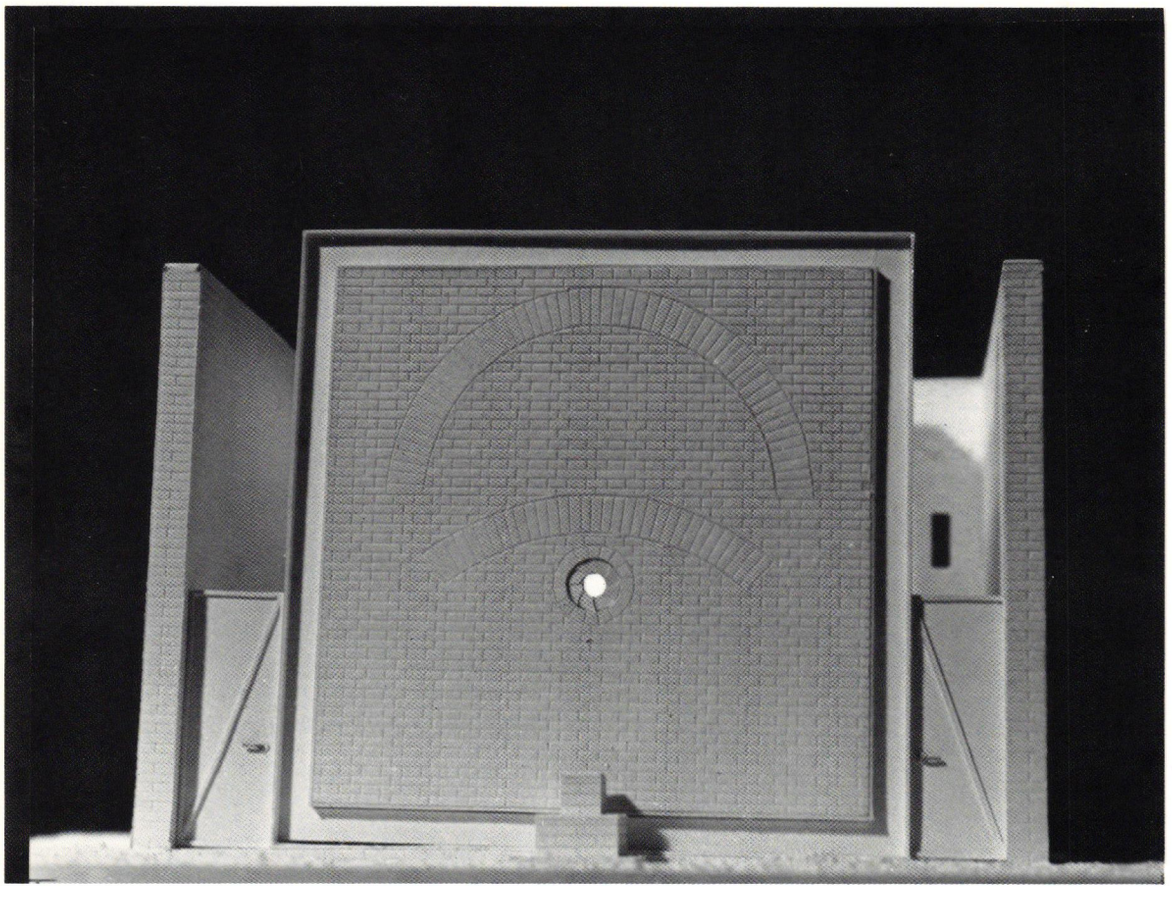
Years passed. The parkland surrounding the building was sold and parceled, a narrow access road was traced, the trees were cut, the ground leveled and new buildings were built around ours. The area turned into an American (much more tragic, less pleasurable) version of Bagheria (I always think of Bagheria when I imagine uninhibited splendor and destruction together). I was once told—this was in Catania, at Palazzo Biscari, in the early eighties—how sad it was when the Sicilian sky was no longer the backdrop for the stone monsters and the monkeys and the exotic plants that crown the garden walls of Villa Palagonia, when after the Second World War poor modern constructions ("inventions"!) began to creep in, to spy on and invade the space of assured madness of the Prince. I remember (or was I told? or have I read? am I now in my old age appropriating memories, fictionalizing my past?)—nevertheless, I remember what happened to Villa Resuttana, in Palermo, when it was squeezed in by the sale of its grounds and began to be encircled by monoblocks, as they used to be called, ten or fifteen stories high, like irreverent giants destroying for ever the once delightful gardens. . . .

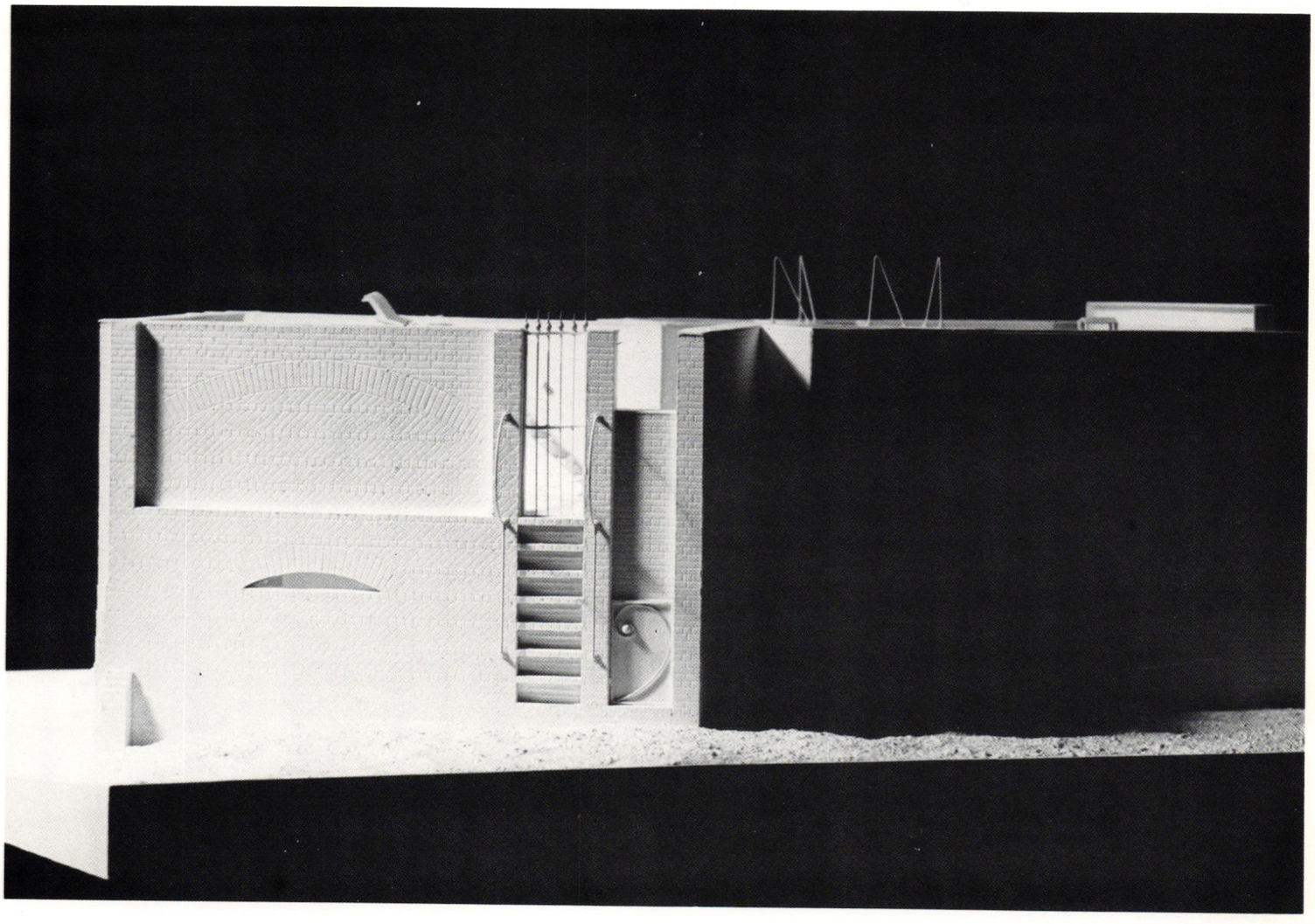
Our fate was similar. Perhaps worse. Post-modern "villas" and post-modern "campaniles" of the cheapest kind profaned the landscape around the building; they all had nauseating colors and were the repository of middle class values, petit bourgeois ideals and tacky intentions. Ah the horrors of those towers with "properly" pitched enlarged roofs! all those pretentiously porticoed, diminutively colonnaded, cutely keystoned, pitiful, parodic entrances . . . ah, the terrible cruelty of progress.

I did not see our building ever again.

A few days ago a letter arrived and it compelled me to write this story. It was from Tony, a very good friend of mine (it is amazing that we still







write). He says that this part of town is now a slum, that many of the buildings are boarded up and that many have been burned or are abandoned, like ours, becoming shelter for the homeless, abodes for the detritus of life.

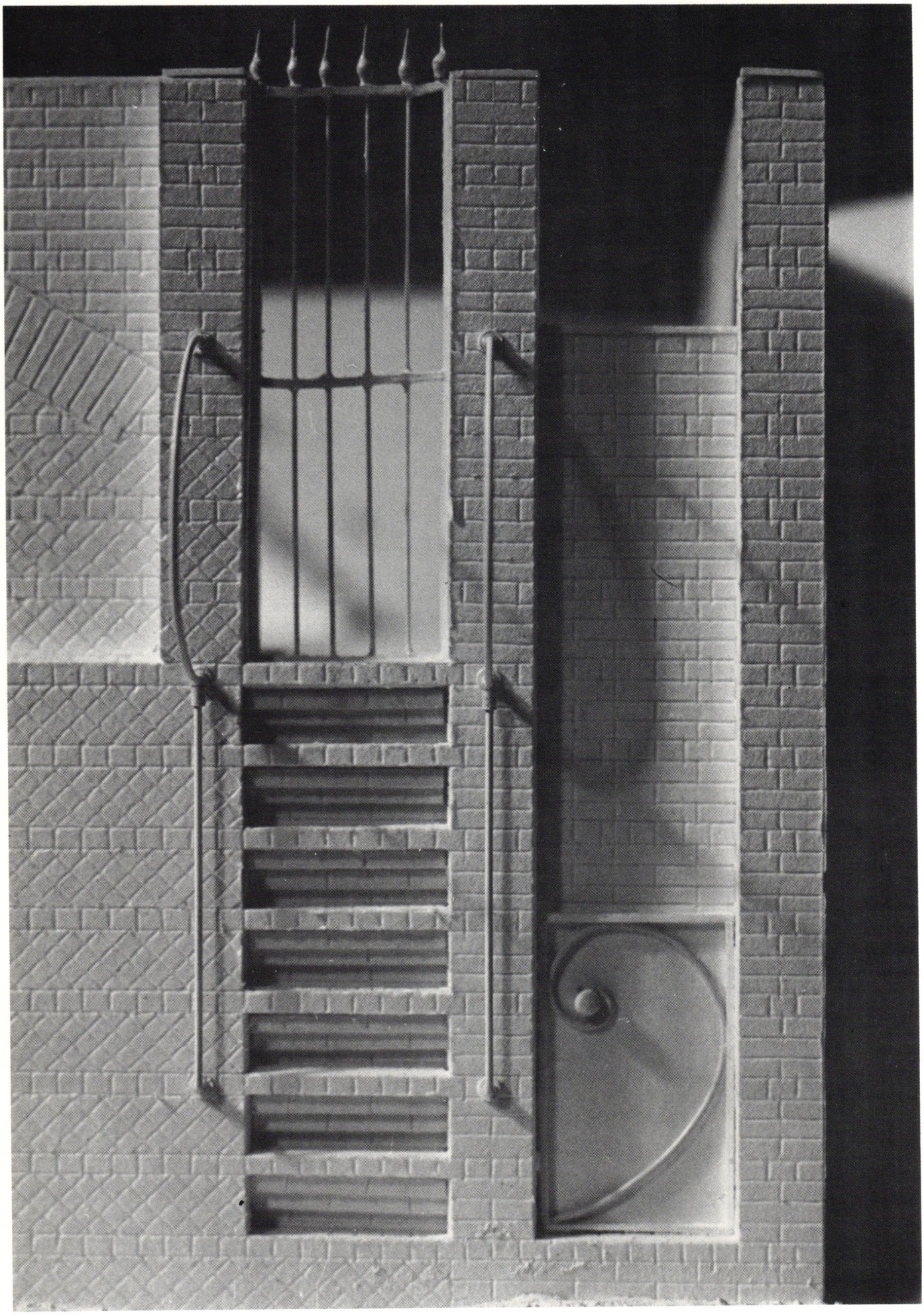
Tony says: "I saw black ashes plastered by the rain on the floor of the pool, as if at the bottom of a gigantic funerary urn; the marble slabs have been ransacked long ago, except for one niche where someone has placed a decapitated plastic figure of a saint. The rooms have become the dumpers of many trashes: I saw empty bottles, half eaten pestiferous foods (the odor of urine saturated the air . . . there, where once were jasmines), emaciated hairless little cats, drags, and poisonous weeds, pornographic pages and the remnants of sanitized adolescent pauperrimous sex. I have seldom been amid so many horrible things. Ugliness everywhere. . . ."

I became very agitated and had to stop reading.

Now I look out from my window. No architecture at all is to be seen. The view is the same abstracted landscape I remember from the fifties: half the green of the grass and half the blue of the sky. The horizon is one, and horizontal. And that will not change.

—"La Celestina," La Pampa, Argentina, December 9th, 2017.

6. Taberna Ancipitis Formae, *views of the model.*



Fictions on Fictions: A Postscript

This is probably a premature and pretentious, yet possible postscript: premature, because some of the pieces were written recently, and I have not yet gained the condition of critical detachment that in my opinion should imbue a postscript; and pretentious, because in fact there is not much to write about: a meager corpus of half a dozen texts written correlatively with half a dozen projects, out of which three are presented here, spanning in time from 1972 to 1984[1].

Why a Postscript?

I thought I should write in addition to the fictions as a clarification or explanation . . . for those readers who may enjoy a voyeuristic incursion into the author's world, to wonder about the connections among the words, images, and themes implied in this linking of architecture and literature. This explanation should be of interest to those readers preoccupied with the shaded area where the practices overlap and their limits become increasingly obscure: when there is one project and their are two representations, one "precisely" drawn and the other "imprecisely" written.

I imagine there will be readers who tend to anticipate one's explanations and assume they are going to hear that the little writings are in fact the fictional origin, the aliment of the designs. To those victims of intellectual fashions I should reply that it has not been the case: the projects have originated conventionally—more often than not, given our intentions—deriving from a particular critical bent or from traditional programmatic and contextual requirements. On the other hand, those readers interested in the pragmatics of literature at the service of architecture (if we may assume that there is literature in these fictions, and if we could assume a pragmatics of it) will find that the fictions do have *pragmatic* and *propagandistic* intentions.

And there is a final reason for writing the postscript. There is a personal benefit to be found. The benefit provided by introspection and reflection, more than ever a must for one who practices architecture today. But in the end it will be most beneficial to both the reader and myself to introduce a third, hypothetical character, a critical interpreter, someone to review together the pictures of drawings and models, the narratives, and this postscript—the texts.

Why Fictions?

Reflecting now on the motives for writing these fictions, it is evident to me that *pleasure*, the private pleasure of writing, of immersing oneself in the spaces and of surrounding oneself with the imaged reality, of experiencing its presence . . . that intimate pleasure has had much to do with it.

As I have mentioned before, the fictions have a pragmatic intent. They aim to control a meaning, to induce an interpretation, to reinforce a sense, to insinuate a reading, to whisper an association; they wish to say what could not be architecturally drawn (illustration or painting are different practices); they attempt to exercise self-criticism or to serve one self (which is not always to be self-serving). Now the question should be put: why the need to say more; why the need to transcend the drawings, to complement their descriptive job?

Quite simply, something like a *propagandistic* intention has played a role in this affair: something very ideological, a compelling desire to say more, a quasi-anxiety to tell more convincingly about those imagined places, a kind of semantic greed, a gluttony of sorts, the "more, more, once more" that I learned from my readings of Barthes and Sarduy. However, the subject of propaganda is not me, or us. Nor is it just our work. The subject of propaganda is an architecture that is not ours alone; it is an architecture faithfully practiced and believed in by others. Thus the fictions serve somehow the purposes of other architects also. And certainly this is an attitude not devoid of contradictions in as much as propaganda and self-criticism, for instance, do not combine easily.

I have wanted to convince my readers that the architecture presented here, and the rest we have designed, has a *depth* (an artistic depth, something not exhaustible, or at least not too rapidly exhaustible) and above all a *reality*. Which is to say that in spite of the unprecedented conditions the designs sometimes propose, a sense of reality (of a possible, alternative, poetic reality) saturates them. This reality is, in part, the product of a tectonic veracity, or of a believable materiality. The narratives describe the latter along with a sensational world this materiality provokes in the characters.

Finally, it could be said that the fictions are intended to convince the reader that the imagined is possible, that the dream can be materialized, made concrete and tangible. I guess these fictions are the testimony of a longing for another reality, a reality that is different from most of the built reality; the rhetoric is there to make the reader desire that which has been imagined.

In the end, the pictures and writings that complete them become themselves a precedent. They have been drawn; they have been written; thus they exist. They could set a precedent for others designing in this mode.

Don't we still want the real to take its cue from, or to inspire itself by the fictional (as it has always done), in order to change and enrich itself? And should not architecture have the capacity—does it not have the obligation—to propose a world that is different and better than the world of the dominant reality, and yet shares with it some affinity, some attraction, that forces it to resemble that which began as fiction?[2]

Don't we want the as of yet inexistent to exist?

NOTES

1. These designs are by two different architects: *Facade/Mask House* is by Rodolfo Machado, and the other two, *Fountain House* and *Taberna Ancipitis Formae*, are by Rodolfo Machado and Jorge Silvetti. The fictions were written as follows:
   "Filmscript of Facade/Mask House", 1972
   "The Voices", 1975
   "Images", Part I in 1983
   Part II in 1984

2. This paragraph freely translates and adapts to my purposes some lines from Michel Tournier in *Journal de Voyage au Canada* (Paris: Editions Robert Laffont, S.A., 1984) 34.

I am thankful to J. A. Alurralde for the multiple role he has played in the preparation of these writings. He has translated "The Voices," given form to the "Filmscript for Facade/Mask House," discussed, and above all criticized my ideas and writings all along. His collaboration made the task simpler, and more enjoyable.

ARCHITECTURE AND MEMORY

Umberto Eco



1. Emmet Gowin, Geography Pages, *1974*.

In the Phaedrus of Plato, the Egyptian god Theuth (who is also Hermes, or Mercury, father of all the arts) offers to the pharaoh Thamus his latest invention: writing. The pharaoh, however, reproaches him, for he believes that the exercise of memory is one of man's most precious gifts; the monarch believes that the letters of the alphabet, arranged in linear order on the two-dimensional space of the papyrus, will allow men to remember without having to use memory ever again.

The pharaoh is ingenuous, to be sure: he thinks that memory is an internal feature of the mind, which certainly has something to do with time, but not with space. Writing, replacing the exercise of the mind, going back in time with action and spatial "trace," has nothing to do with memory.

The pharaoh was mistaken. He was mistaken because, as we know, the practice of writing has not killed memory, but has actually made it more efficient. And he was mistaken because, since the most ancient times, space and memory have been very closely linked: the metaphor of space is so basic in describing memory processes that even contemporary psychology, describing the behavior of our brain in building and retrieving memories, uses spatial metaphors. Psychologists talk, in fact, of "mnestic *traces*," of the construction and reading of "mnemonic *routes*," of links among "cerebral *centers*." Remembering is like constructing and then travelling again through a space. We are already talking about architecture. Memories are built as a city is built.

It could be said that architecture, from its beginnings, has been one of the ways of fixing memories. To recall events we build monuments; exploits are recorded on stones, plaques, steles, obelisks, columns. To establish and remember the principles of mathematics and of astronomy the Egyptians built the pyramids. Over the centuries, in the various civilizations—Jewish, Moslem, Christian—the idea developed of the Temple as book, tract, mystic and hermetic artifice through which the principles of a secret science are written with stone. And in modern times (as in ancient times) architecture superintends the construction of containers for the documents that represent the memory of a civilization: the library, the archive, the museum.

And yet there is a still deeper bond between architecture and literature that speaks of memory. Until the invention of printing, and naturally until the invention of modern means of recording, from magnetic tape to the computer, it was difficult for a cultivated person to remember everything he needed both for his studies and for his activity as an orator. It was impossible to go around, from courtroom to school to political assembly, carrying scroll after scroll of manuscript. A strong and lucid memory was required. At times it was necessary to remember very long lists, very strenuous lines of argumentation. And so, in Graeco-Latin times and, even more, in the Middle Ages, at least until the advent of the printed book, "mnemotechniques" were developed,

There is a story that Simonides was dining at the house of a wealthy nobleman named Scopas at Crannon in Thessaly, and chanted a lyric poem which he had composed in honour of his host, in which he followed the custom of the poets by including for decorative purposes a long passage referring to Castor and Pollux; whereupon Scopas with excessive meanness told him he would pay him half the fee agreed on for the poem, and if he liked he might apply for the balance to his sons of Tyndarous, as they had gone halves in the panegyric. The story runs that a little later a message was brought to Simonides to go outside, as two young men were standing at the door who earnestly requested him to come out; so he rose from his seat and went out, and could not see anybody; but in the interval of his absence the roof of the hall where Scopas was giving the banquet fell in, crushing Scopas himself and his relations underneath the ruins and killing them; and when their friends wanted to bury them but were altogether unable to know them apart as they had been completely crushed, the story goes that Simonides was enabled by his recollection of the place in which each of them had been reclining at table to identify them for separate interment; and that this circumstance suggested to him the discovery of the truth that the best aid to clearness of memory consists in orderly arrangement. He inferred that persons desiring to train this faculty must select localities and form mental images of the facts they wish to remember and store these images in the localities, with the result that the arrangement of the localities will preserve the order of the facts, and the images of the facts will designate the facts themselves, and we shall employ the localities and images respectively as a wax writing tablet and the letters written on it.

Cicero, *De Oratore* (II, 86-88)

Now nature herself teaches us what we should do. When we see in every day life things that are petty, ordinary, and banal, we generally fail to remember them, because the mind is not being stirred by anything novel or marvellous. But if we see or hear something exceptionally base, dishonourable, unusual, great, unbelievable, or ridiculous, that we are likely to remember for a long time. Accordingly, things immediate to our eye or ear we commonly forget; incidents of our childhood we often remember best. Nor could this be so for any other reason than that ordinary things easily slip from the memory while the striking and the novel stay longer in the mind. A sunrise, the sun's course, a sunset are marvellous to no one because they occur daily. But solar eclipses are a source of wonder because they occur seldom, and indeed are more marvellous than lunar eclipses, because these are more frequent. Thus nature shows that she is not aroused by the common ordinary event, but is moved by a new or striking occurrence. Let art, then, imitate nature, find what she desires, and follow as she directs. For in invention nature is never last, education never first; rather the beginnings of things arise from natural talent, and the ends are reached by discipline.

Rhetorica ad Herennium (III, 22)

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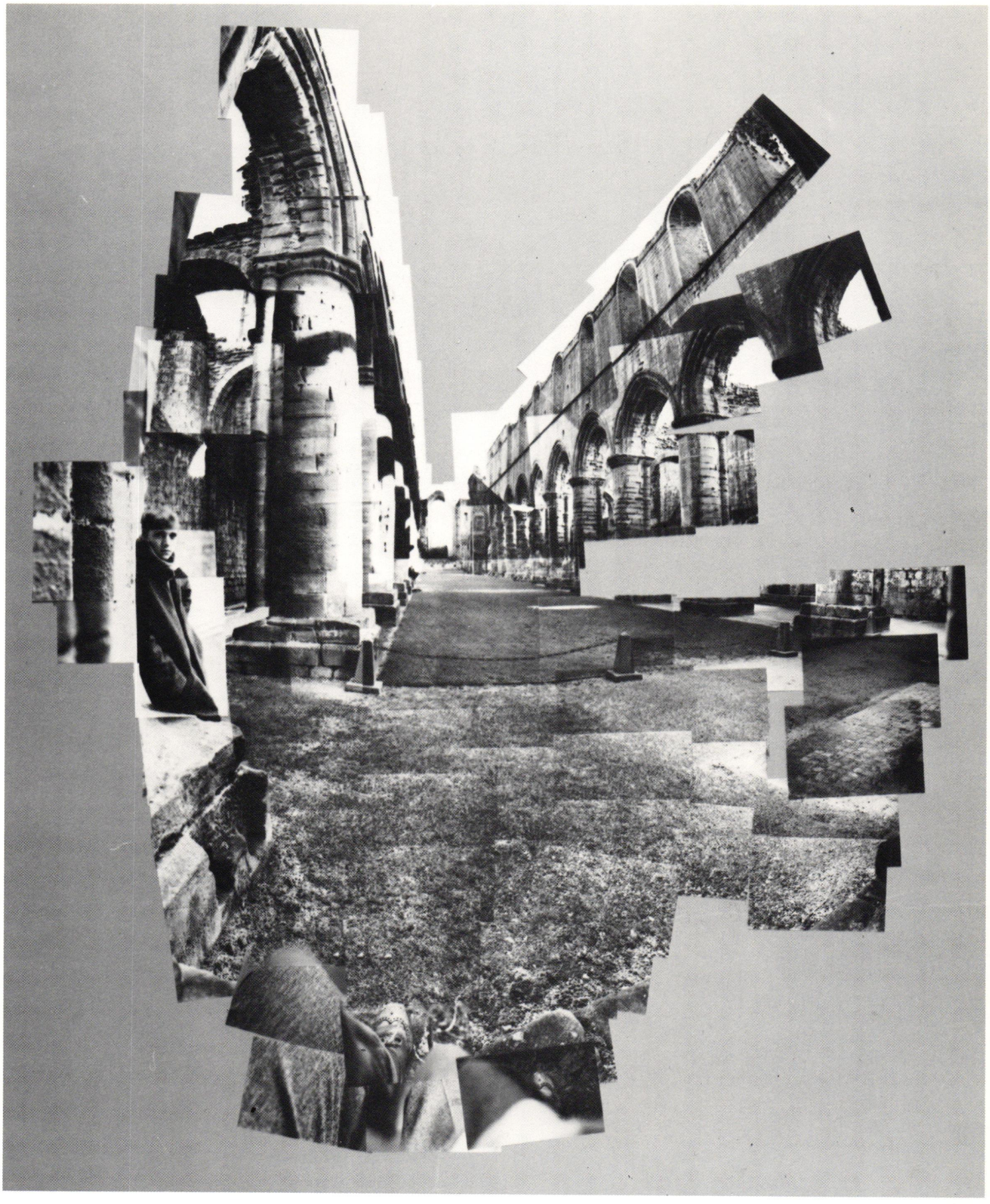
techniques for remembering. These mnemotechniques are described in a vast series of works on the art of memory.

The ancients knew very well, as we also know, that we are able to remember only a very low percentage of what we hear, whereas if we *see* something, we can remember it better. We do not have to consult texts on psychology; we need consult only our own experience. If we spend a month reading Homer's *Iliad* we will perhaps remember the events, but unless we are exceptional beings (like Pico della Mirandola, who, having heard a speech, could repeat it word for word backwards) we will not be likely to recall the various verses, the various books of the poem. But if, on the other hand, we spend a month in Paris and we cover the city thoroughly, it is normal for us to remember vividly afterwards the plan of the streets, the squares, the buildings. If someone were to ask us in which book there is the dialogue between Hector and Andromache, we would not be able to answer. But if someone were to ask us how to get from Montparnasse to the Louvre, most people, after a month in Paris, would probably be able to sketch a map, however summary, explaining the route in a sufficiently precise fashion.

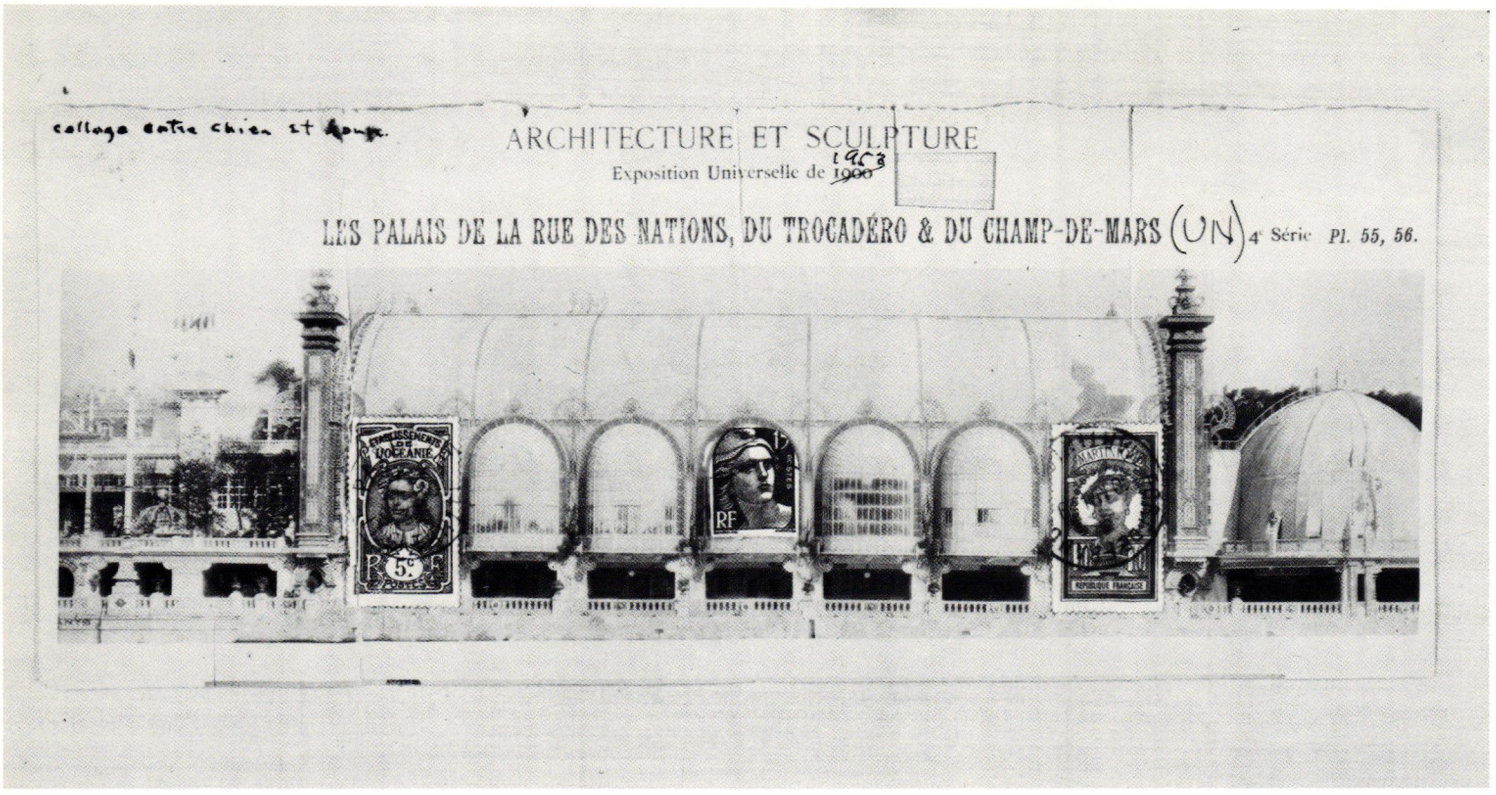
Anyone familiar with ancient logic knows that, in order to reason, you must choose arguments, and these arguments are called places (*topoi* in Greek; *loci* in Latin). This terminology originates with Aristotle, in his works on Logic; but its explanation is found by reading his *De memoria*: to remember we must bear images in mind, and these images must be organized with *order* and *regularity* and the human product in which order and regularity appear best is architecture.

All classical treatises on memory tell us, then, that, if you want to remember something (whether it be lists of objects, names and descriptions of characters, logical arguments, scientific concepts) you must associate each entry in this imaginary encyclopedia with an architectonic space. In the *Rhetorica ad Herennium*, long thought to be written by Cicero, there is a long description of how a building must be imagined. The flights of stairs, the series of corridors and rooms must be easily reconstructed by the mind, and in each room there must be an image, painting or statue, and with each of these images, in each room, we must associate a notion. The terms with which the *Rhetorica ad Herennium* defines the places to remember suggest a treatise on architecture: *aedes, angulum, intercolumnium, fornicem.*

Places can remain in the memory. But to make them remain there more securely we must associate them with some images so remarkable



2. *David Hockney,* Ian, Fountains Abbey, Yorkshire, *January, 1983.*



3. Joseph Cornell, Collage entre Chien et Loup, *1953*.

This achievement of Simonides appears to have given rise to the observation that it is an assistance to the memory if localities are sharply impressed upon the mind, a view the truth of which everyone may realise by practical experiment. For when we return to a place after considerable absence, we not merely recognise the place itself, but remember things that we did there, and recall the persons whom we met and even the unuttered thoughts which passed through our minds when we were there before. Thus, as in most cases, art originates in experiment. Some place is chosen of the largest possible extent and characterized by the utmost possible variety, such as a spacious house divided into a number of rooms. Everything of note therein is carefully committed to the memory, in order that the thought may be enabled to run through all the details without let or hindrance. And undoubtedly the first task is to secure that there shall be no delay in finding any single detail, since an idea which is to lead by association to some other idea requires to be fixed in the mind with more than ordinary certitude. The next step is to distinguish something which has been written down or merely thought of by some particular symbol which will serve to jog the memory; this symbol may have reference to the subject as a whole, it may, for example, be drawn from navigation, warfare, etc., or it may, on the other hand, be found in some particular word. (For even in cases of forgetfulness one single word will serve to restore the memory.) However, let us suppose that the symbol is drawn from navigation, as for instance, an anchor; or from warfare, as for example, some weapon. These symbols are then arranged as follows. The first thought is placed, as it were, in the forecourt; the second, let us say, in the living-room; the remainder are placed in due order all round the impluvium, and entrusted not merely to bedrooms and parlours, but even to the care of statues and the like. This done, as soon as the memory of the facts requires to be revived, all these places are visited in turn and the various deposits are demanded from their custodians, as the sight of each recalls the respective details. Consequently, however large the number of these which it is required to remember, all are linked one to the other like dancers hand in hand, and there can be no mistake since they join what precedes to what follows, no trouble being required except the preliminary labour of committing the various points to memory. What I have spoken of as being done in a house, can equally well be done in connection with public buildings, a long journey, the ramparts of a city, or even pictures.

Quintilian, Institutio Oratorio (XI, 2)

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that we cannot help but remember them. The same system of places can be used for remembering different subjects. When the images we have set in a building of memory are no longer needed, we can erase them from our mind. But the *loci* remain at our disposal.

To remember the *loci* we must mark one out of five with a special sign: a golden hand, for example; or else in the tenth *locus* we can place the image of an acquaintance whose name is Decimus. But we must imagine a solitary building, in a deserted place, because the memory of the crowd tends to weaken the impression left by spaces.

We must look for places that differ from one another: not too many colonnades, for example, because they are all alike. And the rooms must be fairly small, so that the images we put in them stand out. They must not be too brightly lighted, or else the images will shine too much and dazzle us, preventing us from perceiving their forms precisely. But they must not be too dark, either, because shadows make the same images hazy.

We could continue, step by step, following all the medieval treatises on memory, which are in the Latin tradition. It is enough to read *The Art of Memory* by Frances Yates (London, Routledge & Kegan Paul, 1960) or Paolo Rossi's *Clavis Universalis, Arti della memoria e logica combinatoria da Lullo a Leibnitz* (published in 1960 and, revised and expanded, Bologna, Il Mulino, 1983). In these works we can find the texts of manuscripts never published, in which, for example, we are told precisely what the *size* and the *luminosity* of the mnemonic places must be, or the *distance* between them, their *order* and their *form*. The problem of the *dispositio locorum*, the arrangement of the places, seems fundamental; and it so happens there are more observations and rules on how to construct buildings in treatises on memory than in architectural treatises. You find also an art of combination or generation of spaces through operations of a mathematical sort: multiplication, addition, subtraction; transformation through rotation to the left, to the right, upwards, downwards. It is like reading a manual that explains how to generate figures on a computer screen using algorithms.

But gradually the architectural model of the arts of memory (and mind you, this is an entirely *written* architecture, never depicted visually) becomes a model that must serve not only to remember but also to represent the very structure of universal knowledge. Architecture, after having been the model for memory, becomes the model for reasoning. This happens in the works of the students of Logic, from Raimundo Lullo (thirteenth century) down to Petrus Ramus (sixteenth century).

The objection that the architect might raise to this literature of memory is the following: here architecture is used as a model, as metaphor,

The work is of wood marked with many images, and full of little boxes; there are various orders and grades in it. He gives a place to each individual figure and ornament, and he showed me such a mass of papers that, though I always heard that Cicero was the fountain of richest eloquence, scarcely would I have thought that one author could contain so much or that so many volumes could be pieced together out of his writings. I wrote to you before the name of the author who is called Julius Camillus. He stammers badly and speaks Latin with difficulty, excusing himself with the pretext that through continually using his pen he has nearly lost the use of speech. He is said however to be good in the vernacular which he has taught at some time at Bologna. When I asked him concerning the meaning of the work, its plan and results—speaking religiously and though stupefied by the miraculousness of the thing—he threw before me some papers, and recited them so that he expressed the numbers, clauses, and all the artifices of the Italian style, yet slightly unevenly because of the impediment in his speech. The King is said to be urging that he should return to France with the magnificent work. But since the King wished that all the writing should be translated into French, for which he had tried an interpreter and scribe, he said that he thought that he would defer his journey rather than exhibit an imperfect work. He calls this theater of his by many names, saying now that it is a built or constructed mind and soul, and now that it is a windowed one. He pretends that all things that the human mind can conceive and which we cannot see with the corporeal eye, after being collected together by diligent meditation, may be expressed by certain corporeal signs in such a way that the beholder may at once perceive with his eyes everything that is otherwise hidden in the depths of the human mind. And it is because of this corporeal looking that he calls it a theatre.

Letter from Viglio Zwichem to Erasmus of Rotterdam
describing the Theater of Giulio Camillo

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but these treatises tell us nothing new about architecture, because they refer to architectural models that are already known. I realize that in a series of articles devoted to the relationships between architecture and literature, those literary texts that describe very faithfully already existing architecture are of little interest, even if the writing is beautiful. More interesting are those books in which we are taught to look at architecture in a new way (Proust, Ruskin, Chateaubriand; or in which nonexistent, impossible, or purely possible architectures are described (Borges, Calvino).

Still there is one way that treatises on memory have probably affected the development of architecture. In the Renaissance, under the influence of kabbalistic and hermetic thought, astrology, and alchemy, "theaters of memory" were conceived, constructions in which all knowledge of all ages was to be represented, in order to arrive at a universal knowledge, or *pansophy*.

Scholars like Yates, Rossi, and others have, for example, spoken at length of an architecture always described and never executed, such as the Theater of Giulio Camillo (sixteenth century). The idea of the Theater of Camillo was based on the writings of Vitruvius and on certain traditional ideas about the Temple of Solomon. Furthermore, Camillo was influenced by the great Neo-platonic philosopher of the fifteenth century, Marsilio Ficino. Should we say that Camillo was influenced by the Renaissance's ideas of architecture or that he helped influence them? For example, what was the influence of Camillo on Palladio? The implications do not end here.

