

Progressive Architecture

The nature of the built environment

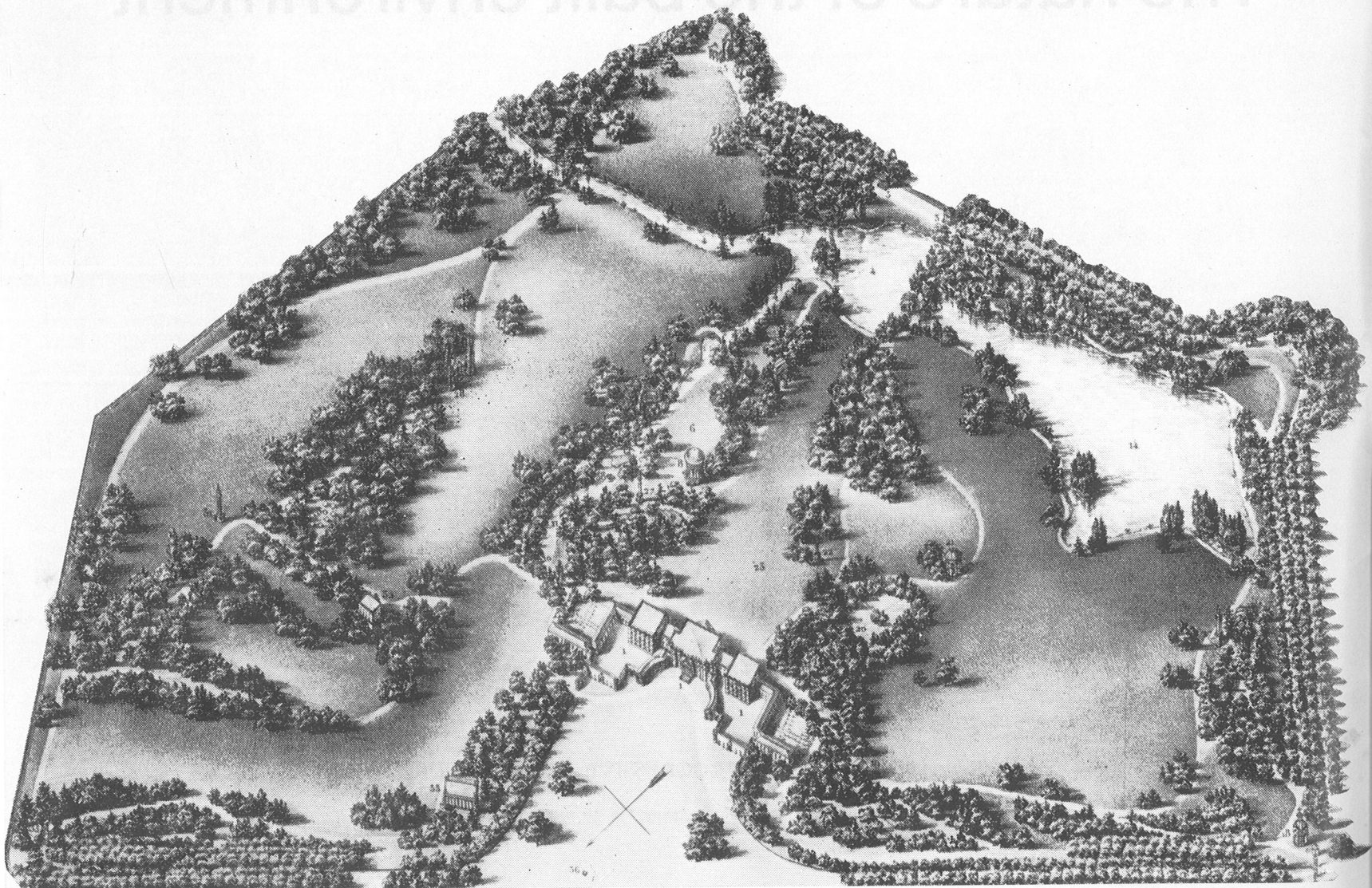
Reprinted from June 1974 PROGRESSIVE ARCHITECTURE

© 1974 Reinhold Publishing Company, Inc. All rights reserved.

Architecture of buildings and land

The nature of the built environment

Robert Geddes



Examining the various possible relationships of buildings to land, an architect-teacher argues for a close integration of indoor and outdoor architecture and supports his position with examples of his own recent work.

Buildings and their landscapes—or, if you prefer, landscapes and their buildings—are embodiments of ideas. That is, ideas of purpose, of space, and of materials influence forms that are built. Even more fundamentally, if not always so obviously, built forms are influenced by ideas of nature.

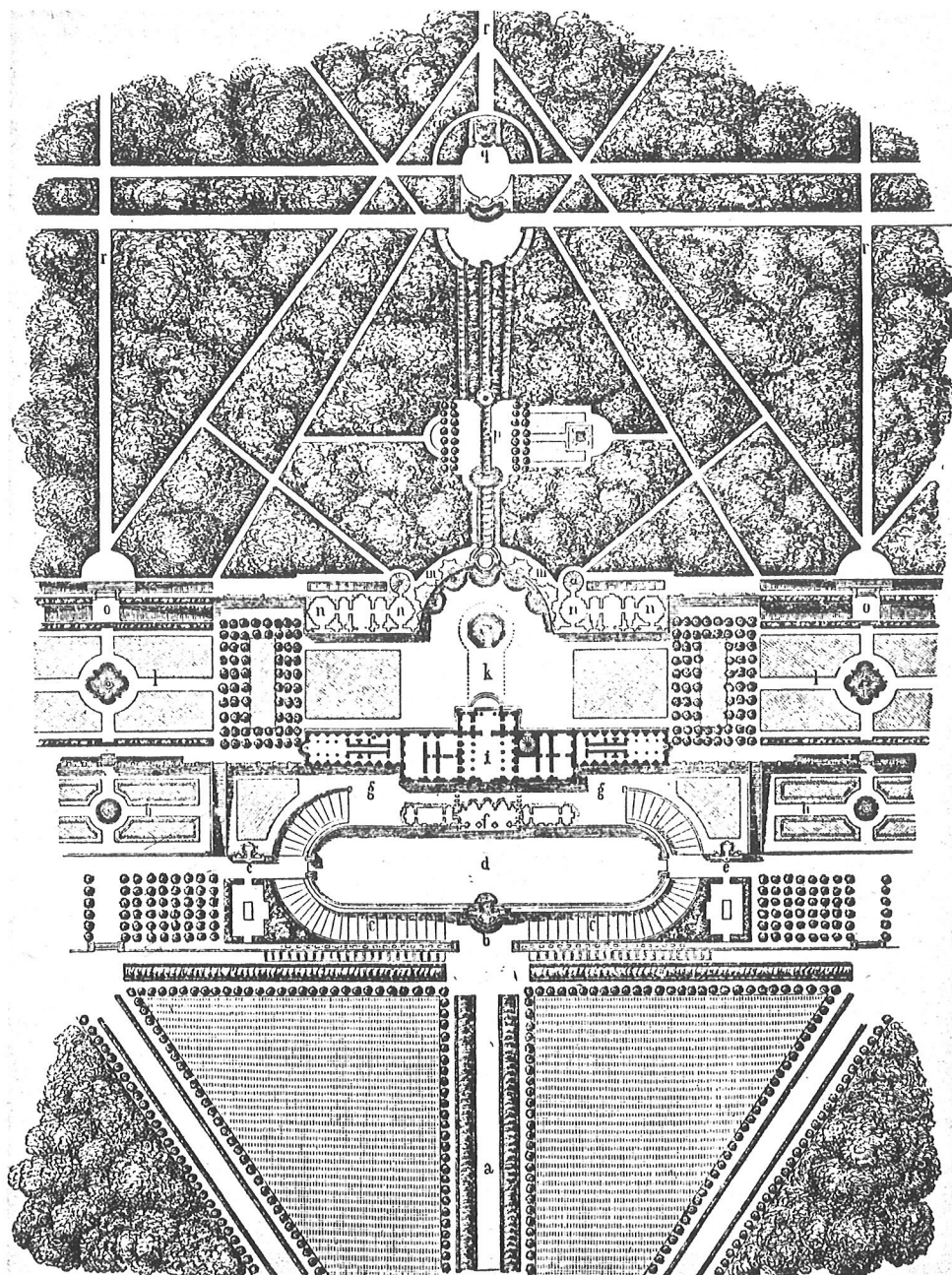
“Nature” is a very ambiguous term, which has taken at least 66 meanings throughout the history of ideas. But two main aspects, it seems, are persistent and recurring, despite their inherent opposition. On the one hand, nature is taken as a model of *regularity* and on the other it is admired for its *irregularity*. Each of these views is a kind of root metaphor, an idea displaying the essence of a system of values. In other words, each image embodies a distinct notion of culture and

