Architectural Design Principles for Communal Dwellings

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29/Architectural Design Principles for Communal Dwellings

Imre Halasz with Noel J. Brady

Architecture can neither resolve the contradictions nor assuage the cultural injustice implicit in the concept of housing for elderly people. Even the best architecture cannot replace lost family and friends; it cannot erase the stigma of age; it cannot restore to old people their traditional roles as tellers of tales, transmitters of culture, and repositories of wisdom; it cannot make whole the fragmented conduct of modern life that banishes the aged into ghettos.

In her book *Nobody Ever Died of Old Age,* Sharon Curtin observed, "Segregation solves none of the problems of aging; it just improves the packaging. It is a solution without substance and underlines a poverty of imagination." No matter how seductive the green lawn and shaded arbor, the segregated place offers no relief from the tyranny of the managed facility.

So, although it would be flattering to believe otherwise, architecture cannot prevent the depletion of the vast treasury of memory and experience accumulated by society's elders. When they, the aged, are cut off and hidden away in isolation, younger generations are de-prived of an important cultural testimony. Architecture cannot combat what contemporary society and its institutions defend: hierarchies of segregation.

Given these powerful limitations, what does architecture actually offer? Architecture is not, after all, entirely helpless. Thoughtful architecture can improve the quality of places. It can provide insights toward a better future if architectural principles of humanism are kept alive.

This discussion rests on the premise that architecture for the elderly should not differ substantially from any built environment for communal dwelling. The qualities of shared residence must not be determined along group lines whether identified by sex, race, religion, or age. Rather, communal residence must meet universal human needs: clarity of space, light, direction, scale, and proportion transcend any artificial boundaries of social typology. Since building codes now dictate the removal of so-called "architectural barriers," there remains no excuse to set different standards for different groups of people.

Architects can therefore concentrate on

providing good architecture grounded in the essentials of communal living. The basic patterns that relate chair to room, to building, to street, to city arise from man's innate impulses and needs, rather than theory. Therefore, it should not be surprising that a successful communal building relies upon the same patterns as those of a successful village, town, or city.

Attention must be paid to the individual as well as the group—in fact to a whole range of group sizes—and to the community itself. We must accommodate the existential forms of behavior that occur in ordinary communities: there must be places for privacy, public participation, spontaneous meetings, small gatherings, large groups, and opportunities for connections to the larger external world. People conduct their singular and social activities in places of sympathetic scale. An integrated series of spatial sizes therefore helps to organize the whole into what Paul Valery called a "wonderfully fitting relationship." The poetic aim is not an empty gesture; rather it sets the complete frame of human existence as the only real reference.

The city designed to speed large volumes of traffic fails its residents by denying them the finer-grain activities of human life. The communal dwelling built for the convenience of managers and custodians fails its residents by efficiency. Yet this "efficiency" is largely illusory. Given responsibility, residents—children, students, or elderly—will take what they can handle and relieve management of many headaches. Human dignity must lie at the heart of an architecture for communal living.

The following diagrams illustrate how durable architectural principles guide the creative process. The objective is not to imply the completeness or a list of easy-to-follow rules, but to call attention to the treasury of collective experiences of form making that help order a coherent whole and aid the effective interpretation of a specific context. The precise "fit" between use and behavior, frequently occupying center stage of project evaluation, is too simplistic. During their lifetime these spaces will have to accommodate different people and a variety of unforeseeable activities. Unpredictable needs occur at different times and places in the built environment.

Architecture would serve the occupants better by adhering to the best and most appropriate use of the timeless attributes of architectural form rather than arcane theoretical models that hope to project a fixed pattern of behavior.