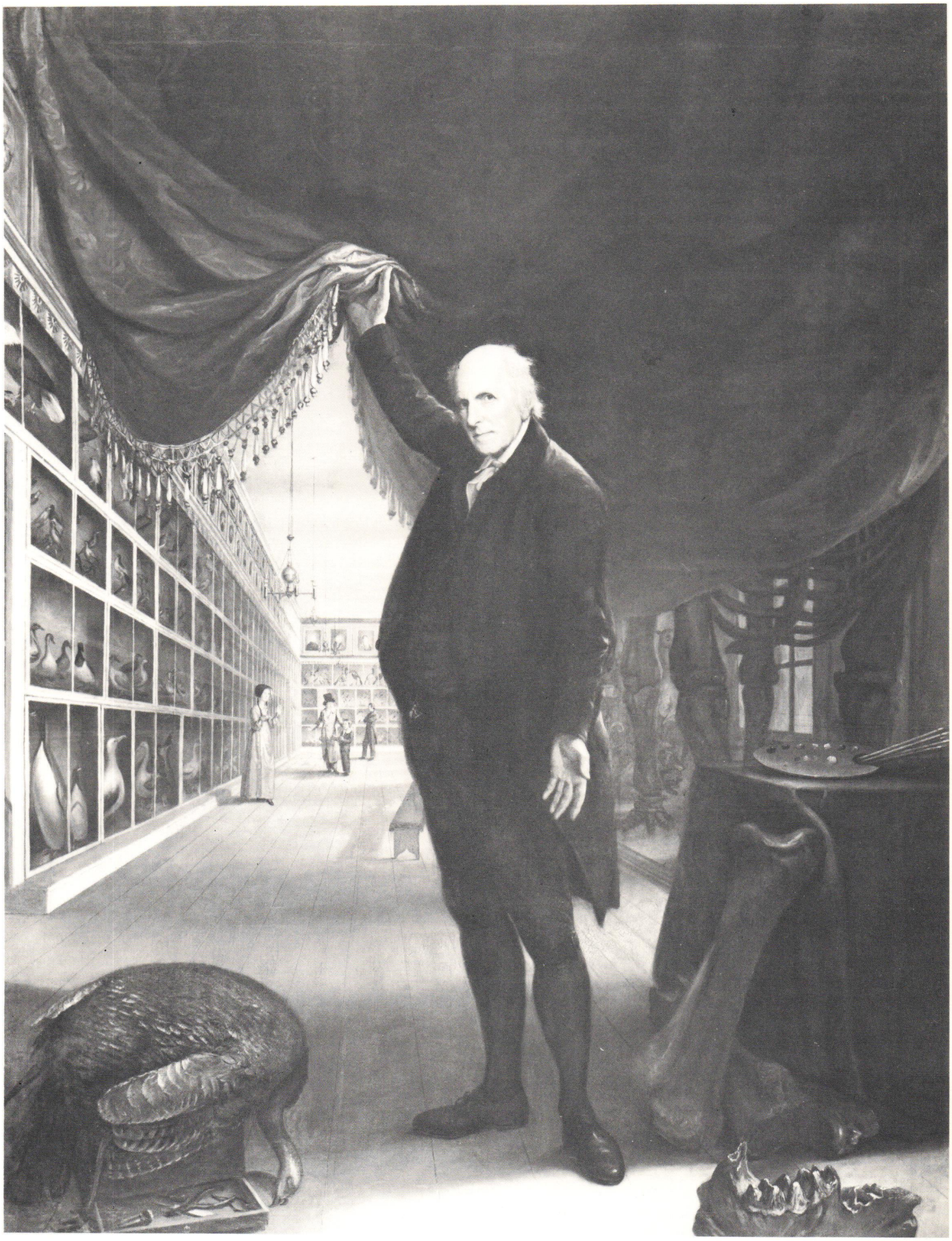
Camillo's idea of the theater of memory was picked up in the seventeenth century by the English mystical philosopher Robert Fludd in his *Utriusque cosmi*; and Frances Yates suggests that Fludd's ideas had an influence on the construction of the Globe, Shakespeare's theater.

It is not my task to go more deeply into these problems. I confine myself to suggesting that with the arts of memory, from ancient Greece to the modern world, a literature develops that not only speaks of architecture but that somehow influences the history of architecture.

And perhaps architecture has always wanted to be a theater of memory. The Louvre is that. And so is the Trump Tower.

It all depends on what you want to remember.

translated from the Italian by William Weaver



4. Charles Wilson Peale, The Artist in His Museum, *1822.*

ARCHITECTURE AND ALPHABET

Werner Oechslin



1. Lettering and building plan: Markus Lüpertz, Babylon dithyrambisch II, *oil, 1975.*

The statements quoted above offer a representative assessment of the link between art and language; they show just how far-reaching and diverse is the relationship of alphabet, writing, and symbols to pictures and architecture. Whether encountered in the formulations of enlightened eighteenth century France or within the concepts of the humanist Cinquecento in Italy, the link remains anchored within a broad cultural context. It adopts geometry as a basis common to both writing and architecture; it considers the link between art as an artifact and writing as an artifact; it includes the functions of sequence and series of the alphabet and the establishment of a grammatical system using a finite number of letters or architectonic elements. Therefore it should be clear from the beginning that any study of "Architecture and Alphabet," limited to an analysis of only the external links between the two spheres, would inevitably break down when confronted with theory put into practice—by the overwhelming impact of the concrete form (figs. 2, 3).[9]

Certainly, the success of Steingruber's architectonic alphabet lies in its exclusive employment of one of the less complex aspects of the link, the use of letter shapes as floor plans, which, however, becomes an appropriate starting point for our study.[10] The floor plan typology of that period was characterized by formalistic criteria, whose rigidity caused it to fade into obscurity. In the same way *architecture parlante* was subjected to random associations; neither the type of link nor its quality underwent any particular examination. In other words, the traditional method of treating the topic from an art historical point of view is necessarily limited here. With these insights in mind and with the basic assumption that language is universally recognized as a vehicle of culture, it is possible to classify and comprehend the actual points of contact between alphabet and architecture.

I.

It is unnecessary to present any particular evidence of the universality of language—not even in the specialized field of art historical research. The art-language analogy has long been embedded in the vocabulary of the art historian. In Italian the word *linguaggio* is for the most part used synonomously with style, individualistic style in particular. And in the face of exhibitions entitled "The Language of Pictures" or books such as *The Language of Architecture* or *Michelangelo and the Language of Art*, it is just as unlikely that, even against their better (linguistic) judgment, as in R.L. Garner's classic *The Speech of Monkeys*, anyone will object to this use of the analogy.[11] Little has changed since the first attempts to examine the universality of language. Furthermore, there is, according to a long philosophical tradition, the universality of "the architectural" in which a structural quality, the modern concept of "systematicity," is inherent.[12] This is

Writing is art:
To paint speech and to speak to the eyes,
And through the varied aspects of the traced figures,
to give color and body to thoughts.

Guillaume de Brebeuf[1]

. . . the artifice of the letters, intended primarily for the eyes, is an artful invention showing our thoughts to those who are far away and to those who will later be born.

Claudio Tolomei, *Il Cesano, Diologo*[2]

Since I have to discuss a few grammatical doubts, following the order of nature, it seems an excellent and reasonable thing to begin with first principles, that is, the elements, or their notations that are the letters. Therefore, since the elements are the first and indivisible parts of articulated voice, in the same way, the letters that represent them are the first and indivisible parts of the written word.

G. G. Trissino, *Dubbii Grammaticali*[3]

We know that if we want to teach literature to the youngsters, first the letters of the alphabet are shown and taught to them, then it is shown to them how those (letters) are joined to produce syllables, and from those, dipthongs or words, one by one. From these they are led to oration, and then they are made to understand those things that would be impossible to understand without the above mentioned principles, since they are not difficult to comprehend. . . . The same is for someone wishing to understand Euclid without the principles.

Iacomo de'Lanteri, *Due Dialoghi . . .*[4]

As writing is a sign of speaking, and speaking, of the mind, in the same way mathematical figures and geometric diagrams are the signs of their concepts.

Daniele Barbaro, *I Dieci Libri dell'Architettura di M. Vitruvio*[5]

Geometry is the A,B,C *of the art of drawing. Without it one makes just as little progress in drawing as one would make in reading and other study without learning the* A, B, C's.

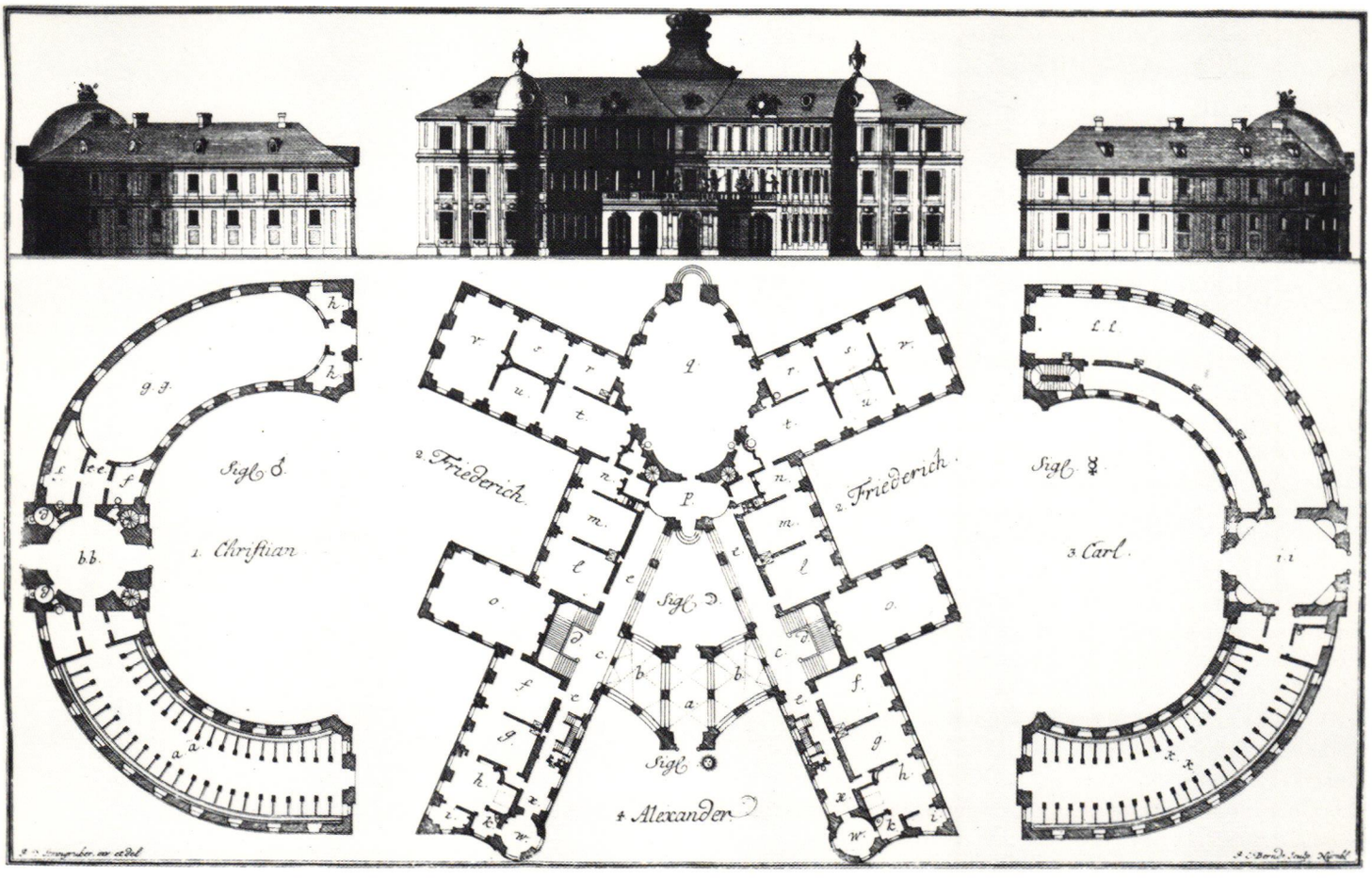
Gerald de Lairesse, *Grundlegung zur Zeichenkunst*[6]

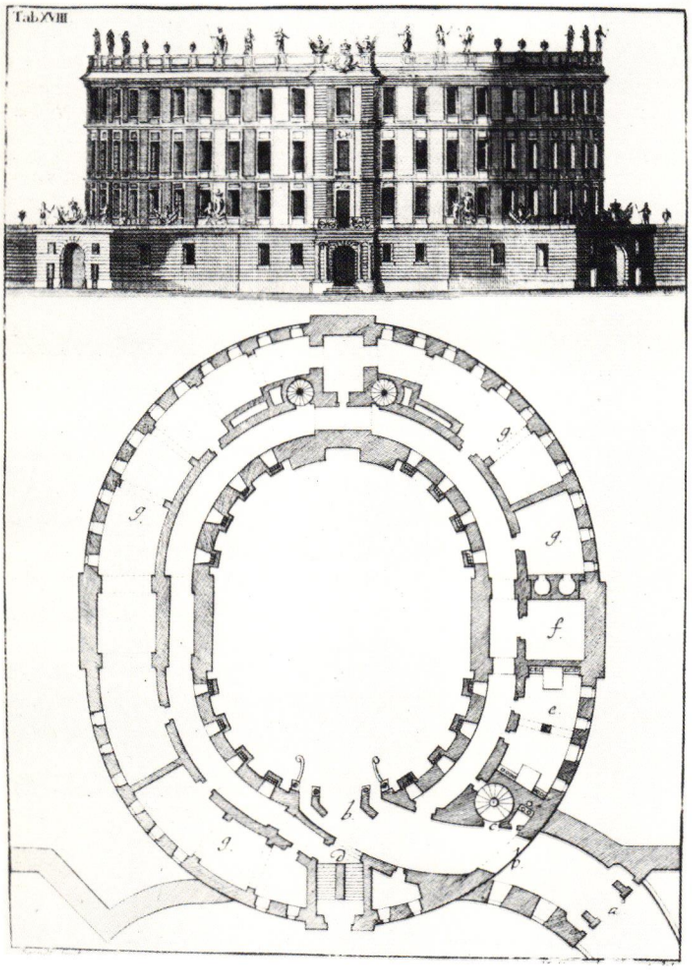
The elements of the orders are somehow the alphabet of architecture, for just as it is possible to compose infinitely many words and phrases from twenty-four letters, thus it is also possible to construct the most varied types of architectural decoration according to the five orders using various combinations of elements in the alphabet.

Goldmann, *Civil-Baukunst*[7]

Yes, I believe that our buildings, especially our public buildings should, in some way, be poems.

Etienne Louis Boullee, *Architecture. Essai sur l'Art*[8]





2. Monogram, doubled to form symmetrical figures and an architectural floor plan with elevations: Project dedicated to Chr. Friedrich Carl Alexander. From Steingruber, Architectonisches Alphabeth, *1773.*

3. Letter shape as floor plan. Letter Q *from Steingruber's* Architectonisches Alphabeth, *1773.*

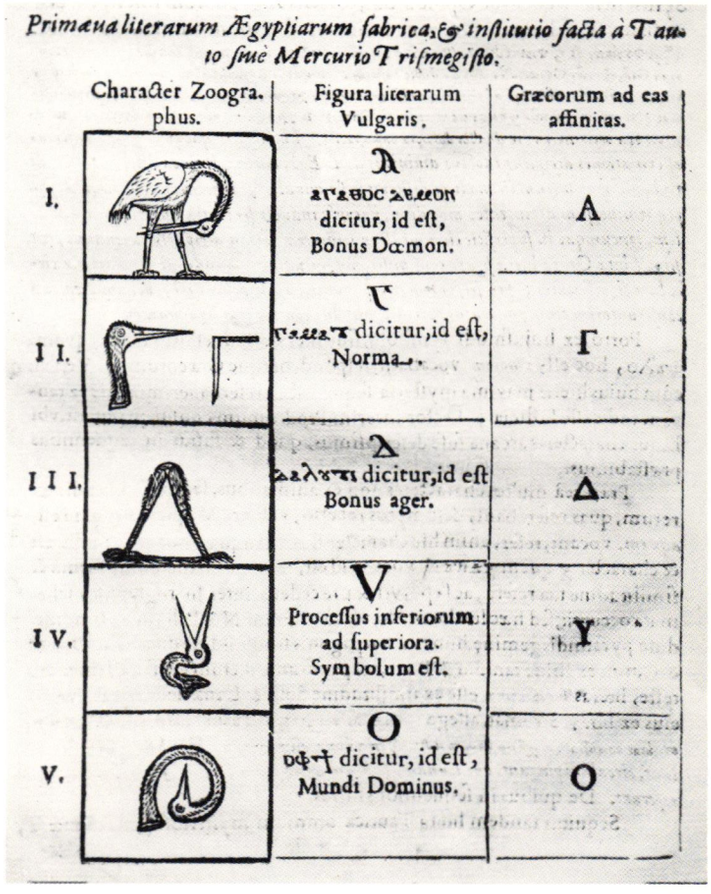
4. Classification of pictorial symbols, symbolic figures and abstract letter forms. From A. Kircher, Obeliscus Pamphilius, *Rome, 1650.*

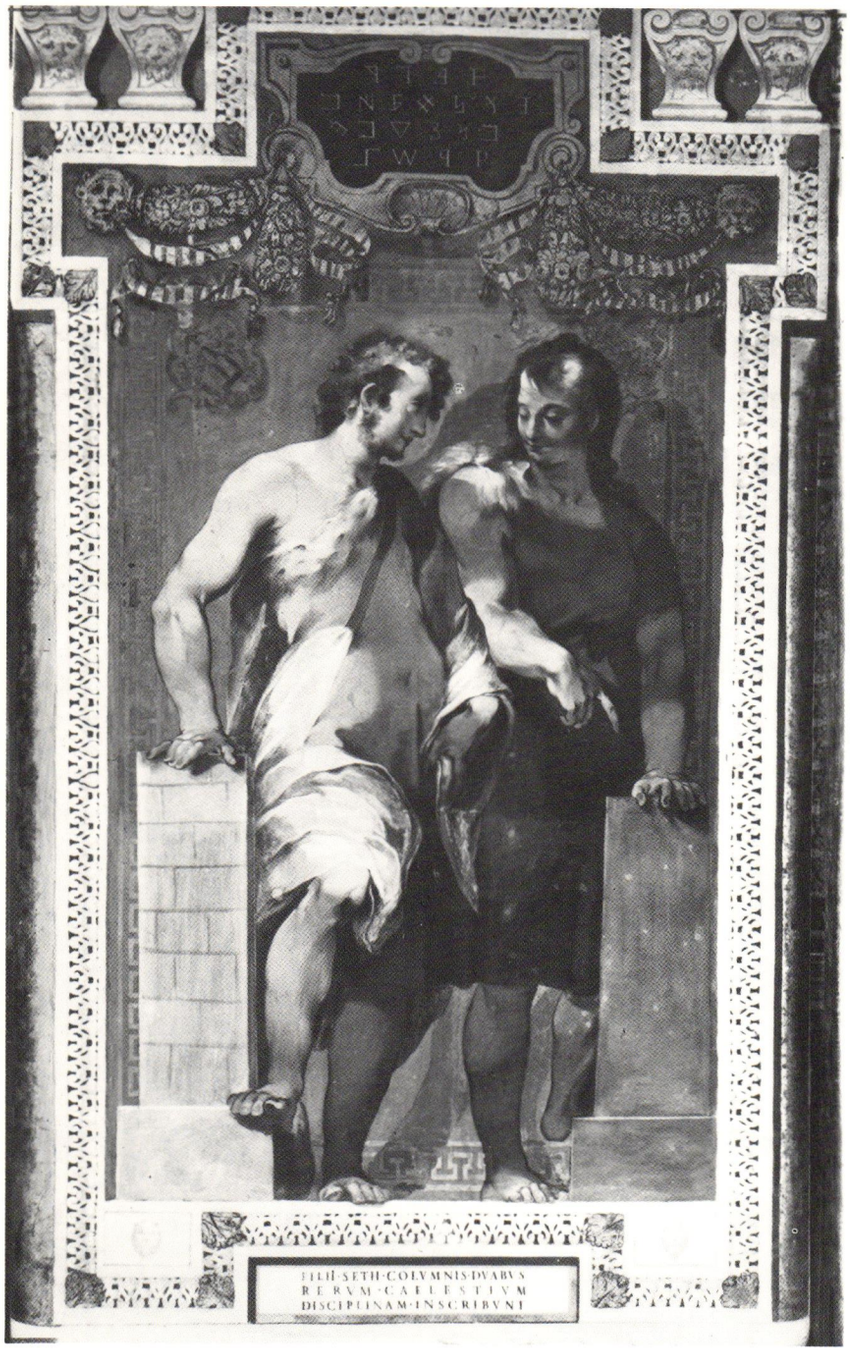
manifest in the title of Wilhelm von Humboldt's classic work *On the Diversity of Human Language Structure and Its Influence on the Intellectual Development of the Human Race.*[13] It is appropriate that the alphabet supplies the building blocks for this metaphor. In this, the most general form, language and architecture are both seen time and time again in the realm of cultural history. Furthermore, if one considers that both spheres were analyzed and defined with reference to their link to all-embracing Nature, then it would seem that there is almost limitless scope for comparison.

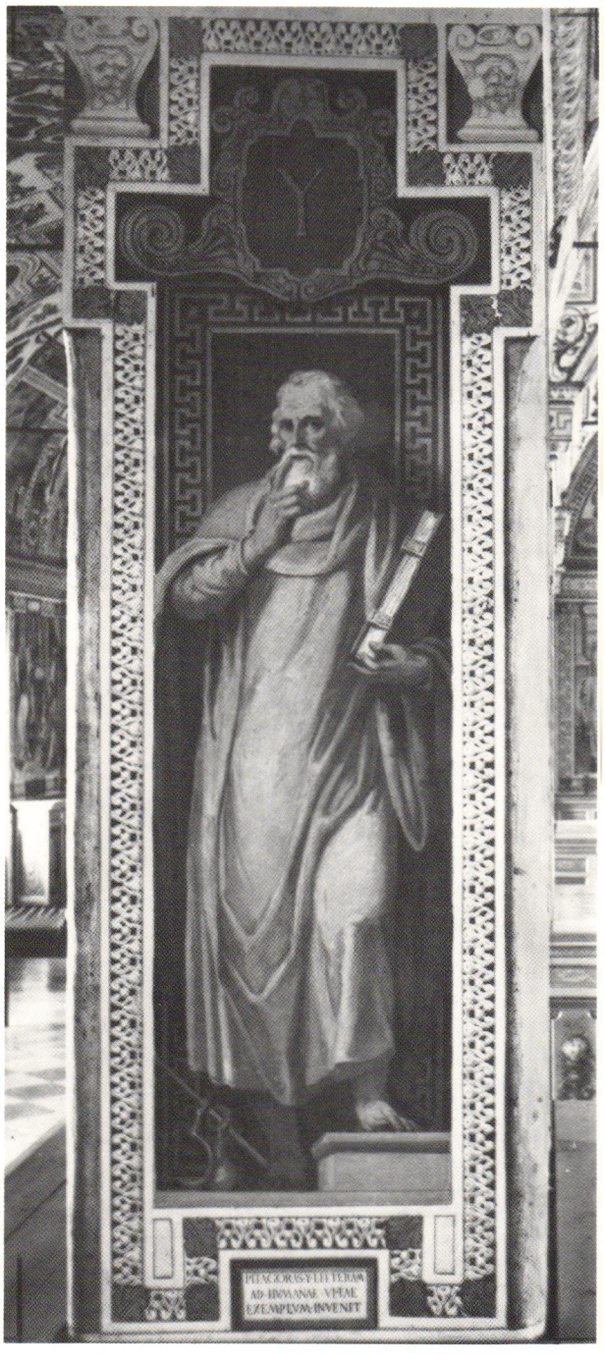
Brébeuf's statement, which for once inversely links writing to the general idea of artistic representation, supplies an example of this idea. Dubois adopted this statement as a motto at the beginning of his exposition entitled "An Abridged History of Writing" (1772).[14] Here, writing is described as art in the sense of picture painting, but naturally, this association did not inhibit Dubois's legitimate desire to raise writing even above art. "L'Ecriture est l'Art des Arts" (writing is the art of arts), he says, more than merely conceding to Gravelot's demand for equality of *Ecriture* alongside the acknowledged art forms.[15] As the analogy is employed primarily in its explanatory function, one is quick to overlook the similarities so as to continue to pursue the popular issue concerning the precedence of one art genre over the others.

Nevertheless, it would be wrong now to deprecate Dubois's so unambiguous statement of intent. Living in an era and within a culture during which research into both the historical and linguistic aspects of language attained a zenith, he had at his disposal an abundant and finely differentiated fund of knowledge that also provides valid criteria for our own inquiry.[16] He is familiar with the contemporary discussion on a universal language and knows to what extent research has advanced since Leibniz. He is acquainted with that highly controversial train of thought that places the origin and development of writing within a standardized pattern parallel to the history of man's development, which is of fundamental significance in ideas on the history of culture from Vico to Herder and Winckelmann. He makes clear differentiations between the degrees of likeness to Nature in the various early hieroglyphics.' The latter he terms *peintures d'idées,* a concept that has meanwhile become a topos. Moreover, in accordance with a standardized model that has maintained validity from Athanasius Kircher to Court de Gébelin, he is able to use the degree of abstraction in the symbols as a criterion for classification (fig. 4).[17] He is equally well acquainted with the corresponding historical sources. He knows of the unique wealth of hieroglyphics in Mexican culture.[18] Furthermore, after Fréret, he is able by comparison to classify Chinese symbols as belonging to the third stage of hieroglyphic writing, both of which are characterized at this stage by the present pictorial form of their symbols being estranged from the original pictorial message.[19]

In view of the widespread understanding of linguistic knowledge at the time, it should also be taken into consideration that Dubois's presentation is not the equivalent of a scientific treatise, but rather, as indicated in the title *Histoire abrégée,* provides a general summary of scientific knowledge in a meaningful context and relationship. This correlation is based on insight into the universal validity not so much of facts that have been individually examined but primarily of the interpretive connections. It provides a rich and finely differentiated framework for demonstrating the link between picture and writing. And the criteria employed, which made both differentiation and grading possible, prove to be relevant even today. Thus, this tendency towards very general universal inquiries was reponsible for the seemingly paradoxical situation that the Egyptian hieroglyphics gave rise







5. The first written testimony of human knowledge according to the myth of cultural inventions: the sons of Seth with the two inscribed columns of natural and manmade stone. Fresco in the Biblioteca Vaticana from the series illustrating the invention of writing and alphabet, 1588.

6. The myth of the invention of writing and alphabet: Pythagoras as the inventor of the Y*. Fresco in the Biblioteca Vaticana, 1588.*

to meaningful interpretations of the link between pictures and writing long before the Rosetta Stone was decoded. Moreover, it was due to the fact that even the act of deciphering and "demystification" (which at most brought about modifications) was unable to upset the previously construed pattern.[20] This circumstance is typical of the nature of universals, whether one shoves them into the Platonic corner or more cautiously approaches the generality of the conceptions. Of importance here is that precisely on the basis of very general inquiries, a rich tradition of culture and art form arose. Horapoll's hieroglyphics, which have been popular since the Renaissance, are well known to be of significance for emblematics.[21] And just as the link between pictures and writing was found in diverse and exemplary hieroglyphic forms according to identifiable criteria, it was possible to construe and master new situations using these insights. The study of emblems led to a system being ingeniously worked out whose elements—from "lemma" to "motto," from "symbol" to "allegory"—were conceived with more precision than would be permitted by modern day language usage. Without a doubt, eighteenth century France in particular, with its mania for classification, occasionally overshot the mark. The distinction, defined in the days of the great Encyclopédie, between *hiéroglyphes curiologiques* (pictorially identifiable with the message), *hiéroglyphes tropiques* (pictorially substituting for the message), and *hiéroglyphes symbolique* (symbolically associated with the message) may seem to be an unpermissible overgeneralization from a modern point of view, or even may be considered "wrong" in a strict historical sense; yet it has long since proved its usefulness as a model for the relationship between picture and message—and can continue to do so unimpeded.[22] With this in mind we find also evident for our particular investigation into the relationship between alphabet and architecture that such universals are of great use. This will be the case whether in reference to their possible common fundamentals in geometry or to the system of combining a limited number of elements in both alphabet and building.

II.

It is possible that the above classification of hieroglyphics may be accused of a deficient foundation in historical fact. And yet, conversely, the classification is elucidated by its very reference to a historical object. This circumstance can be observed in a general sense. Universalities in particular are found to be fixed within a historical context. They seem to be less appropriate to systematic presentation. Thus, the universal aspect of the alphabet finds its roots in a context relating to the history of culture. Even the Encyclopédie, which was written with an aim towards system, supplements its general references to the importance of the alphabet for *entendement* (understanding), *science de l'homme* (human science), *logique* (logic), *art—de communiquer* (art of communication) and *grammaire* (grammar) with a further statement on its respective application and placement in practice. The definition as "table or list of characteristics, which are the signs for particular sounds initiating the composition of words in that language" is preceded by the more general:

By means of the natural organs of speech, man is capable of pronouncing several very pure sounds, with which he consequently forms other compound sounds. We have profited from this natural advantage: he has destined these sounds to become the signs for ideas, for thoughts and for judgments.[23]

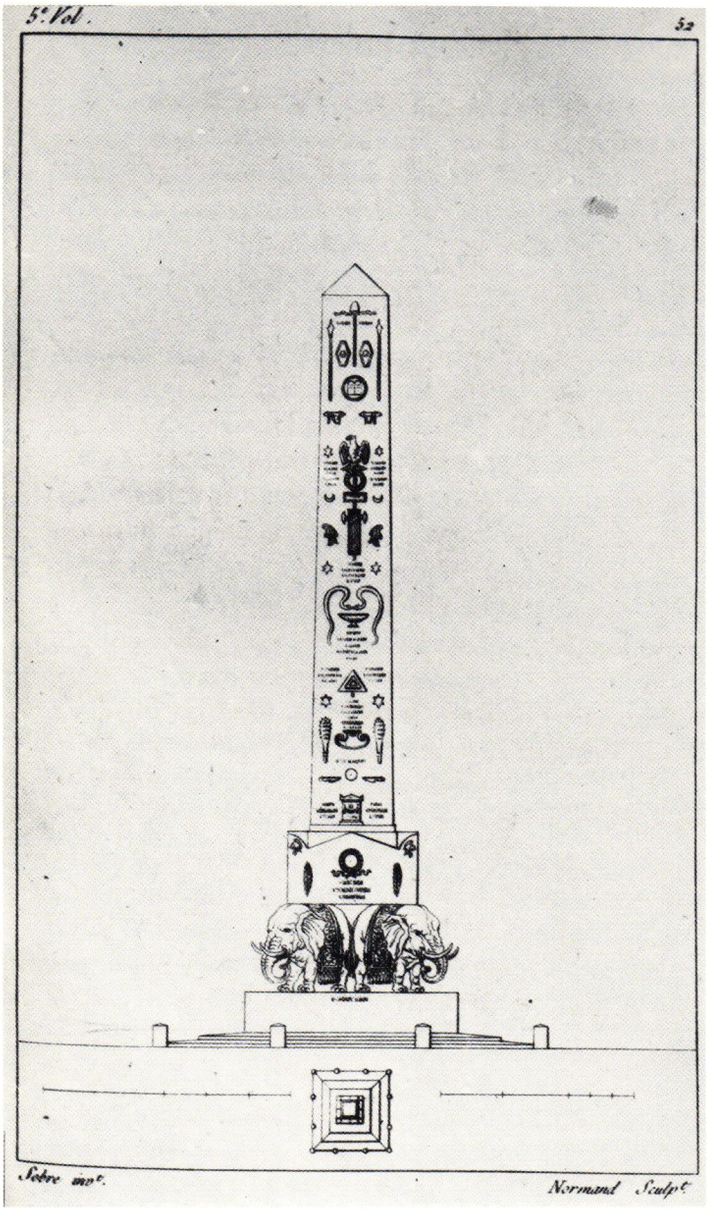
However, in describing the necessity of inventing the alphabet, one then arrives at its tie to the historical situation. The value of speech/alphabet is defined by "usage," application and convention, which leads to actual speech, the *langue de cette société*.[24]

The generality and the essential, concrete historical occurrence are thus linked and can contribute to a meaningful explanation of the history of human culture. The historical act is typified and generalized. And since Virgilio Polidoro's *De rerum inventoribus* (1498) it has been common practice to list all human artifacts collectively—and these include writing, alphabet, and all the fine arts—as historically valid.[25] Therefore, they are for the most part described as inventions linked to either historical or mythical figures. So the inventor-myth offers an additional level for comparison on which we become aware of both alphabet and geometry, and drawing, which generates all kinds of achievements of human culture.[26] Virgilio Polidoro dedicates a whole chapter to the invention of the alphabet, in which the pertinent text references from such works of antiquity as Diodorus, Cicero, Plinius, Philon, Cornelius Tacitus and Eusebius are introduced as authorities.[27] In other words, the myth is historically corroborated so that it is hardly surprising that it claims validity in such scholarly works as Vossius's *De Arte Grammatica*.[28]

The invention of the alphabet and the individual letters was so highly esteemed in this period because of its significance for the history of culture that it became the artistic theme for a whole program of decoration in one particularly prominent place. In 1588 when Pope Sixtus V was planning the renovation of the Vatican Library he wanted to have, among other things, a series of frescoes representing the inventors of writing (figs. 5, 6). These now adorn the chambers of the *Salone Sistino*. In 1590 in his *Della Libraria Vaticana Ragionamenti*, the scholarly doctor and philosopher Muzio Pansa describes each individual representation and interprets it as being part of the antique tradition whereby statues of famous personages were set up in the library.[29] Adam appears as the inventor of the most ancient Hebrew script. And the matching inscription, *Adam divinitus edoctus / Primus scientiar. et literarum inventor* simultaneously supplies an indication of the significance of this invention for the history of culture.[30] Similarly, there follow the inventors of other alphabets: Abraham of the Chaldaean, Moses of the Mosaic, Isis of the Egyptian, Phoenix of the Phoenician, Cadmus and Cecrops of the Greek, among others. This extolling of the invention of the alphabet becomes comprehensible in view of the background of cultural and political aims of that time.

As administrator of the cultural inheritance, the Vatican Library was concerned with, among other things, having as many alphabets as possible at its disposal, in order to be able to fulfill the worldwide apostolic mission of the Church. The consideration that this was a fundamental means of spreading the ideas of religious creeds testifies to the conviction of how significant and universal the alphabet was at that time. In his *Indice de'Caratteri, con l'inventori e nomi di essi* of 1628, Andreas Brogiotti offers an amazingly rich catalogue of the various types of writing used in the Vatican printing works.[31] Alongside various versions of the alphabet in Hebrew (according to Adam, Moses, and Esdras), Illyrian (according to Hieronymus and Cyrillius), Greek (Linus Thebanus, Cadmus, Cecrips) and Egyptian (Merkur Trismegistos and Isis), he also lists a modern Indian alphabet and one taken from the famous tablets of Gubbio.[32] As a result of this knowledge, the institute of *Propaganda Fidei*, founded in 1626, considered one of its most urgent and chief concerns to be the publication of the most important religious texts and prayers in each new or hitherto unprinted alphabet.[33] This accounts, for example, for the appearance in 1629 of the *Alphabetum Ibericum, sive Georgianum cum oratione dominicali, salutatione angelica, symbolo fidei . . .* in Georgian type, in effect a propagandistic publication, its purpose to spread the faith.[34]

One episode of the inventor-myth of the alphabet is linked to architecture in a special way (fig. 5). Although different aspects of the myth



7. *Monument, obelisk and symbolic writing resembling hieroglyphics: Jean Nicholas Sobre, Competition for the design of a monument for the Place des Victoires, Paris, 1795. From C. P. Landon,* Annales du Musée, *V, 1803, plate 52.*

8. *Obelisk and symbolic writing: C. Brogniart, Project for the Vaults at Sainte Geneviève, Paris. From J. Rondelet,* Mémoire historique sur le Dôme du Panthéon Français, *Paris, 1797.*

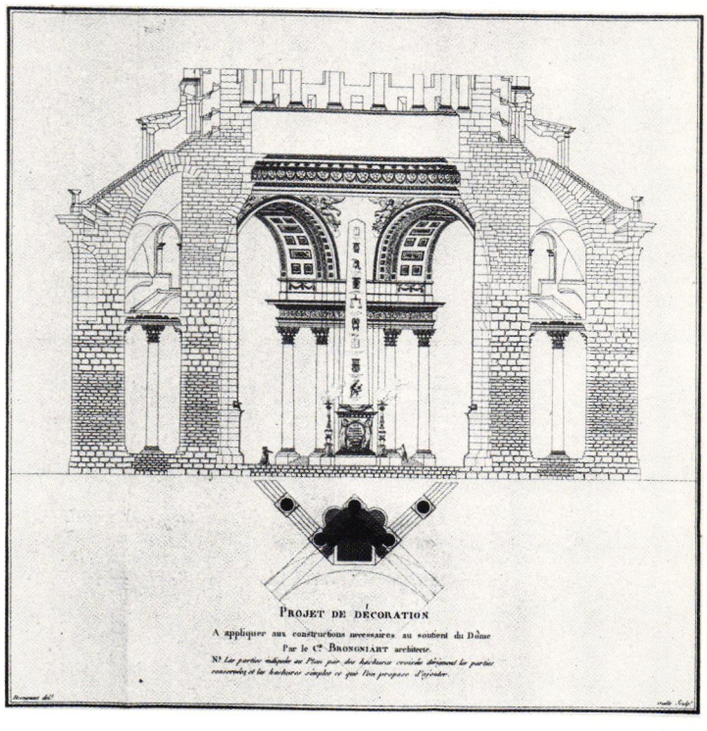
are emphasized in its various traditions, it basically relates how Adam's grandsons, Seth's sons, wrote down everything they knew on two stone columns in expectation of the deluge, and thus inevitably became known as the inventors of the written word.[35] These columns were constructed from the two most elementary building materials: natural stone (marble) and manmade stone (brick). With their historical records in writing or pictures, they are archetypes for the whole broad tradition of monuments bearing inscriptions or pictorial documentation. This tradition extends from the Egyptian obelisks and the Roman triumphal columns up to their baroque and classical descendants (figs. 7, 8). Muzio Pansa's doubt as to whether these "inscriptions" depict letters, symbols or pictures, only serves—by directing the basic question on the development of writing to precisely this episode—to emphasize the significance of this development in the history of culture.[36] For this reason, it is understandable that the episode is also occasionally told in connection with other legends of invention. In Ferentilli's explanation of the terrestrial eras, which in part clings to kabbalistic tradition, the invention of writing appears alongside that of the first manmade dwelling, and human necessity identifies both as being important and even essential.[37] In the Vitruvian theory of architecture, the construction of the first manmade dwelling is seen as a measure taken for man's protection, and its purpose is therefore usually interpreted with regard to a civilizing function. In comparative studies of art genres this fact has often given architecture precedence over the other genres. Hence, while in Ferentilli's version Abel erects the first herdsman's dwelling as protection from the inclemency of the weather, in the other instance, in the face of fire and flood, writing is used out of similar necessity to guarantee the preservation of culture, "*perchè temevano il pericolo del fuoco e del Diluvio*" (fearing the danger of fire and flood).[38] There is a further point to strengthen this argument. In Ferentilli's interpretation of Genesis, the proverbial biblical age of the fathers of mankind guaranteed not only an abundance of descendants but also, and in particular, an abundance of inventions, the result of the vast experience of longevity.