society, and therefore of buildings, cities, and landscapes. Emerson observed that “the views of nature held by any people seem to determine all their institutions.”

In both ancient and modern times, Western culture has had an image of physical nature that was regular in its changes, forces and forms; universals were framed that expressed that regularity. The geometry of nature was used as the basis of rational ethics and aesthetics. A typical statement of this viewpoint might go something like this: “The work of every reasonable creature must derive its beauty from regularity, for reason is rule and order.”

The irregularity of nature has been greatly admired in the West since the 18th Century. Appreciation for irregular nature

Author: Robert Geddes is dean of the Princeton University School of Architecture and Urban Planning and a partner in the firm of Geddes Brecher Qualls Cunningham of Philadelphia and Princeton, N.J.



1 (left) Plan of Stowe (from Clifford, D. “A History of Garden Design,” Praeger, 1963).

2 (right) Plan of Villa Aldobrandini (from Newton, N. *Design in the Land* Harvard University Press, 1971).

The nature of the built environment

is expressed in the love of the picturesque, the wild, the rough, and the rude, the passionate and the primitive, the romantic. Renoir, for example, said that artists were "careful to proceed like nature. They are always respectful pupils, and are on guard never to transgress her fundamental law of irregularity."

In American history, ideas of nature have had powerful influences on the built environment. Two pivotal men, Thoreau and Jefferson, personify very different sets of intentions.

Henry David Thoreau was a forceful exponent of the idea of a nature unmodified: "I wish to speak a word for nature, for absolute freedom and wildness, to regard man as an inhabitant or part and parcel of nature rather than as a member of society." The crucial relationship for Thoreau was not man-to-man, or man-to-society, but man-to-habitat. The Thoreau image was first built as a landscape in the cemeteries of the 19th Century (such as Mt. Auburn Cemetery, Cambridge, Mass., 1831), and later in the new suburbs (such as Riverside, Ill., designed by Olmsted and Vaux, 1868). The romantic landscape of the suburb featured curved streets and irregular placement of buildings. The significant relationships were not between building and building, or street and building; what counted was the direct relationship of any built element to the terrain, to natural topographical elements.

Before Thoreau, the dominant image of the good landscape, advocated by Thomas Jefferson, was distinctly pastoral, following the mainstream of Western culture since Hesiod and Virgil. Jefferson valued the institutions and landscapes of an agrarian society because "the countryside produces more virtuous citizens." The agrarian landscape was preferred because it supported a better political, social community. The pastoral ideal, according to Leo Marx, "has been used to define the meaning of America ever since the age of discovery, and it has not yet lost its hold upon the native imagination." Pastoralism is more than a political economy; it is a collection of images about the world. The main elements of pastoralism, as a way of life, are freedom to hold discourse, to think, to make music and love in an ideal, ordered landscape.

The pastoral ideal has been expressed since the end of the 15th Century, in pastoral poetry and the formal gardens of Italy and France. The design of these gardens was seen as natural, in the sense of essential reality; wild irregularity was not seen as orderly or natural. The garden was a deliberate abstraction, an idealization of nature. Later, in the 18th Century, the emergence of the English landscape garden provided a dramatically different alternative as a formal means of abstracting the natural landscape. But both the Italian-French garden tradition and the English garden tradition share the idea of the pastoral as the basis of landscape form. These two traditions also share a formal element of crucial importance to the understanding of the built environment. Both seek to idealize the "forest edge" in the idea and form of the garden. The garden is a formal recognition of the beauty of the forest edge, the amenity of clearings in the forest.

The scientist, Eugene Odum, in classifying the major landscape ecosystems of the world (i.e., seas, estuaries, and seashores, streams and rivers, lakes and ponds, marshes, deserts, tundras, grasslands, and forests), points out that man seeks two basic tasks from the landscape: production

and protection. And unlike other organisms, he also seeks an esthetic enjoyment from the landscapes. For mankind, the habitat of the *forest edge* meets all three needs.

Therefore, Odum points out, from the viewpoint of biology and geography, "human civilization has so far reached its greatest development in what was originally forest and grassland in temperate regions. Man, in fact, tends to combine features of both grasslands and forests into a habitat for himself that might be called *the forest edge*. When man settles in grassland regions, he plants trees around his homes, towns, and farms, so that small patches of forest become dispersed in what has been treeless country. Likewise, when man settles in the forest, he replaces most of it with grasslands, but leaves patches of the original forest on farms and residential areas."

The relationship between man and nature has changed over the course of history, as his society and culture has changed. One of the most evident physical manifestations of culture is the landscape garden—the conscious making of a space that is distinguished from its surroundings and is created to express man's ideal image of nature. It is in some way always a vision of "paradise." (The word paradise originally meant a "walled garden.") Although the garden is made of elements of nature, its form is determined by man's culture, by his ideas and values concerning the role of landscape space in the built environment.