Baker House, M.I.T.'s dormitory in Cambridge, Massachusetts, designed by the Finnish architect Alvar Aalto in 1948, is an excellent example of good communal architecture. Although it was designed as a home for young students, Baker House was conceived as an archetypal place for community living. The selection of an undergraduate dormitory for a discussion on housing for the elderly may provoke expressions of disbelief. But Baker House is a seminal illustration not only for a highly successful place for generations of students—a volatile and ever-changing community—but also of principles of design that embrace the need of the individual and the community, which is the predominant theme of collective dwelling. The following paradigms focus on a few generic aspects of architecture that had a major design role in achieving the resolution in Baker House. ∎

Figure 1. *Constructing an Environment.* The building volume, conceived as an elastic membrane, recedes as if molded and pressed by the two permanent open spaces: the Charles River basin and the M.I.T. athletic fields. The resulting exchanges form gentle concave edges to embrace extensions of the larger landscape. Two of these spaces (1 and 2) appear to have the appropriate size to house the most important collective uses, including lobby and dining hall, as their volume seems to penetrate the main building form.

Figure 2. *Correspondence of Community.* The seemingly isolated site is encouraged to become an element of a larger hierarchy by bridging the entrance and related public functions between the Charles River and the domed entrance of the Institute. This direction, the confluence of major uses along the way, was a fundamental design decision which enables all emerging elements of the design to become part of a larger whole.
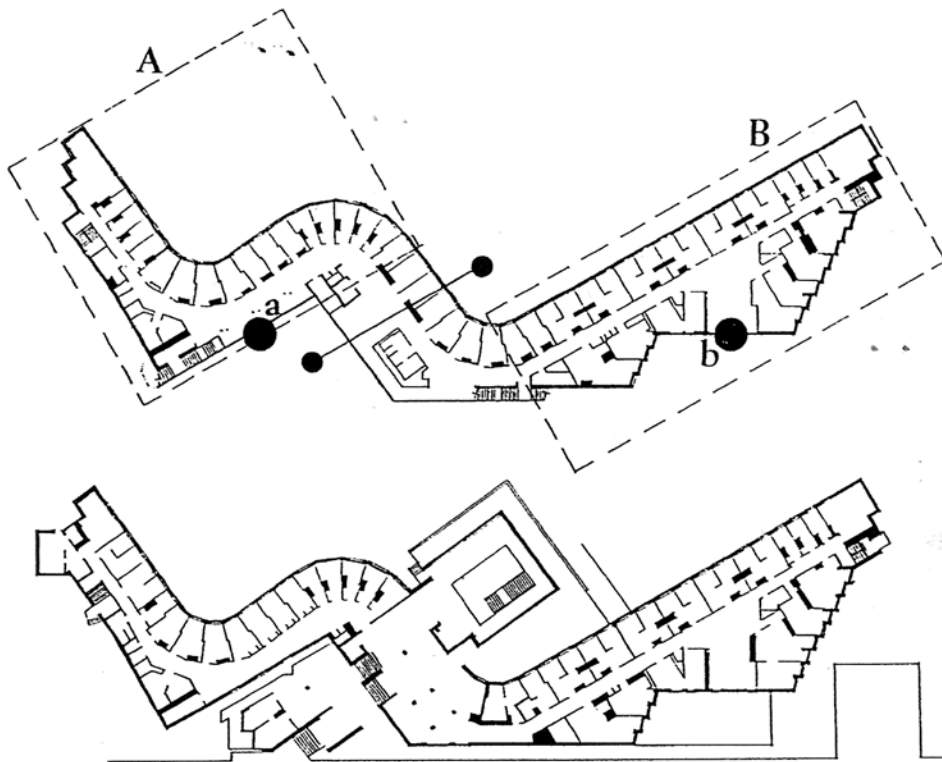