It only remains to be added that in astrology and geometry inventions are presupposed to possess that facility for abstraction and for the reduction of phenomena to schematically abbreviated (picture-) symbols similar to the letters of the alphabet.[39]

The question of whether one invention influenced another is of little importance. The humanistic, geometrical construction of letters may well include such conjectures, and yet, at the same time, it offers evidence of having deliberately placed geometry in a position generally relating to both alphabet and architecture. On the other hand, the invention-myth produced a topos, which then generally related to the history of culture. Each version of a legend or myth had its own individual characteristics—as in the case of the columns with the inscriptions—to which archetypical qualities were then attributed. This may explain why the theory of architecture, in spite of its solid, methodical foundation in geometry, nevertheless found it necessary to give such prominence to inventions, even in the sphere of geometrical application. Caramuel's *architectura obliqua* is his invention in the same way that Ferdinando Bibiena insisted on calling the *scena per angolo* his own.[40] And just as in the history of the invention of the alphabet Pythagoras is identified as the inventor of the *Y* (fig. 6), in the seventeenth century Nikolaus Goldmann "invented" a particular type of volute construction on an Ionian capital.[41] Keeping in mind the invention legends and the significance they are able to endow, it is possible to directly compare the two artifacts, thereby establishing yet another powerful link between architecture and alphabet.

III.

Whether, as Plato reports, a mythical king condemns the invention of alphabet or the invention is lauded, as in Francesco Sansovino's *Rime in lode dell'Alfabeto*, in light of the consequences its relevance to the history of culture advances to the central point of the inquiry.[42] The peculiarities of the characters themselves or their finite number is less frequently considered with the same zeal. This seems to be primarily a "modern" problem of linguists, who paraphrase this problem as "symbol economy."[43] And yet the grouping and sequence of the characters, and to an even greater extent the design of the letterforms are issues under constant examination. Here again a link to architecture can be established. At the very basis of the myth of writing on the columns erected before the deluge lies the conceptions of documentation and tradition, conceptions on which culture is founded. However, a task of this kind can be performed not only by recording the content but also indirectly by means of the very system of symbols comprising the letters of the alphabet. The sequence of the letters is a phenomenon of no more random a nature than the number of symbols in the alphabet, and it was an obvious choice to use this characteristic as an instrument of culture. This choice could not even be altered by the fact that the invention of the alphabet was an endless process, beginning with the *alphabet primitif* with its sixteen letters as singled out by Court de Gébelin and leading to the extended "complete" alphabet with its additional individual inventions such as the Pythagoraean *Y* (fig. 6).[44] There are the further efforts of the emperor Claudius with *antisigma* and *digamma*, or the invention of four new letters by the Franconian king, Chilperic I, as well as Trissino's completion of the Latin letters with *epsilon* and *omega*, and later new formulations within the framework of a universal language.[45] These serve as confirmation that the alphabet is only conditionally alterable, rather than as attempts to infringe upon the principle of a finite number of letter elements. The problem becomes clear if we follow the train of thought of Giulio Camillo, possibly the most famous "mnemonist."[46] He elucidates the possibility of a finite topographical-architectonic system of documentation to encompass all knowledge bases, using the alphabet as his means of presentation. To the statement that the twenty-two letters of the alphabet are capable of expressing everything (*sono bastanti a esprimere il tutto*) he adds that if the alphabet were to have been lost and someone were to have suggested expressing all known and recorded facts with twenty-two letters he would certainly have been declared insane. The *certo e piccolo numero* of the letters evidently contain a further principle of the alphabet that reaches beyond the purely mediatory function. The mnemonic aspect, which is alluded to by Giulio Camillo and is, on principle, of great importance for writing in the invention legends, becomes particularily clear in the sequence of letters and in their finite number, in other words, in "symbol economy." In this way, the alphabet can also produce any number of catchlines, such as the one used today by astronomy students as an aid for remembering the classification of star sizes. "O Be A Fine Girl. Kiss Me," gives in correct sequence the O-, B-, A-, F-, G-, K-, M-, the sizes of the stars from the thirtyfold diameter of the sun down to one fifth of the same. What today is considered obvious was still a peculiarity in the seventeenth century amid numerous mysteries of Nature and experiments resulting from them, and as such was worthy of special consideration. In his *Ioco-Seriorum Naturae et Artis, sive Magiae Naturalis Centuriae tres* of 1666, Caspar Schott gives a detailed introduction to setting up a catalogue for the recording by memory of every written word, using the arrangement of the letters of the alphabet.[47] Even in 1554 in his *Discorsi*, Giraldi had already described in general this principle with respect to the presentation of an exact arrangement, the *scienza delle cose*:[48]





Our elders gave us the orders of letters, to solve and reduce easily everything in a beautiful structure: and we have the headings of the matters to which we can reduce everything that is necessary for writing.

What is the nature of the analogy of the natural conformities of alphabet to architecture? The simplest and at the same time most convincing explanation is given in the passage quoted from Goldmann at the beginning of this study: the finite number of letters finds its correspondence in the finite number of constructional elements in the architectural orders. The range of variation in letter combinations finds correspondence in the combinatory power of constructional elements:

Thus it is possible to construct the most varied types of architectural decoration using various combinations of elements, of which there are not many more than there are letters in the alphabet. These combinations are defined by the five orders.

Admittedly, Goldmann subsequently requires that such combinations of elements adhere to one order only, in the same way that not just any letter combination will result in a meaningful word. Sturm reports that it was for this reason that Goldmann differentiated—according to the varying importance of vowels and consonants—between main or essential elements and others.[49]

Nevertheless, the analogy still remains limited to a somewhat general idea and does not move towards the quest for analogy between letters as abstract forms and geometrical floor plans in architecture. Goldmann's paragon hardly goes beyond juxtaposition, which was also illustrated by Giovanni Battista Lenardi in his frontispiece engraving to Ciampini's work on the history of architecture, *Vetera Monimenta* of 1690 (fig. 9).[50] Next to the painter, the draftsman (working with lines), and the chronicler or historian, there stands a fourth allegorical figure representing typography, who points with her right hand to the typecase containing the letters of the alphabet; all four figures serve as the representation and realization of architectural monuments. It is not by chance that in the foreground of the picture there are hieroglyphic fragments, for, uniting picture with writing, they emphasize the process of historical representation.

This last reference brings us back to a more profound analogy between alphabet and architecture—their common basis in geometrical symbols and figures. The linear drawing of hieroglyphics on Egyptian obelisks had already been mentioned by Philandrier—unexpectedly and only in passing—in his philological discussion of the Vitruvian concept of *graphidis scientia*, which referred to architectural drawing.[51] The point of comparison lies exclusively in the abstraction of the line as drawing medium. With its Euclidean definition it unites geometrically both letter and architectonic floor plan. And it is in this that the more profound meaning in Lairesse's comparison is to be recognized. In accordance with his era, Lairesse introduces the comparison almost as a platitude: "Geometry is the *A*, *B*, *C* of the art of drawing."[52] This train of thought had been paraphrased with explicit details on the formal aspect of the *tertium comparationis* by Barbaro:

As the writing is the sign of speaking and speaking of thinking, the mathematical images and the geometric figures are the signs of their concepts.[53]

And in Lanteri's statement at the beginning of this study, the analogy of alphabet and Euclidean geometry, the basis for architecture, had been expanded to include the aspect of cropedactic and didactic generality.

What is the result now of this more explicitly defined link between alphabet and architecture if it is extended beyond that general



9. Painting, Drafting, Chronicling and Typography in their mutual function of documenting historic monuments: Allegorical title page to Ciampini's Vetera Monimenta, *Rome, 1690, Engraving by A. von Westerhout, after G. B. Lenardi.*

10. The position of speech organs with corresponding letter shapes to explain the origin of the Hebrew alphabet. From van Helmont, Alphabeti vere Naturalis Hebraici brevissima delineatio, *Sulzbach, 1667.*

classification which, with reference to geometry, might lead back (erroneously) to the discussion of universals and the legends of origin? It is a question of stressing the instrumental nature of the geometric basis of alphabet and architecture. This is shown plainly by Lanteri, Barbaro and even Goldmann. At that moment when the alphabet is liberated, by progressive abstraction, from imitation—and this process, of course, plays just as central a role in the theoretical fundamentals of art—a form of systematization within formal aspects is made available. In his *Essai sur l'Origine des Langues*, Rousseau emphasizes a certain feature of the inscriptions of Tchelminar that he considers also to be of aesthetic value: all the letters are constructed with the exclusive use of two elements—the straight and the curved line.[54] This classification corresponds not only to the usual geometrical classification of the most elementary lines but can also be applied to more complex systems of notation in both writing and architecture.[55] The definition of writing, as proposed by Goulet de St.-Morien in a rich tradition of treatises on the subject, is nothing more than a reduction of complicated systems to their geometrical basis, which once again gives rise to endless possibilities for application:

Writing is the art of drawing thoughts clearly, by means of letters and words, correctly constructed of vertical and horizontal lines; the letters, the word, the lines and their distances from each other are proportionate to the width of the pen-nib which draws them.[56]

This same function of being all-generating is attributed to geometry in architecture.[57] Rousseau's further emphasis on a "binary" system of writing, reduced to straight line and curve, can be compared over and above other pertinent texts with J. N. L. Durand's model of basic architectonic types, considered to be a concrete guide to the designing of architectural floor plans.[58] The fact that geometric figures following neoplatonism and, lastly, the Pythagoraean tradition, increasingly play the role of elemental forms shaped by straight and curved lines, modifies the comparison only slightly.

Also noteworthy is the process envisioned for the renewed composition and establishment of both writing and architectural form.[59] The expansion of a geometric system of grammar to architectonic syntax is provided for in Durand's system and is also in the plan sketched out in Goldmann's quotation. Its fundamentals are contained in the Vitruvian system and has placed Barbaro under an obligation to bring the formal aspect to the forefront. For him, the *consideratione universale della forma* is a condition for the scientific and systematic construction of architecture.[60] Furthermore, Barbaro's predecessor as philosopher of architecture and mentor to Palladio, Giangiorgio Trissino, in the introduction to his *Dubbi Grammaticali*, endeavors to elucidate the general formal principles; here he differentiates between *principii primi* or *elementi* and the *note di essi*, which are consolidated in the *lettere*.[61]

IV.

There is no doubt that figure and form and the geometrical conformity attributable to them are common to both the alphabet and architectural configuration. It so happens that the general validity of geometry for writing and architecture was realized frequently in the endeavors of the humanists. Which other universal basis, if not geometry, would the alphabet strive to obtain as a means of representation, after having seen the picture-message correspondence being relegated to the realm of hieroglyphics or the prehistory of the alphabet (fig. 4)? By way of comparison, an origin in speech and articulation must logically lead to absurdities. The *Vocabolario degli Accademici della Crusca* introduced its first article on the letter *A* with the naive explanation that its position as first letter in the alphabet was due to the fact that the cry (an *A* sound) of a child is still its first utterance.[62] Furthermore, F. M. B. van Helmont tried to explain the formation of the letters as a direct consequence of the physiological speech process (the position of the tongue in the oral cavity, etc.) (fig. 10).[63] Using the Hebrew alphabet, endowed with divine inspiration and therefore the first alphabet, he demonstrated inversely, letter for letter, the correct position of the mouth needed to produce an act of speech. This must have had particularly devastating consequences, when, in accordance with van Helmont's recommendation, attempts were made to force the speech organs of a mute into the required position with forceps for therapeutic purposes.

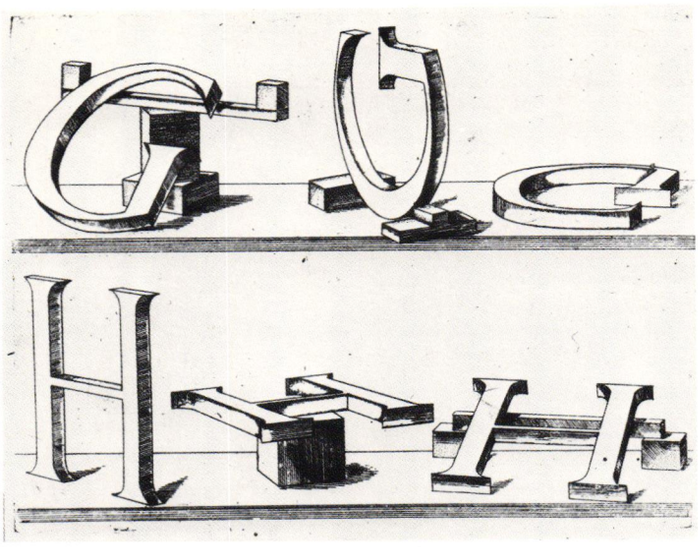
The establishment of alphabetical forms using geometry was simple and harmless by comparison after their earlier function of imitating what they represented was once and for all forgotten. On the other hand, the artist acknowledging a geometric basis for his work was now assumed to be competent in the construction of letterforms (figs. 11–17). Indeed, with the renewed supremacy of geometry under the influence of Vitruvianism, the construction of letters actually came to be the prime example of its application.[64] A considerable number of treatises on the construction of the alphabet have appeared in Italy since the late fifteeth century, among whose authors were counted Mantegna's friend, Felice Feliciano, Damiano Moille, Sigismondo de'Fanti and Luca Pacioli.[65] Dürer also compiled an alphabet treatise, the *Underweysung der Messung*. Whereas the coupling of the medieval tradition of decorating capital letters and the growth of graphic reproduction techniques resulted in the appearance of alphabets in copper engravings—for example, in the work of master E. S.; work with alphabets is extended according to the rules of geometry and proportion, in accordance with the Vitruvian theory.[66] And if geometrification of letters could be firmly established, then the "ordinary object, the letter" could be put to use by geometry and perspective. Hans Lencker compiled a treatise on perspective in 1571 in which he presented all the letters of the alphabet in correspondence to simple geometrical figures and structures for demonstration purposes and for perspectival representation (fig. 11).[67] Such games with letters are popular. And it is only a small step from letter-"structures" such as these to the use of letter forms in architecture.

Geoffroy Tory took the Vitruvian theory even more literally. This attitude is illustrated in his work, probably the best known on the topic, which first appeared in Paris in 1529.[68]

Champfleury. In which is contained the art and science of the proper and true proportion of attic letters, otherwise called antique letters and, commonly, Roman letters proportioned according to the human body and face. (fig. 16).

The title already announces that the Vitruvian *homo ad circulum et quadratum* will be worked into the form of the letters, extending beyond geometric construction. The geometric alphabet is linked to the figurative alphabet, which shows a markedly rich development and contains such extreme examples as the *mascherata* described by the younger Michelangelo Buonarotti. Here, the idea of an anthropomorphic alphabet is realized by illustrations of young men bending their bodies into the shapes of letters and inscriptions.[69]

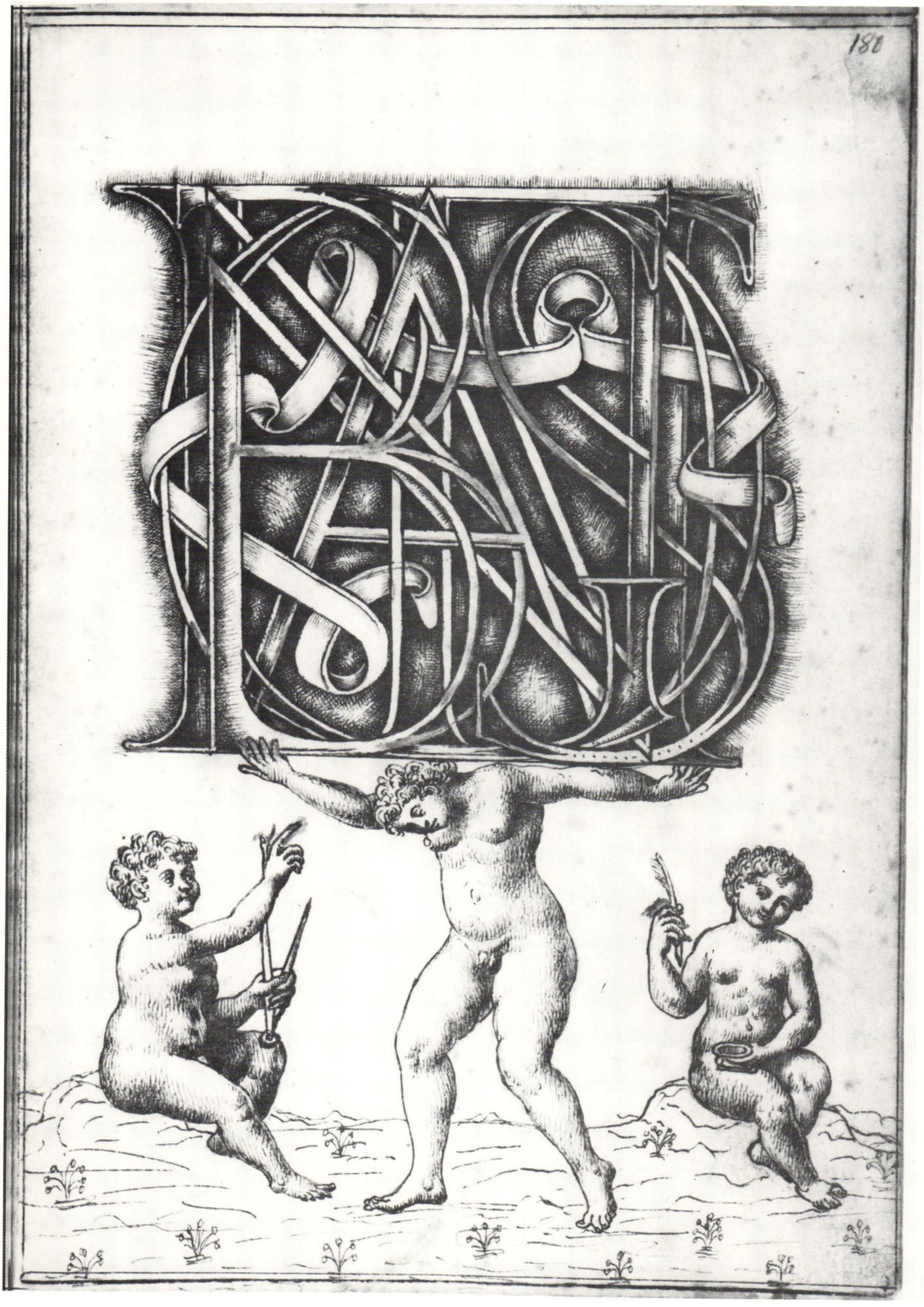
A further observation results from the directions for construction as given by Palatino, as, for example, in his treatise on the alphabet (fig. 12–15).[70] He proceeds from the common general statement that all the letters can be described within the framework of a square and of a circle (*se formano tutte dentro in un quadro et un Tondo*). There then follows the division of the graduated square according to a ratio of 1 : 9. This results in the *testa* as sectional length, by which the guide points for the construction of the letter can be determined. This constructional aid is similar to a grid that has been known in architectural



11. Letters as geometrically conceived physical objects in a perspective demonstration: The letters G *and* H *from Hans Lencker's* Perspectiva Literaria, *Nürnburg, 1567.*

12. "Puzzle," consisting of letters in their classic form. From Palatino's Libro Primo delle Lettere Maiuscole Antiche Romane, *1575. Ms., Berlin, Kunstbibliothek, folio 183.*

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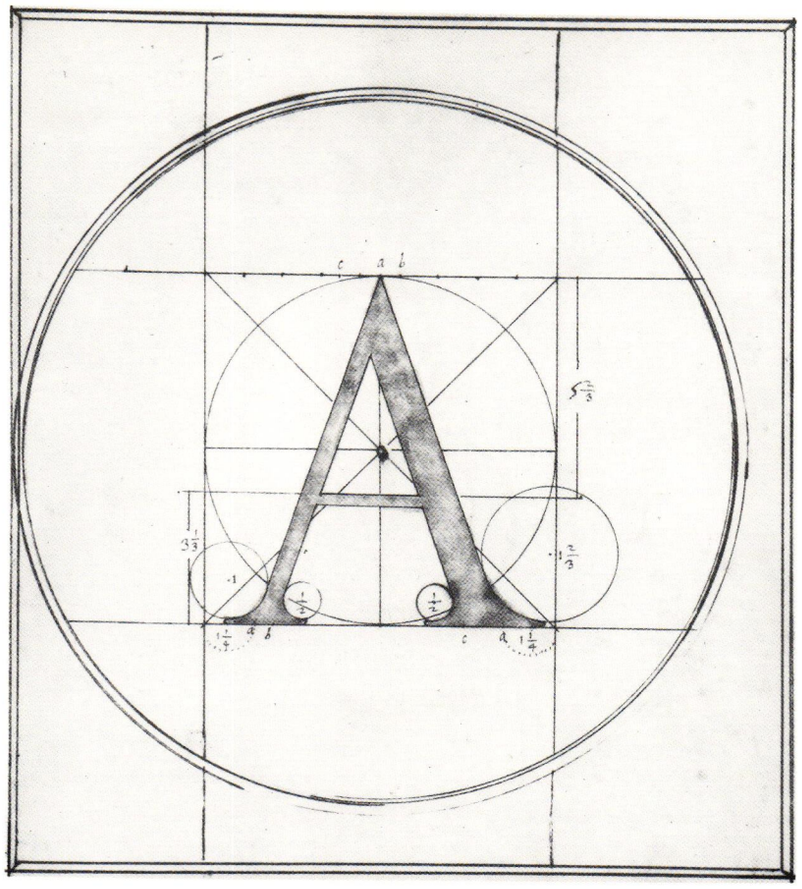
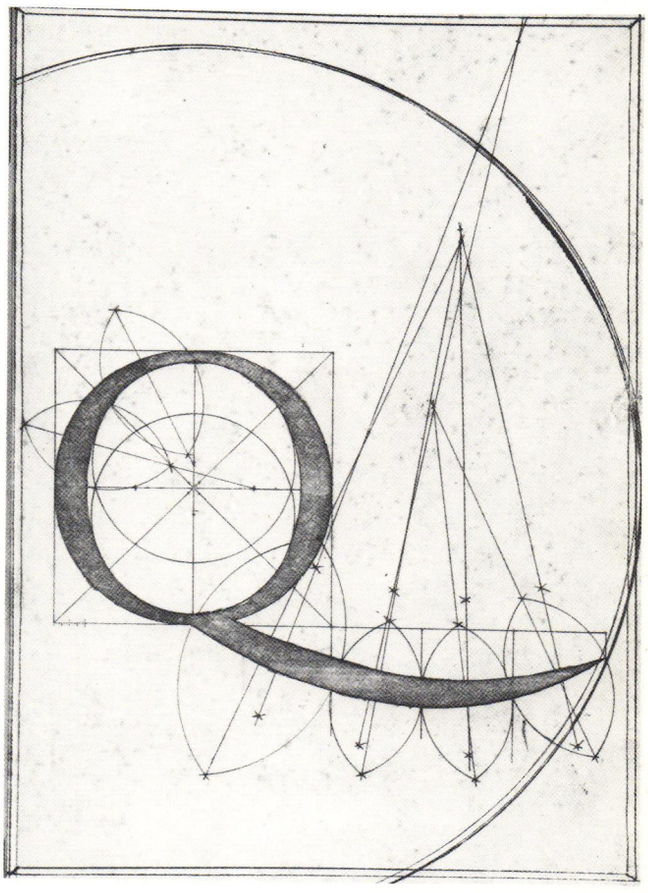
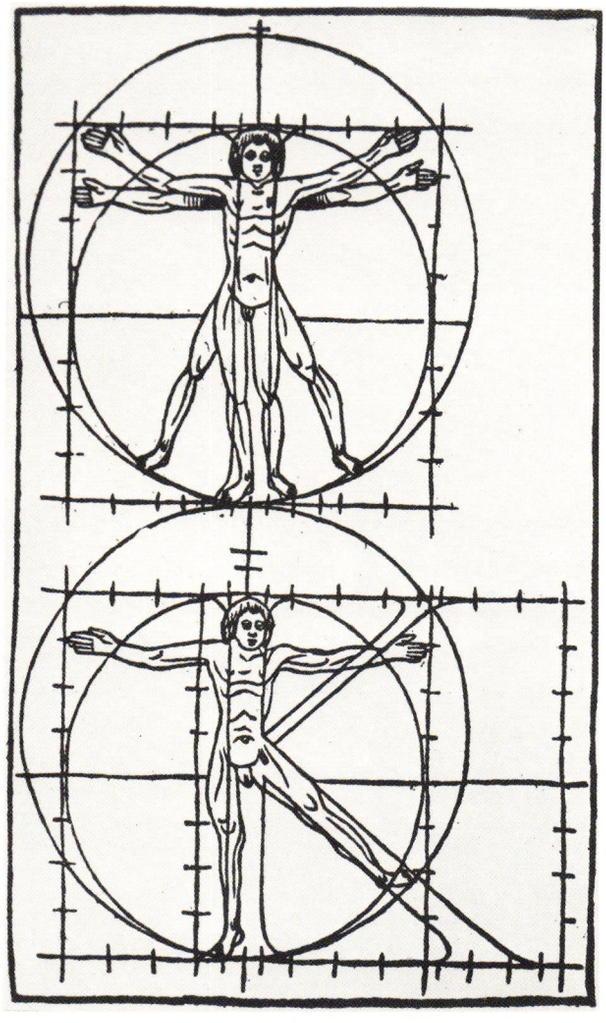
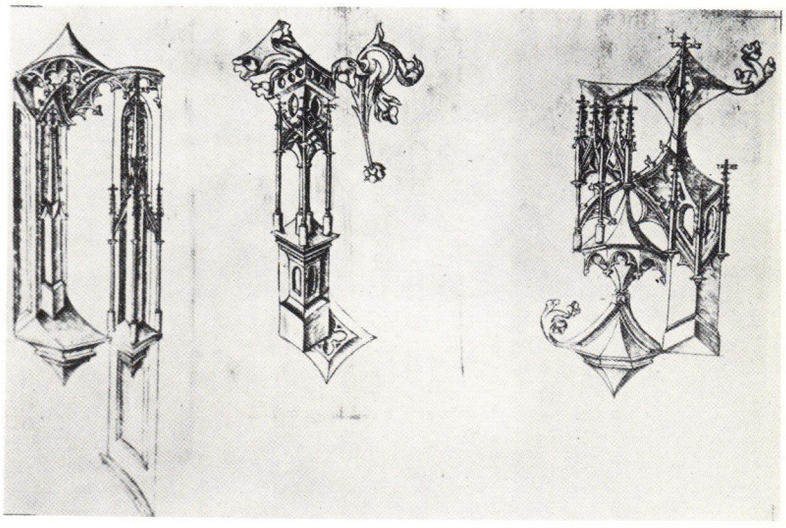








13. The common geometric letter ratios: Letters of the alphabet in an Atlas metaphor. From Palatino. Ms., Berlin, Kunstbibliothek, fol. 180.

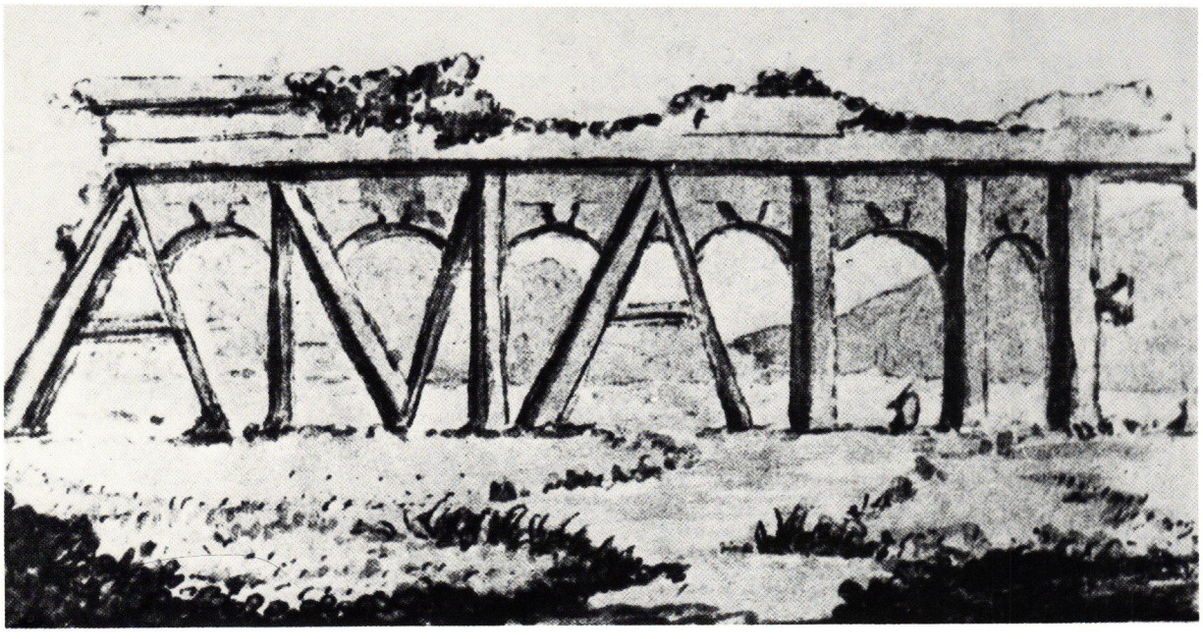
14. The geometric construction of the letter A. *From Palatino. Ms., Berlin, Kunstbibliothek, fol. 9.*

15. Construction of letter Q. *From Palatino. Ms., Berlin, Kunstbibliothek, fol. 22.*

16. Alphabet and the architectonic, geometric model. Geometric ratio and the Vitruvian homo ad circulum et ad quadratum. *The letters* T *and* K, *from G. Tory's* Champfleury, *Paris, 1529.*

17. Architectonically constructed lower case letters: The letters q, r, *and* s *from the alphabet of master W. A., ca. 1465–1485.*





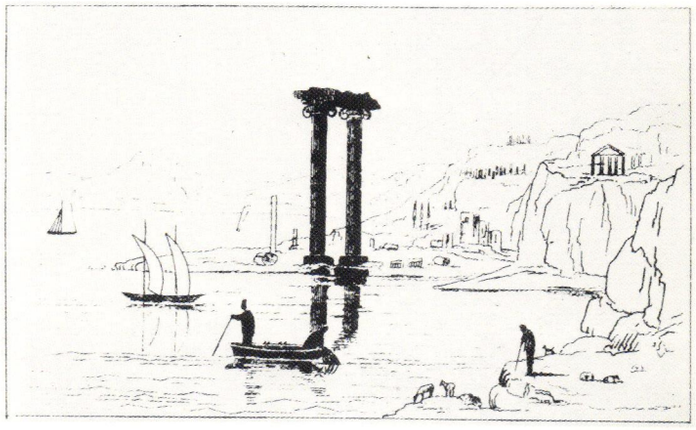
design since the plans for St. Peter's and in printed architectural treatises since Cesariano. Pierre le Bé uses a refined form of it in 1601 as the basis for his alphabet design. And at the end of the century, draftsmen of the *Académie des Sciences* suggested a grid with 2304 sections for the design of letters, using the greatest possible precision, and they proposed that it be put at the disposal of the "Imprimerie Royale." From the point of view of architectural history, Durand, like Vittone and Jefferson, attempted to call attention to the significance of the grid and its increasing application as a basic design tool.[71] To emphasize the universal however, it is important to point out that the grid's construction using squares and fixed points, as illustrated in Palatino's example, also proved useful in cases where higher demands were made on the degree of abstraction in notation systems. Saunderson developed a system of writing by numbers, that could be decoded on the basis of the above mentioned elements of grid construction square frames, fixable points, and with which it was even possible to make calculations by using mobile needles. Diderot included this idea in his *Lettre sur les Aveugles, à l'usage de ceux qui voyent* of 1749, using it as an example to elucidate the basis of the problem of both writing and notation.[72]

Because of their mutual geometric basis, writing and architecture have in this way repeatedly come into contact with each other. Therefore it is no surprise that in 1690 Girolamo Vitali cites more or less all the classifications and criteria mentioned here in an article on the letter *A* for a mathematical lexicon.[73] Beginning with the characterization of *A* as the first letter in the sequence of the alphabet, *quem in nostro Lexico sequimur*, he is led to its basis in Euclidean geometry. The geometrical description refers to *forma* and *partes*. And in accordance with the contemporary interest in extending the rules of geometry to curved lines and figures, he repeats the construction of the letters in *figurae curvilineae*. He is familiar with the treatises on the construction of the alphabet and also with the constellations for battle order, which are formed according to various letter shapes. He verifies these with references to Vegetius and with the authority of a military architect.

V.

It is only a small step from the alphabet and the geometrically constructed figures to architectural ideas and projects. If a letter of the alphabet is established as to its geometrical composition, then it really only needs definite (and arbitrary) placement as an object of architecture in order to be actually acknowledged as architecture. Within a rich artistic tradition, various possibilities develop.

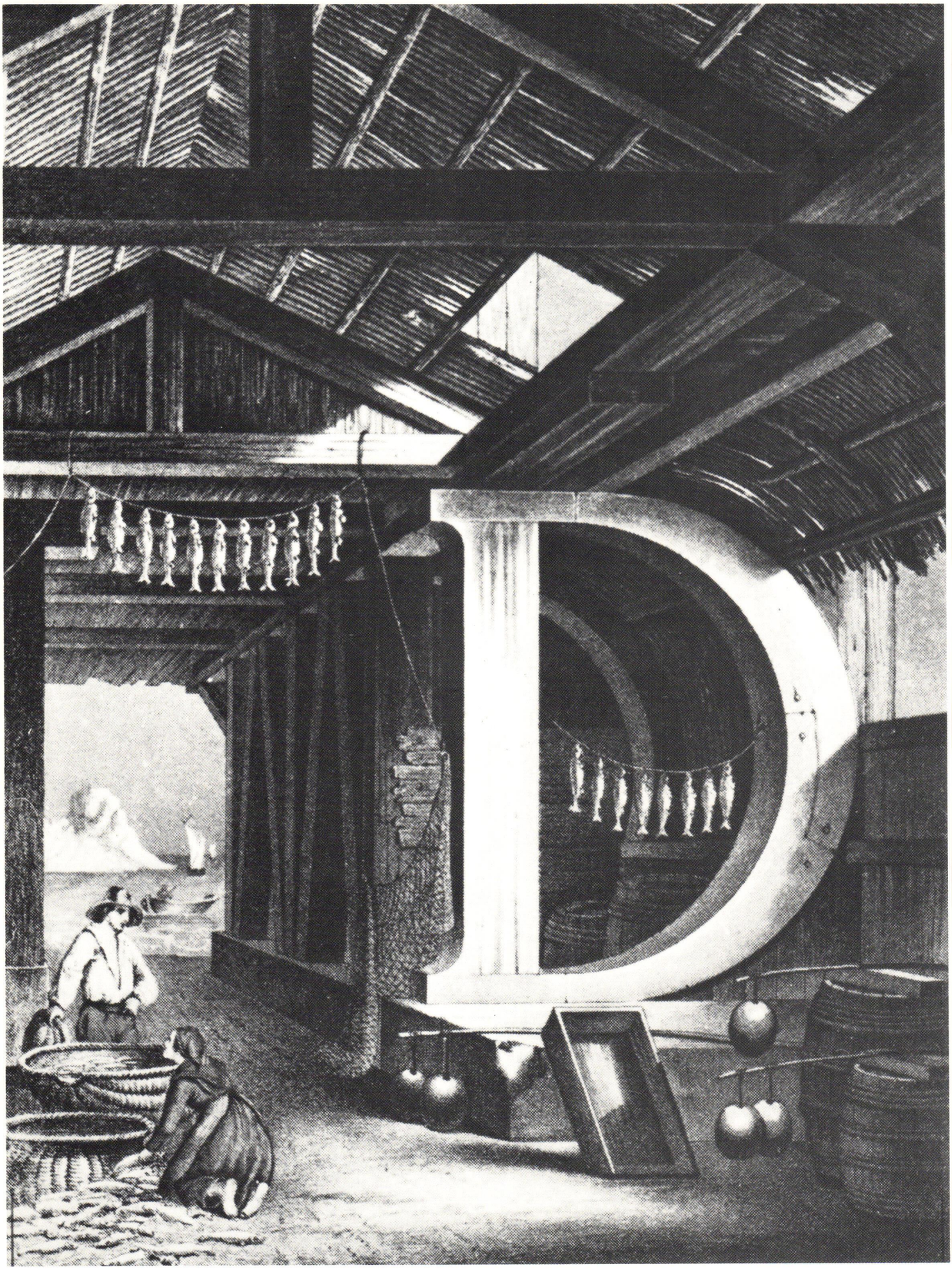
Ever since letters have been artistically formed—as isolated initials, for example—the alphabet has undoubtedly come to belong to the artist's sphere of authority.[74] This classification is emphasized by the fact that the alphabet has been attributed to specialized artistic categories. In 1757 in his *Dictionnaire portratif de peinture, sculpture, et gravure*, A. J. Pernety defines the alphabet as a *terme de Graveurs*, thereby placing it into that category in which its potential as a work of art will most frequently be realized.[75] It was precisely during that period that architects turned to engraving as a medium. They, too, designed alphabets—as other themes such as the vase were designed—perfectly expressing the sense of style that was in fashion at the time. With backgrounds of landscape or even exact topographic motifs, initials often appear as absolutely valid pieces of architecture—and this long before Oldenburg's representations of clothespins and similar ordinary objects. This architectonic effect, which had its origins in contrast, was given its most extreme formulation by Piranesi when he placed the letters *I* and *L* in front of reconstructions from antiquity, formally approximating the famous second frontispiece to the *Antichità Romane*



18. Example of an initial integrated in pictorial space. The initial P *by Piranesi. From* Antichità Romane *I, 1756.*

19. Lettering as architectural fiction: "Amalie" in the form of a Roman aqueduct. Watercolor by J. W. von Goethe, 1806. From Reise-, Zerstreuungs- und Trost-Büchlein.