Eternal design elements

Landscapes, like buildings, are composed of space. And, like buildings, the form of a landscape is initially charted by "necessity," the necessity for protection, the necessity for shelter, the necessity for irrigation. In Joseph Hudnut's brilliant essay, "Space and the Garden," he argues that the development of the pergola, the arbor wall, and the fountain proceeded from function. But, "by successive adaptations to our spiritual, symbolic needs, they achieve beauty by conforming to our vision of Nature and of man's place in Nature, to our needs for peace and harmony in the world, to our faith in the dignity of life. The shape, arrangement, form, and content of the landscape will proclaim these aspirations."

Along with "necessity," another common basis for the design of landscape and buildings is that both are governed by the materials they embody. Although the modern movement has added important materials (steel, concrete, etc.) to architecture, it has brought no significant new materials to landscape. The essential connection between the new architecture and landscape is, therefore, not to be found in new materials or technologies; rather, the connection is in the old virtues of sun, sky, greenery, shelter, and space.

In the best of all possible worlds, what might be the relationship between buildings and their landscapes, or landscapes and their buildings? It seems to me that there are three different possibilities.

The *first* possibility is that architecture should be formally independent of landscape, which it serves as a complement and foil. The integrity of the landscape is preserved, and the buildings do not seek intermediate gardens or terraces, serving as transitions between built form and natural or idealized nature. Implied in this contrast is a relationship of opposites (illustrations 1, 3, 4, 5).

3 (right) *Hagley Park*, designed by the owner, George Lyttleton, and his cousin William Pitt, around 1750. Hagley is a fine example of the English landscape movement, which in the words of an 18th-Century visitor, "will teach you where the woods, groves and lawns should intermingle to grace each other—where water should be secluded and where visible—where light and shade have the best and most agreeable effect, and where the solemn and the gloomy more happily contrast the sprightly and the gay." The relationship of building and landscape is also one of contrast; the house is set upon rough-cropped, undulating meadows without architectural transitions made by terraces or walls. (from J.P. Neale *Views of the Seats of Noblemen*).



4 (below) *Villa Savoye, Poissy, 1928–31*, designed by Le Corbusier as an architectural object to be set upon a continuous meadow. The idea of the landscape is similar to Hagley Park; in Le Corbusier's own words: "I shall place this house on columns in a beautiful corner of the countryside; we shall have twenty houses rising above the long grass of a meadow where cattle will continue to graze." (from Willy Boesiger *Le Corbusier, Volume I*.)



5 *Eames House, Pacific Palisades, Calif., 1949*, designed by Charles Eames. Set in a grove of eucalyptus trees, overlooking a rye grass meadow, the Eames house is a fine example of the beauty of the forest-edge habitat seen in contrast to the man-made object.



6 *Taliesin, Spring Green, Wisc., 1911–*, designed by Frank Lloyd Wright. In his autobiography, Wright proposed an idea of landscape and buildings in which the transition from one to another is not perceptible. "I knew well that no house should ever be *on* a hill or *on* anything. It should be *of* the hill, belong to it." The intentions are clear, but the realizations are ambiguous. (Photo: Hedrich-Blessing)

7 *House in Lincoln, Mass., 1947*, designed by Carl Koch. The Thoreau-like landscape and garden are interior and exterior elements of the architecture. The hillside garden connects the living room and kitchen of the house. The intention is to eliminate the distinction between natural and artifact. (Photo: Ezra Stoller © ESTO)



The nature of the built environment

A *second* possibility is that architecture and landscape be seen as continuous, without clear distinctions between the artifact and natural fact, between built form and natural form. Interpenetration is sought between architecture and its natural surroundings, in terms of space and materials. The building should appear to grow out of its site, to be part of the site; of it, not on it (illustrations 6, 7).

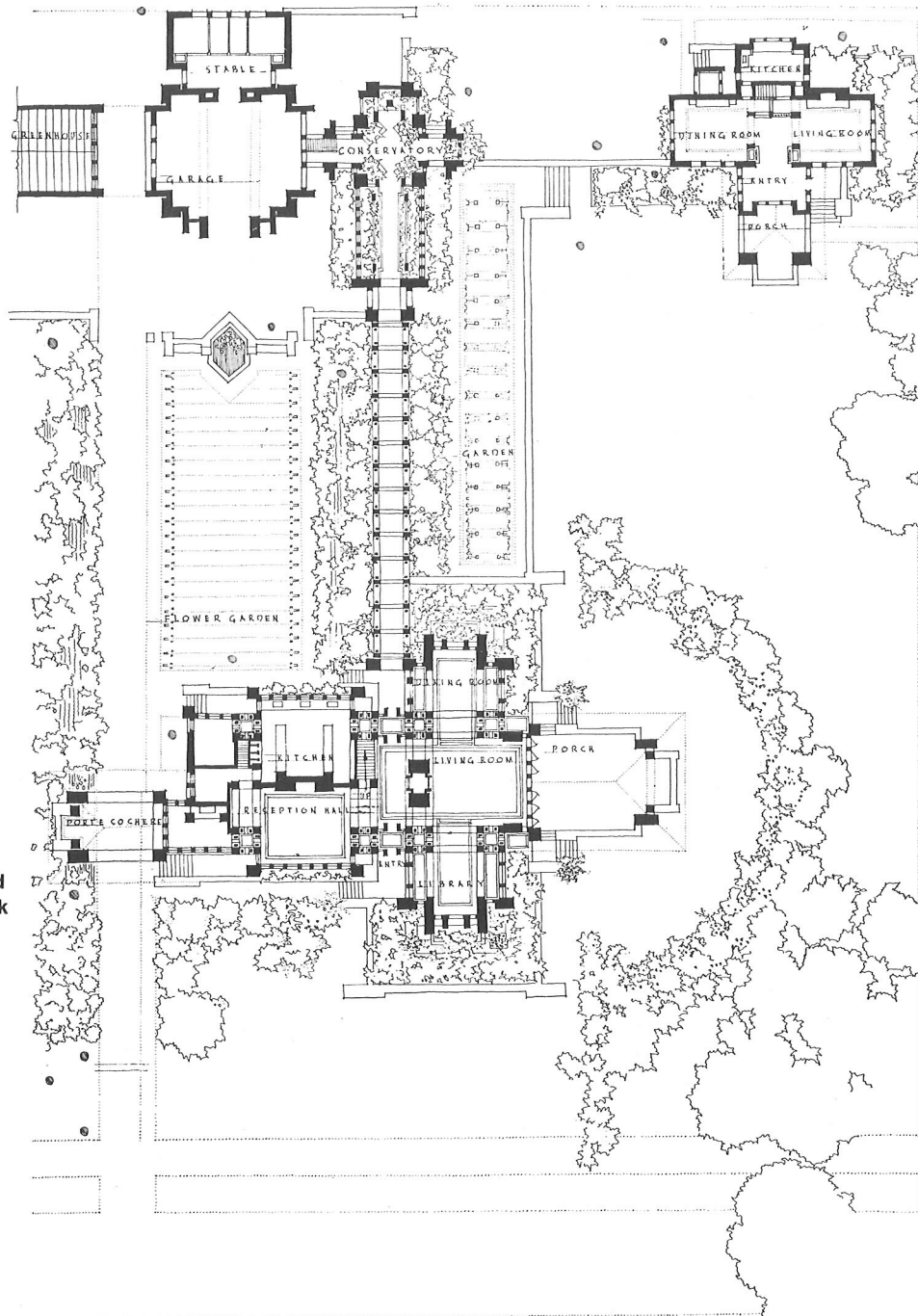
The *third* possibility is that architecture and landscape should modify each other, that indoor and outdoor space be organized together as a formal geometric unity, defined by built forms such as terraces or walls, arcades, trellises, trees, and plant materials. In 19th-Century England, landscape architect Humphrey Repton suggested "the gardens or pleasure grounds near a house may be considered as so many apartments belonging to its state, its comfort, and its pleasure." The architectural potentials of the third possibility

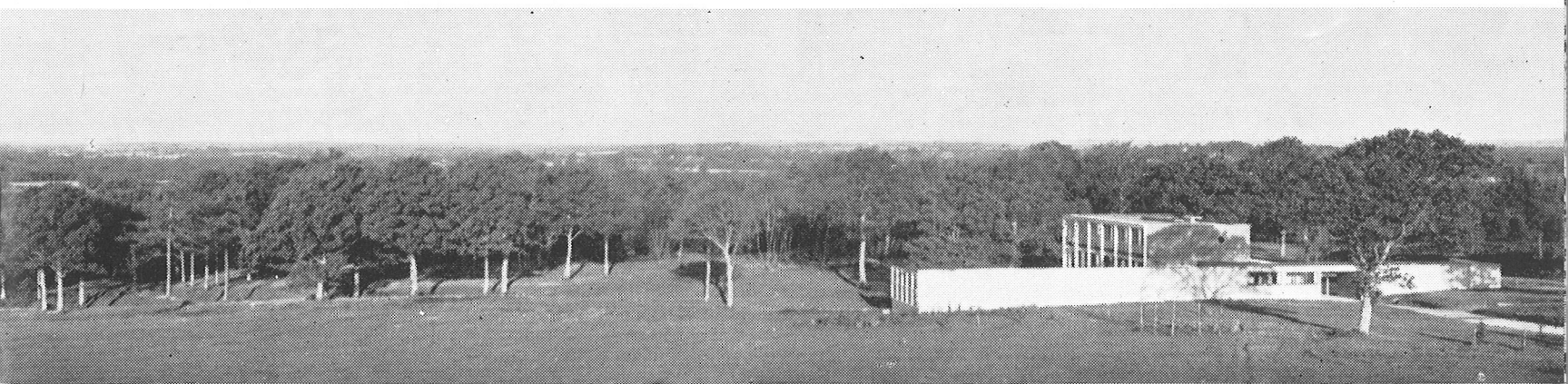
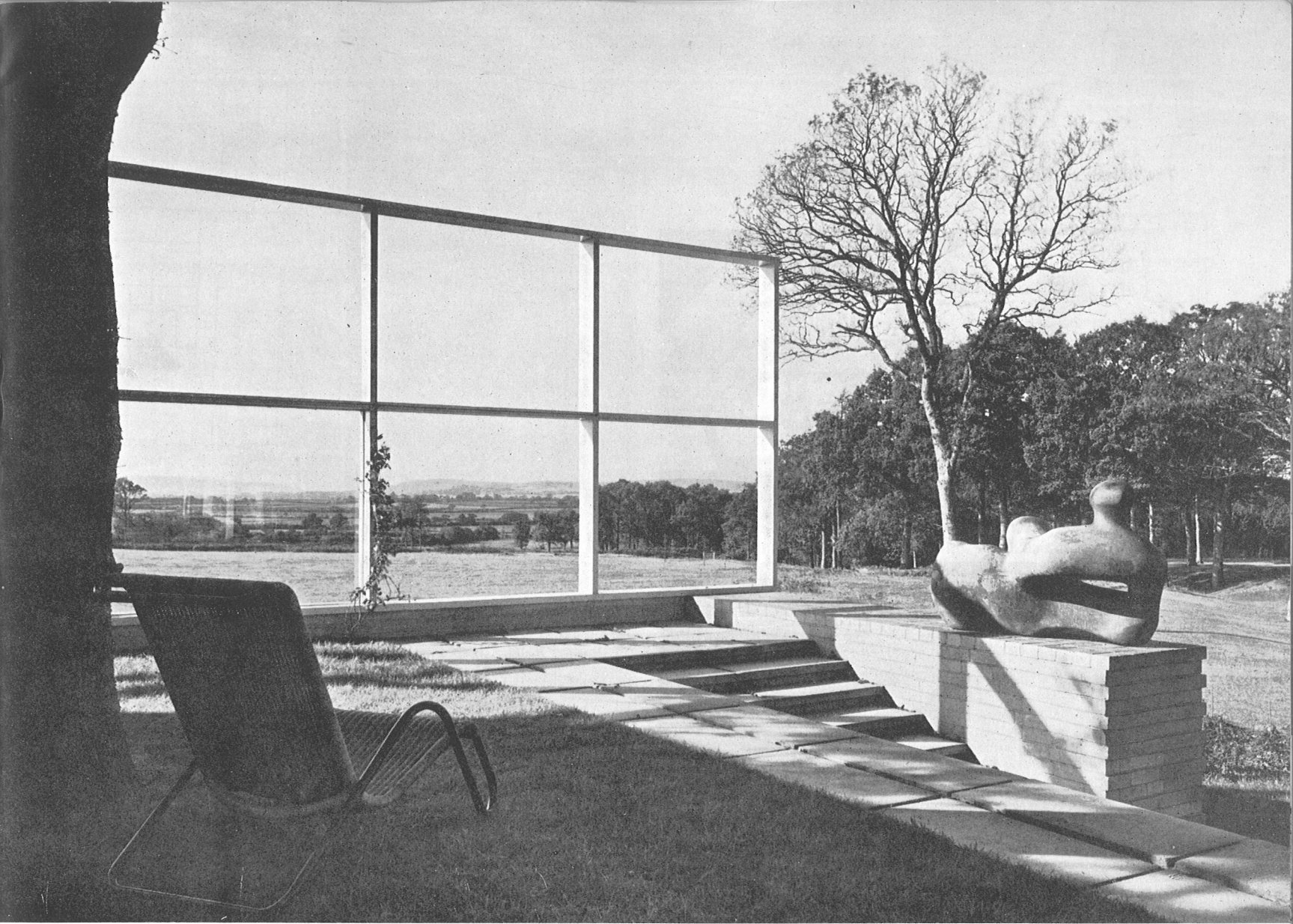
(illustrations 2, 8, 9) are very diverse.