20. Alphabet and a fictitious architectural monument. From The Landscape Alphabet, *London, 1830.*



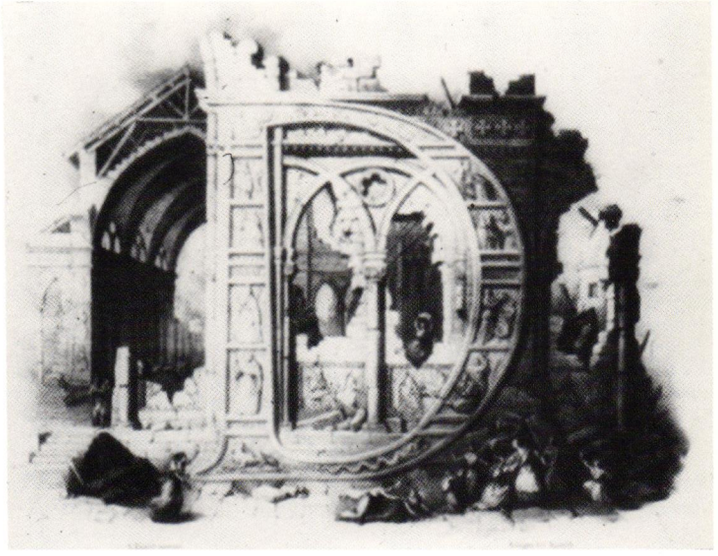
of 1756. The text of the *Antichità* is introduced by the letter *P*, which is standing in the forum and whose longer, vertical arm runs parallel to a Corinthian column in the picture behind (fig. 18).[76] This assimilation of letters into their pictorial backgrounds yields a multitude of possibilities. In the same *Antichità*, Piranesi engraved with perfect pictorial integration the initial *N*, its three branches extended downwards to combine with horizontally placed pieces of architecture so as to give the impression of a massive wall.[77] This letter introduces the descriptions of the aqueducts, of which such ruined walls might easily be reminiscent. In the background is the same aqueduct motif, which, in the plate directly preceding it, is not obscured by an artistic rendering but, with its archaeological purpose, rather appears as an exact design.[78]

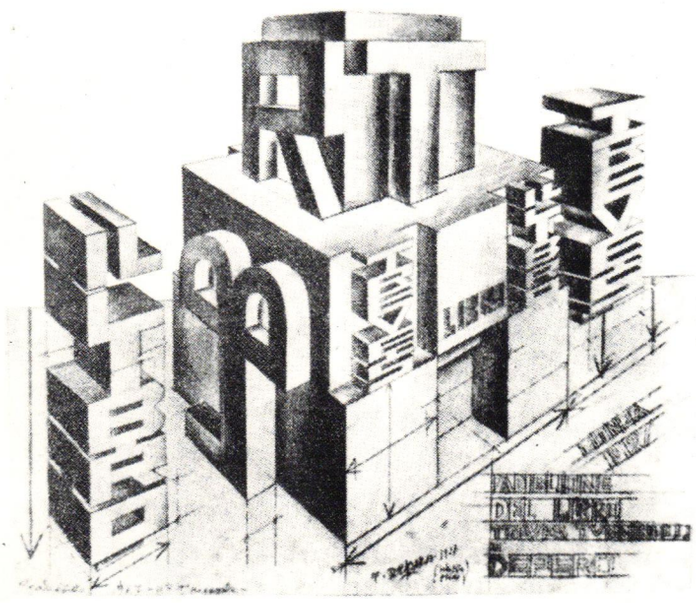
In 1806 Goethe places a monumental *A* in a landscape of hills and lake (as an allusion to Anna Amalia), and then reproduces the word "Amalie" in the form of a Roman aqueduct (fig. 19). Thus, he, too, follows the fashion of pictorial integration of the letter-motif, which by now has attained architectural monumentality.[79] This development reached its first peak in the painted alphabets of the nineteenth century. In 1830 Engelmann published *The Landscape Alphabet* (fig. 20) in London, which expresses letters as architectonic elements and as reflections in the water, thereby "realistically" including them in the picture.[80] Here, the prerequisite is once again one of the perspective view, which requires that all elements of the picture be regarded with equality. Already by the time of Lencker's treatise in 1567 the letter was being given the same treatment as geometric and architectural structures. Now the attention is directed to a greater extent towards the suprise element of the chosen motif. In 1843, Leopold Müller produced a lithographed alphabet (fig. 21) in the style of Giovanni Battista de Pian, in which the letters were set into the architecture of inn and market scenes.[81] A double *F* flanks a large fireplace and supports its superstructure. A *D* whose shape is not inappropriate to a wood structure supports, analogous to other architectural elements, the roof and beams of a building in which fish is sold. The lower part of the roof follows the curve of the arched part of the letter. In the *Alfabeto Pittorico* by Basoli (fig. 22), first published in 1839, the choice of motifs, based on the artist's experience with stage scenery, is extended to include the imagery of the theatre and all its Piranesian inventions.[82] Ruins, a Roman circus, lighthouse and mosque, library and Egyptian portal, harbour scenes and "sepolcri" are offered as subject matter into which the letters are masterfully interwoven as architectonic elements, with the aim of achieving as high a degree of novelty and virtuosity as possible.

Another peak in the architectonic integration of letter forms can be observed in the architecture of the early twentieth century. Propagandists of both Italian Futurism and the Russian revolutionary period make plans for the architectonic revolt of letters.[83] Letter architecture, in pictures such as those from Piranesi to Basoli, is used primarily in the medium of graphic art, even in its new guise of poster design. It also makes use of the directly propagandistic effect of the words themselves: whether Làzlò Peri places the name of Lenin on top of his monument to Lenin, itself bearing constructional resemblance to letters; whether Mussolini orders a monumental *M* to be erected as an entrance portal, or whether retail and industrial buildings bear gigantic letters, the application of architectonic, monumental lettering is firmly established and continues to be so, up to the work of Robert Venturi.[84] And in those places where this is less noticeable, on "ordinary" firm or factory signs, then a glance at dedicatory inscriptions in Roman baroque churches will show that it is in any case part of the repertoire of architectonic decor to accept "supplements in writing."[85] This is why alphabetic insertions into the architectural form are only found in

21. Letter as an integrated architectural element: The letter D *in a covered fish market. From the lithographed alphabet by de Pian and L. Müller, Vienna, 1843.*

22. The letter as architectural element in the tradition of scenographic invention. The letter D *from Antonio Basoli's* Alfabeto Pittorico, *Bologna, 1839.*





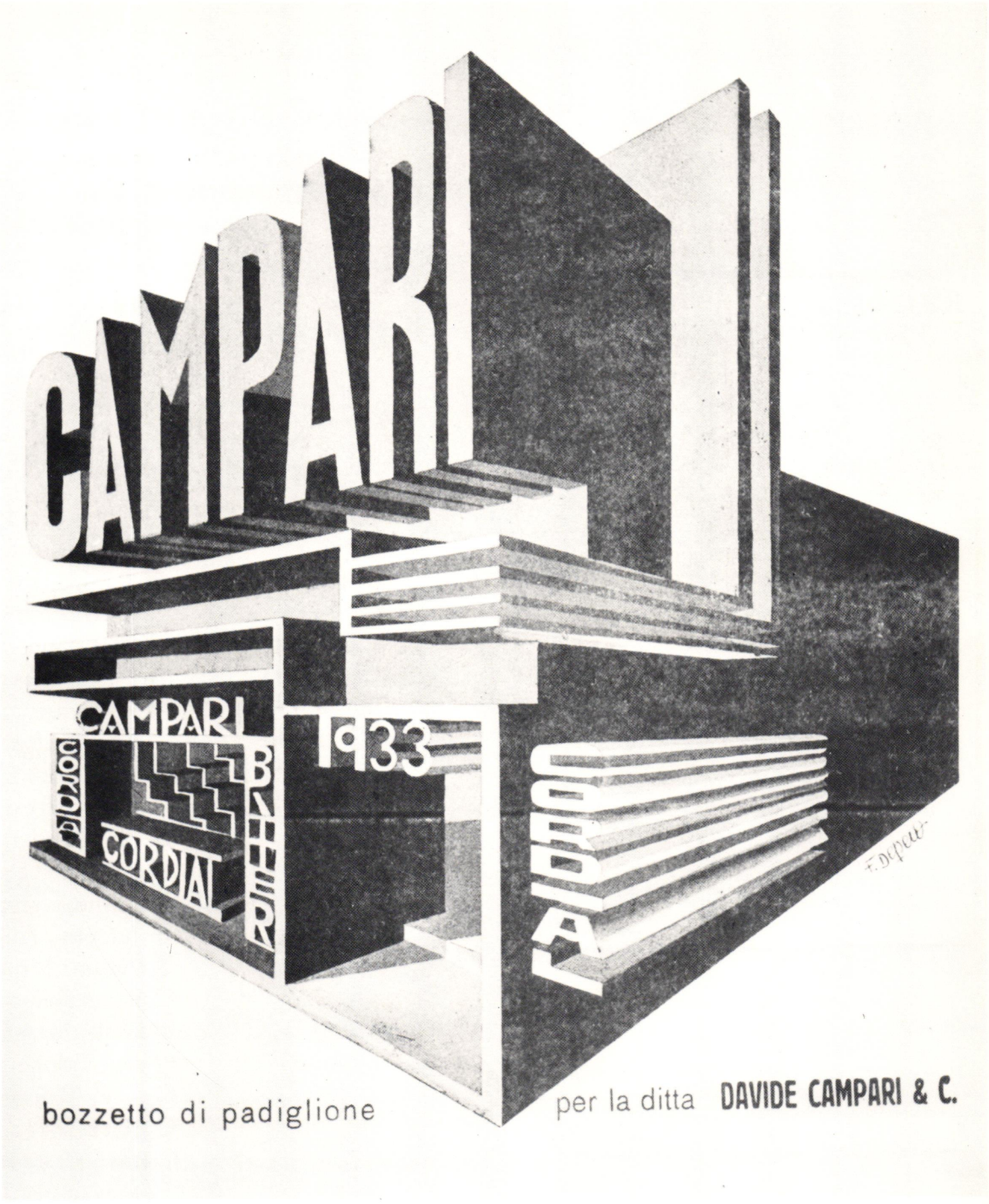
23. Letters and writing as structural elements in an architectural model: Fortunato Depero, Padiglione del Libro *for the Third Biennale in Monza, 1927.*

extreme cases. That the very letter elements become essential components of a project is extremely unusual. Fortunato Depero was one of the artists who made use of this possibility (figs. 23, 24), even if his *padiglioni* characteristically are considered to belong to the category of architectural exhibition pieces.[86] They include the *Padiglioni Campari* of 1933 and in particular the famous *Padiglione del Libro* for the third *Biennale de Monza* in 1927. The words *Il Libro* and *Treves* (the name of the publishing house) or their abbreviations *LB* and *TR*, as the only architectural elements, divide up the building block, built of cubes. Piled up like triumphal columns, the same lettering flanks both sides of the pavilion. Even this more radical style of the architectural use of letters has been carried on since then—for example, by Pier Gough, whose project for a research station for ICI originated in 1970 in the Architectural Association in London. Here, too, the elements of writing are not merely applied but constitute the architectonic form of the design. Configurations *resembling* letters often help to enforce the architectural intention in place of actual legible letters: di Teana employs for his futuristic city curving elements, which because of their sequencing, give a slight impression of letters.[87] Of course, these elements are filled in with architectonic concreteness. The process of abstraction recalls the previously discussed universality of the basic forms of the alphabet.

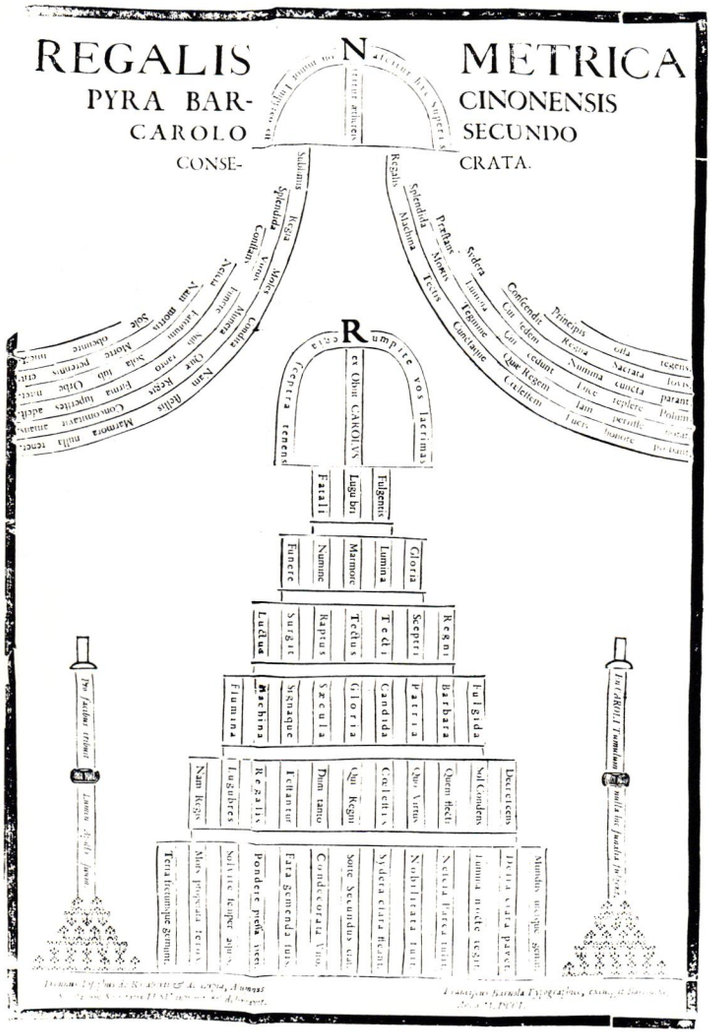
The various areas of such classifications are often freely interchangeable. This interchangeability is summed up by Magritte's motto: *Le titre ne contredit pas le dessin; il affirme autrement* (The title does not contradict the painting; it confirms it in another way) written on the back of a note to Foucault concerning his painting *Ceci n'est pas une pipe*.[88] It is equally applicable to his picture, *Rêve* which is composed of letters. Whether letters offer conditions for architectural expression or whether letters are expressed in architecture remains ultimately a question of varying points of view about the link between architecture and alphabet. The question embraces not only the possibilities of the pictorial alphabet but also the Vitruvian concept of anthropomorphism. In his photographic layout to Nezval's *ABC*—Cycle, Karel Teige succeeded in producing a perfect combination of a geometrically, typographically ideal letter form and the modern ballet dancer set into the fiction/invention of an architectonic continuum.[89]

More closely associated with the letter*form* is a further area of classification, found primarily in the sphere of artistically created alphabets and, conversely, in typographical pictorial figures. At the end of the fifteenth century, the architectonic alphabet of master W. A. used the abundance of late Gothic tabernacle architecture in order to stylize the letters in the likeness of architectonic structures (fig. 17). When letters or lettering are used as the basis for an architectural figure, as opposed to architectural elements being used to form a letter, yet another new sphere of creative association with the alphabet is revealed, with its own varied history and architectural examples. It extends from the poems shaped as goblets and candelabras for publications honoring people or events to Apollinaire and the futuristic *Parolibere*.[90]

The seventies rediscovered these forms of expression for language and art; their architectonic aspect is demonstrated in the title conferred on the corresponding sector by the Biennale of 1978: *materializzazione del linguaggio*. Particular attention should be paid to those configurations from which architectural pictures emerge. Delaunay's title page for Ivan Goll's book of 1924 on the Eiffel Tower uses the letters of the title to form them into a silhouette of the Eiffel Tower. In Rocaberti's publication of 1701 in honor of the funeral ceremonies of Carlos II of Spain, there appear, in place of the usual engraving of catafalques and mourning decoration, poems in honor of the deceased, whose typographical presentation gives the contours of a *castrum doloris* (figs. 25, 26)[91]



24. Fortunato Depero, Padiglione Campari, *1933.*



25. *Typographic architecture: presentation of funeral hymns in the form of a* Castrum Doloris. *From I. Rocaberti,* Lagrimas Amantes de la excelentissima Ciudad de Barcelona . . . , *Barcelona, 1701.*

26. *Presentation of funeral hymns in the form of a* Castrum Doloris, *Rocaberti.*

27. *Lettering and monogram as architectural floor plan:* IHS–*Jesuit college by A. Glonner, 1774.*

28. IHS–*Jesuit college of F. Roppelt, 1783. Berlin, Kunstbibliothek.*

29. *Letters, doubled to form symmetrical figures and architectural floor plans: "Louis le Grand"; architectural ovation to Louis XIV by Thomas Gobert.*

LAMENTATVR
tanti Regis Occaſum, hu-
omnia, cumque Gotho-
crymarum ſuſpen-

PYRAMIS

O
Mœ
Cor
Diſsi
Planè
Heſpe
Dolori
Dehiſ
Fluent
Citata
Quieſc
Vbique
Æolus v
Mox calore
Illico ſide
Se omnia fu
Et mundus lacr
Magnos vt fluvic
Efforment; dolea
Mecum genant
CAROLVS ſecun
Obivit: heu quo
Vix iſte deficit,
Cur lacrymas igitur
Cur gemitus reprimis?
In luctum, Auſtriaci
Tu fatum? & quare no
Cur tam fidum erga
Qui tibi lux fuit extin
Qui tibi donorum ra
Qui te, Rex veluti,
Qui te ſolliciti
Cur oculis ergo p
Te fugiunt gemitus, lu
Dic mihi dic? Gotho. el
Quomodo flere queo,
Vix cadit hæc Lux, hic

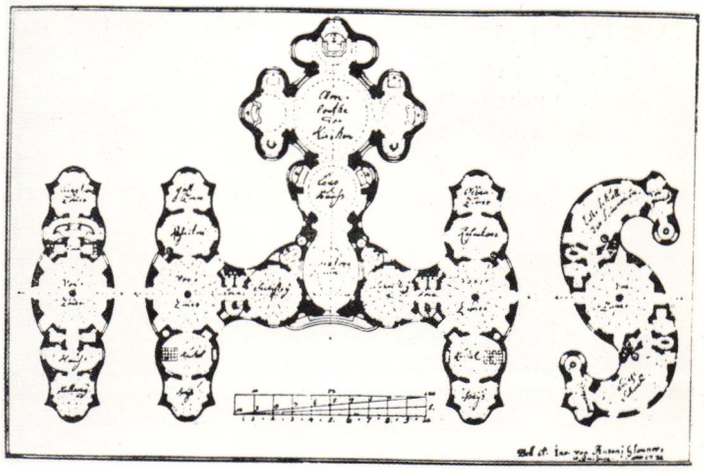
er!
are!
atis
heu!)
ipſa
llus!
olum
xium:
minum
fluant:
tumens
c mare:
coarctet:
ttat ignis:
ſte tegant
& Cœlum:
vomat vndique
mare maximum
ia, tum fleant:
preſsà Hiſpanià.
nus inter quoslibet,
mas debeo dare!
i Rex deficit.
è Gotholonia fundis?
nè cur verteris atrum
acrymabile plangens
ibus æthera compleſs?
non pandis amorem?
vmbracla laborum:
ol ſicut, adauxit:
cuſtodijt vſquè:
Paſtoris ad inſtar:
Gotholonia? quare
crymæque profundæ?
us mihi ſævior omni!
ſi cor deficit iſthic;
Rex hic, Paſtor & iſte?

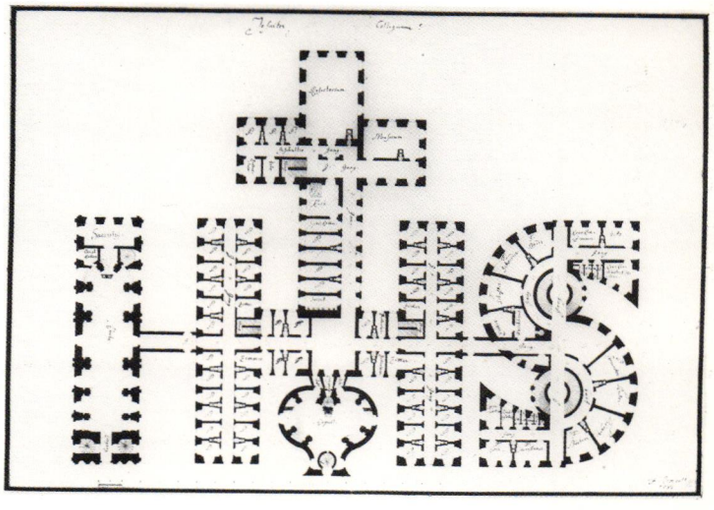
Ioſephus Campins & Aran.

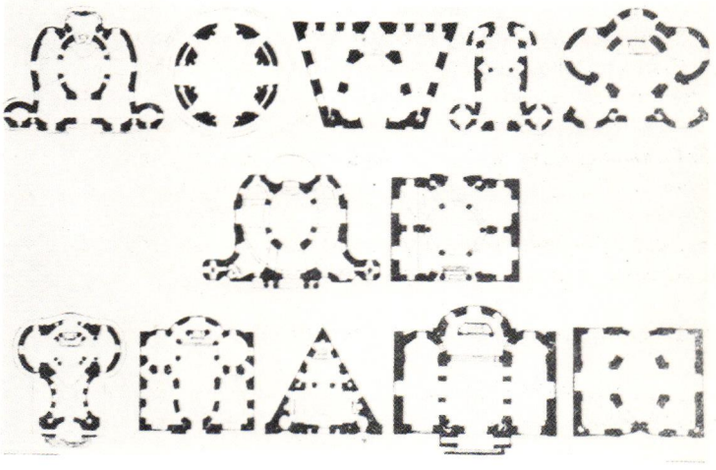
HESPERIA CAROLI

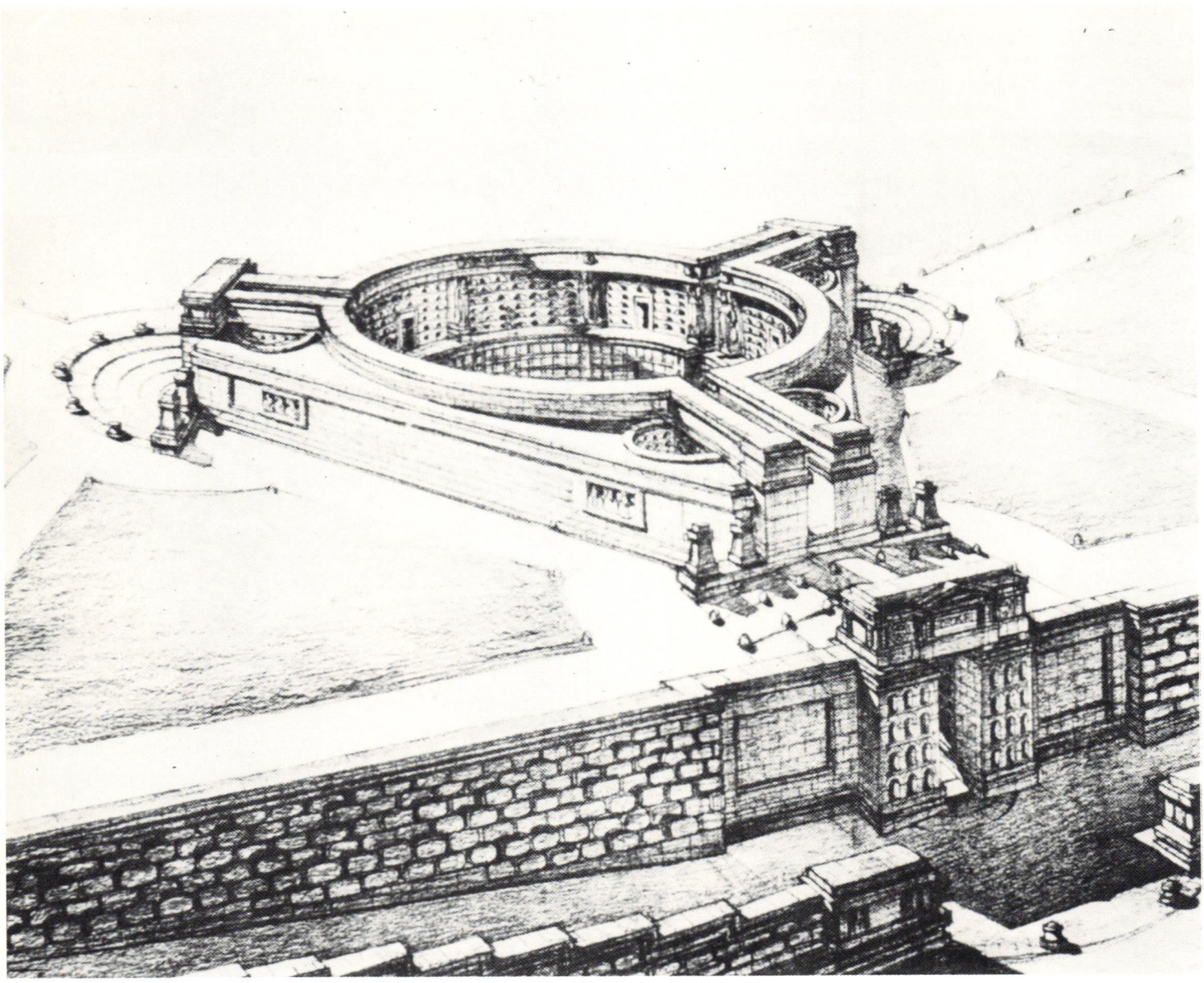
jus ad planctus adhortans
lonià apparenti de laſione expoſtulans.

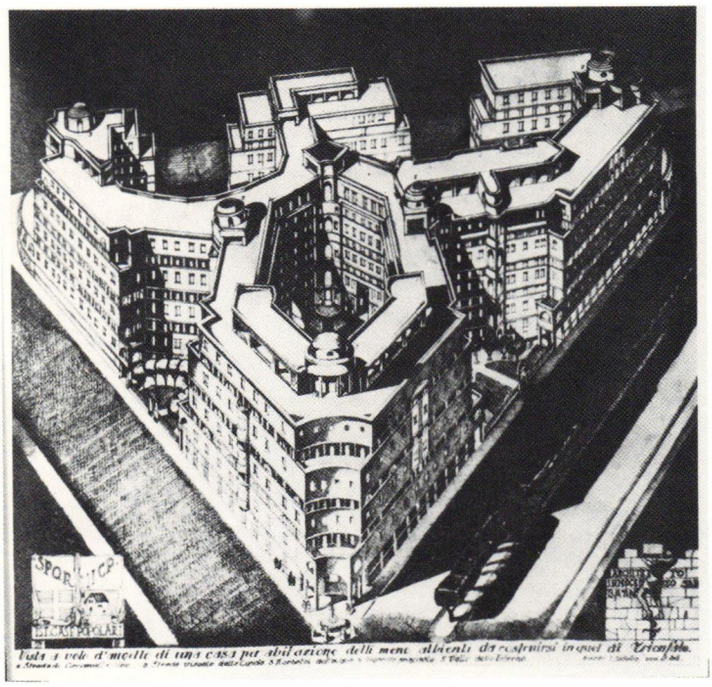
CENTAVRINA.











30. Floor plan resembling both the shape of letters and building typology: Enrico del Debbio, project for a "Monumento ai Caduti" for the Roman Verano cemetery, 1921.

31. Floor plan resembling both a letter and building typology: Innocenzo Sabbatini, housing project for the Quartiere Trionfale, Rome, 1930.

32. Architecture as both bearer of inscriptions and system for their classification. Wood carving of a Turris Sapientiae, *end of the fifteenth century.*

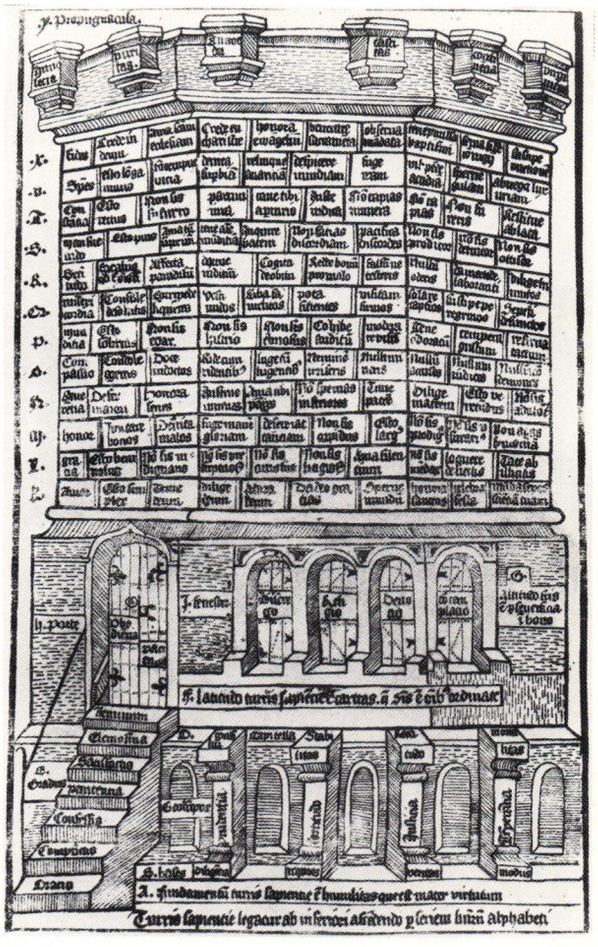
33. Architecture as bearer of mysterious inscriptions. Sibylline abbreviation. From Probus, De Notis Roma . . . , *Rome, 1525.*

One final possibility earns special consideration because of its inclusion of those architectonic structures whose forms are defined and projected from the floor plan. This has long been an acknowledged criterion for architectural form. What at first seems comparatively trivial gains particular meaning in the light of the floor plan's formation as central to the architectural structure. There are basically two possibilities. The adoption of whole words or monograms leads on the one hand to the projects of the Jesuit colleges of Glonner (1774) and Roppelt (1783) whose architecture, here with baroque flourishes and there with the rigidity of geometry, is intended to be built up over the floor plan of the colophon *IHS* (figs. 27, 28).[92] On the other hand, there is the possibility of bringing the individual letter to its common denominator in architecture. This can be achieved by application of probably the most common aesthetic architectural category: symmetry. Thus, in Thomas Gobert's project in honor of *Louis-le-Grand*, the individual letters are doubled to form a symmetrical structure for the floor plan, then to be split up in the usual way into walls, posts, and columns (fig. 29).

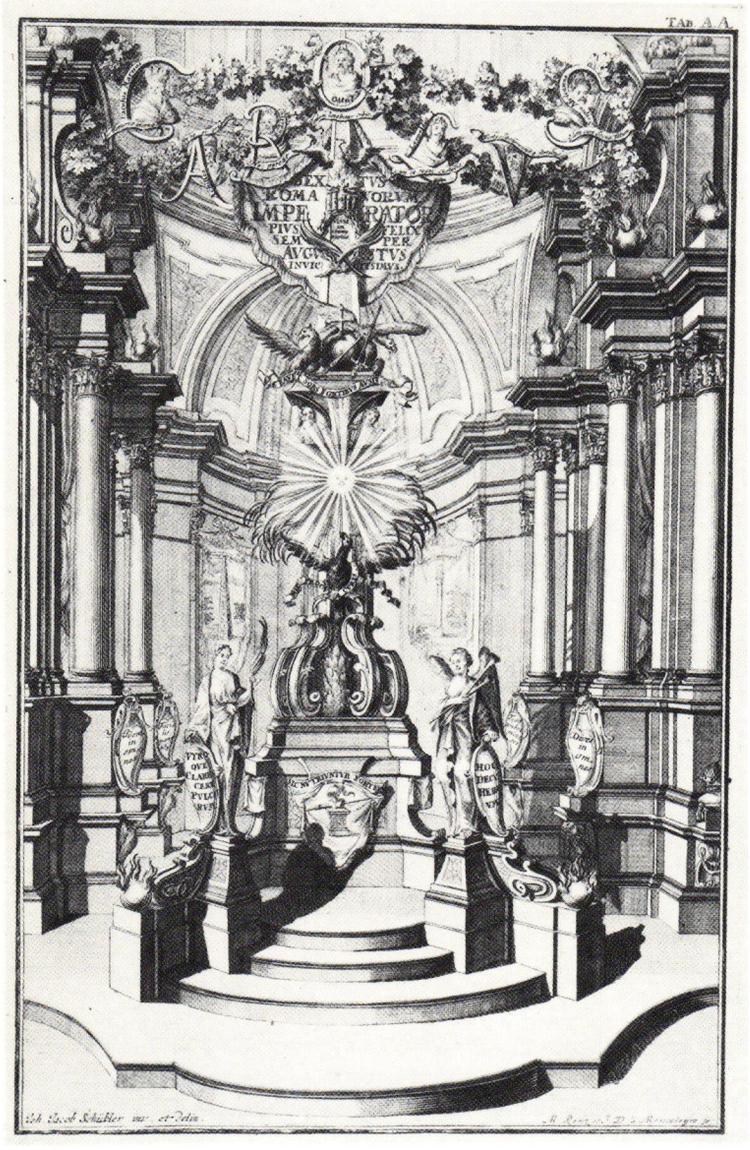
Steingruber's famous *Architectonisches Alphabet*, published in Schwabach in 1773, belongs in this category (figs. 2, 3).[93] It gives a complete series of architectural designs according to each individual letter of the alphabet and extends the shaping of the floor plan to include the elevation. This program alone would seem to contribute considerably towards the claim that such constructions would be feasible. Steingruber vindicates this claim, furthermore, by expounding the *varietas* offered by such a multiplicity of alphabetical floor plans, and in doing so he criticizes tediousness in architecture, with reference to Laugier. What had hitherto been left to the caprices of invention was then made concrete in an architectural treatise, and in this new, official attire seemed to have moved closer to realization. However, this concretization also remained to a great extent no more than mere hope, with the exception of the *X* and *Y* types, which were already in common use anyway.

And yet it was not pure chance that led Steingruber to compile a catalogue of plan types based on the alphabet. His period is one of progress in the efforts to form floor plan typologies, whose significance and successors can here once again only be indicated representatively and in isolated references. Of course, in those areas where the construction of individual dwellings has been replaced by city block construction, architecture is familiar with an abundance of geometrically abstract floor plan forms, of which an analogy to some letters of the alphabet positively thrusts itself. It is along these lines that Steven Holl, author of Pamphlet Architecture, has summarized observations on building block construction in American cities under the title *The Alphabetical City*.[94] For example, the *I* type signifies the type of house that extends through the length of the block and has a front and back facade; the *T* type shows the same facades but this time with more width; and the *U* type contains a courtyard open on one side. Further variations result according to unrestricted use of the building block principle to form combinations of these basic types.

The above mentioned statements on configurations that *resemble* the letters of the alphabet repeat themselves here. Wherever figures are chosen for the purpose of floor plan typology, there will always be shapes resembling letters, particularly when forms are combined. And once again it is in Italy, this time in the period between the wars, that these floor plan figures are especially popular and lead to Enrico del Debbio's war memorial for Rome in 1921 (fig. 30) or Sabbatini's residential district of the Quartiere Trionfale of 1930 (fig. 31).[95] Both projects demonstrate their "likeness to letters" in the combination of the enclosing and linear sections of the figures; both projects clearly show this floor plan quality in the diagrams. This possibility was









34. Letters in an extended use as emblems in the framework of staged ceremonial architecture. Dedicational engraving to Karl VI from Schübler's Perspectiva, *1719. Engraving by M. Renz and J. D. à Montalegre.*

35. Allegory of the invention of writing: "Hieroglyphics" as "architecturally conforming" symbol-inscription: F. Schellenberg, Dedicational engraving in honor of the New Year, 1786.

36. Pseudo-hieroglyphics as architectural decoration: base of a pyramid serving as Glacière, *Potsdam.*

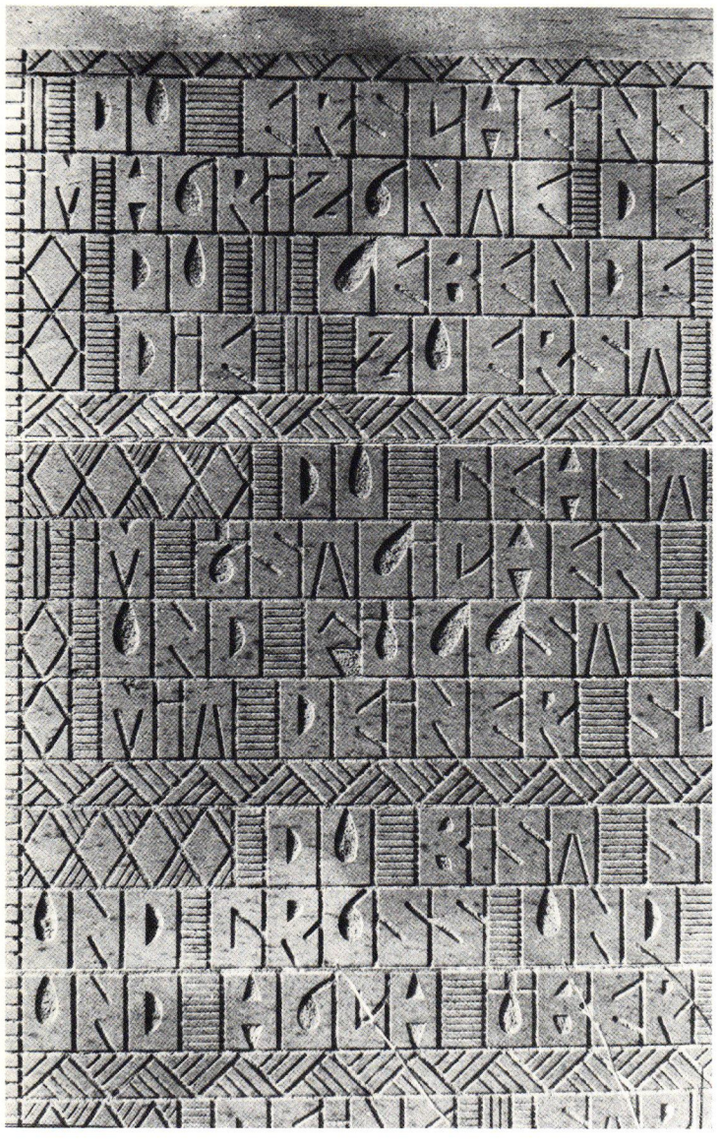


reflected again in 1975, this time pictorially, in Markus Lüpertz's *Babylon dithyrambisch* (fig. 1).[96] The title reveals the association between architecture and elements of speech. In the painting the shape of the plan is brought out distinctly, while beneath it a sky scraper sinks babylonically earthwards.

VI.

One final area linking writing and alphabet to architecture will need at least a brief explanation. This time it does not begin at that point where alphabet and architecture make contact formally, that is, at their mutual geometrical and graphical basis, but rather recalls the enormous scope for symbolism in both writing and alphabet. It is true that in Vittone's architectural treatise, the *geroglifici* appear to be specified as hardly more than synonyms for miscellaneous decorative elements; yet exactly these hieroglyphics with their acknowledged relevance as symbols and emblems were also of decisive importance in the architectural context.[97] The inscription when used in architecture, as cited above, suffers from its explicitness and banal brevity; the information summarized symbolically in the hieroglyphic—*ex similitudine rerum materialium*, as Athanasius Kircher described the process of abstraction—is better suited to the similarly veiled message of the architectural work (fig. 35).[98] It was finally the study of Egyptian obelisks that produced a direct model for the use of symbols such as hieroglyphics and their more modern descendants, emblems. The obelisks had always been accepted as monuments of significance, and thus the importance of the message encoded in their decorative hieroglyphic symbols could be postulated. Whether Athanasius Kircher (fig. 4), in ignorance of the notion of hieroglyphics being a form of alphabetical writing, conferred on the obelisk in the Piazza Navona an interpretation that was comprehensible within its own modern context, or whether, as was often the case at the end of the eighteenth century, the hieroglyphic symbols attached to a public monument were created especially for that monument (figs. 7, 8) is of no importance.[99] The truth is that finally, as a result of historical and basic insights into pictorial writing, particularly writing of hieroglyphic origin, it was possible to supplement works of architecture with informative inscriptions whose messages were sufficiently veiled by metaphor.

There are few examples to verify the nature of this category. The more encoded the inscription on the building (fig. 32), the closer its association with the monument appears. This is apparently suggested by one example, in which the inscription, attributed to a sybil, consists of abbreviations of particular regularity (fig. 33).[100] This engraving of 1525 shows a person pointing to the inscription and at the same time to the architectural monument. The inscription was deciphered by Beda with the aim of increasing the fame of this outstanding "work of architecture." Similar ambiguity seems sometimes to integrate the inscriptions on works of art even better into the context of meaning for whole systems of decoration. The engraving in honor of Karl VI, depicting a fictional stage setting, which forms the frontispiece to Schübler's *Perspectiva*, clearly shows the word "Carolus" in the form of hanging drapes.[101] The word is in this way incorporated into the archi-



37. *Stylization of writing and alphabet suggesting "exotic" alphabets and their ornamental value: pedestal inscription, Mathildenhöhe, Darmstadt (detail).*

tectural furnishings. The letters reveal their whole meaning only when they are linked to further inscriptions mounted on shields, to emblems and allegorical statues, and after the meanings attached to every other letter have been disclosed. Thus, the *C* is associated with Carolus Magnus and is supplemented by the quotation praising the virtue common to both rulers: *Eternity will not forget / the stories of your heroic deeds.*

As shown in these examples, the hieroglyphic symbols as "language" are not contrasted with the work of architecture but rather converted into being a part of it, integrated to conform with the decor. Indeed, one could almost claim—positively interpreting Vittone's classification—that hieroglyphics can be considered the generally acknowledged formula for the integration of "symbolically" and "emblematically" conveyed messages in the architectural context. Furthermore, the association with hieroglyphics in the eighteenth century made possible the free invention of pictorial writing systems. With symbols resembling hieroglyphics situated in appropriate places, these systems adorn monuments such as the obelisks designed by Brogniart (fig. 8) and Sobre (fig. 7).[102] In this way, to a certain extent they expressed symbolically in architecture the new ideas of the French Revolution. Conversely, the "hitherto undecoded" hieroglyphic system of writing, illegible outside the circle of scholars researching it even after Champollion, has nevertheless retained that significance inherent in pictorial writing systems. Remaining independent of any major recategorization of meaning or interpretation, hieroglyphics have continued to be used to decorate architectural works, even if only on such structures as the pyramid serving as an ice cellar in Potsdamer Park (fig. 36). A final example is presented to show how the formal approximation to ancient, apparently illegible types of writing increases decorative worth and intensifies the integration into the architectural structure bearing the inscription. The writing on the Mathildenhöhe (fig. 37) consists of lines and hatchings of teardrop, semicircular, and triangular shapes reminiscent of hieroglyphics, and it is only after close examination that the forms of a text, composed in legible Latin, become recognizable.

translated from the German by Carol A. Brévart.