Having laid out three alternatives for the relationship of buildings to landscapes, I must admit to believing in only two of them. I am not opposed to efforts by others to achieve the second alternative—that is, the elimination of distinctions between natural and built forms—but I do not believe it is truly possible, because the artifact is inherently different from the natural element.

The third alternative—the inflection of buildings and landscape to each other—seems to me the most potent. It is this alternative that we have been exploring in our recent work (see following pages). Ideas of nature are among the generating ideas of architecture, and man instinctively seeks for some formal continuity between indoors and outdoors. Outdoor spaces hold an invaluable potential for mediating between man, his built forms and his natural environment.

8 *Martin House, Buffalo, N.Y., 1904*, designed by Frank Lloyd Wright. The Prairie house took its name from its landscape. In the Martin house, the gardens, galleries, pergolas, porches, and structures are all part of a complex, continuous spatial design. (From Hitchcock, *Nature of Materials*.)



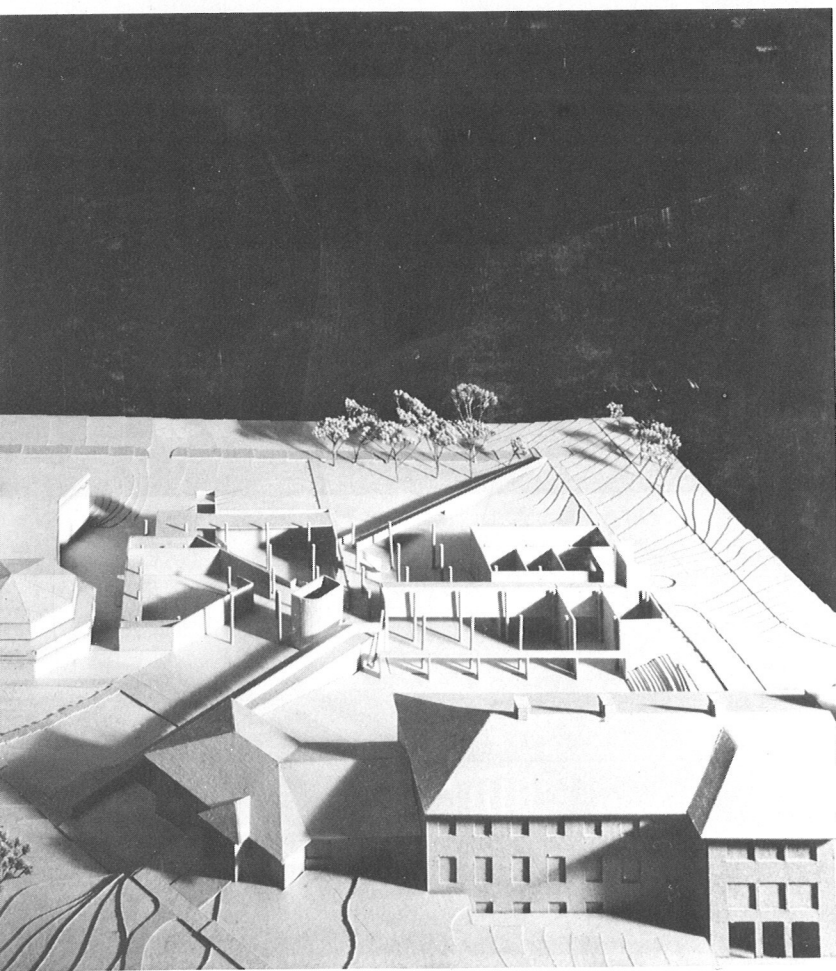
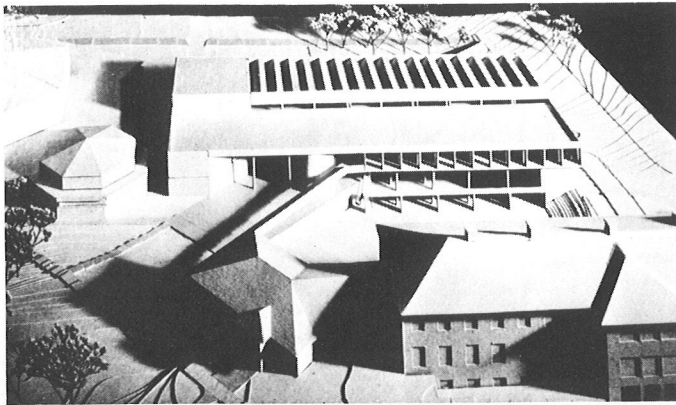


Sources

- Kassler, E.B. *Modern Gardens and the Landscape*. New York: The Museum of Modern Art, 1964.
- Shepard, P. *Man in the Landscape, A Historic View of the Esthetics of Nature*. New York: Alfred A. Knopf, Inc., 1967.
- Fairbrother, N. *New Lives, New Landscapes*. New York: Alfred A. Knopf, Inc., 1970.
- Marx, L. *The Machine in the Garden: Technology and the Pastoral Ideal in America*. Oxford University Press, 1964.
- Shepherd, P. *Modern Gardens*. London: The Architectural Press, 1953.
- Odum, E.P. *Ecology*. New York: Holt Rinehart & Winston Inc., 1963.
- Hudnut, J. *Architecture and the Spirit of Man*. Cambridge: Harvard University Press, 1949.

9 Chermayeff House, Sussex, England, 1937, designed by Serge Chermayeff with Christopher Tunnard, landscape architect. Set on a meadow at the edge of a woods, the house, walls, terraces, and sculpture maintain their identity but play contributing roles in "shaping the place" as a unity.

The nature of the built environment

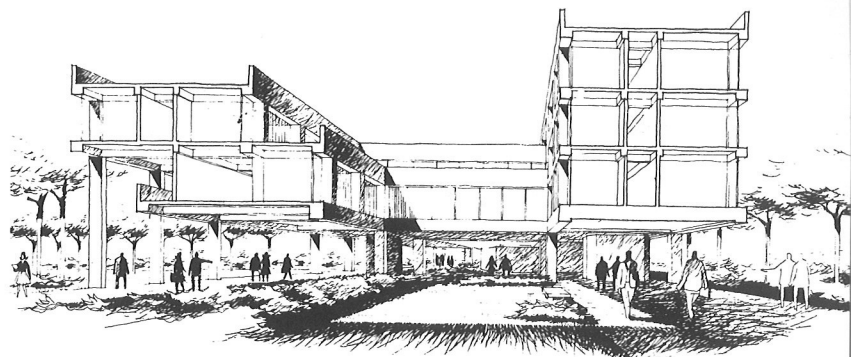


Fine Arts Building, Goucher College, Towson, Md. Geddes Brecher Qualls Cunningham, Architects. (project, 1970) The building provides studio lofts on the upper floor, and public exhibition galleries and halls on the ground floor. Located astride an entrance walk leading to the center of the campus, the building is an example of a hybrid of alternatives 1 and 3. That is, because of its overall subtractive form, the studio-loft top floor seems to float above the complex, sloping landscape; underneath, however, the walkways, galleries, and courtyards are examples of the mutual modification of building and landscape form.