NOTES

This work, originally titled "Architektur und Alphabet," presents part of a report on research undertaken primarily between 1975–1979. The extent of the analyses and examples has had to be limited to fit into the concept of this essay. It was preceded by the article "alphabet" of 1975 for an American encyclopedia, which was never published, and by the xeroxed catalogue of minimal edition with its introduction "Alphabet/Schrift/Sprache/Zeichen/Bild/Kunst/Architektur," for the exhibition and colloquium Kunst und Sprache *in Zürich, 1977. A study on "hieroglyphics", medallions and related bearers of messages in writing or picture in architectural decor in the light of historical and cultural understanding in eighteenth century Italy (Vico, Bianchini, Piranesi) will be appearing in* Macula.

1. Guillaume de Brebeuf's statement is placed as a motto above the first chapter of Dubois's *Histoire abrégée de l'écriture* (Paris, 1772) 1. It is taken from Brébeuf's translation *La Pharsale de Lucain . . . en vers francois* (The Hague, 1683).

2. Cf. Claudio Tolomei, *Il Cesano, Dialogo* (Venice, 1555) 68.

3. Cf. G. G. Trissino, *Dubbii Grammaticali* (Vicenza, 1529) fol. *aa ii*.

4. Cf. Iacomo de'Lanteri, *Due Dialoghi . . . del modo di disegnare le piante delle fortezze secondo Euclide; et del modo di comporre i modelli e torre in disegno le piante delle Città* (Venice, 1557) 7, 8.

5. Cf. (Daniele Barbaro), *I Dieci Libri dell'Architettura di M. Vitruvio* (Venice, 1567) 274. See also Werner Oechslin, "Astrazione e architettura," *Rassegna* 4 (1982) 19–21.

6. Cf. Gerald de Lairesse, *Grundlegung zur Zeichenkunst*, ed. (Nürnberg, 1727) 15.

7. Cf. Nikolaus Goldmann, *Vollständige Anweisung zu der Civil-Bau-Kunst . . .* , extended by Leonard Christoph Sturm (Wolffenbüttel, 1696; Leipzig, 1708) preface.

8. Cf. Etienne Louis Boullee, *Architecture, Essai sur l'Art*, ed. by Jean Marie Pérouse de Montclos (Paris, 1968) 47.

9. Virgilio Vercelloni, "Construire a chiare lettere (da Goethe ai Pop)", *Psicon* (1976) 97ff. He placed the phenomena described here in the "bizarre" and "eccentric" world of the "peculiar" eighteenth century. However, he also rightly allotted the arch to the architectural endeavours of the "New Figuration" movement of the Sixties and Seventies. Vercelloni's essay offers us the only serious text related to the problem. In Josef Ponten's *Architektur, die nicht gebaut wurde* (Stuttgart/Berlin/Leipzig, 1925) 60ff. and figs. 119–132, the problem is introduced characteristically with the epithets "das Merkwürdigste" ("the strangest"), "das Tollste" ("the most fantastic"), "das am meisten Spielerische und Ausgefallene" ("the most playful and unique"), and in his explanation of the phenomena he limits himself simply to the characterization: "doch ein beredtes Zeugnis seiner Zeit" ("an eloquent testimony to its era nonetheless").

10. Cf. Johann David Steingruber, *Architectonisches Alphabet bestehend In Dreyssig Grund- und Auff-Rissen . . .* (Schwabach, 1773).

11. W. Gessner, *Die Sprache der Baukunst. Raum und Gebärde* (Stuttgart, 1948). David Summers, *Michelangelo and the Language of Art* (Princeton, 1981).

12. Compare Werner Oechslin, "Architettura e Natura, sull'origine e la convertibilità dell'architettura", *Lotus* no. 31 (1981) 4–6.

13. Cf. W. von Humboldt, *Ueber die Verschiedenheit des menschlichen Sprachbaues und ihren Einfluss auf die geistige Entwickelung des Menschengeschlechts* (Berlin, 1836).

14. Dubois, *Histoire abrégée*. Dubois dedicated the work to the "Messieurs de l'Academie Royale d'Ecriture de Paris" founded in 1762 within the context of an increasing tendency to diversify the various spheres of art and culture and to form individual institutions for each genre. On the founding of the Academy, see Dubois, *Histoire abrégée* 122ff. and 162ff.

15. Cf. Dubois, *Histoire abrégée* 5.

16. See Madeleine V.-David, *Le débat sur les écritures et l'hiéroglyphe aux XVIIe et XVIIIe siècles et l'application de la notion de déchiffrement aux écritures mortes* (Paris, 1965) and Jacques Derrida, *De la grammatologie* (Paris, 1967).

17. Because of his direct connections with contemporary attempts at new interpretations of the hieroglyphics, i.e., the integration of the Roman obelisks into an overall symbolic conception of the city of Rome, and because of the wide distribution of his works, Athanasius Kircher remains an important point of reference. His models and ideas are to be found in, besides his "magnum opus" the *Oedipus Aegyptiacus* (Rome, 1652–1654), in *Prodromus coptus sive Aegyptiacus* (Rome, 1636); *Obeliscus Pamphilius* (Rome, 1650); *China illustrata* (Amsterdam, 1667); *Turris Babel* (Amsterdam, 1679). Cf. Antoine Court de Gébelin, *Monde primitif, analysé et comparé avec le monde moderne, considéré dans l'histoire naturelle de la parole; ou origine du langage et de l'écriture . . .* (Paris, 1775). This work, recognizedly the most comprehensive on the topic, appeared in the nine-volume *Monde primitif* (1773–1782).

18. The Mexican "knot-writing" formed a kind of special theme for scholars of writing at that time. Cf. *Lettera Apologetica dell'esercitato Accademico della Crusca contenente la difesa del Libro Intitolato Lettere d'una Peruana . . .* (Naples, 1750). The work is, moreover, one of the classics of Italian Freemason literature.

19. Cf. Dubois, *Histoire abrégée* 10. Nicolas Fréret was *Secrétaire perpétual* of the *Académie Royale des Inscriptions et Belles Lettres*, in which writing research was particularly promoted. Fréret was associated with the Parisian academy of art and, of course, with the Etruscan academy in Cortona. He became involved with the writing complex in the course of his chronological studies (also on China), in which field he competed with Newton. On Fréret see de Bougainville, "Eloge de M. Fréret," *Histoire de l'Académie Royale des Inscriptions et Belles Lettres* (Paris, 1756) 23 : 314ff. The (chronological) classification of hieroglyphic and Chinese pictorial or written symbols within the universal development of the writing or speech was one of the classic desires of this field of research.

20. Compare the example from Kircher's *Obeliscus Pamphilius*.

21. I refer to the classic studies of K. Giehlow, "Die Hieroglyphenkunde des Humanismus in der Allegorie der Renaissance . . . ," *Jahrbuch der kunsthistorischen Sammlungen des Allerhöchsten Kaiserhauses* (Vienna/Leipzig, 1915) 33: Handbook 1. and L. Volkmann, *Bilderschriften der Renaissance, Hieroglyphik und Emblematik in ihren Beziehungen und Fortwirkungen* (Leipzig, 1923).

22. Cf. D. J., "Hiéroglyphe," *Encyclopédie, ou Dictionnaire raisonné des Sciences, des Arts et des Métiers . . .* (Neuchâtel, 1765) 8 : 205–206.

23. Cf. C. Chesneau du Marsais, "Alphabet," *Encyclopédie . . .* (Paris, 1751) 1 : 295–297.

24. Integration into a social context was postulated analogously for art and architecture during this period. I refer solely to the corresponding theoretical statements of Quatremere de Quincy in the "Avertissement" of his *Encyclopédie Méthodique. Architecture* (Paris, 1788) 1 : 1 ff., and in his *Considérations morales sur la destination des ouvrages de l'art . . .* (Paris, 1815).

25. Virgilio Polidoro, *De rerum inventoribus* (first editions: Venice, 1498 and 1499; all 8 books: Basel, 1517, 1521, 1524, and 1525).

26. Werner Oechslin, "Geometrie und Linie. Die Vitruvianische Wissenschaft von der Architekturzeichnung," *Daidalos* (1981) 1 : 20ff.

27. Cf. Polidoro, *De rerum inventoribus* (Basel 1521) fol. 5v/6r.

28. Cf. G. J. Vossii, *Operum Tomus Secundus Grammaticus, Aristarchus sive de arte grammatica libri septem . . .* (Amsterdam, 1695) 9 : 13ff.

29. Cf. Mutio Pansa, *Della Libraria Vaticana Ragionamenti . . . divisi in quattro parti. Ne'quali non solamente si discorre dell'origine, e rinovatione di essa: mà anco con l'occasione delle Pitture che vi sono nuovamente fatte si ragiona* (Roma, 1590). The publication is consequently considered to be the official statement of the iconographic program of the new fresco cycle. It draws attention to the historic relevance of the subjects in detail. A new edition, which, in view of the abundance of information, has the meaningful title *Vago, e dilettevole Giardino di varie lettioni di Mutio Panza*, was published in 1608 in Rome by Mascardi. Cf. Pansa, "Del costume di tener Statue nelle Librarie, e di Adamo primo huomo del Mondo" *Della Libraria Vaticana* 149ff.

30. The frescoes on the columns are described in the inscriptons beneath them and are supplemented above by scrolls containing the appropriate alphabets or letters. These alphabets have been published by Pansa.

31. Cf. A. Brogiotti, *Indice de Caratteri, Con l'Inventori, e nomi di essi, esistenti nella stampa vaticana, e camerale* (Rome, 1628).

32. Cf. Brogiotti, *Indice de Caratteri* 25. Gubbio's tablets were not only well known at that time but had also been published partially, along with their inscriptions; see Giacomo Devoto, *Tabulae Iguvinae* (Rome, 1940) 7.

33. Such texts are published up until about 1787 and are to be found in a series of volumes. See Johann Georg Theodor Graesse, *Trésor de livres rares . . .* 1:84–86. Furthermore, Propaganda Fidei also published among others, an Arabic grammar in 1641.

34. Cf. (J. di Stefano), *Alphabetum Ibericum, sive Georgianum, cum oratione dominicali, salutatione angelica, symbolo fidei, praeceptis decalogi, ecclesiae sacramentis et operibus misericordiae . . .* (Rome, 1629), the first dated publication of Propaganda Fidei.

35. Various versions of this tale go back to Josephus Flavius. Besides those of Virgilius Polidoro, detailed comments are to be found in a comparable encyclopedia of antiquity by Guido Pancirolo and by his commentator, Flavio Gualtieri, *Raccolta breve d'alcune cose più segnalate c'hebbero gli antichi . . .* (Venice, 1612) 182. It is inteesting that both–like Pansa in *Della Libraria*, 254, speak of "columns."

36. Cf. Pansa, *Della Libraria* 255. One can conclude from the wording that knowledge of the problem complex concerning writing exists: "Se queste fossero veramente di *lettere significanti*, ò pure de *segni*, e figure scolpite, come poi costumò l'Egitto di fare, non si sà ancora perfettamente." It is noteworthy that the interpretation is based upon the knowledge of the alleged "pictorial writing" of the hieroglyphics. However, Pansa also reports the opinion of those who, according to theological priority and not to the possible conformities of the development of writing with reference to the increasing abstraction in letters, desired that the writing on the columns be Hebrew.

37. Cf. Agostino Ferentilli, *Discorso Universale . . . nel quale discorrendosi per sei età . . .* (Venice, 1574) 12ff.

38. Ferentilli, *Discorso*, 16–17. "fu il primo che cominciasse à fabricare le capanne de'Pastori." Marble and brick are attributed a capacity to resist the dangers of flood and fire.

39. It is well known that astrological knowledge was considered to be in the uppermost position of the *prisca philosophia*. Thus Polidoro also believed that Seth's sons had written down nothing other than the "disciplinam rerum coelestium a se primo inventam" (Polidoro, *De rerum inventoribus*, fol. 7r.). The possible conflict in interpretation, i.e., the possibility that signs on the columns would not belong to the category of the invention of writing if they were astrological diagrams, is avoided by relegating it to the appropriate chapter on the invention of astrology. The picture typology in modern representations of such inventions and activities corresponds to this; see Oechslin, "Geometrie und Linie."

40. Cf. Juan Caramuel de Lobkowitz, *Architectura civil, recta y obliqua* (Vigevano, 1678). Cf. F. Galli-Bibiena, *L'Architettura Civile* (Parma, 1711), "A'Lettori": "La Prospettiva de'Teatri, è Scene, è tutta di mia invenzione, . . . Mà per le scene colli punti accidentali, e vedute per angolo, sin'ora non praticate da alcuno, sono positivamente tutte mie." See also Oechslin, "Il contributo dei Bibiena–una nuova attivita architettonica," *Bollettino del Centro Internazionale di Studi di Architettura "Andrea Palladio"* (1975, 1978) 18:131ff.

41. The Ionian volute presents a perfect example of an architectonic problem that plainly provokes the spirit of invention. Already at the time of the Cinquecento, Salviati's proposal caused envy and the reproach of plagiarism. In his *Architettura civil* of 1678, Caramuel gives a whole collection of various methods of construction with the inventors' names. And Goldmann's variation was so convincing that the pertinent text was accepted into de-Laet's famous Vitruvius edition of 1649.

42. Cf. Francesco Sansovino, "Rime in lode del l'Alfabeto," *Delle Rime Piacevoli* (Venice, 1627) 182ff.

43. Compare Konrad Ehlich, "Schriftentwicklung als gesellschaftliches Problem lösen," *Zeitschrift für Semiotik* (1980) 2:335–353.

44. In the Vatican series, Pythagoras's "ethical, human" invention is linked with the picture of Hercules at the crossroads. The inscription beneath the fresco reads: "Pythagoras Y Literam ad humanae Vitae Examplum invenit" (Pansa, *Della Libraria* 285ff.).

45. Cf. Dubois, *Histoire abrégée* 25, 26. Cf. Trissino, *Dubbii grammaticali*.

46. Cf. Guilo Camillo, *Due Trattati, l'uno delle materie, l'altro della imitatione* (Venezia, 1544) fol. 37v–38r.

47. Caspar Schott, *Iaco-Seriorum Naturae et Artis, sine Magiae Naturalis Centuriae tres* (Würzburg, 1665) 117.

48. Cf. G. B. Giraldi Cintio, *Discorsi* (Venice, 1554) 72.

49. Cf. Goldmann, *Vollständige Anweisung*, preface.

50. Cf. Giovanni Ciampini, *Vetera Monimenta* (Rome, 1690).

51. Cf. Guillaume Philandrier, Gulielmi Philandri, Castilonii, . . . *in decem M. Vitruvij Pollionis de Architectura libros annotationes . . .* (Rome, 1544) 1.

52. Cf. de Lairesse, *Grundlegung zur Zeichenkunst*.

53. Barbaro, *I Dieci Libri*. de'Lanteri, *Due Dialoghi*.

54. Cf. Jean Jacques Rousseau, "Essai sur l'Origine des Langues, où il est parlé de la Mélodie et de l'Imitation musicale," *Projet concernant de nouveaux signes pour la musique* (Geneva, 1781) 239.

55. For general comparison: Elmar Holenstein, "Doppelte Artikulation in der Schrift," *Zeitschrift für Semiotik* (1980) 2:319ff.

56. Cf. Goulet de St.-Morien, *Mémorial des Principes de l'Ecriture, par demandes et par réponses* (Paris, An X, 1802) 9.

57. As in the treatises on writing, an attempt is made in treatises on drawing and plan design to transpose the hitherto spontaneous art form of drawing into the geometrical system. Cf. Oechslin, "Die wohltemperierte Skizze" *Daidalos* (1982) 5:99ff.

58. The main difference between "straight" and "curved," which had already been established by Euclid, appears in all the treatises on geometry made applicable to art, from Albrecht Dürer *Underweysung* (1525) to Carlo Cesare Osio *Architettura Civile* (Milan, 1661) to William Hogarth *Analysis of Beauty* (London, 1753). See Jean Nicolas Louis Durand, *Précis des Leçons . . .* (Paris, 1801) plate 20 of the second part and ff. See also Oechslin, "Monotonie von Blondel bis Durand. Reduktion einer architektonischen Aesthetik?," *werk-archithese* (1977) 1:29ff.

59. Compare the first statement, which Condillac uses as a foreword to his *La Langue des Calculs, ouvrage postume et élémentaire* (Paris, An VI) 1: "Toute langue est une méthode analytique, et toute méthode analytique est une langue."

60. Barbaro, *I Dieci Libri* (Venice, 1556) 26. Compare also the classification scheme for "Forma" in the Italian edition (Venice, 1567) 27.

61. Cf. Trissino, *Dubbii Grammaticali* and note 60.

62. Cf. *Vocabulario degli Accademici della Crusca* (Naples, 1746) 1:1.

63. Cf. F. M. B. van Helmont, *Alphabeti vere Naturalis Hebraici brevissima delineatio* (Sulzbach, 1667).

64. Compare Oechslin, "Geometrie und Linie."

65. See Millard Meiss, "Alphabetical Treatises," *Andrea Mantegna as Illuminator* (New York, 1957) 68ff., with a postscript in *The Painter's Choice; Problems in the Interpretation of a Renaissance Art* (New York, 1976) 176ff. Compare also F. Feliciano, *Alphabetum Romanum* (Verona, 1960).

66. Cf. Wilhelm Bühler, "Kupferstichalphabet des Meisters E. S. . . ." *Studien zur Deutschen Kunstegeschichte* no. 301 (Straussburg, 1934). Compare also J. Poppelreuter, *Der anonyme Meister des Poliphilo . . .* (Strassburg, 1904) 19, 22, 24, 36–37.

67. Cf. Hans Lencker, *Perspectiva literaria, das ist ein klärliche Fürreissung wie man alle Buchstaben des gantzen Alphabets Antiquitetischer oder Römischer Schrifften auff mancherley art und stellung durch sondere künstliche behende weiss und weg so bishero nicht ans liecht kommen in die perspectif einer flachen ebnen bringen mag* (Nürnberg, 1567). On the formal congruity of the method of presentation, compare any treatise on perspective in architecture. Letters presented to demonstrate perspective also become conversely instructional figures: compare eg. *G. H., Reiss-Buch, Neuvollständiges . . .* (Nürnberg, 1707). Plate 59 shows an alphabet consisting of such letters and thus appears as "perspectival variant" to Palatino's letter puzzle (fig. 12).

68. The famous work was written between 1523 and 1529 and gained the title of *imprimeur du Roi* for Tory.

69. Prose Fiorentine (Cicalate) (Florence, 1723) 6:part 1, 20ff.

70. Cf. Giovanni Battista Palatino, *Libro di G. P., cittadino romano, nel qual s'insegna a scrivere ogni sorte di lettera antica, e moderna, di qualunque natione, con le sue regole et misure et essempi et con un breve discorso dele cifre* (Rome, 1545). For her help and cooperation during my work on the Palatino manuscript in the Berliner Kunstbibliothek (OS 5280) I would like to sincerely thank Dr. Marianne Fischer. The manuscript bears several dates (1543, 1549, and mainly 1574, 1575). For comparison to Palatino and to Cresci's "Nachfolgewerk," see D. M. Anderson, *A Renaissance Alphabet. Il Perfetto Scrittore, Parte Seconda, Giovan Francesco Cresci* (Madison/Milwaukee/London, 1971).

71. Cf. P. Collins, "The Origins of Graph Paper as an Influence on Architectural Design," *Journal of the Society of Architectural Historians* (1962) 159ff., and J. Guillerme, "Notes pour l'Histoire de la régularité," *Revue d'Esthétique* (1970) 4:383ff.

72. Denis Diderot, *Lettre sur les Aveugles, à l'usage de ceux qui voyent* (London, 1749) passim and plate 2, 69.

73. Cf. G. Vitali, *Lexicon Mathematicum. Hoc est Rerum omnium ad universam plane Mathesim quoquo modo, directe, vel indirecte spectantium, collectio, et explicatio* (Roma, 1690) 1ff.

74. Compare E. Oswald, "Alphabet," *Reallexikon zur deutschen Kunstegeschichte* (Stuttgart, 1937) 1:column 404 ff.

75. Antoine Joseph Pernety, *Dictionnaire portatif de peinture, sculpture et gravure* (Paris, 1757) 9.

76. Giovanni Battista Piranesi, *Antichità Romaine* (1756) 1:book 1, focillons 146, 148 and 150.

77. Piranesi, *Antichità Romaine* 1:book 1, appendix, "Spiegazione della proposta tavola degli acquedotti," 1, focillon 147.

78. Piranesi, *Antichità Romaine* 1:book 1, plate 38, focillon 217.

79. Cf. Johann Wolfgang von Goethe, *Reise-, Zerstreuungs- und Trost-Büchlein 1806 to 1807*, ed. Ch. Michel (Frankfurt, 1978). figs. 25 and 26.

80. *The Landscape Alphabet* (London: Engelmann, Graf, Coindet & Co., 1830).

81. Leopold Müller's alphabet published by Toma und Höfelich, Vienna.

82. Cf. Antoinio Basoli, *Alfabeto Pittorico ossia raccolta di pensieri pittorici composti di oggetti comincianti dalle singole lettere alfabetiche* (Bologna, 1839).

83. Cf. Vercelloni, "Costruire a chiare lettere."

84. This is based upon Venturi's own work and on his basic discussions. *Learning from Las Vegas* (Cambridge, 1972) can be taken as a point of orientation for modern statements.

85. John Sparrow, *Visible Words: A Study of Inscriptions in and as Books and Works of Art* (Cambridge, 1969) and Alan Bartram, *Lettering on Architecture* (New York, 1976).

86. On Depero, see the following references: *Numero unico futurista Campari 1931. Creazione Depero. Omaggio della ditta Davide Campari e C. Milano* (Reprint, Florence, 1978); *Fortunato Depero nelle Opere e nelle Vita* (Trento, 1940); B. Passamani, *Fortunato Depero ein Künstler des Futurismus*, exhibition catalog (Bonn/Saarbrucken/Hannover, 1973). See also "Futurismo architettura," *Controspazio* 3, no. 4/5 (1971) and P. Vetta, "La technologia del cartone, Invenzione futurista di ambienti spettacolo," *Rassegna* 4, no. 10 (1982) 28ff.

87. Cf. R. Wedewer and Th. Kempas, *Architektonische Spekulationen*, (Düsseldorf, 1970).

88. Cf. Rene Magritte, *Écrits complets*, ed. by A. Blavier (Paris, 1979) 640.

89. For acquainting me with this I would like to thank F. Ph. Ingold: see "Poetismus als Lebenskunst. Zur Aesthetik der tschechischen Avantgarde," *Neue Zürcher Zeitung* 9/10, No. 131 (June 1979).

90. Representative of the abundant literature on the topic are the following references: E. Cook, "Figured Poetry," *Journal of the Warburg and Courtauld Institutes* (1979) 42: 1ff; (L. Caruso and S. M. Martini) *Scrittura visuale e poesia sonora futurista*, exhibition catalogue (Florence, 1977); *Vom Aussehen der Wörter. Visuelle Poesie/Notationen* exhibition catalogue (Hannover, 1980).

91. Cf. I. Rocaberti, *Lagrimas Amantes de la Excelentissima Ciudad de Barcelona, con que agradecida a las reales finezas, y beneficios, demuestra su Amor, y su Dolor, en las Magnificas Exequias, que celebrò á las Amadas, y Venerables memorias de su difunto Rey y Señor, Don Carlos II . . .* (Barcelona, 1701) plates after 166 and 222. It is remarkable that the "catafalque" ("Regalis Metrica Pyra Barcinonensis") bears the signature of the inventor and artist, the Jesuit pupil, Rocaberti, along with that of the typographer, Francicus Barnola. The catafalque also bears the title "Regia Sepulcharalis Pyra" and is further described as "Labyrinthus redactus ad formam Regalis Tumuii" ("labyrinth" is the usual name for such shaped poems).

92. For comparison of the subsequent text, see Vercelloni, "Costruire a chiare lettere," and Ponten, *Architektur, die nicht gebaut wurde*. Drawing in the Kunstbibliothek Berlin, cf. E. Berckenhagen, *Architektenzeichnung 1479–1979* exhibition catalog, no. 189 (Berlin, 1979) 139.

93. Johann David Steingruber, *Architektonisches Alphabet* (Reprint London, 1972, and New York, 1975). See the introduction by Berthold Wolpert.

94. Cf. Steven Holl, *The Alphabetical City*, Pamphlet Architecture, no. 5 (New York, 1980).

95. Cf. *La Metafisica gli Anni Venti*, exhibition catalog (Bologna, 1980) 2:110, 125.

96. Cf. *A New Spirit in Painting*, exhibition catalog (London, 1981), no. 88 and 89.

97. Cf. Bernardo Antonio Vittone, *Instruzione Elementari per indirizzo de'giovani allo studio dell'architettura civile* (Lugano, 1760) 545.

98. Cf. Kircher, *Obeliscus Pamphilius* 123.

99. Kircher's "modern" interpretation of the obelisk in the Piazza Navona appears on *Obeliscus Pamphilius*. Kircher even profited from the possibility of using hieroglyphics and symbols constituting modern texts in analogy to the Egyptian old writing, e.g., the obelisk with the "Elogium" in honor of Ferdinand III, which precedes Kircher's *Oedipus Aegyptiacus* I.

100. Cf. (M. Val. Probus), *Hoc in Volumine haec continentur M. Val. Probus de Notis Roma. ex codice manuscripto castigatior, auctiorque, quam unquam antea, factus. Petrus Diaconus de eadem re . . .* (Venice, 1525). The deciphering of the inscription: "Primus pater patriae perfectus est. Secum salus sublata est. Venit victor validus. Vicit vires urbis vestrae, ferro fame, flamma, frigore (fol. XV V.) is attributed to Beda, whose *Tractatus de computo, vel loquela per gestum digitorum* is included with this print (fol. 55r. ff.).

101. Cf. Johann Jacob Schübler, *Perspectiva. Pes Picturae. Das ist: Kurtze und leichte Verfassung der practicabelsten Regul, zur Perspektivischen Zeichnungskunst* (Nürnberg, 1719), "Erklährung."

102. Cf. J. Rondelet, *Mémoire Historique sur le Dôme du Panthéon Français* (Paris, An V, 1797), plate 9. Cf. C. P. Landon, *Annales du Musée*, plate V (Paris, An XII, 1803) 111 plate 52.

PAUL SCHEERBART AND EXPRESSIONIST ARCHITECTURE

Rosemarie Haag Bletter



1. Oskar Kokoschka, "Paul Scheerbart," 1910 (Apollo, 77 [September, 1962], 513).

German Expressionist architecture consists mostly of rapid sketches, written programs, and publications. Paul Scheerbart's writing, which reveals a compelling architectural vision, is crucial to this work. The hero in much of Scheerbart's science fiction is an architect, and the subject is the architecture of the future. Inspired by light mysticism, Moslem architecture, the Gothic cathedral, and nineteenth-century glass structures, Scheerbart foresaw the building of opulent and colorful glass constructions symbolic of extra-dimensional space and of a spiritualized world. Herwarth Walden, whose magazine *Der Sturm* and whose gallery of the same name became the rallying points of the various contingents of prewar Expressionist art and literature, called Scheerbart "the first Expressionist."

Scheerbart's work fundamentally influenced the architecture of his close friend Bruno Taut, whose position throughout the period of architectural Expressionism in Germany was pivotal and commanding. The same month (November 1918) that saw the establishment of the Weimar Republic through an act of political revolution saw also the foundation of the Arbeitsrat für Kunst (Work Council on the Arts) based on workers' soviets or *Arbeiterräte*. The Arbeitsrat, which was composed of a varied group of architects (Walter Gropius and Eric Mendelsohn among them), artists, art historians, writers, and critics, was headed at its inception by Taut. It attempted to redefine architectural and educational concerns in accordance with post-revolutionary requirements. Members of the Arbeitsrat organized exhibitions and published bristling programs and manifestoes in the style of Expressionist writers. Moreover, during 1919 and 1920, Taut supervised an exchange of correspondence among a more loosely associated group called the Gläserne Kette (Glass Chain), an effort to challenge the participants. And from 1920 to 1922 Taut was editor of the magazine *Frühlicht* (Dawn). Besides his leading role in these joint enterprises, Taut also produced on his own a profusion of articles and books. Foremost among them were: *Alpine Architektur*, 1919; *Die Stadtkrone* (The Civic Crown), 1919; *Der Weltbaumeister* (The World Builder), 1920; and *Die Auflösung der Städte* (The Dissolution of the Cities), 1920. All contain Scheerbartian ideas and direct quotations from Scheerbart's writings. Most of all, Taut's leadership of several postwar groups, such as the Arbeitsrat, insured a wider dissemination of Scheerbart's literary heritage.

Paul Scheerbart was born in 1863 into a well-to-do family in Danzig. As a young man he showed little interest in husbanding his inheritance, which was quickly squandered.[1] From 1887 on, after he settled in Berlin, he was almost constantly poverty-stricken. Unable to live from his writing, he withdrew more and more into the illusory world of his novels, often assuming the role of his fictional characters. At the same time, his ability to entertain made him the popular center of several well-known *Stammtische*, reserved tables in Berlin bars around which members of the intelligentsia gathered regularly. One of these was made up of writers such as Otto Erich Hartleben, Arno Holz, Max Dauthendey, Johannes Schlaf, Hans Heinz Ewers, and several others. Through Johan August Strindberg's *Stammtisch*, made up mostly of the Scandinavian and North German contingent, Scheerbart met artists Edvard Munch and occasionally Alfred Kubin.[2] Strindberg's table was also shared by the Hamburg poet Richard Dehmel, who became one of Scheerbart's closest friends (Dehmel had influenced Peter Behrens's dramatic productions at the Darmstadt Artists' Colony).[3]

Scheerbart's early literary output reflects the sentiments of the *Jugendstil* period. But epigrammatic brevity rather than descriptive clarity, a distinctive feature of Expressionist literature, characterizes his mature style. His preoccupation with nonverbal communication and the abstract rhythms of nonsense poetry even prefigures the sound poems of the Berlin Dada Period.[4] In Scheerbart's earliest writings of the nineties and the turn of the century,[5] references to glass architecture and architectural flexibility are used in a vague, mystical and Symbolist manner, as metaphors of spiritual transformation. From about 1904 on, his architectural fantasies no longer have the cosmic setting of most of the earlier stories, and even if they never quite become down-to-earth, they begin to have an air of greater plausibility.

The idea of architectural flexibility makes its appearance in a literal form in his 1907 story "Das Automobil-Theater."[6] Scheerbart reports with tongue in cheek that since the automobile industry has difficulty selling cars, it must come up with novel uses of the car to stimulate sales. He writes that he recently witnessed an automobile-theater demonstration put on by a famous car manufacturer. This mobile theater consisted of ten trucks that transported everything needed for dramatic productions. Ten workers were able to erect within half an hour a theater of colored wood and sailcloth placed between the trucks. After the performance, the theater was transformed into a restaurant with kitchen in barely seven minutes, and once the guests had dined, it was changed again in a short time into a hotel for the theatrical company.

In 1909, in the short story "Transportable Städte" (Transportable Cities),[7] Scheerbart again employs existing transportation for as yet unheard-of purposes. He relates in a journalistic style that the American architect Cashling has been commissioned by a group of fifty millionaires to construct transportable cities. Cashling believes that, with the lighter materials available from car and airplane industries, this will not pose a significant problem. He suggests that three trucks and three hundred cars might constitute a completely mobile town of one hundred houses. Cashling recommends this flexible design because, he insists, no one in the fast-paced twentieth century wants to wake up to the same front yard all the time, for in this age everyone has a "comet-nature" that leads to extended traveling and consequently to traveling cities. He concludes: "This is of course modern nomadic culture."[8]

The same futuristic messenger, the American architect Cashling, reappears in a story of 1910 called "Die Stadt auf Reisen (The Traveling City).[9] Here Cashling's design for a mobile city has expanded considerably. It is to be made up of a colony of 3,000 cars that together could form 1,000 houses. The fantasy "Hausbaupflanzen" (Plants for Building Houses) of 1910 is more overtly Expressionist in content because no mechanical means are proposed to achieve architectural transformation.[10] In this story the chemist and botanist Constantin invents a type of liana that grows into houselike structures. He proclaims: "I have invented growing houses. . . . We no longer need to build with dead materials—we can construct with living building materials."[11] Scheerbart's "Hausbaupflanzen" has the inventor take control of nature to bring about what might be called an architectural Genesis.

To his obession with mobility and transparency, vivid color must be added as another Scheerbartian means of inundating the senses. The theatrical tendency of his ideas is revealed in "Das Glas-Theater" (The Glass Theater), also of 1910.[12] Scheerbart writes that since we already have shadow plays and light plays, we should also have color plays. In his opinion, color manifests its full range best in diamonds and glass, and he suggests, therefore, the following:

Just imagine so-called shadow plays with transparent opaque glass sheets. Over these glass sheets, which be in all colors, shadows from polychrome glass can be projected . . . . Cannot extraordinary moods be achieved with such colored shadows? Will this not give a whole new direction to theater art in which glass will play the dominant role?[13]

Scheerbart's nonobjective color play is significant in the history of Expressionist art. At about this time Kandinsky began working towards an abstract art in which special meaning was attached to color. It also prefigures Taut's glass kaleidoscope in his Cologne Glass House of 1914, and after the war just such color plays were realized as theatrical events at the Bauhaus by Ludwig Hirschfeld-Mack.

Of All of Scheerbart's longer works, *Das graue Tuch und zehn Prozent Weiss* (*Grey Cloth and Ten Percent White*) and *Glasarchitektur* (*Glass Architecture*) are the most noteworthy for their architectural implications. Both were written in 1914, only a year before his death. The novel *Grey Cloth and Ten Percent White*[14] displays his architectural visions in a more typically whimsical Scheerbartian setting than the better-known *Glass Architecture*. *Grey Cloth* opens in the middle of the twentieth century with an arts and crafts exhibition in Chicago. The large exposition halls, entirely of polychrome glass and iron, are designed by the hero of the novel, the architect Edgar Krug. Walter Lowe, a friend of the architect, introduces Krug to one of the exhibiting artists, a sculptress in a violet velvet dress with red and green cuffs. Architect Krug whispers to his friend: "Really, I should be the only one here who has anything to say in matters of color. The ladies ought to be more discreet about their dress—out of respect for my glass windows."[15] Luckily, a friend of the sculptress, Clara Weber, the organist in the exhibition hall, joins the party, and Krug is pleasantly surprised by her appearance: her dress is grey with ten percent of it in white lace. He proposes marriage to Miss Weber provided that she wear only grey dresses with ten percent white for the rest of her life. He does not want a wife who will clash with his architecture.

The rest of the novel is a picaresque journey to exotic construction sites around the globe that display Krug's dexterity with variable glass architecture. The architect and his new wife travel in a private dirigible. In the Fiji Islands, he supervises the construction of a rest home for pilots from the dirigible high above the site. He observes that wind screens for colored glass, placed in long rows amid the landscape to produce unusual vistas, do not look substantial enough from the air. Through color signals he directs the workers below to add rooflike glass panels to the upright screens. The orientation of the added panels is to be continually altered by means of levers. All of Scheerbart's schemes are intended as much for aerial view as for conventional earthbound panoramas. The built-in movement of glass architecture is thereby further augmented by the motion of the observer. The couple's next stop is an Indian zoo in the foothills of the Himalayas. On seeing these mountains from his dirigible Krug muses: "I would like to build up the whole mountain range."[16] The building materials, he says, could easily be brought to such a remote site by dirigibles.[17]

From the Himalayas Krug travels on to the Aral Sea, where a trial station for sea architecture has been set up by one hundred architects and engineers to test the resistance of new building materials to sea water:

From above the station looked like a colorful play of lines. Swag-like chains of colored lights had been hung between the ship masts. . . The station was on board a great number of small and large ships. These had all sorts of shapes—mostly rectangular, but some were round and ellipsoid ship-like carriers—all of which could continuously and variably be combined with each other. The station, thus, could easily assume quite a different shape and could also be subdivided in any desired way.[18]

From this sea laboratory, Krug is called to the Kurian-Murian Islands on the east coast of Arabia by the eccentric millionaire Li-Tung who wants new buildings for himself and his retinue of servants. The Kurian-Murian Islands already are paved with majolica tiles, interrupted occasionally by glass floors lit from below at night. To save wear and tear on the precious pavement, Li-Tung demands "Gallows Houses" that are suspended from a pivoting horizontal beam. Krug accommodates his patron and, predictably, finds the idea feasible if carried out in glass: "If the houses are small and completely of glass, they can be pulled down to the ground—they can hang higher or lower—in any case, they can always be turned in such a way that the living room lies in the shade. . . ."[19]

Li-Tung deeply loves color, and when Mrs. Krug arrives in her grey-and-white outfit, he orders her to put on colored silks. Perhaps because Li-Tung is such a great patron of glass architecture Krug agrees to nullify the sumptuary clause of his wife's marriage contract. But in the meantime Clara Krug has become so convinced of the appropriateness of her costume to glass architecture that from then on she wears her drab garb voluntarily. The book finishes with Clara and Edgar Krug relaxing in their own glass house after glass architecture is accepted around the globe. They lean back in easy chairs and stare entranced up into the glass-covered cupola to watch changing effects of light and color, as if they inhabited a room-size kaleidoscope.

The glass architecture depicted in *Grey Cloth* by Scheerbart improves on nature and induces its inhabitants to peaceful contemplation. The nineteenth-century Romantics' immersion in nature, as a means of transcending individual insignificance, is transposed by Scheerbart into a completely man-made environment, the realm of the architect. This device suggests that nature is no longer found satisfactory as given. To be sure, the Romantic artist liked his nature exaggerated, but nature was allowed to provide its own drama by means of turbulent clouds, storm-tossed seas, or abrupt changes of light. The very desire to alter nature must be seen not just as a gesture toward global beautification. It implies instead a subversive sort of antinaturalism, an endemic feature of Expressionism. Like abstraction in painting, the intent to change the natural environment into an enormous architectural setting, hints at the total rejection of the nineteenth century's

confidence in the material world. Scheerbart's works are more romantic, utopian proposals. They contain in essence a critical discourse with nature and matter. Because of this, Scheerbart's fantasies are never quite technocentric, even when he relies on cars, boats, and dirigibles for physical mobility. He uses technology to overcome its very rootedness in a pragmatic rationality and to achieve a state of a rather mystical, antirational contemplation. In this respect he prefigures attitudes characteristic of Expressionist architecture.