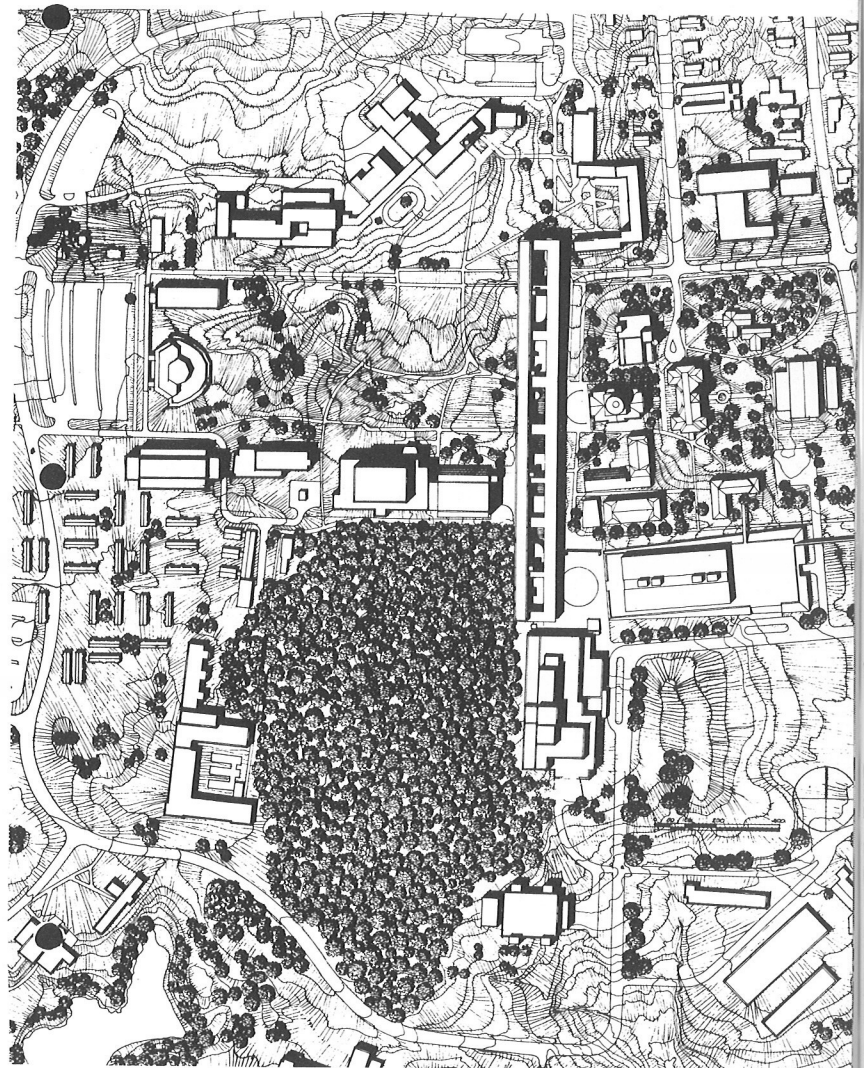
Vienna-South Urban Extension, International Town Planning Competition, 1971. First prize: Geddes Brecher Qualls Cunningham. This growth plan for an urban extension is based upon a formal idea similar to that of the firm's recent buildings; that is, the spatial composition of linear layers of buildings and landscapes. The building layers are flexible means to accommodate many diverse activities, developed over a period of time. There are three kinds of landscapes: first, a central space defined by high density housing, connecting the various cores; second, linear green parks along the edges; and third, a network of pedestrian walks and plazas in the sectors. The central greenway would be a civic garden, in the formal tradition of Vienna.

The Vienna-South design is a large-scale example of alternative three, in which the building layers and open spaces are a continuous, coherent interwoven grid of urban landscape.