Structures are assigned the function of stage sets by Scheerbart. His architecture localizes and intensifies the human action that takes place in and around it. Scheerbart seldom gives detailed descriptions of the constructions he envisions. Most often the reader is introduced to them through one of his characters' experiences. He never tells us the exact proportions and forms of a building, but instead relates the sensations that it elicits in the observer. His architecture is not an objective thing that can be apprehended through its dimensions. It never stands still long enough to be measured. Flux is its essence. Change in natural light is enhanced by a preponderance of colored glass. Artificial lights provide the same effect at night. Scheerbartian architecture has an openness and spatial ambiguity, deriving in part from the use of a transparent material that both admits and reflects light, but also from its physical flexibility. It suggests infinite variety and infinite space as it is expanded into a global program.

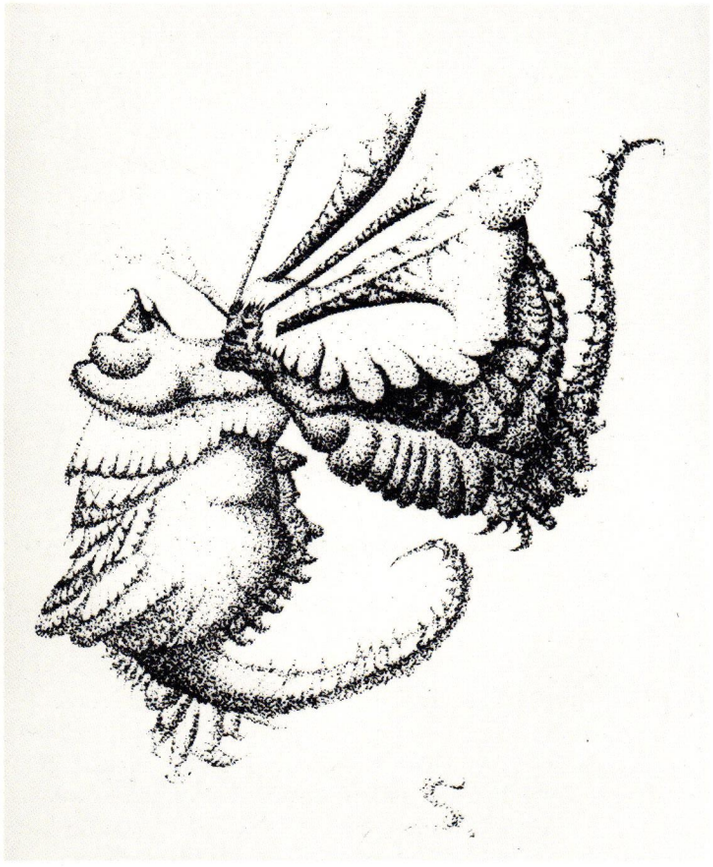
Mobility and transformation help to de–emphasize the material nature of this architecture. It is meant to heighten cultural sensitivity and resembles more closely states of emotion than anything known in conventional architecture. Scheerbart seldom refers to traditional building types such as schools, churches, or state buildings. This fictional architecture has all the characteristics of Expressionist writing in its unpredictable forms, its reliance on subjective response, and its heightened dramatic effect. As a writer Scheerbart can present us with mental constructs free of the limitations imposed by actual building. Scheerbart is able to translate the mode of literary Expressionism into vivid descriptions of visual, spatial, and architectural experience. Through his influence on Bruno Taut, his concepts are taken one step closer towards perceptual reality: Taut in turn renders Scheerbart's words into drawings. From here the leap to three-dimensional architecture becomes more conceivable.

Scheerbart's book *Glass Architecture* was dedicated to his friend Taut and, like *Grey Cloth*, was written in 1914.[20] Though it is Scheerbart's most often quoted work, stylistically it is atypical. In format it is Expressionist only in its nonlinear arrangement of ideas into brief paragraphs. The book is a comparatively straightforward account of the advantages of glass architecture. This seemingly technical work opens with a moralistic statement: Scheerbart insists that there is a direct connection between the architecture we live in and our thinking and feeling. Since we live in relatively enclosed rooms at present, Scheerbart writes, the milieu from which our culture springs is consequently too hemmed in. Brick buildings symbolize for Scheerbart our cultural narrowness. In order to elevate our society to a higher plane, we must first change our architecture and, according to Scheerbart, glass architecture will free us from our confinement.[21]

As a specific starting point Scheerbart uses the large greenhouse of the Berlin-Dahlem Botanical Gardens.[22] But he states that this greenhouse is uneconomical for the general purposes of glass architecture, because its single glass covering permits great heat loss in the wintertime. He suggests, therefore, the use of a double glass wall that would function as an insulator.[23] The cold look of glass is to be remedied through color and muted lighting. The glass panels are to be held in place by an iron



2. Bruno Taut, Reworked Mountain Peaks, (Alpine Architektur [*Hagen, 1919*], *pl. 8).*



3. Paul Scheerbart, drawing for Jenseits-Galerie *(Berlin, 1907).*

or reinforced concrete framework. Interior columns should be lit indirectly to make them appear lighter and freer: "Glass architecture will seem to be floating by means of these light columns."[24] Glass floors lit from below would give to those walking over them a feeling of virtual suspension. Furniture is to be of glass and steel, but should be placed only in the central areas of rooms so as not to obscure the beauty of the surrounding glass walls. For textiles Scheerbart suggests the use of glass fibers.[25] Straight walls are to be avoided. As a basis for ornamentation he recommends the nonfigurative style of Arabic ornament.

His preference for rich colors, lush ornament, and especially his knowledge of Louis Comfort Tiffany reveal that Scheerbart's taste was formed in the era of the *Jugendstil*. In the 1890s Scheerbart had, in fact, contributed to such typically Art Nouveau periodicals as *Ver Sacrum*, *Jugend*, and *Pan*. His historical references, however, range considerably wider than this turn-of-the-century style. The development towards a glass architecture is, in his opinion, unthinkable without Gothic stained glass. He believes that spiritual aspirations in the Middle Ages were met by glass architecture, although at that time, because of structural limitations, they could not be fully realized. Noteworthy as well for Scheerbart is eighteenth-century French garden design because of the artifice it imposes upon nature. Nevertheless, Scheerbart finds topiary reshaping of nature much inferior to the possibilities opened up by glass. His special attention is lavished upon the Arabic tradition, because he regards this as the true cradle of glass culture. He points to the superb design of Moslem garden architecture, with its open-air kiosks and pavilions of glazed tiles connected by water channels. Scheerbart's deep interest in garden architecture is understandable, since it is less tradition-bound, more imaginative and more light-hearted than the great standard works of architecture. His vision for the future, he insists, must not be considered utopian. To justify this contention, he writes that since the railway and spreading urban centers were able to alter the surface of the earth in less than half a century, a global spread of glass architecture in the future is quite conceivable. Glass architecture will, to start with, satisfy our senses, but as we become accustomed to it, Scheerbart believes, it will also be capable of expanding our sensory perception.

What is striking in Scheerbart's *Glass Architecture* is the preoccupation with lighting effects, sometimes in relation to glass structures but as often independent of it. Here, as in *Grey Cloth*, Scheerbart suggests the use of a "light signal language" for distant communication. Light, even more insubstantial than glass, is structured into a network of beams by means of refractions in glass and mirrors. And the name "light architecture" would be as appropriate as "glass architecture" for Scheerbart's fantasies. He invokes in all his works the imagery of light, crystal, and glass to suggest social change and transformation. This imagery had a venerable tradition that was resurrected by the German Romantics and that inspired writers and architects in the early twentieth century. For medieval mystics, glass and crystal (also often used in conjunction with gold and precious stones or any other material that sparkled with light) stood for transcendence of Christ's body, and in more general terms it suggested religious gnosis. In the legends of the Holy Grail, this metaphor was usually given architectural form as a glass temple. The Romantics adapted this idea to connote the transformation of the self from a mundane to a higher plane. As the religious aspect of this symbolism became submerged with the Romantics' concentration on a personal gnosis, the crystal and glass imagery lost its architectural dimension. In the literary works of the period it was condensed into a small object, a Stone of Wisdom, that stood for the self and mind. Scheerbart, in reusing this metaphor of spiritual transformation, returned it to its former architectural dimension, i.e., its social dimension. Glass architecture expresses the social transformation

of new society. The specific meaning of this metaphor, spiritual change, also makes clear why Scheerbart was obsessed with architectural flexibility. Constant flux serves to reinforce the metaphoric nature of glass architecture, social transformation.[26] For this reason Scheerbart's interest in a mobile architecture has little in common with the technocentric proposals of the Futurists, R. Buckminster Fuller, or Archigram.

Reyner Banham was instrumental in rekindling architectural interest in Scheerbart's importance for architectural conceptions of the early twentieth century when he published a brief essay on Scheerbart called "The Glass Paradise" in the *Architectural Review* in February 1959.[27] He correctly pointed to the connection between Scheerbart, Ludwig Mies van der Rohe's skyscraper projects of 1919-21, and Miesian skyscrapers built in the United States. Much later, in his *The Architecture of the Well-tempered Environment*, Banham says of Scheerbart's *Glass Architecture* that "of all the visionary writings of that period, this book has the greatest impact nowadays as the concrete and tangible vision of the future environment of man."[28] Banham is particularly impressed by Scheerbart's awareness of the details of lighting and adequate temperature control, his familiarity with already invented gadgets, and his frequently correct projection of their use in the distant future. However, while Scheerbart's technological know-how is remarkable, it does not lead to a thorough understanding of his intentions or his influence on Expressionist architecture.

Even though Scheerbart's mature works exhibit a deep interest in the technical aspect of architecture, technology is still only a means to an end: the literary metaphor of glass is turned into a social catalyst, an architecture animated with spirit. Glass architecture is meant to "enlighten" society. Scheerbart's mechanical and engineering conceptions are only on the surface of his thought, not central to it; they are used only as a means to a transcendental end. In fact, technology employed for its own sake was one of the targets of Scheerbart's satire.

A crucial aspect of Scheerbart's utopianism, one which was important for Bruno Taut and other postwar Expressionists, is his antinationalist and antimilitarist stance. Scheerbart, like many among his literary circle, had been touched by socialism and anarchist beliefs in the 1890s and he became a regular contributor to the anarchist periodical *Aktion*. He predicted quite accurately the direction military development was to take with the invention of air power in his 1909 pamphlet *Die Entwicklung des Luftmilitarismus und die Auflösung der Europäischen Land-Heere, Festungen und Seeflotten* (The Development of Aerial Militarism and the Dissolution of the European Land Armies, Fortification, and Navies).[29] Here he postulates that, with the introduction of airplanes that can drop "dynamite torpedoes" anywhere they wish and that are themselves invulnerable if they fly at night, the old type of warfare with standing armies and fixed fortifications will be over. Scheerbart writes that these dynamite torpedoes will never miss their mark because eventually they will be directed by wireless telegraphy. Once equipped with such deadly weapons, each nation, instead of attacking its enemy's at the front, will attack major cities:

It is superfluous to picture the terror of such bombardments of cities—everyone can do that for himself. The atrocity of such a war is so clear that it would be wise, for the time being, not to contemplate it. The mere contemplation of such arts of war can cause a nervous breakdown. . . .

Most of the swords and most of the uniforms will probably be preserved in war museums of the future—as reminders of the good old times when people still transported each other with lead and powder so pleasantly into the hereafter. The dymnamite-future is unfortunately not as harmless as the old powder-period. [30]

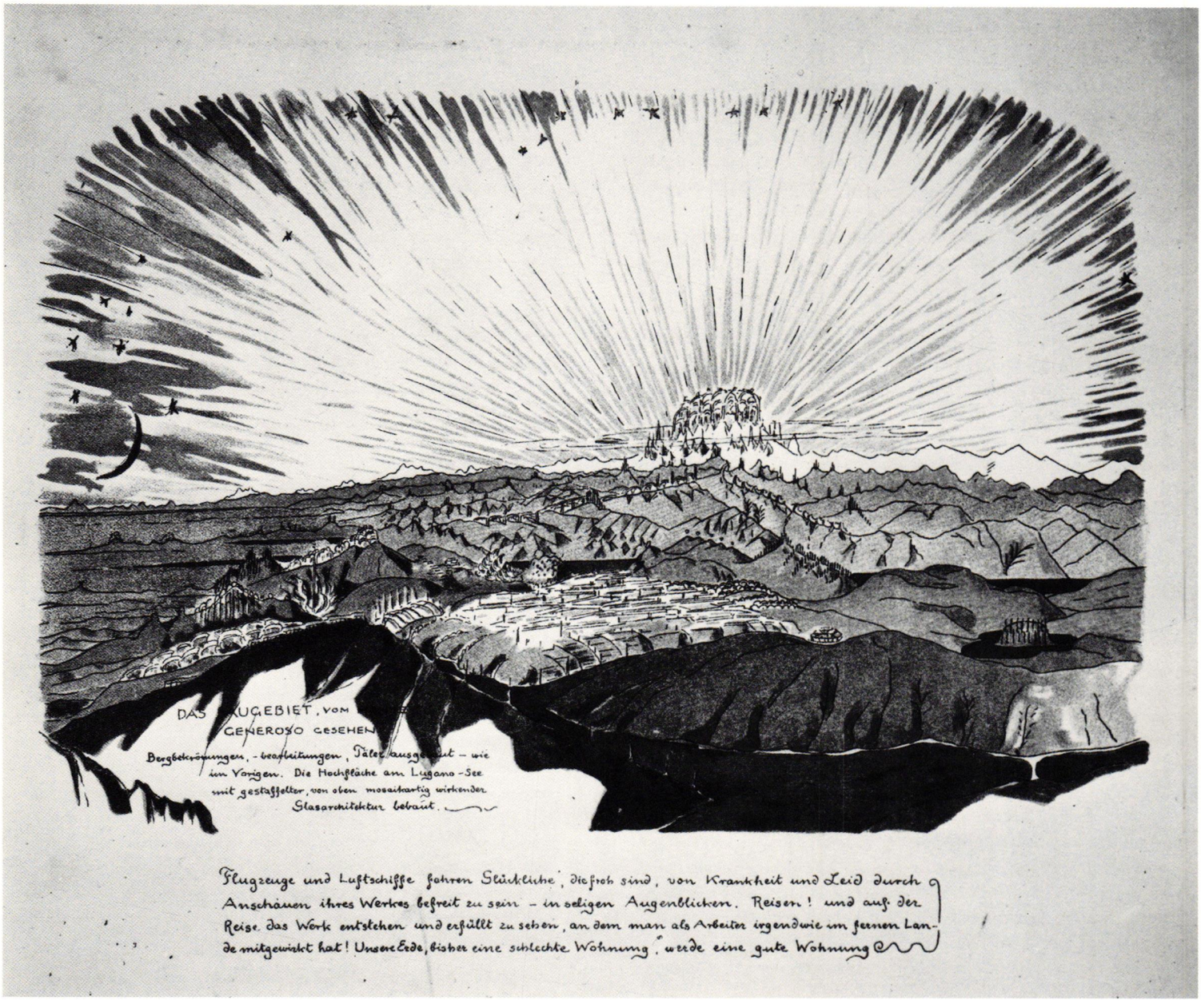
In an article of 1909 titled "Dynamitkrieg und Dezentralisation" (Dynamite War and Decentralization) Scheerbart proposes a way to avoid dynamite wars.[31] Here he reasons that because concentrated settlements would be the prime targets for aerial bombs, the madness of war could be eliminated if the targets themselves were removed by nonviolent means. The dissolution of cities would be possible by dispersing them in the countryside and resettling their inhabitants in decentralized garden cities. Echoing socialist ideas, he states that to give up large cities is no great loss, because they have only been the source of great human misery. Scheerbart, correctly envisioning the multidirectional strike force of modern warfare, counters with an evasive pattern of habitation, the decentralized garden-city.

The quintessence of Scheerbart's ironic attitude towards the machine is his attempt to invent a *perpetuum mobile*, recorded in his 1910 book of that title.[32] He was as familiar with the laws of physics as anyone, but the project's special attraction for him was precisely his effort to contradict them: "It is amateurish to want to see everything executed right away in reality. I have always found Ludwig II dreadful, who had to row around on his artificial lake in Lohengrin's armor in order to appreciate the total mood of Lohengrin."[33] From 1907 on, Scheerbart became preocupied daily with the construction of his miraculous machine. His book is a running diary of false starts, assumed progress, subsequent failures, and fresh tries. There is even a foldout sheet with a diagram showing myriad interlocking cogwheels and mathematical formulae to match. He expected nothing less than a miracle from a functioning *perpetuum mobile*. According to Scheerbart, it would tap the secrets of unlimited cosmic energy that could be harnessed to clear up the world's problems: "The social question is finally solved."[34] Workers who heretofore were conditioned to regard all physical work with pride would be freed from menial tasks and would have to unlearn their negative attitudes toward creativity. "Whatever will the social democracy say to this great worker's revolution!"[35]

The free energy of the *perpetuum mobile* is also to be used for "house building machines" and the realization of his more elaborate architectural reworkings of nature into a colossal earth art: "I thought at first of the Spreewald and then I wanted to buy the Black Forest for exhibition purposes. But now I believe that the whole Hartz Mountains are most suitable. There the whole area can be dug up as one wishes in order to demonstrate the large plans on a small scale."[36] The Bode Valley can, to be sure, be left as is, for the sake of contrast. . . ."[37] Total mobility of all inhabitants would become economically feasible. As a welcome consequence, Scheerbart is convinced, there will be a complete dissolution of national borders. The *perpetuum mobile* would do away with not only nations but also their governments. He reasons that if cogwheels of a twenty-meter diameter were constructed, even the largest house of parliament could easily be toppled. The completion of the *perpetuum mobile*, therefore, is also the anarchist's sine qua non for success.

But while Scheerbart is free to idealize the unexpected effects of his purported invention, he actually dreads its completion: "These are of course only fantasies. Actual reality is always quite different. . . ."[38] What he fears in particular is the military's appropriation of such a powerful machine. It might, therefore, be wiser only to fantasize about it. Scheerbart, nevertheless, concludes his discourse on the *perpetuum mobile* by stating the he has at last found a solution for its design. Unfortunately, Scheerbart continues, he is not yet free to reveal the secret of its invention because the patent is still pending.

The *perpetuum mobile* and what it stands for is not only a Scheerbartian fantasy but is also, much like glass elsewhere, a succinct symbol of



4. Bruno Taut, The alpine construction site seen from Monte Generoso (Alpine Architektur, *pl. 17).*

Expressionist aspirations. Its mobility would be as eternal as the universe, and its invention would lend its creator power over physics, mathematical logic, and technology.[40] Like Expressionist mysticism, the *perpetuum mobile* suggests a frontal attack upon materialism. And making the reader go through graphs, technical drawings, and mathematical formulations to arrive at nothing in the end is the book's ultimate irony.[40]

A friend of Scheerbart's, the writer Anselm Ruest, clearly realized the deeper reason for his preoccupation with this most utopian of machines. In a 1919 article in memory of Scheerbart, Ruest writes that Scheerbart knew only the extremes of light and dark.[41] The possibilities of the most irrational destruction that he foresaw drove him to superhuman visons of a better age. The *perpetuum mobile* would have made all machines superfluous, and glass architecture with its excess of light would banish darkness. Ruest sees these fantasies as prophylactic dreams tinged with irony, for, he asks, what breaks more readily than glass? "And if people had only listened to my constant pleas between the years 1911 and 1914 to give Scheerbart the Nobel prize as the then only true and real apostle of peace in Europe."[42]

Scheerbart's fears came true in 1914 with the outbreak of war. He became increasingly depressed and died in 1915. He was never a social activist, and his death is marked by the same kind of impotence and futility that had drawn him toward the *perpetuum mobile*. He died a pacifist during World War I, the war which introduced to mankind the technological horrors he had so clearly foreseen. He died the unappointed court jester of his age, to whom few had listened because his message was at once too cryptic and too intense.

The critic Adolf Behne wrote in his obituary about Scheerbart and his style, a style that would also accurately decribe any Expressionist:

You [Scheerbart] *saw that any 'form' is paralysis and nailing down, but that beauty is altogether essentially movement, dissolution, . . . suspension. That which is called form by the blind soul is full of arrogance and narrow-mindedness. But you experienced infinity and you were full of humbleness before it. Your work was eternal nature and because of this 'naturalism' could only be subject for irony.*[43]

The open-ended flexible pattern that Scheerbart preferred over structured forms grew out his mystical and anarchist beliefs. This emphasis on the conceptual was to become one of the most important elements of early twentieth-century art and architecture. Herwarth Walden was exactly right when he called Scheerbart the first Expressionist.[44]

Scheerbart's 1914 book *Glass Architecture* was dedicated to Bruno Taut, and Taut's Glass House at the Werkbund Exposition in Cologne of the same year was in turn dedicated to Scheerbart. Taut had met Scheerbart in the circles of *Der Sturm* around 1912, and between 1913 and 1914 Scheerbart was eagerly corresponding with Taut—sometimes as often as twice a day—regarding the Glass House and the publication of *Glass Architecture*. Taut's Glass House, with its polychrome double glass walls, its cascading fountain with strings of glass beads lit from below, and its kaleidoscope—an opaque glass screen onto which slowly shifting abstract patterns were projected—realizes many of Scheerbart's proposals. That the Cologne Glass House was considered a prototype or Scheerbartian ideas is apparent from the didactic aphorisms composed by Scheerbart and placed on the exterior of the Glass House, such as: "Ohne einen Glaspalast ist das Leben eine Last" (Without a glass palace life is a burden), "Das bunte Glas zerstört den Hass" (Colored glass destroys hatred), and "Das Glas bringt uns die neue, Zeit Backsteinkultur tut uns nur leid" (Glass brings us the new era, we only feel sorry for brick culture).[45]

The Werkbund Exposition was cut short by the beginning of World War I: For some time before and after the 1918 revolution, because of the precarious economy in Germany, Taut along with many other architects received few commissions. Yet in part inspired by the revolutionary period and as a reaction against the horrors of war, Taut intensively investigated new architectural and social schemes. These appeared in his utopian books such as *Alpine Architecture* (1919) and *The Dissolution of the Cities* (1920).[46] In this quasi-literary format, Taut was able to echo Scheerbart's vision even more closely than in the executed Glass House. In Taut's sketches for *Alpine Architecture* we find a reflection of Scheerbart's global spiritual transformation by means of glass architecture, and of Scheerbart's proposals for the recutting of whole mountain ranges and their decoration with glass. This is coupled with a pacifism and anti-nationalism also taken from Scheerbart: the reshaping of the globe is to be carried out communally to engage the public in edifying work, following the somewhat mythologized example of Gothic cathedral construction. The purpose here, however, is not the glorification of God, but to keep boredom, aggression, and war at bay. In *The Dissolution of the Cities*, Scheerbart's mistrust of the city and of industrial progress has found expression in Taut's designs for small agricultural communes placed in an anarchist setting—a stateless society without centers, without institutions, without schools, without marriage, and without currency. Scheerbart's interest in a flexible architecture, actual and apparent, is also present in Taut's books. The technical aspect of such designs was not of great importance to either Scheerbart or Taut. In their projects movement is most of all an expression of an upwardly mobile collective psyche of a new society. Literal transformation of architecture is, therefore, not absolutely essential. It is used by Scheerbart and Taut most frequently in a metaphorical sense: glass architecture as such, because of its reflective properties, looks already *as if* it were undergoing change.

Scheerbart's ideas were made accessible not only through these books, but also through Taut's initial leadership of the Arbeitsrat. Scheerbart's writings were recommended to its members, who by 1919 were more than one hundred strong and included among many others the architects Otto Bartning, Paul Goesch, Walter Gropius, Ludwig Hilberseimer, Carl Krayl, Hans and Wassilli Luckhardt, Paul Mebes, Eric Mendelsohn, Adolf Meyer, Hans Poelzing, Hans Scharoun, and Max and Bruno Taut.[48] As this organization grew in size it became too unwieldy for Taut's liking. He resigned the leadership in February 1919, and this position was subsequently taken over by Gropius, who soon thereafter, in April of that year, became the director of the Bauhaus at Weimar. Most probably through Gropius's contact with Taut and the Arbeitsrat, Scheerbartian notions were incorporated into the opening manifesto of the Bauhaus.[48]

The quest for a proper relationship of the architect to society in a socialist state and the role of architectural education in this new society, begun by the Arbeitsrat, was pursued further by the Glass Chain, the smaller working group founded by Taut. Many of the essays, statements, and Scheerbart-inspired designs of the Glass Chain were published in *Frühlicht*, the only Expressionist periodical to deal with architecture and city planning.[49] Scheerbart was often quoted directly in the pages of *Frühlicht*. Even an architect like Mies, otherwise not strongly aligned with Expressionism, published his projects for glass skyscrapers in this periodical. Mies wrote about his designs: "I recognized that the use of glass does not depend on an effect of light and shadow, but on a rich interplay of reflections."[50] Through Mies' work, Scheerbartian translucency with its implication of a new, international society, entered the prevailing tendencies of the International Style.

By around 1920 the most intense visionary phase of Expressionist architecture diminished. Germany was still in a state of near civil war, with frequent street battles between left- and right-wing factions. The political weakness of the young Weimar Republic was becoming abundantly clear during these immediate postwar years. Along with political disillusionment came the gradual demythification of the crystal metaphor.

When the business of building resumed in earnest in 1924, after a disastrous inflation of the German economy was brought under control, Taut turned increasingly to the design of housing. Glass architecture in this context was totally impractical. Polychromy became a substitute for colored glass, however. The metaphor of social transformation thus survived in the brightly painted stucco facades of his *Siedlungen*. Taut wrote about the influence of color on the inhabitants' mood much the same way Scheerbart had written about the emotive power of glass architecture. His housing schemes also echoed Scheerbart's belief in their plans. Though they were never outright garden-cities, they often included public greens and private gardens. The largest of his housing estates, the Hufeisen (1925-6) and Berlin-Zehlendorf (1926-31) *Siedlungen*, contain an unusually wide variety of housing types that include small rowhouses as well as five-story apartment units. They have the intimate quality of small-town streets and village-like places, together with a rather urban configuration of apartment blocks surrounding the perimeter. They respond more specifically to the complex and varied emotional attitudes the public brings to its definition of home than do the uniform *Zeilenbau* schemes that came into vogue in the late twenties.

Scheerbart's and the Expressionist architects' proposals for transformational design that dwells on feeling rather than on technology distinguish them from the characteristic progressivist development of the early twentieth century. Sigfried Giedion and Nikolaus Pevsner in their histories of modern architecture regarded Expressionism as a strange interlude within mainstream Modernism. The reassertion of vernacular and primitive forms in the later work of Le Corbusier and Alvar Aalto, in which human activity and existence return as primary metaphors, has allowed us to see Expressionism in a new light.

Adolf Behne, critic and member of the Arbeitsrat, summed up Scheerbart's belief in the power of architecture when he wrote:

"Building as an elemental *activity has the power to transform the individual. And now, indeed, building with glass! This would be the surest method of transforming the European into a human being".*[51]

NOTES

1. From a private interview with Hellmut Draws-Tychsen, the administrator of Scheerbart's literary remains. Basic research tools for an understanding of Scheerbart's background are: Ingrid Bode, *Die Autobiographien zur Deutschen Literatur, Kunst und Musik 1900–1965*, 2 vols. (Stuttgart: Metzler, 1966) and *Expressionismus, Literatur und Kunst 1910–1923*, ed. Paul Raabe, H. L. Greve, and Ingrid Grüninger, exhibition catalogue of the Deutsche Literaturarchiv, Schiller-Nationalmuseum (Marbach/Neckar, 1960).

2. Alfred Kubin. *Die andere Seite* (Munich, 1928) 10, 46, 192. Scheerbart asked Kubin to do the illustration for his 1913 novel *Lesabéndio–Ein Asteroidenroman* (Munich: Deutscher Taschenbuch Verlag 1964) 165. In 1910, when Scheerbart was associated with *Der Sturm*, Oskar Kokoschka did his portrait as part of the series "Menschenköpfe," *Der Sturm* 1 (1910) 213; see fig. 1. Scheerbart on occasion published his own drawings as marginal designs in his books but for *Jenseits-Galerie* (Berlin: Oesterhold & Co., 1907) his report on the discovery of cosmic beings, Scheerbart drew ten large-scale illustrations of composite, otherworldly creatures; see fig. 3.

3. By 1909, Peter Behrens, probably through his friend Dehmel, was in contact with the same group of writers who also frequented Scheerbart's circle (during Herwarth Walden's short-lived editorship of the theater magazine *Der Neue Weg* in early 1909, the following names appear as contributors: Peter Behrens, Dehmel, Scheerbart, Strindberg, Dauthendey, Hermann Muthesius, Alfred Döblin, Max Brod, Detlev von Liliencron, Alfred Mombert, Franz Servaes, Elisabeth Foerster-Nietzsche, Samuel Friedländer, Arno Holz, Alfred Lichtwark, Ludwig Rubiner, and René Schickele).

4. In fact, Hans Richter in his recollections writes that the earliest example of abstract poetry, one that makes a play of language through sound associations, was Scheerbart's poem "Kikakoku"; see Hans Richter, *Dada, Art and Anti-Art* (London: Thames & Hudson, 1965) 120. "Kikakoku" is from Scheerbart's 1897 collection of poems *Ich liebe Dich! Ein Eisenbahnroman mit 66 Intermezzos* (I Love You! A Railroad Novel with 66 Intermezzos).

5. Today many of his works are difficult to locate, though some have been republished. By far the best collection of his writings can be found at the Deutsche Literaturarchiv at Marbach/Neckar and at the Dehmel Archive of the Staats- und Universitätsbibliothek, Hamburg (the latter includes a Scheerbart-Dehmel correspondence). Scheerbart's recently republished *Glasarchitektur* (Munich: Rogner & Bernhard, 1971) with a postscript by Wolfgang Pehnt contains a useful bibliography of works both by Scheerbart and about him. A good bibliography of his novels and collected short stories and poems can also be found in Kurt Lubasch and Alfred Richard Meyer, *Paul Scheerbart Bibliographie, mit einer Autobiographie des Dichters* (Berlin, 1930). This does not cover the many short stories and articles published in various magazines. An incomplete bibliography appears in Eugen Mondt, *Paul Scheerbart–Ein Schöpfungsbericht* (Leipzig, 1912). Some of Scheerbart's works have been excerpted in *Verschollene und Vergessene–Paul Scheerbart*, ed. Carl Mumm (Wiesbaden: Steiner, 1955).

6. Paul Scheerbart, "Das Automobil-Theater," *Der Morgen* I (13 December 1907) 871. All Scheerbart quotations are translated by Bletter.

7. Paul Scheerbart, "Transportable Städte," *Gegenwart* LXXVI (9 October 1909) 762.

8. A similar proposal, based on the car as modern man's habitat, is made by Reyner Banham in "A Home is not a House," *Art in America* 53 (April 1965) 70–79; reprinted in *Meaning in Architecture*, ed. Charles Jencks and George Baird (New York: G. Braziller, 1970) 109–118.

9. Paul Scheerbart, "Die Stadt auf Reisen," *Das Blaubuch* 5 (29 September 1910) 929–932.

10. Paul Scheerbart, "Hausbaupflanzen," *Gegenwart* 76 (22 January 1910) 77–79.

11. Scheerbart, "Hausbaupflanzen," 77.

12. Paul Scheerbart, "Das Glas-Theater," *Gegenwart* 78 (12 November 1910) 913–14.

13. Scheerbart, "Das Glas-Theater," 914.

14. Paul Scheerbart, *Das graue Tuch und zehn Prozent Weiss* (Munich and Berlin, 1914).

15. Scheerbart, *Das graue Tuch* 11.

16. Scheerbart, *Das graue Tuch* 91–92.

17. Compare this to Buckminster Fuller's proposal of 1927 in which he suggests that dirigibles transport whole apartment towers to the site and assist in their erection; see Robert Marks, *The Dymaxion World of Buckminster Fuller* (New York: Anchor Books, 1960) 70.

18. Scheerbart, *Das graue Tuch* 124–125.

19. Scheerbart, *Das graue Tuch* 136–137.

20. Paul Scheerbart, *Glasarchitektur* (Berlin: Verlag der Sturm, 1914). This book has appeared in an English translation together with Bruno Taut's *Alpine Architecture: Glass Architecture by Paul Scheerbart and Alpine Architecture by Bruno Taut*, ed. Dennis Sharp, trans. James Palmes and Shirley Palmer (New York, Washington: Praeger, 1972).

21. In his 1911 story "Ein Ornament-Museum," *Gegenwart* 79 (25 February 1911) 175–6, Scheerbart wrote of a top-secret ornament museum that is used by privy councilors to study "Volksseelenkunde," the soul of the people. The latter is supposedly fully revealed in the ornament a society produces. The resulting information is classified to keep control over the people in the hands of privy councilors.

22. Scheerbart, *Glasarchitektur* 13.

23. Scheerbart and Taut's double glass walls used for purposes of insulation anticipated Le Corbusier's double-glazed windows in the Villa Schwob (1915) with heating pipes between the two glass panels. Scheerbart had advised against the use of convectors or radiant heat between double-glazed walls, because he believed that too much heat would be lost to the exterior. Instead, he proposed that electrically heated carpets be used for heating the interior. For a discussion of Scheerbart, Taut, and Le Corbusier's proposals for temperature control, see Reyner Banham, *The Architecture of the Well-tempered Environment* (Chicago: University of Chicago, 1969) 125–132 and 143–163.

24. Scheerbart, *Glasarchitektur* 48. Just such effects were created by Hans Poelzig in the foyer of the Grosses Schauspielhaus, Berlin (1919).

25. To a large extent Scheerbart relied in these proposals on inventions that were not entirely new but had yet found no wide currency. Among the gadgets he discusses are, for instance, thermal carpets and vacuum cleaners for parks. He was also aware of the existence of glass fibers. By his full-hearted acceptance of new materials he seems to forecast the manufacture of fiberglass or even the architectural use of such a material as the covering for the U. S. Pavilion at the Osaka Exposition of 1970, with its vinyl-coated glass fiber fabric twice the size of a football field; see "Biggest Big Top," *Architectural Forum* 131 (December 1969) 68–69.

26. For a detailed discussion of this metaphor and its history see Bletter, "The Interpretation of the Glass Dream–Expressionist Architecture and the History of the Crystal Metaphor," *Journal of the Society of Architectural Historians* 40 (March 1981) 20–43.

27. Reyner Banham, "The Glass Paradise," *Architectural Review* 125 (February 1959) 87–89.

28. Banham 125.

29. Paul Scheerbart, *Die Entwicklung des Luftmilitarismus und die Auflösung der Europäischen Land-Heere, Festungen und Seeflotten, Eine Flugschrift* (Berlin, 1909). Reprinted in *Verschollene und Vergessene* 36–51.

30. *Verschollene und Vergessene* 46.

31. Paul Scheerbart, "Dynamitkrieg und Dezentralization," *Gegenwart* 76 (27 November 1909) 905–906.

32. Paul Scheerbart, *Das Perpetuum Mobile* (Leipzig, 1910).

33. Scheerbart, *Das Perpetuum Mobile* 9.

34. Scheerbart, *Das Perpetuum Mobile* 29.

35. Scheerbart, *Das Perpetuum Mobile* 29.

36. Scheerbart, *Das Perpetuum Mobile* 11.

37. Scheerbart, *Das Perpetuum Mobile* 16.

38. Scheerbart, *Das Perpetuum Mobile* 41.

39. C. G. Jung writes that the *perpetuum mobile* usually symbolizes a quest for immortality; see C. G. Jung, *Psychologie und Alchemie* (Zurich: Rascher, 1944) 252. Like much other Expressionist imagery, the *perpetuum mobile* is, therefore, an image of strength in an apparently chaotic world.

40. Heinrich Eduard Jacob writes in 1911 that, although few people realize it, the *perpetuum mobile* is Scheerbart's mockery of an all too practical age; Heinrich Eduard Jacob, "Aus den Theatern–Paul Scheerbart-Abend, *Gegenwart* 79 (8 April 1911) 291.

41. Anselm Ruest, "Von Geburt, Tod und Wiedergeburt des Dionysus–Paul Scheerbart zum Gedachtnis," *Der Einzige* 1 (1 November 1919) 317–319.

42. Ruest, "Von Geburt, Tod und Wiedergeburt des Dionysus," 318. Ruest's point of view is confirmed by a brief autobiographical sketch by Scheerbart of 1904. Scheerbart writes that he sees it as his difficult task to infuse this age of socialism, technology, and militarism with romanticism, fantasy, and piety; see Paul Scheerbart, "Autobiographisches," in *Paul Scheerbart Bibliographie* 14–15.

43. Adolf Behne, "Paul Scheerbart," *Zeit-Echo*, 5 (1915–1916) 77.

44. Herwarth Walden, "Paul Scheerbart," *Der Sturm* 6 (December 1915) 96.

45. The other aphorisms appear in Scheerbart's letter to Taut of 10 February 1914; see Paul Scheerbart, "Glashausbriefe," *Frülicht*, supplement of *Stadtbaukunst*, 3 (1920) 45–48.

46. Bruno Taut, *Alpine Architektur* (Hagen i. W.: Folkwang-Verlag, 1919); *Die Auflösung der Städte* (Hagen i. W.: Folkwang-Verlag, 1920).

47. Bibliographical index in *Ruf zum Bauen*, (Berlin, 1920).

48. Scheerbartian crystal symbolism is alluded to in the concluding line of Gropius's opening statement: "Together let us desire, conceive, and create the new structure of the future, which will embrace architecture and sculpture and painting in one unity and which will one day rise toward heaven from the hands of a million workers like the crystal symbol of a new faith." See Hans M. Wingler, *The Bauhaus*, trans. Wolfgang Jabs and Basil Gilbert (Cambridge: M.I.T. Press, 1969) 31. In addition, every point made in Gropius's program for the Bauhaus in April of 1919 had been anticipated in Taut's *Ein Architektur-Programm* (Christmas, 1918).

49. The first fourteen issues of *Frühlicht* appeared as a supplement to the city planning periodical *Stadtbaukunst alter und neuer Zeit* (January to July 1920). The last four issues–from the fall of 1921 until the summer of 1922–were published as an independent periodical.

50. [Ludwig] Mies van der Rohe, no title, *Frühlicht*, 4 (Summer 1922) 122–124.

51. Adolf Behne, *Wiederkehr der Kunst* (Leipzig, 1919) 54.

INVISIBLE CITIES

William H. Gass



1. ". . . the noble and magnificent city of Kin-sai . . ."
The Travels of Marco Polo. New York: Orion Press, 1958, between pp. 220 and 221.

Italo Calvino's *Invisible Cities* is one of the purer works of the imagination.[1] It is prose elevated to poetry without the least sign of strain. Nevertheless, it has its subjects: memory, desire, and the elusive nature of the mind. It is also a profound study of the character of the city. *Invisible Cities* is first of all a book about a book, however, a book which happenstance brought into being, namely, *The Travels of Marco Polo*. Marco Polo, in the company of his uncle and his father, both traders who had been to the East once before, reached the country of Kublai Khan, and his court in Peking, in 1271. Marco became a favorite of the Khan, who employed him on business trips in central and western China. He is even said, by his own testimony, to have ruled the city of Yangchow for three years. In 1295, after seventeen years in China and a journey home which took an additional three, Marco Polo returned to his native city. His return was poorly timed. Venice was momentarily at war with Genoa, and in the fighting Polo was captured and imprisoned for two years in the enemy's city. While thus confined, he dictated his book, a history of his travels, to a fellow prisoner.

Why did he entrust the setting down of his book to another? May we suppose that Polo could write Latin, the language of the scholar, but never spoke it, that he spoke Chinese, and, of course, Italian, the popular speech of his people, but never wrote it? Perhaps he had no need to write what he could remember so vividly, and it was only his listeners who desired a text to which they could turn and return to.

In any case, his history is a work shaped by the mouth and meant for the ear, just as *Invisible Cities* is, and it had to be assembled and arranged from recollections. It was doubtless spoken to "pass the time," to enlarge his sequestered world and amuse his companions. It is little wonder, then, that Calvino's book begins with a section of "Cities and Memory." Polo spoke of astonishing things, indeed, and was possibly as truthful as he could be when he told of the existence of paper money, of asbestos, of coal, of spices of all sorts, and particularly when he described the amazing cities of the East. Chapter after chapter of his book simply depicts the character of this city, this province, or that. Surely his memory was spurred and directed, too, by the questions of his listeners, just as the Khan interrogates Polo in Calvino's account.

The Travels of Marco Polo remained one of the principal sources of our knowledge of the East for centuries. The edition which should interest us most, perhaps, is the one in the Bibliothèque Nationale (Codex 2810). It dates from the fifteenth century and contains twenty-five colored illustrations—illustrations designed by an artist who had never been east of the Danube, of course. This pictorial edition was reprinted by Calvino's publisher, Einaudi, during the 1950s. My own Englished version dates from 1958. There can be little doubt that Calvino consulted the aforementioned Italian edition when he was composing *Invisible Cities*. It may, in fact, have inspired him, although the small doubt one is duty bound to entertain is decisive.[2] Still, the illustration one encounters when the book breaks open at one of its central sewings (fig. 1) is of *the noble and magnificent city of Kin-sai*, but its pinnacles and flags, its tin, slate, and tile roofs, its dark dormers, the water which rushes through its streets, the bridges which loop over them depict a kind of Venice, a Venice done in Tuscan tones, a Venice where the water streams between the buildings like windblown hair.

Marco Polo's cities were certainly invisible, as any remembered city, any sought-after city, any city rendered in words will be. Even at this moment, words are violating our vision; vision is vitiating our thought. If we were watching a native dance in New Guinea, what we said in our surprise at the appearance of a mud man, if it went beyond directions like "look!" would interfere fatally with our perception, just as our response to the mock attack of a camel driver, disgruntled by the size of his tip, if it consisted of a lecture, might veil his amused but businesslike eyes; and what our reporter's pencil is inclined to write about the start of the dogsled race from anchorage to Nome depends as much on presupposition as the contest does on snow, for the truth here is simple and painful: the words which appear to reach out and envelop that camel driver, clay creature, or team of dogs have a greater inheritance from reality than the mud men, camels, or sled dogs do, innocently enjoying custom or the laws of physics. The most ordinary words, as we are aware, are more general, more repeatable, more far-reaching in every area of implication, in their harness undeterminably stronger than our momentary perception of sixteen happy animals who perhaps believe they are out for an afternoon run. Think of the word *polis*—"city"—itself: a word which will be young still when every other city is a midden or in unsieved dust. It is the wretchedness of this truth (wretched because it is the dogs and their driver most of us admire; it is the mud man who frightens or amuses us, not a newspaper account; it is an ice cream cone, not the words *ice cream* we want to put in our mouths); it is the injustice of any one word's overweening reality which has made this truth so invisible.

What could Marco Polo's bedazzled readers do, as they followed his description of the noble and magnificent city of Kin-sai, but think of Western towers and stone cornices and piered bridges, of Western water, when they visualized the city his words brought to life? All the cities he told about seemed exotic, magical, splendid beyond belief, cities of longing, but of their—the readers'—longing, and therefore clothed in the colors of that life. The difficulty is the same for us today, when we read of the "cities of desire" depicted by Calvino's Polo for the Khan: of Despina, for instance, the city which looks like a steamship when approached on camel back and we are weary of being swaysick on the sand; then like a camel when seen from the sea and we are anxious for the steadiness of the earth. We might imagine still another which sails its innumerable terraces into the sea like a ship. Both Kin-sai and Despina provide us with examples of the sorry impossibility of "seeing" through words, let alone "seeing" with them, although Calvino, Polo, we, and the Great Khan try.

Imprisoned either by walls or words, it is all the more important to try: to dream beyond the bricks, beyond the outer courtyard with its watchtowers, guards, guns; beyond the words which screen us from the world, beyond our own aims, fears, normally trivial aches and pains, which we nevertheless enlarge and objectify as bruises in hillsides, as knocks in walls, as cuts through mountains, as the leveling of plains. It is necessary to leave our cell and see the city—see the city in the cell, as the painter of legend perceives some stirring shape in spit or an errant puddle; for a cell whose walls might rise around us everywhere the same and faceless as concrete and equally cold, or as difficult to dent as glass and as remorseless, as resistant to experience as plastic; such surfaces refuse the past, reject the scratches which calendared by days the ten years Gesualdo lay in rags, cast in a corner for climbing a vine for a glimpse of a bathing lady; these will not be found here, nor the small crack we may imagine is a river, or the wallpaper whose pattens make a map, or patches of plaster damp like sweat in the pit of an arm; the mind cannot throw itself or any image against such pitiless sameness. Avoid such cities, such cells: all places where the light falls evenly as rain on day and night alike.

Cities can be cleansed even of themselves when they do not understand the true nature of their inhabitants, as was the case with one of Calvino's "hidden cities," Theodora, which cleared its skies of condors only to observe the increase of serpents, and whose victory over the spiders gave the flies free reign, while the extermination of the termites granted a kingdom to the woodworm. When, at last, the rats and roaches and gnats and flies, the fruitflies and mosquitos and every sort of vermin—all growing, flying, and creeping things—had been swept from the city, a city whose dream seems to have been to be a hospital for the healthy, then *the other fauna* came *back to the light from the library's basements where the incunabula were kept*; they were *leaping from the capitals and drainpipes, perching at the sleeper's bedside. Sphinxes, griffons, chimeras, dragons, hircocervi, harpies, hydras, unicorns, basilisks* resumed *possession of their city*.

In one of my imaginary cities, after a long period of misrule by birds, phonographs, and people, paintings left their frames and draped different landscapes over the baseball diamonds, Sabine ladies lolled about the shady streets, alert for adventure, and all the tinted animals roamed free. Their leader said simply: when they reckoned the inhabitants of their city, they neglected the antique pots, the rugs which had emigrated years before from Isphahan, the Chippendales, the Ensors, the Bonheurs, the stone idols, discontented lamps.

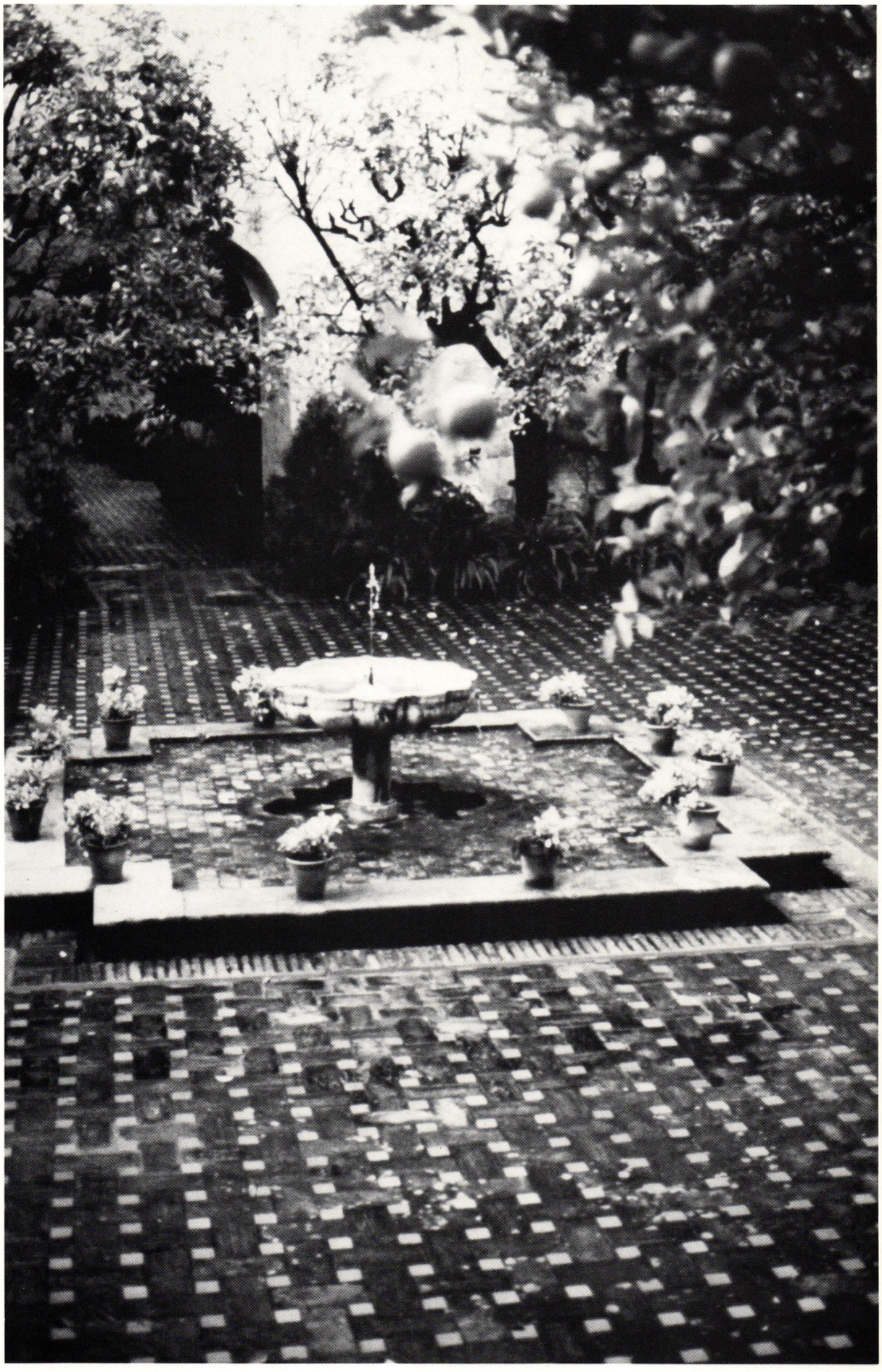
Marco Polo's actual prison companion, one Rustigielo of Pisa, is, in Calvino's recasting, the Great Khan himself, confined to his Kingdom, now grown so large it feels swollen and gangrenous, so distant in its borders that its edges can't be touched, vaporous and unreal except in the sober clear recitals of his friend and sometimes ambassador, the Venetian adventurer who brings him news—news, but not of places, not of Westport or the Bronx, of college towns or ghettos, but of "hidden cities," "cities of the dead," "continuous cities," "thin cities," of "cities and their signs": in short, of systems, meshes, interlocks, of webs. There is, for instance, the city of Zaira, which is not made of its bastions and arcades and steps, but like a burned over forest, consists instead *of relationships between the measurements of its space and the events of its past: the height of a lamppost and the distance from the ground of a hanged usurper's swaying feet; the line strung from the lamppost to the railing opposite and the festoons that decorate the course of the queen's nuptial procession; the height of that railing and the leap of the adulterer who climbed over it at dawn. . . .*[4]

If the Khan has been captured by his own conquests, and is now no freer in the middle of his immensities than a rowboat on the ocean, or as we are machining along at 30,000 feet, Rustigielo has been made a monarch by means of metaphor, because it is, indeed, to a king, in this book, that Polo speaks, to a different kind of fellow prisoner; and it is through the king's eyes that a design is discerned in the fierce smolder and aimless fire of his tales. A mind is made by the mind's eyes.

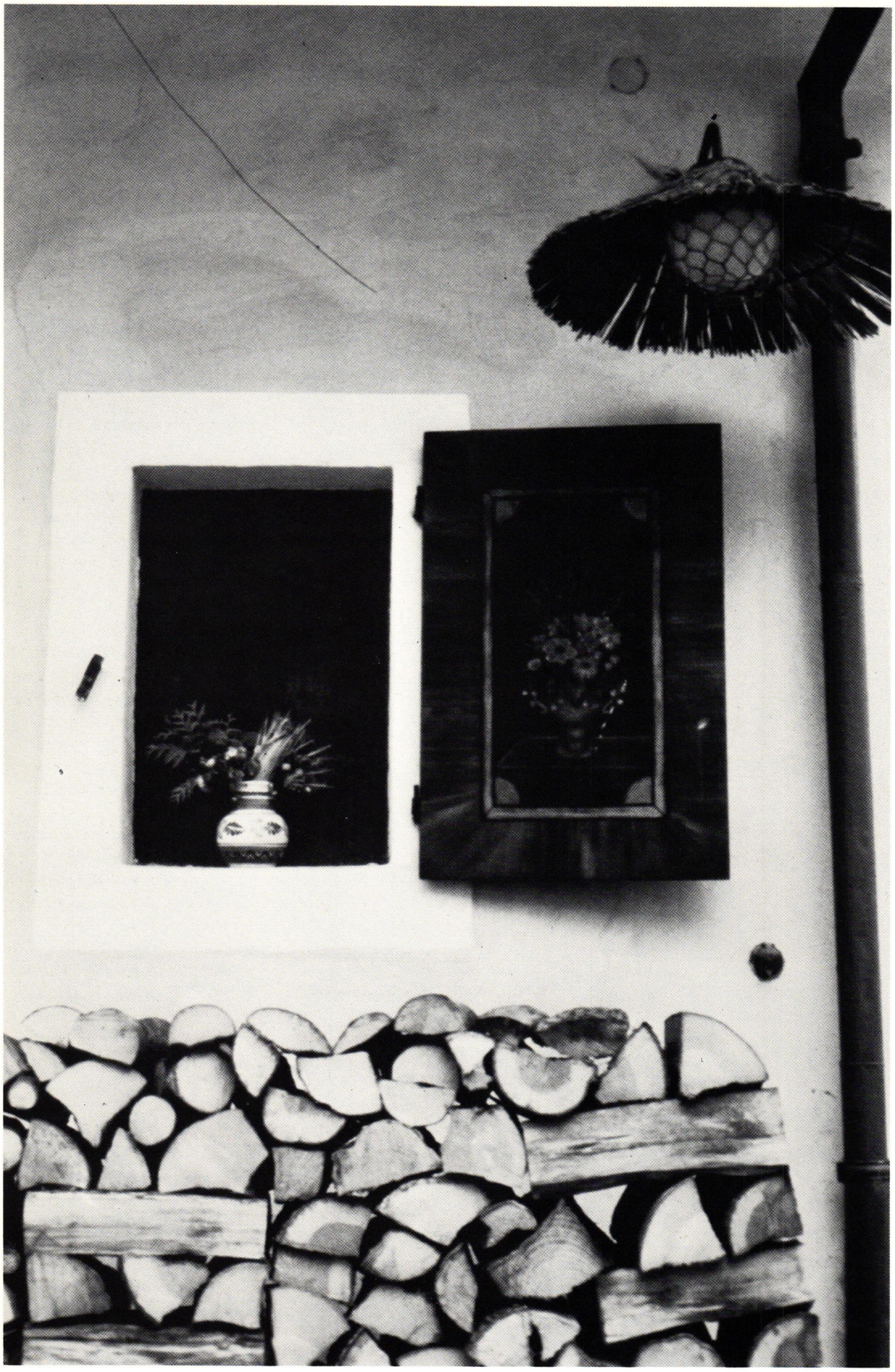
Scheherazade, staving off death with her stories, must borrow or invent, because she never leaves her husband's side; yet we, ourselves, may wonder, as we listen to Marco Polo tell the Khan of the cities he has seen, whether he has ever really left his home town, or has simply turned round and round many times in one place, or unfolded from one bud an astonishing plentiful of petals, transforming a simple fountain by resemblance into a robust pot of chives.

Fifty-five cities compose . . . invisibly, concurrently, continuously . . . Italo Calvino's epitomal city. It turns out to be the Venice we know so well, perhaps through a sober daily life there, or a few ecstatic visits, certainly from repeated reading and innumerable fantasies. Nevertheless, it is that same Venice which Marco Polo himself confesses he cannot imagine existing, even after Kublai Khan points out to him with a negligent gesture which signifies some dearer purpose, the palaces whose marble steps lie immersed in water, the balconies which overhang the canals, the city's shimmering domes and silent campaniles. Venice is thus one miracle made of many, a contraction of the fabulous the way fingers form a fist, for it has preserved the evanescent marvels met with in Marco Polo's travels like fossils in its own stones and has flung over its fluid causeways such surprises as only lonely caravans encounter; yet it is also a Venice which has become plural, dispersed, ephemeral again, because it represents far more cities than those, real or imaginary, mentioned in Calvino's elegant and ruthlessly patterned text. It is not simply a symbol standing for Heidelberg, Frankfurt, Chicago, or New York, where one might actually have set foot, or for those places which have perished like Babylon beneath the weight of years or those that exist like misery before its cause, as improbably as birdsong whistled under water—that is, those cities not yet found or even founded or fully realized—such as survive in fancy like Atlantis or my imagined city of Yclept (with its footfall formed steps, its undimmable flowers, its playing fields in the shape of colorful cotton yarns, its not yet built barns for the storage of the letter B: where there are gay blades in solemn scabbards, bees' knees spread out to dry on trays, bales of bated breath), or, for that matter, the way those ubiquitous Utopias persist, like flocks of wishes with one wing, they are so incessantly and inadequately dreamed.

Venice cannot be said to serve simply as a sign, then, or an exemplification, for it has also become the city inside of every city, the city beneath every city, the city that contains the cities that *are*, including the ones which barely subsist on the maps, their location indicated only by the dimmest of pink dots—specks which could, like a red mite, imperceptibly shift—as well as those cities which cannot be blotted out the way the ports of the Phoenicians were: I mean the camps of catastrophe, cities of sewers and open wounds and mass graves and the still-shitting dead, cities bombed into existence like Beirut, or cities like Cairo, scalded by their atmosphere, whose admired autumnal sunsets are caused by clouds of foetid gas, cities where growths of garbage define the parks, and every alley is intestinal; the cities we can only forget, it seems, by repeating them like a gun shot, by reproducing . . . reinvesting, rebuilding, reinhabiting . . . by reenacting their several and similar hells, not smoothly and professionally, but stupidly and clumsily, as if they were scenes in a High School play.



2. ". . . From the foot of the Great Khan's throne, a majolica pavement extended . . ."
Fountain with tiled pavement in the Alcázar, Seville, Spain.



3. ". . . an altogether Austrian cord of wood . . ."
Out-building near Inn, Ehrenhausen, Austria.

Calvino's cities spiral toward us as if unrolled by Polo before the eyes of his host. There are nine panels, each introduced to us by a brief snatch of conversation between the traveler and the king, and each concluded by the completion of that conversation, so that these passages, italicized in the text, form wholes of their own—nine of them. The first group, as well as the last, contains ten accounts of fabulous cities, while each of the middle seven sets forth five. If we add to the list of cities described the nine conversations which surround or variously intrude upon them, we arrive at a total of sixty-four sections, not accidentally the sum of the squares, eight on each edge, which make up the board for chess, a game well-beloved by the Khan. It is also, of course, the grid of every great city. Each is built, like Calvino's book, upon an invisible graph. The chess board is only incidentally a set of paths, for these paths are principally corridors of power, influence, force.

From the foot of the Great Khan's throne, Calvino writes, *a majolica pavement extended* (fig. 2), and now and then *Marco Polo, mute informant* (for he does not yet speak the Khan's tongue), *spread out on it the samples of the wares he had brought back from his journeys to the ends of the empire: a helmet, a seashell, a coconut, a fan. Arranging the objects in a certain order on the black and white tiles, and occasionally shifting them with studied moves, the ambassador tried to depict for the monarch's eyes the vicissitudes of his travels, the conditions of the empire, the prerogatives of the distant provincial seats.*[5]

From our own journeys (since each of us is Polo to another's Khan), we may return with other wares, but that won't matter, for what will render them significant will be their placement on the pavement, the flights of influence they suggest, the orders they elicit from the eye, as I recently returned from a trip with the image of a painted board wrapped on a roll of film in my valise, a metal pipe, a shaded lamp, a yellow wall, a vase of dried flowers in a niche, an altogether Austrian cord of wood (fig. 3). I returned with them, and with the wonder of their relationships.

What we frequently fail to understand is that a city is not an assemblage of buildings streaked by highways and streets; it is a subtle pattern of powers, like the board. Kublai Khan realizes that if he could understand the rules which direct and facilitate the movements of these objects, ignoring their specific shapes and unique natures, he would hold like a scepter in his hand the essentials of his Empire, and govern accordingly; so he replaces the objects Polo has been maneuvering about on the majolica pavement with pieces from his chess set, their ivory slick as a kid's slide, and then he assigns to these, in a purely algebraic fashion, meanings appropriate to the moment: let x equal a seashell or a fan, perhaps; let the knight be, for now, an equestrian statue superbly stony in the square it stands on, for the pieces are as variable as a, b, and c; and let us permit the Queen to be a lady looking down behind a fan from her balcony at a fountain, possibly at a topiaried tree into whose trunk she is quickly translated, into the pulp of its fruit, into a palm full of seeds.

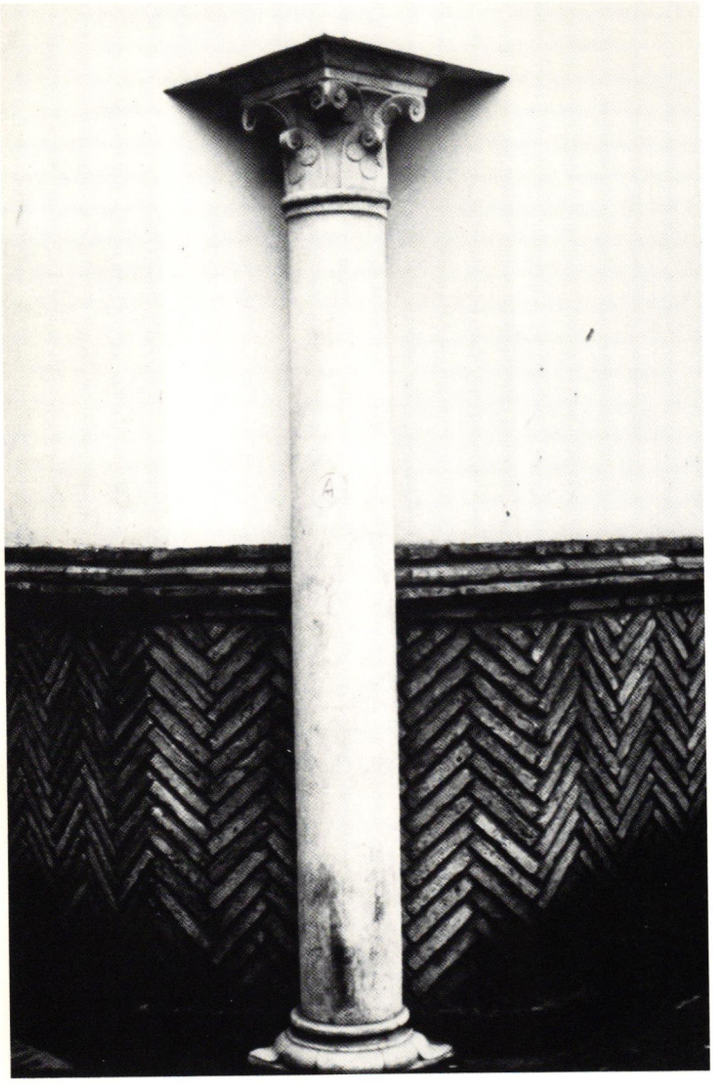
The wise Khan might imagine, then, a city made solely of movements, like some of the "cities of desire" which Marco Polo describes, a city composed entirely of staircases and paths, streets and thoroughfares and alleys, elevators and playgrounds, sidewalks and tram lines and drawer slides and subways and boulevards and bus stops and zippers and toilet chains and cranes. It is a city in which every block is a kind of smoky port.

In this scenario, young Frank Presto is no longer the promising young lawyer, young husband and father, baseball fan, wearer of a pair of black and tan trousers, a young flutter in the king's eye he might be elsewhere—not in this city. In this city he is simply a commuter; he leans against doorjambs; he casters across his office from desk to window, from secretary to Xerox. His age is irrelevant. Age is an avenue of the demographic city. His promises rust in the wreckage that is the city of broken hopes. At this moment, Frank is only an element of circulation, a drop of blood in the body of the city whose skin we have just lifted like a shirt. And the Khan plays game after game of city/chess like this, searching for secrets in the interlocking lines, in these moderate abstractions—in a white rook, black queen—through which he believes divergent avenues, or a city's radial center, might be seen.

For such a city, the Khan could have calculated to a nit's pick the fall of bodies from high windows, the hubbub of behinds behind the copier, and, on their way from plate to mouth, the evasive loops of forks entangled in spaghetti. Trajectories, blinks, droplets of flu sneeze, the jitter of the pinball, brain scans, congregations of handshakes, goodbye waves, the flight of Time where the clock's hands hide its face: he might imagine all of these. Let's say he does. *At times he thought he was on the verge of discovering a coherent, harmonious system underlying the infinite deformities and discords, but no model could stand up to the comparison with the game of chess.*[6] So the King presses on. He no longer interprets the pieces, lets them shadow forth a figure kneeling beside the fountain; he simply makes the proper moves, ponders the rules, admires the purity of each play's endless designs, the menace inherent in their innocent configurations.

There are, of course, "thin cities," here, cities which grow like galls on the trunk of a river, which fill in a valley like morning mist, which lean against the irregular side of a mountain; and none of these "cities" can be said to be standing on a grid; but in the first place the grid goes about with us like a compass on the bridge. Rays rush out of our eyes and reach for the horizon, and if we completely lose our place north will seem straight ahead, south will lie behind us like history, and west and east will empty out on either hand. The jumbled streets of old trading quarters, casbahs and ghettos, those crowds of houses so dense that the streets become pushed inside: these tangles were always marks of a village or possibly a town, but never a city; and we visit them in cities the way we visit the museum, to contemplate the past, to read our real age, to see again in the barrio the small seed which has grown beyond all community like a pumpkin in a pea patch, and is held together now, not by eyesight and kettle smell, but with invisible wires and inaudible messages, voices on errands, words relayed like lightning, letters which seem to leap up at once in many places like armed men from the dragon's teeth. And as the village grows into a city, the grid appears like the beard on a youth, and lengthens with it toward those weakening knees.

The game proceeds, yet a reckoning arrives. As Kublai Khan stares at a square just vacated by a fleeing king, he sees that these games of chess come literally to nothing (a weedy plant commands more harmony), and in that moment falls from Plato's orbit as if the philosopher were a planet, because beneath the pieces the board is bare, the stones of all his cities' buildings dissolve in the lines which bound them, and these run pointlessly—invisibly—off into space. But Marco Polo counsels the king to part the pavement. On that slick ivory surface, that fired clay, in that open square of wood which is at once a piece of playing field and a square of the city, what can one further see? the footprint of a pavement? perhaps a taut and angry fiber? the glaze of a dreaming eye? logs lazily adrift in a slow-moving river? a woman peering from an upstairs window? Every object is itself a cell which would contain us; yet every end has its outlet as well; and as we pass through a cave's yawn to the hollow of a hollow tree, from that hollow to an open door



4. ". . . Many a corner will strike us like an elbow . . ."
Corner column ornament, Barrio Santa Cruz, Seville.

5. ". . . the signifier has swallowed the signified . . ."
Totem images, Sitka, Alaska.

6. ". . . like a floating ghetto . . ."
Houseboats, Hongkong.

or window, we cross one threshold to achieve yet another, even more wondrous, wider world.

When the concept of the city, with its concrete streets and concrete towers, has been replaced by that of the game, with its architectural grid and gun range, its system of implicit threats, its irregular spheres of influence; and when that game, furthermore, has been, in its interest, exhausted; then the materials of the contest, its dinky tools, the ivory itself, its fingered skin, the shape of the cross on the king's crown are entreated for results. A pillar becomes a tree, a tree a totem. The grid gives way, the board parts like the Red Sea, and the land it lay on appears, warm again as a baby blanket. We are not simply back with youthful—partly promising—Frank Presto again. We have crawled up his nose. We have entered his ear. We inhabit his lust. We are the bees who buzz in his brain.

Let me recapitulate our progress. It is a pattern to be found in all the arts. We began our pursuit of the city by examining the particular, the things that cities are made of—squares, streets, buildings, bridges, people, parks—allowing the least leaf to be engraved upon our faces as though it had been long pressed there. We endeavored to give to the shallowest saucer great depth, but we did so through the intensity of our attention, by dwelling on the small bob of its basin, the thin rule of gold around its rim, the cup which will squat there when the tea is finally ready. We collected facts. We described things as we believe they really are. Not only our streets, but our lanes, our halls and closets, are named in this realm of reference, this freeway of denotation. The procedure will give us one sort of city: a city of idle odors and random sounds, a city of character, of what is popularly called *place*. Our city will have a personality, for we shall have rendered the gestures of its spirit, the way in which it resembles a young girl, a lecherous uncle, an old maid. Our city will be a richly human body made of countless bones. Many a corner will strike us like an elbow (fig. 4). Many a path will wear like a hole through your shoe. Many a brick will stiffen at our touch, and the light fall irregularly throughout the city, palely in this place, brightly in another, after the manner of our understanding.

Not content with this, we soon sought in the playing fountain, the shaded courtyard, the kneeling man, the fan, in the look that leaped like a tree through the stone pavement a pattern of powers, of influence and agitation, and like the Great Khan we withdrew toward the game, although it was still people we saw moving about like pawns, and not yet pawns we saw moving about like people. This method will give us still another sort of city, a city in which system is beginning to be born, in which terms are beginning to be replaced by relations, in which roles are beginning to define their representatives, and not the reverse.

As we saw, the mathematically minded monarch scarcely creates one state of thought than he calculates another—pressing on, pushing his luck—so that soon he is reaching the particular only through the idea, and what was earlier a bit of evidence for a generalization is now only an instance of one, just as an apple is an instance of the idea "apple," the idea "one." The signifier has swallowed the signified (fig. 5), although you may still observe it as a swell in the stomach, and like a bulge beneath the bedclothes of the bereaved and sleeping body.

The Khan comes at last to mathematics, to the ideal, to the city as a series of abstract interactions, to complete, unabashed *invisibility*; although we must recognize, as Calvino does, that there are invisibilities of at least two distinct kinds: the first is what is before us at the moment, in our mathematical mood, an unvarnished invisibility, an



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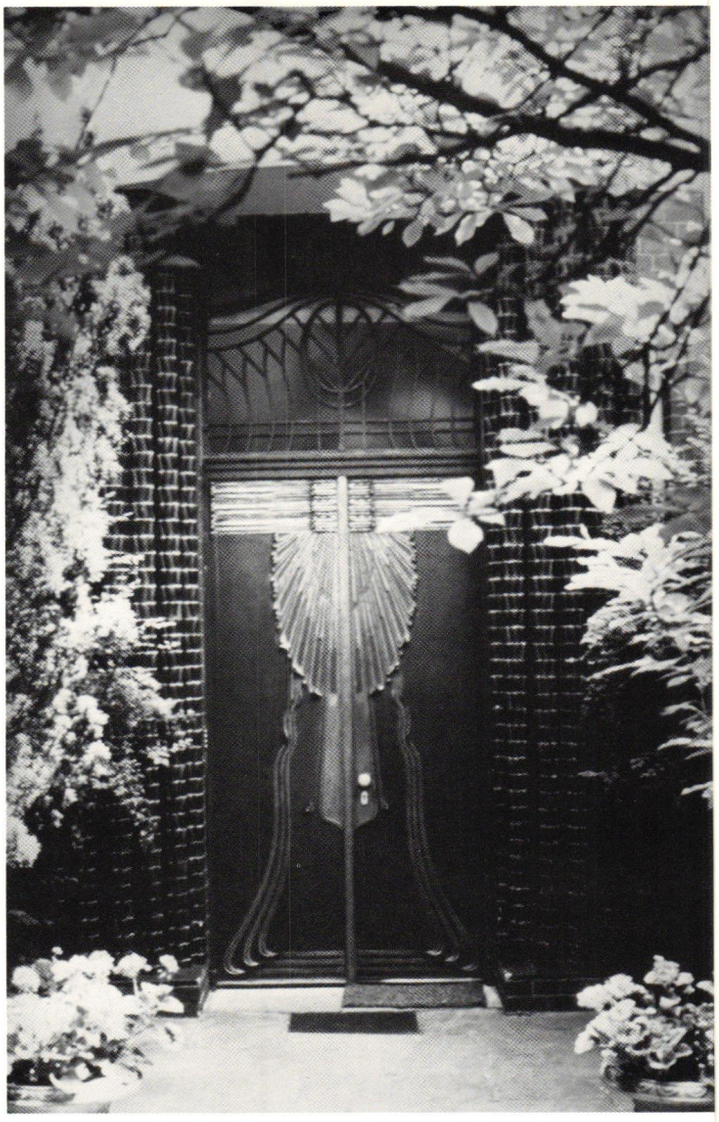
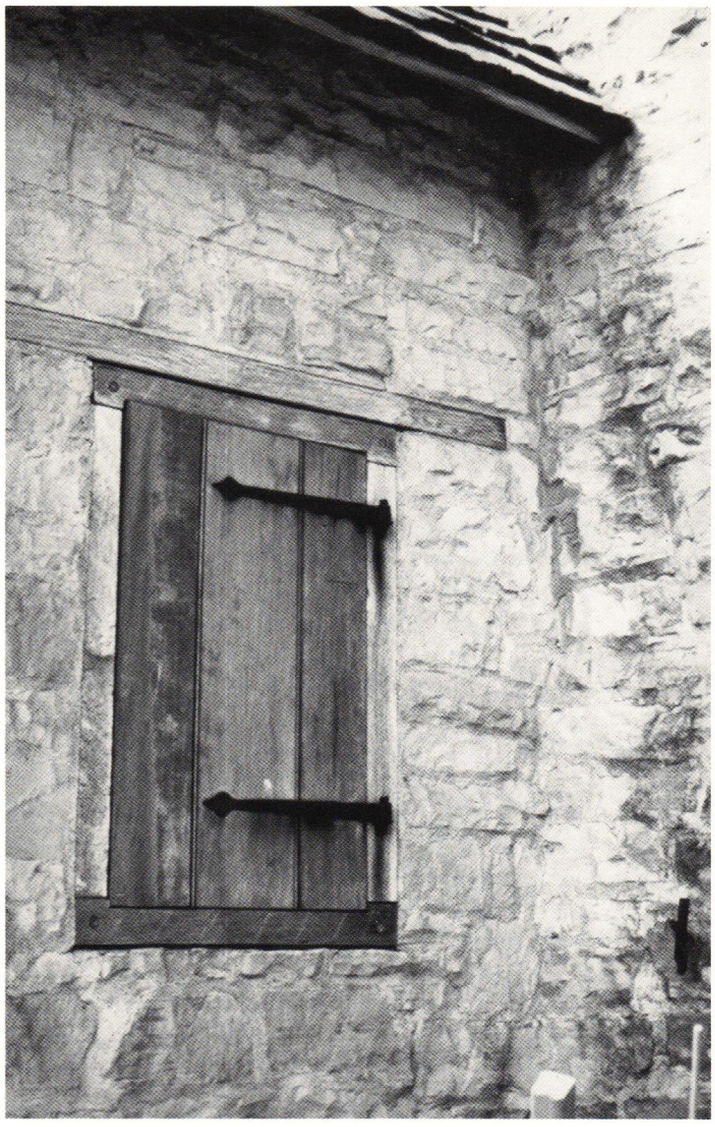






7. ". . . doors of every design desire us . . ."
Door in the Barrio Santa Cruz, Seville.

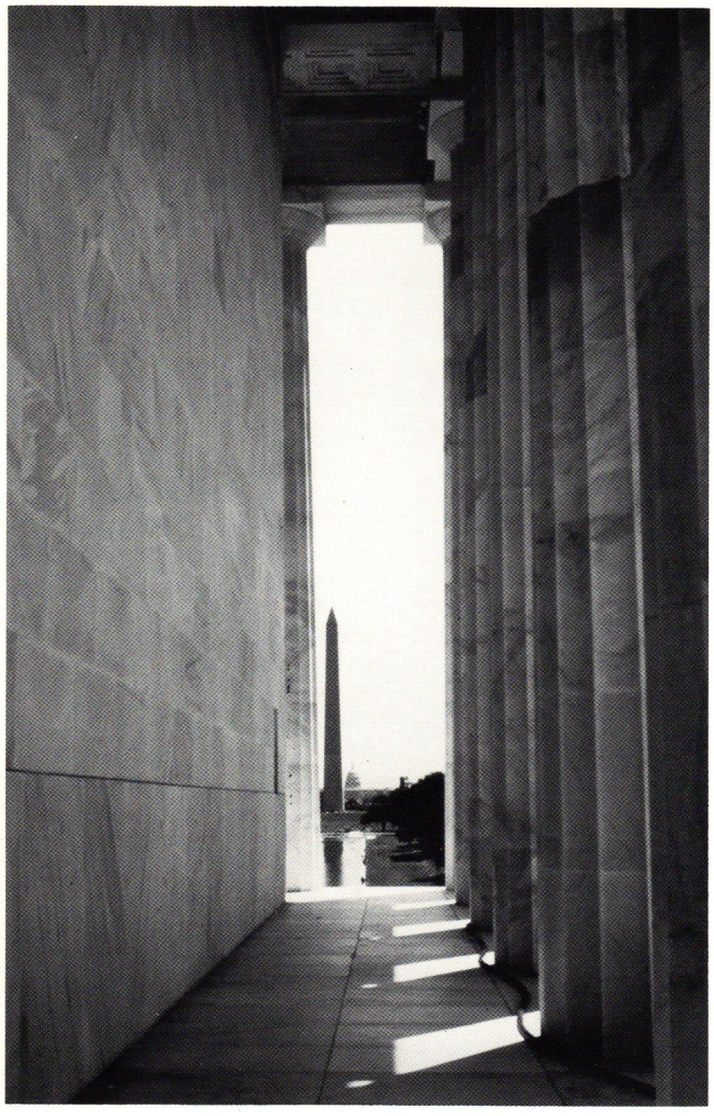
8. ". . . doors of every design desire us . . ."
Art nouveau door, Darmstadt.

9. ". . . doors of every design desire us . . ."
Garden gate, Dumbarton Oaks, Washington, D.C.

10. ". . . blind as a boarded window, yet full of look . . ."
Boarded window, St. Genevieve, Missouri.

11. ". . . The map of the city is the city . . ."
Pool pattern, Dumbarton Oaks, Washington, D.C.





12. ". . . our heros . . . organize the aspirations of the nation . . ." *Lincoln Memorial, Washington, D.C.*

invisibility, in short, which does not hide itself, which comes clean, as it were, and which is, in that sense, not invisible at all; and then there is the second sort, which is like the proverbial needle, the purloined letter, or the figure in the carpet, palpable, present, but unnoticed, like a floating ghetto (fig.6), an invisible visibility, hidden from us like a flaw in our character, embraced without realization or recognition. Better a visible invisibility, Aristotle is sometimes thought to have said.

But mathematics is only a game—don't we hear that often offered as an excuse for collective ignorance? Where is the city now, at this level of quiet unstreeted Idea? However, with Marco Polo as our guide, what help do we and the Great Khan get? We return to the particular, it's true; we shall enter the door instead of merely passing through it—doors of every design desire us (figs. 7, 8, 9); we are about to bruise our eyes upon the hard ebony inserts of the game board; nevertheless, the game board is not that simple city square we began with, that regimental crisscrossing like the streets of Manhattan; it is but a small square of ruled wood, lined cloth, blind as a boarded window, yet full of look (fig. 10). What has really happened to us?

We have begun to listen to the sound of our own words, not merely to their meanings; we have begun to circle their shapes like a walk around a town; we have turned to the representatives of thought for sustenance, not to the thoughts themselves, or to the things those thoughts were presumably about; for just as trees are bark and leaves and light, and the forest is trees and leaflight, too, so the city is made of millions of small forms and fine textures, of the very near and the quite far, and like the wilderness may have its own mountains, depending on place and point of view, tiredness and timing.