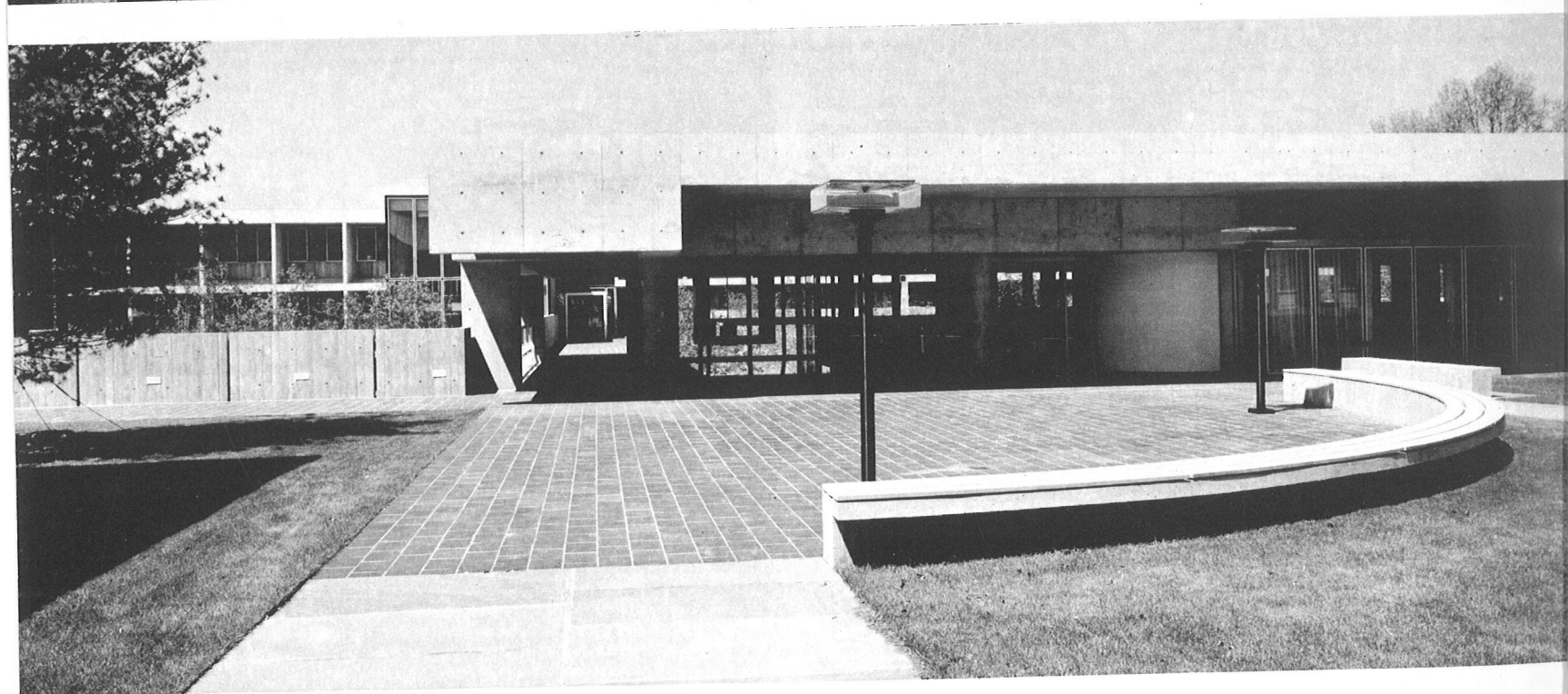
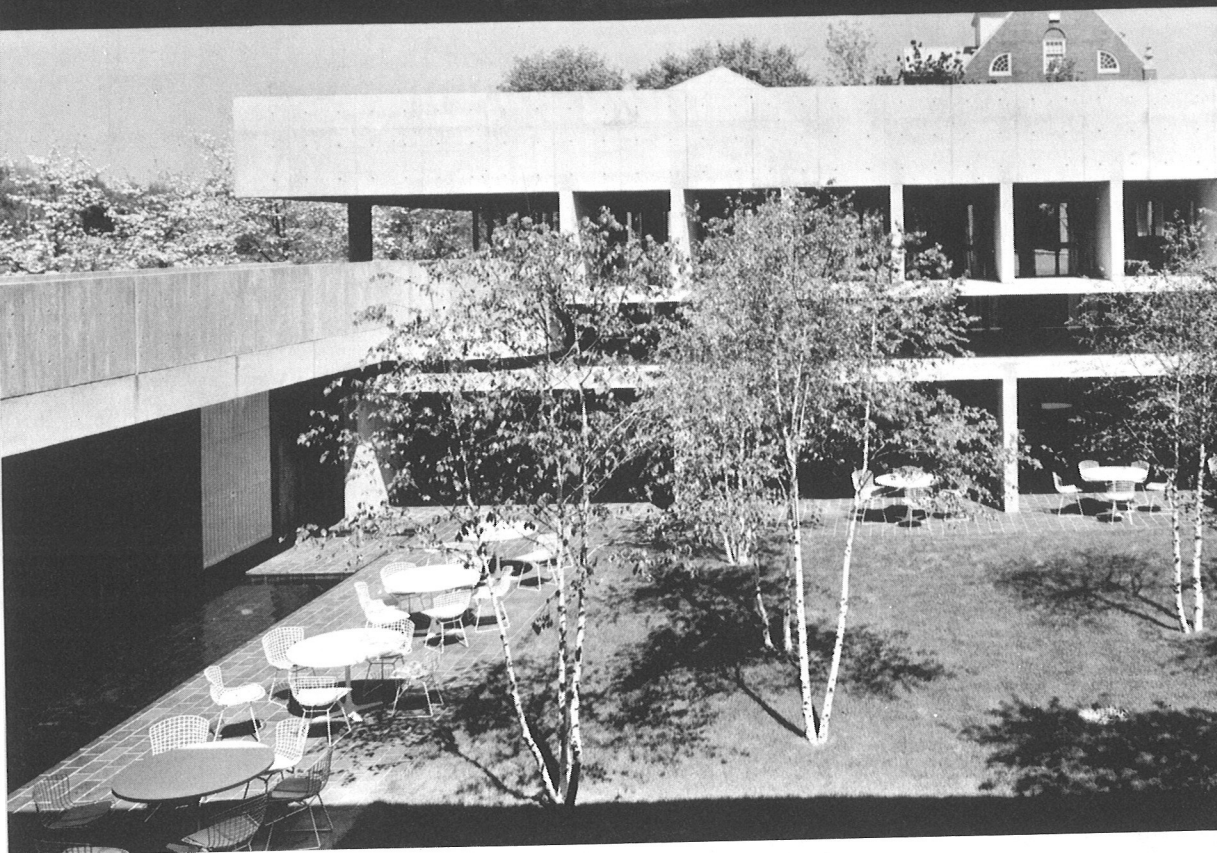


Faner Hall, Southern Illinois University, Carbondale, Ill. Geddes Brecher Qualls Cunningham, Architects. Under construction 1974. This linear building contains classrooms, offices, museum, and other teaching facilities for the humanities and social sciences. Located in the midst of an existing campus, the new building serves as a backdrop for existing landscape spaces. Under its subtractive overall form, the building creates a covered arcade, plazas, walks, and courts.

Faner Hall is in some respects an example of the first alternative (a relationship of opposites) floating as it does above a complex set of landscapes. But underneath it is an example of the third alternative, because the ground level spaces, arcades, courts, and walks are all responding to surrounding landscape elements and buildings. In a sense, Faner Hall creates a "cartesian forest" with its own clearings and walks underneath; and it forms a "forest edge" for open spaces on both sides.