A city is a wall for words, misunderstood or simply imitated in spray-paint; but it is a house for houses, too, and so should have its doors and sudden windows, its stairs and stories, its halls and dining rooms and dens. We have explored our chosen city through the dreams of its streets and derelict alleys, its suspension bridges and bridal paths, the way Polo has in describing his cities to the king. Now we remain with the mute sign itself. The map of the city is the city (fig. 11). Billboards and building declarations are the city; every sort of symbol—the Arch, the Eiffel Tower, the Rialto or the Doges' Palace, the Canalettos—is the city the way the capitol, and our heros, Washington and Lincoln, organize the aspirations of the nation (fig. 12). Our romance with the dome, that basin of the spirit, passionately continues, despite occasional detours for an adultery.

Shortly new words will begin to be heard in the sounds which old words make, as for instance in *swoon*, which I understand, now that I speak it clearly and listen with a pure ear, is not the languid faint which I formerly feared, but the casual and quiet glide path of a paper airplane.

The quantity of things that could be read in a little piece of smooth and empty wood overwhelmed Kublai; Polo was already talking about ebony forests, about rafts laden with logs that come down the rivers, of docks, of women at the windows. . . .[7]

When we live in only one city, in only one kind of city, in an invisible city, we abstract—we cut apart—ourselves; and sometimes our cities are like abbatoirs and butcher shops where our gesticulating corpses hang from hooks, and our hearts crawl about like crabs in a basket.

I recall in Cairo (fig. 13) the little shelters I saw on rooftops, people perched like pigeons on the cooling towers, the narrow warped boards



13. ". . . I recall in Cairo the little shelters I saw on rooftops . . ."
Rooftop life, Cairo.



which bridged the buildings rocking even with a child's weight, the flapping lines of clothes strung between malfunctioning antennas to be wind-washed, the buckets in which water was kept, the small smokes from cooking fires, acrid as an outcry, otherwise lost in the larger dusts from the desert and the exhaust haze from the cars: not a city, surely, inside a city, but places for living, if you could call them such, which were not places ever intended for that—beneath the arches of the ancient aqueduct, on stairwells, within abandoned crates and cartons, derelict cars, in the barren concrete skeletons of unfinished buildings, in archeological excavations beside the pyramids—everywhere spaces filled with people like water welling up from the ground.

In Manila I sat on a floor of broomed dirt, in a house surrounded by a sea of mud (fig. 14), and stared at the gray screen of an inoperable TV—for there was no electricity in the entire community, drinking tea from a cup so rough one finger received a cut. Again, in Manila, in vacant lots Marcos had had boarded up so the squatters would be hidden from the public and the highways, mothers, children lay on mattresses open to the sky—no fencing there to conceal them from the hotel windows—and received the frequent rains as if they were a blessing, twisting their clothes into ropes to wring the water out. In Shanghai long ago, or in Hongkong now, one can find river and seaways paved with boats, and upon the boats, life, as indifferently abundant as mist, clinging to everything, moistening the sails and the polished railings.

Venice was, like Hongkong, particularly a trading center, its buildings so fragile they seemed to be waiting to be taken down and sold, and such is Calvino's Esmeralda: a place of varying routes, of many noble and nefarious choices. It does indeed seem, with its paths and canals, its bridges and little alleyways and steps, its courtyards and churches, to be one vast area for movement and passage and travel. *A map of Esmeralda should include, marked in different colored inks, all . . . routes, solid and liquid, evident and hidden.*[8] The surveyor's task is made difficult by the swallows who follow and fly sedious flight plans. We have already visited this city, however, where, as you may recall, we found Frank Presto, somewhat besmitten, unrolling with difficulty, in the cramped and scarcely concealed corner behind his duplicating machine, a silk stocking it will not do to snag. How coolly Doris, for that is her present name, reclines within her dreams, for she is in motion, though reclining, like her city, and intends to rename herself Evita when the right time comes.

Phyllis, the city which follows Esmeralda in the text, is also like Venice, with surprises for the eye everywhere. But habit deadens our appreciations, and soon the city becomes imperceptible: *the city fades before your eyes, the rose windows are expunged, the statues on the corbels, the domes,* like torches, turn to smoke.[9]

Not only are there cities which belong to the past, and which are now invisible for that reason but there are cities of the present whose existence is quite evident to any traveler with eyes alert and curious, but which are hidden to the inhabitants, who no longer need to experience their post boxes, their scented trees, in order to allow their dogs to piss against them on their twice daily walks. A neighborhood may be missed entirely by a preoccupied visitor. I certainly do not notice now the soles of my feet, my own fat, restless or resentful ears, opposing opinions. Frank Presto has not observed the dust which has already



gathered at the back of his new machine, much of which has been swept off by the milling movements of a sleeve. Great stretches of so many cities in our country are indistinguishable, and even when we peer at them (while searching for a fast food joint, for instance), they are simply stretches, highways which have thrown out little asphalt lots along them like oozes of rust on a pipe. Amid so much tastelessness, it takes a pretty tasteless gesture to create a locale.

But when are cities invisible because they have no identity, and when is it because of our indifference, our closed eye? We tolerate incongruities as we tolerate religions. Not far from one of the largest hotels in Anchorage a pleasant little hovel nestles. Behind it one may see a sign advertising car parts. It has a front yard, odd enough for the business district, where a snowman leans wearily west. Between the melting man and the frozen house, with its mandatory evergreen, stand the bony poles of a huge teepee. Our cities are like seas, and it is not uncommon to see one building seize and swallow another like a shark (fig. 15). Several cities come together in this corner of Anchorage, exposing their bones like elbows out of sleeves, nudging one another in the same space. Cities of custom and history and commerce and comfort come together like a crash in the street. But we are used to crashes in the street, just as we are used to collisions beyond the curbs.

All future cities are invisible as a matter of course, including the Chicago which my train has not yet entered; or they have no substance, like the suburb which will be appended to Des Moines, and not even seen then by the people who live in Moline. In addition, there are dreamtowns, Disneylands, various Parises of pleasure. Venice is easily each of these.

14. ". . . in a house surrounded by a sea of mud . . ."
Slum, Manila.

15. ". . . it is not uncommon to see one building seize and swallow another . . ."
Bank, Stuttgart.



16. ". . . occasionally a ruin will become a piece of art . . ."
Ruin of church with facade standing alone, Macao.

Yes, says the vapid traveloguer, Venice is a magical city, a city whose light is famous, whose Doges were powerful, whose churches and plazas and monuments and palaces and museums are splendid, whose riches in paintings, tapestries, statuary, armor, glass, and other fine things are immeasurable. Oh, men were men then. It is a city that has captured the imagination of people of all times and places, provided they are actually, ostensibly, or invisibly German. Yet the canals of Venice stink of garbage; the city is old and dirty and sinking into its own swill. There is pigeon shit on the pigeon shit; there is the smell of mold and rot and sour wine everywhere; the plumbing is antiquated, although the city is nothing but plumbing; the climate is conducive to fevers; rats are so prevalent they have made the city famous as a rest home and haven for cats. Venice has known power, wealth, greatness, shame. Now it is a poorly maintained museum. People carry pieces of Venice away in their valises: bits of cornice, slivers of Murano glass, plates of great and complex grace, as radial as some cities. It exists in the past, even now, for there are no motor cars in the city; but the present is present, nevertheless, in the noise of the vaporetti, in the din of the transistors, in the magazines from Milan and the pornographic paperbacks.

There is so much water in Venice that the city doubles itself constantly. The Palais d'Or glistens on the surface of the Grand Canal. Orange rind clings to its mirrored filagree. Cities are sometimes called twins because they face one another across a river, like Minneapolis and St. Paul, and there are a number of twins among Calvino's creations. In Eudoxia, for instance, we can find a carpet which contains a complete map of the city, or perhaps the city is the reflection of the carpet, as the carpet may, in turn, map the sky. To illuminate the landing of a stairway, panels of stained glass foresee the development of the city. Where are the true forms and where the false? We can ask this question even when we believe we know which is the solid city and which the reflection.

Two boys of my invention are leaning over the railing of a bridge, staring down, hoping for the sight of a condom among the effluvia, a useful box, a corpse. What floats by, scarcely noticed, is the image of the heartbreak of one, the bankruptcy of the other.

In Eusapia the populace has built catacombs which are a replica of the city, or have the dead built the city that stands above ground like stones to mark their place? Ambiguities abound. Intentions are concealed. Is that canal my imaginary boys were staring at now flowing through the mirror in a Berlin palace? and is the innocent labyrinthal hedgerow which decorates the courtyard of the Hôtel Carnavalet really an incendiary plan for the restoration of the monarchy? Calvino's text gives birth to questions it does not raise. I wonder what the dead bury up there in Eusapia's broad day: grain? bullrushes perhaps? banks of cloud grass?

I live, myself, in a city of defeated expectations, a city of inept lies. One arrives at the train station in order to book a room for the night (there are no trains); yet lest I adapt myself to this new arrangement, another station will sell me chandeliers or office equipment. When will shopping centers become warehouses if warehouses are already galleria, ateliers, or rifle museums? Theaters quietly unseat themselves and perform their plays outdoors. One may dine rather well in a rehabilitated church (astonishing phrase!), at a table overlooking the no longer sanctified altar where they keep the register of reservations, and return home to one's apartment in the recycled synagogue. So what if the window lets in the eye of God?

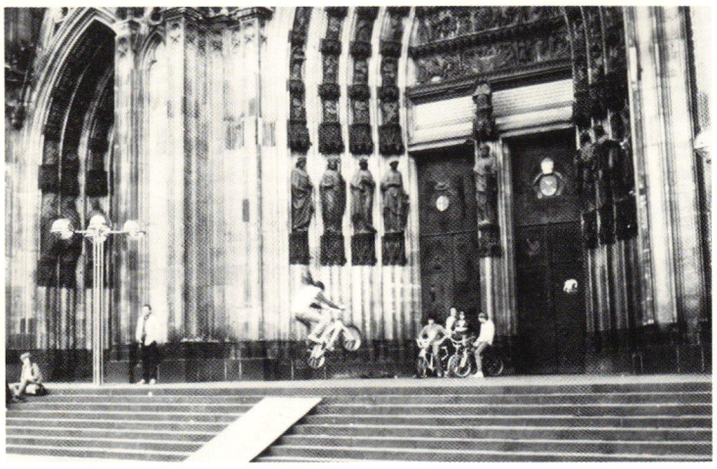
Schools may be anything but schools: an old folks' home, an orphanage, a shopping brothel, a detention center. Here, a grocery store sells art supplies; there, a gas station pumps meat and milk. Fire houses are especially vulnerable. This one is a raisin cookie company. That one sells quilts. Abandoned power stations put on a beguiling puppy face and hope their shape will suggest something. One year a section of the city is a slum, the next year it is chic and saved. Soon, in such deceptive cities, mailboxes will swallow the mailman's hand; trees will help school children cross the street safely; the red light will mean run; and no one will speak for fear of being taken seriously. As for myself, I await the day when Pine Tree Lane is the redlight district and the tall glass towers contain nothing but lemonade and surplus grain.

But the falsehoods began when the first earth was moved. The train station was built to resemble the Siena City Hall or a castle in the Alps, itself a fake, as well as the mountain. Banks were reassuring Greek temples at first, or colonial mansions, before they became gift shops, while a few now specialize in Chinese cuisine, each dish exquisite like the lake front in some cities, the menu extensive, the meal a disorder. Homes were built back then (though now "back thens" have overcome us like crime) to resemble ships, as was the Governor's house in Macao; some lie becalmed in fields still, or marooned in an oil slick. There are cities in which railings have been known to overleap streets and run wildly in search of a porthole, a whiff of salt air, a flying fish. Usually ruins are remaindered, but occasionally a ruin will become a piece of art (fig. 16), like a broken window, shattered marriage, derelict fuel pump, or a pierced façade. Not every building remarries readily. Dirigible hangars have their own climate; clouds form; it even rains; it is not possible to play golf in them in every weather.

Calvino allows each kind of city to appear ("trading cities," for instance, "cities and eyes," "thin cities," "cities and signs," "cities and the dead"), to fill a place on the board with one of its five manifestations (rook, castle, bishop, king, queen), to enjoy its springlike "break of day." However, every such epiphany, every "showing forth," goes ahead according to rules which have been rigorously formulated and pitilessly enforced (rules which I understand, but choose not in this place to disclose). Having briefly shown itself, each city disappears the way an image on a scroll winds gently out of sight, possibly to return, but not on this trip.

There are timeless cities, not because they seem eternal, but because every thing about them is the same age. Canberra, for instance, is a stage set which springs to life when you open your curtains, but it was not there while you slept. Like Clayton, Missouri, it has no history; it is not yet a city. The elderly hide themselves, their yellowing valentines and their laces.

Did we speak of the Devil? Here is Zora, a city as memorable as a jingle. It is a honeycomb in which we can place those things we want to remember. It is a city of labeled jars, of canisters which contain rice and recollections. Zora is not a city memorable in itself (in itself, it is self-effacing, almost invisible), but it is made of memory lanes like an old musical melody. We might imagine, for instance, an extensive cemetery, and then remember our friends and acquaintances, their names and most significant deeds, by carving them on tombstones carefully selected to signify the essential nature of their being. Of course, if they lack an essential nature, the tombstones may resemble nothing except one another. However that turns out, is not the organization of the spaces in the celebrated memory theater of Giulio Camillo the same? Isn't it what we mean when we say that something—the way you slipped that folded fifty in your bodice—is engraven on our



memory? or the time, as kids, we jumped our bicycles over the steps in front of the cathedral in Cologne (fig. 17)? Surely it's better than saying that your name has been writ on water. Yes, certainly, Venice is such a theater, where Marco Polo stored the cities of the East like spices brought back aboard ship, and where every bridge in every city sees its own feet and curving belly; and we have but to look round the rounded corner of the Gritti Palace to encounter Polo's memory of Olinda, the city which developed in concentric circles like a tree, the old walls and quarters expanding as it grew so that its bark could continue to encompass it, and whose newer sections, increasingly thin where they begin, press out from the inskirts of a city whose center has, by now, reached and resembles the horizon.

If we weary of the name *Venice* and of that *V* through which the gondoliers paddle, carol, and collect their fee, Florence can satisfactorily replace it, because *Invisible Cities* is a book about still another book, Dante's *Inferno*, composed as nearby to *The Travels of Marco Polo* as Georgetown is to the Capitol. The nine sections of Calvino's text resemble the nine circles of Hell through which Virgil escorts Dante, although Marco Polo carries the Khan with him largely by turns of the wheel of the word. There is a definite, not to say plummetous, descent from the first part, which opens with "Cities and Memory," to the final one, which begins with "Cities of the Dead," after which we fall more precipitously toward those cities which are said to be "Hidden."

But the dead often live more fully dead than when they were alive. Now, finally, they have a look in their eyes. Nor do we know what rough one of them is this moment slouching toward Bethlehem to set off a bomb?

In Calvino, as in any actual urbanity, Augustine's City of God and his City of Satan share the same streets and avenues, interpenetrate equally every relation. As I've argued, a single city is at once a cemetery, a slaughterhouse, a lying-in hospital, and a bordello. I have no doubt that the fountain which breathes its broken hopes in that forlorn Córdoba courtyard purls merrily in a cloister in Seville. Frank Presto will present his new secretary not only with a new pair of stockings but with a garter belt in black net to match them—even hold them up—but their love is shadowed by its own remote ruins now. the kneeling figure we observed earlier—who might have been fishing a fan from a fountain—that figure may simply be waiting for the shutters of the surrounding apartments to open to allow in the cool night air and his amorous eyes.

The technique of this magical and fabulous fiction concerns the recognition of the Real, which is its insistent subject. Calvino has described himself as having a geographical neurosis, and we might imagine that here he has allowed that neurosis to rule, if not ruin, him; but Calvino remains the realistic writer he began his career by being, an author of social protest, of political engagement. He recognizes now (if this book can be entered as evidence) that being Real does not mean being committed to the imitation of the commonplace, the promises of parties and politicians, the trite, the ordinary, the mercilessly clichéd—and all imitation is commonplace; it is itself a cliché. On the contrary. Reality does not consist of things, their collections, or their shallow denominations. Chicago is not the trumpet of its towers, which only herald it as we approach. Reality is not a set of simple situations, nor is it one shade of anything, one blue color or brown shirt. It is not even a single system of relations—invisible as all of them are. The experience of the city exceeds our experience of Proust. A great city's life lies in the details, in the details as they fulfill a whole. Consider what a little grass does to a set of steps, and multiply . . . multiply . . . Consider what a crack of light does to the dungeon, and multiply for freedom

17. ". . . the time, as kids, we jumped our bicycles over the steps in front of the Cathedral . . ."
Cologne Cathedral.

18. ". . . One must give one's garden a view . . ."
Garden in the sky, Nice.



and for sky. Consider not only the multiplication of niceties, but of vulgarities as well: signs, poles, wires, trash, broken glass, peeling paint, rotting boards. And multiply . . . multiply . . . This book *Invisible Cities*, mistaken as an instance of the wild and woolly, is respectable in its traditional intentions: it would tell the truth; it would point a moral, suggest a way.

Calvino brings each of his cities before us through mime, and by dancing, as poor Polo must do at first, since he does not know the Great Khan's language. He renders each of them by means of essential relations—possibly dwellings or thickets of dwellings of odd kinds—not simply, then, of those parts which will somehow allow themselves to stand for their whole, either routinely, as a piece of pie must, or even more routinely, as a statistical sample likes to lie its way into everybody's confidence; but rather more metaphorically, poetically, if you like, so that one detail resonates with the presence of the rest like the last *l* in the toll of the chapel bell.

Isn't that what happens to the elements of a successful city: they satisfy our needs, allow our lusts, remind us of our past, inhabit our future, encourage our reveries? Hölderlin's house stands, as it should, on a stream lined with dreams. The feel for the meaning and quality of a door or a gate does not stop there, opening both out and in at the same time the way a lamp in a window excites an exchange of light. What is a text but a community of words? A poem, to be sure, may stand on a white hill all alone like a country church, but a fiction is all jostle and solicitation like a crowded market place.

The man who knows by heart how Zora is made, if he is unable to sleep at night, can imagine he is walking along the streets and he remembers the order by which the copper clock follows the barber's striped awning, then the fountain with the nine jets, the astronomer's glass tower, the melon vendor's kiosk, the statue of the hermit and the lion, the Turkish bath, the café at the corner, the alley that leads to the harbor.[10]

For this sort of writing, "exquisite" is an inadequate adjective. Can't we believe that on many a Trieste night, James Joyce lay awake walking the Dublin streets, rereading the signs, resting his cane in a comfortable and familar crack?

We have seen cities clothed in colored tiles, courtyards composed of images and ancient scripts and antique statuary, streets lined with streams, lined with inclining tables and dissipated awnings. There are neighborhoods where, in the shelter of the trees, the houses contrive to dream the American dream. A single building can sometimes overpower an entire city, and like the Arch in St. Louis, become more than an emblem, more than a feat to be admired, but a conscience to be obeyed.

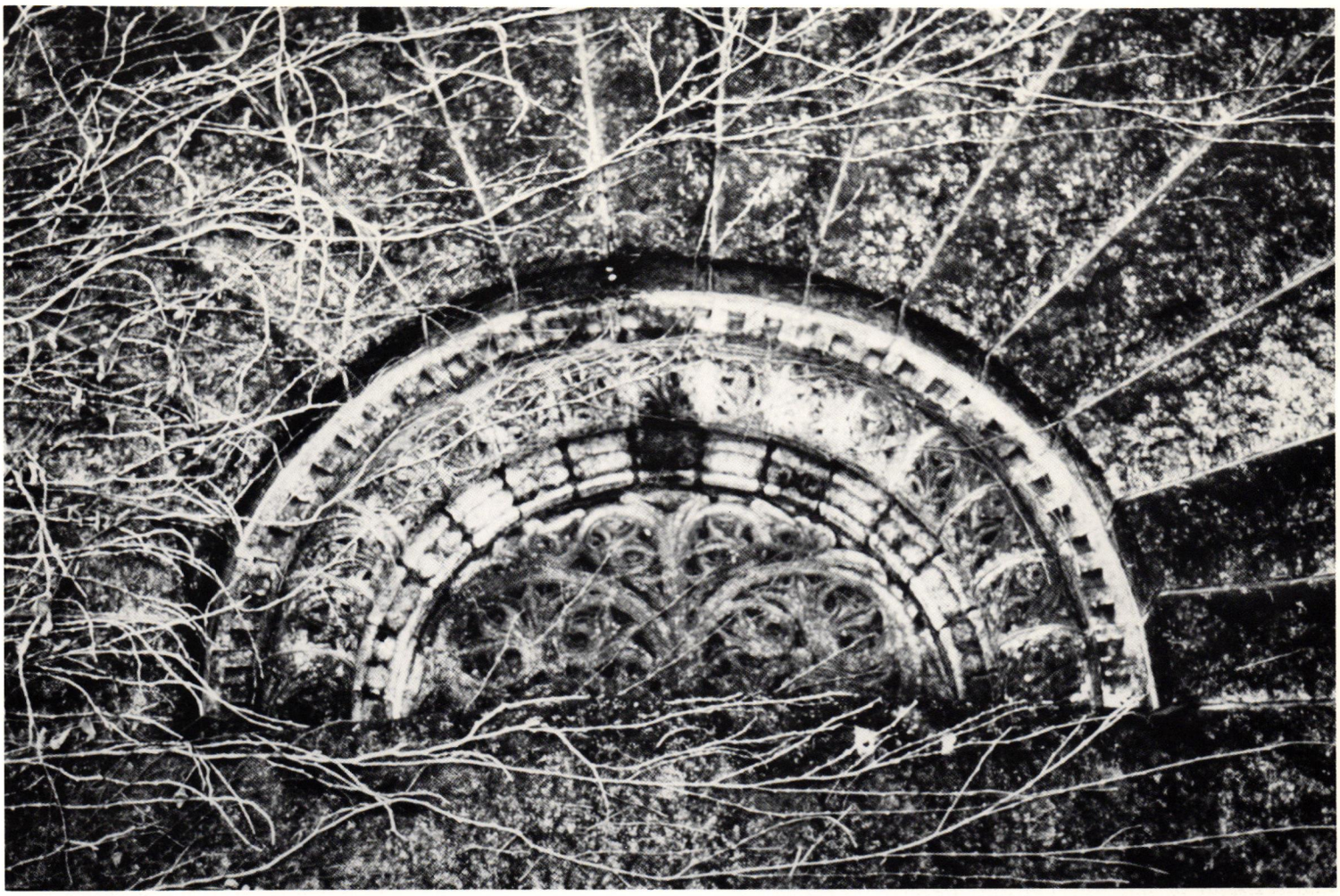
It would be a serious error to imagine that each city portrayed in Calvino's urban bestiary is a part of a larger, unexperienced megalopolis the way Clayton, Chevy Chase, or Shaker Heights, are parts, even metaphorically. They are not hairs or fingernails or skin. They constitute entire cities in themselves. Like the body's circulation system or the glands, they are just not *complete* ones, for the complete city is both the Las Vegas of this book—a city of signs, each sign signifying still another, no real referent anywhere—and the city without either edge or center, one of Calvino's "Continuous Cities," like Los Angeles, or the concentrated, pointed city, one that sits like a cap of snow on a hill's head and melts its sewage on the fields and road below, as well as each of the fifty-five towns the text takes us through, including those that disappeared ahead of history and before we reached the title page; governmental cities, too, capitals with a capital *C*, and those which will be paraded by our absent or our sleeping eye as the text turns silently inside itself, thinking like a drill bit does, bringing more aspects to inner view . . . continuously, invisibly.

The moral of our story comes, as it ought, on the last page, when the disappointed Kublai Khan complains: *"It is all useless, if the last landing place can only be the infernal city, and it is there that, in ever-narrowing circles, the current is drawing us."*[11]

And Polo said (repeating a saying in Sartre that "Hell is other people"): *"The inferno of the living is not something that will be; if there is one, it is what is already here, the inferno where we live every day, that we form by being together. There are two ways to escape suffering it. The first is easy for many: accept the inferno and become such a part of it that you can no longer see it. The second is risky and demands constant vigilance and apprehension: seek and learn to recognize who and what, in the midst of the inferno, are not inferno, then make them endure, give them space."*[12]

This is not, perhaps, a startling conclusion, but neither is the news that one must cultivate one's garden. They are, however, important conclusions, complex in their context, and even considerably true. One must, in fact, give one's garden a view (fig. 18).

And now should certain listeners, readers, travelers, complain that they have seen the sacred city of Kin-sai before; that they have seen the same woman lean from the same window more than once; that they have noticed how the same lesson lay unlearned in this city and in that, and concluded consequently that these were identical dumb students in one slow school; that they have heard the words *gate, square, street, tower, statue, vista, courtyard, steeple, minaret* repeated like the rattle of a child's drum; then my, Marco Polo's, and the Good Khan's answer has to be, I think, that if you believe all crossings are alike because they are all called crossings, you shall shortly be at sea, for not all crossings even cross; and if you believe that, because different bricks must similarly repeat themselves to make a wall no wall resembles any other, or conversely, that every brick wall hides the same house; if you think the beggar you gave money to on Monday is the banker who, on Tuesday, received your intimidated check, then you had better be happy to live in one thin city your lifeline long (for there will be no point in going to another), a city where everyone will have one dog, one car, one lingering cough, one husband and/or wife, the way we each have one mother; and I can only pity those who see no difference between Colette, who leaned down from her window in the Palais Royale that ripe May day and threw her fan into the fountain, and Cecile, who, in the maddening mug of one of St. Louis's insufferable summer evenings, hurled the straw hat with which she was trying to cool her honey blond head at the back of a prowling tom, so that it fell in a slow swoon through the wet night air, only to be crushed in the gush of water coming from the hydrant in which we kids were playing. We watched the straw hat come apart like rushes drawn away into the current of a river, and while what might have been one of the world's eyes slowly began to emerge from the street (fig. 19), Polo, my playmate, said he heard a distant falls, saw a great lake beyond, docks, patient donkeys, a young woman watching from a window.



19. ". . . one of the world's eyes slowly began to emerge from the street . . ."
Stone grill, Richardson, Chicago.

NOTES

1. Italo Calvino, *Invisible Cities*, trans. William Weaver (New York: Harcourt, Brace, Jovanovitch, 1972).

2. My respect for the scholarly standards of Jorge Luis Borges compels me to include this brief bit of dubious bibliographical information.

3. Calvino 160.

4. Calvino 10.

5. Calvino 121.

6. Calvino 122.

7. Calvino 132.

8. Calvino 89.

9. Calvino 90.

10. Calvino 15.

11. Calvino 165.

12. Calvino 165.

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2. In Marcel Brion, *Fabrizio Clerici* (Milan: 1955).
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10. Patreese Martin.
11, 12, 32. In Paolo Portoghesi , *Rome of the Renaissance*, trans. Pearl Sanders (London: Phaidon Press, 1972).
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2, 3. Muscoe B. Martin.

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11. Athanasius Kircher, *Arca noe, in tre libros digesta* (Amsterdam: Joannem Jaussonium a Waesberge, 1675).

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Gass
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Alphabet, designed and cut by Richard Grasby, lettercutter.

CONTRIBUTORS

ABOUT THIS ISSUE

As with previous issues of *VIA*, "Architecture and Literature" explores a single theme. This collection of essays continues *VIA*'s tradition of publishing authors from outside the realm of architecture, contributing to a fuller understanding of architectural themes by presenting a broad spectrum of viewpoints.

David Leatherbarrow has a Bachelor of Architecture degree from the University of Kentucky, and a Ph.D. in Art from Essex University. He has taught architecture in both England and the United States, and has participated in numerous European architectural competitions. He co-edited a book on architectural drawing, and currently practices and teaches architecture at the University of Pennsylvania.

Judith Wolin is an Associate Professor of Architecture at the Rhode Island School of Design, and has been a visiting critic at Yale, Harvard, Princeton, and Maryland Universities. She was awarded a fellowship from the National Endowment for the Humanities for 1984–85, and is currently pursuing research on the history of narrative environments–gardens and buildings with literary programs–and on the critical and artistic problems they raised.

William Alexander McClung is Professor of English at Mississippi State University and currently holds visiting appointments at Georgia Tech. and UCLA. He received his B.A. from Williams College, and his Ph.D. from Harvard Universiy. He is the author of *The Country House in English Renaissance Poetry* (1977), *The Architecture of Paradise* (1983), and articles in literary and architecture journals, including forthcoming papers in *Studies in the History of Art, Design Book Review*, and *SITES*.

Richard Selzer is a General Surgeon at the Yale University School of Medicine and a writer of five books of essays, articles, and memoirs. His most recent collection, *Taking the World in for Repairs*, includes *The Slaughterhouse* and will be published in 1986.

Jaime Alazraki has a Ph.D. from Columbia University, and has taught at the University of California, San Diego. He is a Professor of Latin American Literature at Harvard University. He has written widely on Jorge Luis Borges, and, more recently, on Julio Cortázar. He was a Guggenheim Fellow in 1971 and again in 1981.

Donald Kunze teaches architecture at Penn State University and is currently working on a study of the civic place of the county courthouse.

Wesley Wei received his Master of Architecture degree from the University of Pennsylvania in 1977 and has been a Professor of Architecture at Penn State University since 1981. His work has been selected for the Pennsylvania Academy of Fine Arts 1986 show, "The Tradition of Philadelphia Architecture as seen in Drawings."

Narciso G. Menocal holds a doctorate in Architectural History from the University of Illinois–Urbana-Champaign, and is currently the Chairman of the Department of Art History at the University of Wisconsin at Madison. He is the author of *Architecture as Nature: The Transcendentalist Idea of Louis Sullivan*, as well as numerous articles on American architecture.

Rodolfo Machado was born in Argentina and is an American citizen. He received his diploma in Architecture from the Universidad de Buenos Aires in 1966, and received a Master of Architecture degree from The University of California at Berkeley in 1970. He is currently an Associate Professor and head of the Department of Architecture at the Rhode Island School of Design. His drawings, writings, and built projects have been published and exhibited throughout the world, and together with Jorge Silvetti, has won numerous *Progressive Architecture* awards, as well as awards in France and Germany.

Umberto Eco is a distinguished semiotician, historian, philosopher, aesthetician, and a scholar of James Joyce. He is the author of the novel *The Name of the Rose*. He teaches at the University of Bologna and lives in Milan.

Werner Oechslin has studied art history, philosophy, mathematics, and archeology in Zurich, Switzerland. He has published extensively in art and architectural theory, in particular Italian architecture of the fifteenth–nineteenth centuries, and eighteenth century art. He is the editor of *Daidalos*, the Berlin Architectural Journal.

Rosemarie Haag Bletter is an Adjunct Associate Professor at the Institute of Fine Arts in New York. She recently published the book *American Architecture Since 1945*, and was curator of the 1930–1945 segment of the 1984–85 "High Styles: Twentieth Century American Design" at the Whitney Museum of American Art. She was the consultant and writer for the film "Beyond Utopia" (with Martin Filler). She served as the Director of the Society of Architectural Historians from 1981 to 1984, and currently serves on its education committee.

William H. Gass received a Ph.D. in Philosophy from Cornell University and is currently the David May Distinguished Professor in the Humanities at Washington University in St. Louis. He has authored several novels and collections of short stories and essays. He has received both Guggenheim and Rockefeller Foundation fellowships for fiction as well as numerous awards for writing, including the 1985 National Book Critics Circle Award for criticism for his collection of essays, *Habitations of the Word*.

Richard Grasby is a graphic designer, typographer, and lettercutter. He is the designer of the alphabet used for the letterforms of "Via" in the cover title and the dingbats that appear throughout this issue. He teaches a course at the University of Pennsylvania and frequently lectures and conducts workshops on lettercutting. Mr. Grasby is a Fellow and past President of the Society of Designer-Craftsmen, a member of the Art Workers Guild (London), and a Fellow of the Royal Society of Arts. The relationship–often uncomfortable–between lettering and building, the appropriate use and the scale of lettering in town and country is now his particular concern.

A Bower in the Arsacides

Hitherto, in descriptively treating of the Sperm Whale, I have chiefly dwelt upon the marvels of his outer aspect; or separately and in detail upon some few interior structural features. But to a large and thorough sweeping comprehension of him, it behooves me now to unbutton him still further, and untagging the points of his hose, unbuckling his garters, and casting loose the hooks and the eyes of the joints of his innermost bones, set him before you in his ultimatum; that is to say, in his unconditional skeleton.

But how now, Ishmael? How is it, that you, a mere oarsman in the fishery, pretend to know aught about the subterranean parts of the whale? Did erudite Stubb, mounted upon your capstan, deliver lectures on the anatomy of the Cetacea; and by help of the windlass, hold up a specimen rib for exhibition? Explain thyself, Ishmael. Can you land a full-grown whale on your deck for examination, as a cook dishes a roast-pig? Surely not. A veritable witness have you hitherto been, Ishmael; but have a care how you seize the privilege of Jonah alone; the privilege of discoursing upon the joists and beams; the rafters, ridge-pole, sleepers, and under-pinnings, making up the frame-work of Leviathan; and belike of the tallow-vats, dairy-rooms, butteries, and cheeseries in his bowels.

I confess, that since Jonah, few whalemen have penetrated very far beneath the skin of the adult whale; nevertheless, I have been blessed with an opportunity to dissect him in miniature. In a ship I belonged to, a small cub Sperm Whale was once bodily hoisted to the deck for his poke or bag, to make sheaths for the barbs of the harpoons, and for the heads of the lances. Think you I let that chance go, without using my boat-hatchet and jacket-knife, and breaking the seal and reading all of the contents of that young cub?

And as for my exact knowledge of the bones of the Leviathan in their gigantic, full grown development, for that rare knowledge I am indebted to my late royal friend Tranquo, king of Tranque, one of the Arsacides. For being at Tranque, years ago, when attached to the trading-ship Dey of Algiers, I was invited to spend part of the Arsacidean holidays with the lord of Tranque, at his retired palm villa at Pupella; a sea-side glen not very far distant from what our sailors called Bamboo-Town, his capital.

Among many other fine qualities, my royal friend Tranquo, being gifted with a devout love for all matters of barbaric vertù, had brought together in Pupella whatever rare things the more ingenious of his people could invent; chiefly carved woods of wonderful devices, chiselled shells, inlaid spears, costly paddles, aromatic canoes; and all these distributed among whatever natural wonders, the wonder-freighted, tribute-rendering waves had cast upon his shores.

Chief among these latter was a great Sperm Whale, which, after an unusually long raging gale, had been found dead and stranded, with his head against a cocoa-nut tree, whose plumage-like, tufted droopings seemed his verdant jet. When the vast body had at last been stripped of its fathom-deep enfoldings, and the bones become dusty and dry in the sun, then the skeleton was carefully transported up the Pupella glen, where a grand temple of lordly palms now sheltered it.

The ribs were hung with trophies; the vertebrae were carved with Arsacidean annals, in strange hieroglyphics; in the skull, the priests kept up an unextinguished aromatic flame, so that the mystic head again sent forth its vapory spout; while, suspended from a bough, the terrific lower jaw vibrated over all the devotees, like the hair-hung sword that so affrighted Damocles.

It was a wondrous sight. The wood was green as mosses of the Icy Glen; the trees stood high and haughty, feeling their living sap; the industrious earth beneath was as a weaver's loom, with a gorgeous carpet on it, whereof the ground-vine tendrils formed the warp and woof, and the living flowers the figures. All the trees, with all their laden branches; all the shrubs, and ferns, and grasses; the message-carrying air; all these unceasingly were active. Through the lacings of the leaves, the great sun seemed a flying shuttle weaving the unwearied verdure. Oh, busy weaver! unseen weaver!—pause!—one word!—whither flows the fabric? what palace may it deck? wherefore all these ceaseless toilings? Speak, weaver!—stay thy hand!—but one single word with thee! Nay—the shuttle flies—the figures float from forth the loom; the freshet-rushing carpet for ever slides away. The weaver-god, he weaves; and by that weaving is he deafened, that he hears no mortal voice; and by that humming, we, too, who look on the loom are deafened; and only when we escape it shall we hear the thousand voices that speak through it. For even so it is in all material factories. The spoken words that are inaudible among the flying spindles; those same words are plainly heard without the walls, bursting from the opened casements. Thereby have villainies been detected. Ah, mortal! then, be heedful; for so, in all this din of the great world's loom, thy subtlest thinkings may be overheard afar.

Now, amid the green, life-restless loom of that Arsacidean wood, the great, white, worshipped skeleton lay lounging—a gigantic idler! Yet, as the ever-woven verdant warp and woof intermixed and hummed around him, the mighty idler seemed the cunning weaver; himself all woven over with the vines; every month assuming greener, fresher verdure; but himself a skeleton. Life folded Death; Death trellised Life; the grim god wived with youthful Life, and begat him curly-headed glories.

Now, when with royal Tranquo I visited this wondrous whale, and saw the skull and altar, and the artificial smoke ascending from where the real jet had issued, I marvelled that the king should regard a chapel as an object of vertù. He laughed. But more I marvelled that the priests should swear that smoky jet of his was genuine. To and fro I paced before this skeleton—brushed the vines aside—broke through the ribs—and with a ball of Arsacidean twine, wandered, eddied long amid its many winding, shaded colonnades and arbors. But soon my line was out; and following it back, I emerged from the opening where I entered. I saw no living thing within; naught was there but bones.

Cutting me a green measuring-rod, I once more dived within the skeleton. From their arrow-slit in the skull, the priests perceived me taking the altitude of the final rib. "How now!" they shouted; "Dar'st thou measure this our god! That's for us." "Aye, priests—well, how long do ye make him, then?" But hereupon a fierce contest rose among them, concerning the feet and inches; they cracked each other's sconces with their yard-sticks—the great skull echoed—and seizing that lucky chance, I quickly concluded my own admeasurements.

These admeasurements I now propose to set before you. But first, be it recorded, that, in this matter, I am not free to utter any fancied measurement I please. Because there are skeleton authorities you can refer to, to test my accuracy. There is a Leviathanic Museum, they tell me, in Hull, England, one of the whaling ports of that country, where they have some fine specimens of fin-back and other whales. Likewise, I have heard that in the museum of Manchester, in New Hampshire, they have what the proprietors call "the only perfect specimen of a Greenland or River Whale in the United States." Moreover, at a place in Yorkshire, England, Burton Constable by name, a certain Sir Clifford Constable has in his possession the skeleton of a Sperm Whale, but of moderate size, by no means of the full-grown magnitude of my friend King Tranquo's.

In both cases, the stranded whales to which these two skeletons belonged, were originally claimed by their proprietors upon similar grounds. King Tranquo seizing his because he wanted it; and Sir Clifford, because he was lord of the seignories of those parts. Sir Clifford's whale has been articulated throughout; so that, like a great chest of drawers, you can open and shut him, in all his bony cavities—spread out his ribs like a gigantic fan—and swing all day upon his lower jaw. Locks are to be put upon some of his trap-doors and shutters; and a footman will show round future visitors with a bunch of keys at his side. Sir Clifford thinks of charging twopence for a peep at the whispering gallery in the spinal column; threepence to hear the echo in the hollow of his cerebellum; and sixpence for the unrivalled view from his forehead.

The skeleton dimensions I shall now proceed to set down are copied verbatim from my right arm, where I had them tattooed; as in my wild wanderings at that period, there was no other secure way of preserving such valuable statistics. But as I was crowded for space, and wished the other parts of my body to remain a blank page for a poem I was then composing—at least, what untattooed parts might remain—I did not trouble myself with the odd inches; nor, indeed, should inches at all enter into a congenial admeasurement of the whale.

Chapter 102 from *Moby Dick* by Herman Melville