The nature of the built environment

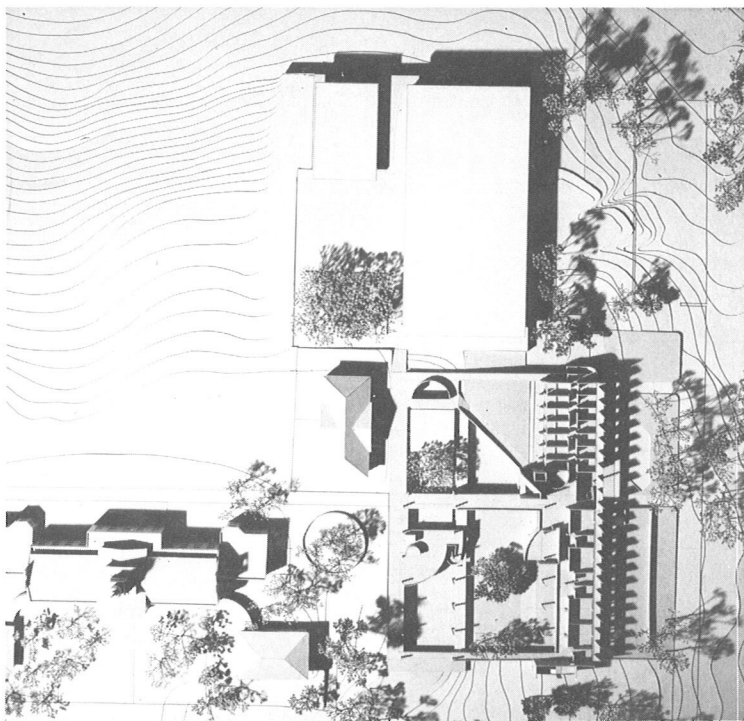
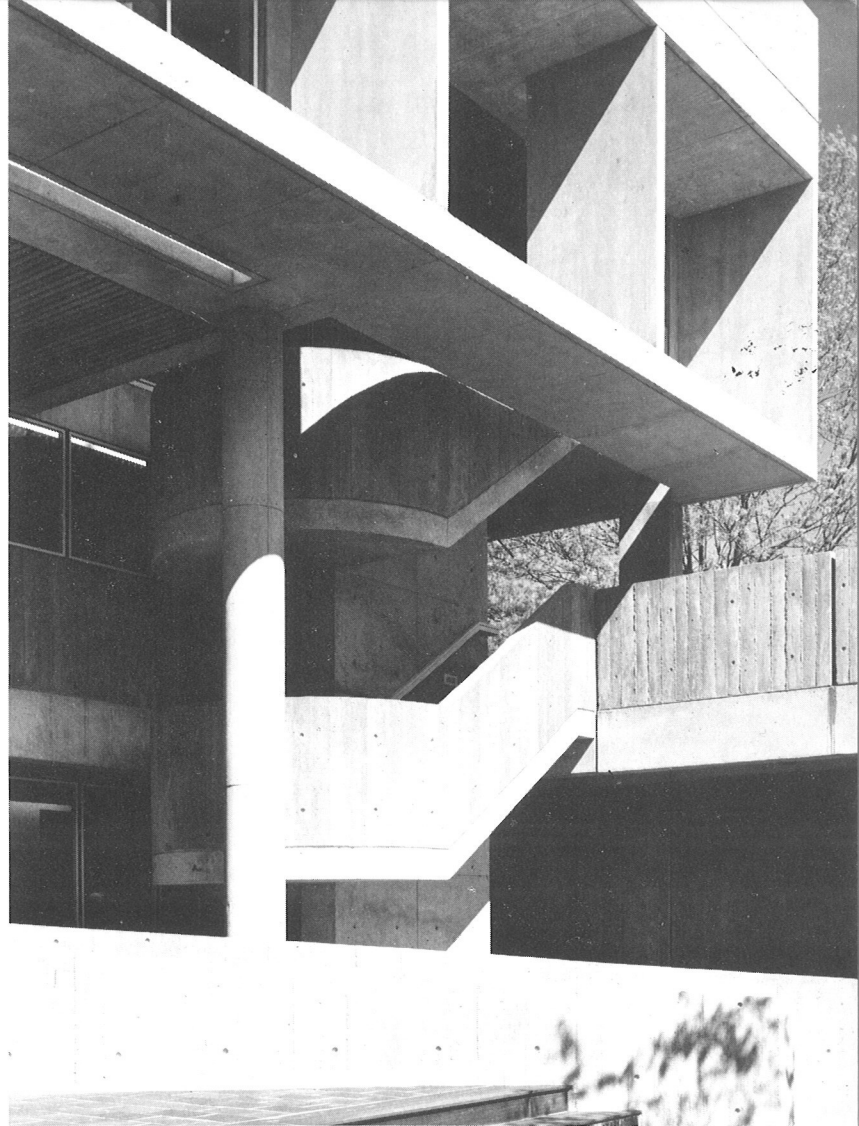
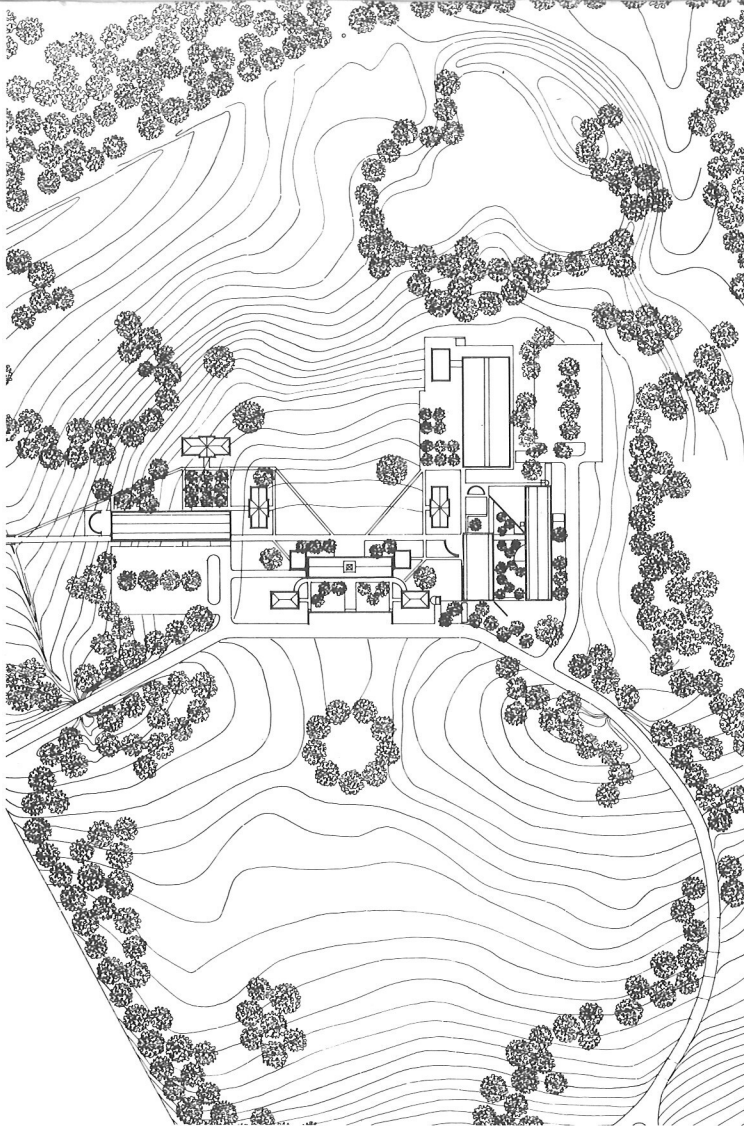


Institute for Advanced Study, Princeton, N.J. Geddes Brecher Qualls Cunningham, Architects. Zion & Breen, Landscape Architects. This group of buildings and courtyards provides dining, commons, office, and seminar facilities in an extension of an existing campus.

Located alongside neo-Georgian buildings, in a gently rolling meadow surrounded by the forest edge of a neo-English landscape, the buildings create a cloisterlike inner courtyard. An outdoor room in the pastoral tradition, the courtyard has an irregular grove of white birch trees which contrast with the regular grid of the columns. Other pastoral elements

are the pergolas, the fountain, and the grass. The courtyard has the peaceful feeling of a clearing in the forest.

The interior and exterior spaces relate to each other in a great variety of ways, sometimes continuous, sometimes discrete, depending on the uses; a single kind of relationship is not sought for all purposes. Often, a "yin-yang" sort of response is developed, as for example, in the relationship between the quarter-circular coffee lounge and its adjoining terrace (above), the courtyard, and the dining hall itself. Likewise, the building enclosures are influenced by "yin-yang"



responses between inside and outside. Each building's skin serves as an environmental filter, for light and views, for privacy and community, for heat and sound, for protection, and entry.

Many of the generating ideas seem, in retrospect, to have been those that are usually associated with landscape, especially a pastoral landscape, an idealized nature in built form; paths that serve as connections between people and places; and places that encourage freedom of thought, discourse, and contemplation.

Photos: George Cserna.