Figure 3. Branching Diagram. Decisions based on the unique aspects of the site as demonstrated above facilitate a clear diagram of two houses (A and B) with their own social areas (a and b) linked to the main community spine (1 and 2).
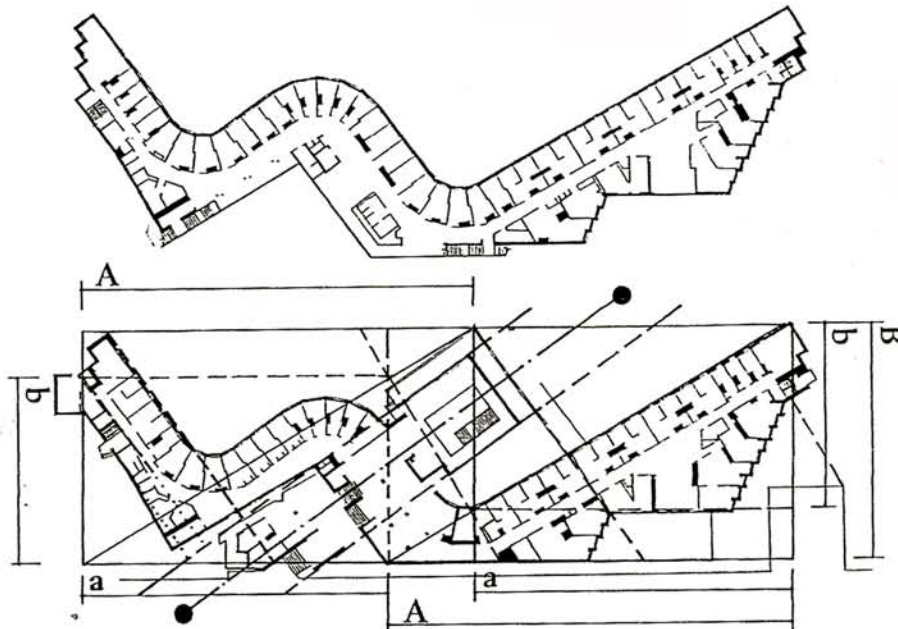
Figure 4. Geometry as an Ordering Device. "Regulating" lines based on the diagonals of rectangle ab and overlapping rectangle AB help organize the place within the orthogonal boundaries of the site in consonance with conceptual constraints of the larger decisions (Fig. 1, 2, and 3), making the built form unique and site specific. It not only "fits" the site but is almost made by it. The building would lose all its essential qualities anywhere else.
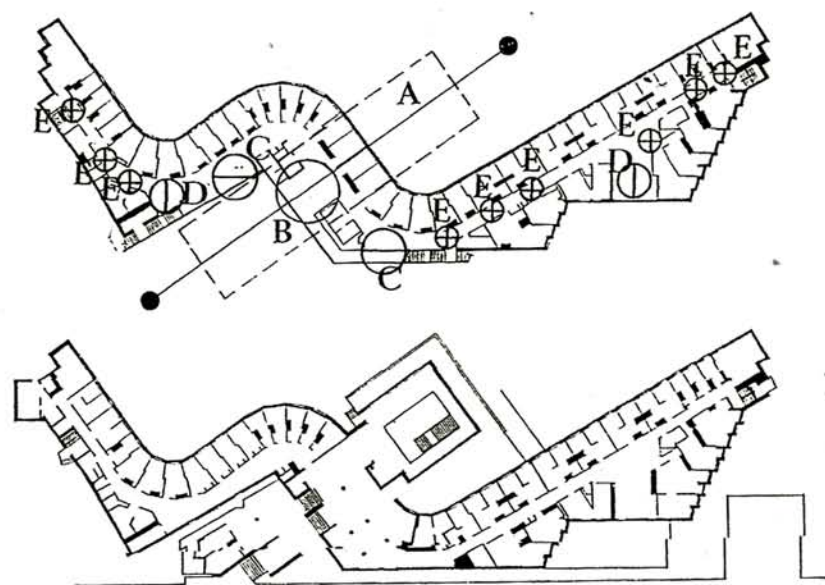
Figure 5. The Hierarchy of Social Spaces. 5a: The fine grain and hierarchical structure offer a range of river views and special configurations for the "units," and concentrate shared zones on the opposite side of the buildings. From A and B the vertical and horizontal shared-space entrance zones, C, open on each floor to the neighborhoods provided with their own social zones, D. Informal nooks, E, are found in the short stretches of double-loaded configuration, associated mostly with entrances to rooms. 5b: The vertical organization in which the two reference levels (1 and 2) integrate the ground and building with the two "houses." The diagonals (3) are spatial replicas of the diagonals found in the plan. They tie the entrance zones (C) to each other without forcing circulation through main shared spaces and thereby masterfully completing the range of social areas from A to E.

This fine example of what could be considered good architecture shows how the essential characteristics of community can be anchored in physical form. Baker House remains the most popular dormitory on the M.I.T. campus because of its ability to provide for the well-being of the individual in a variety of settings within and beyond the building.
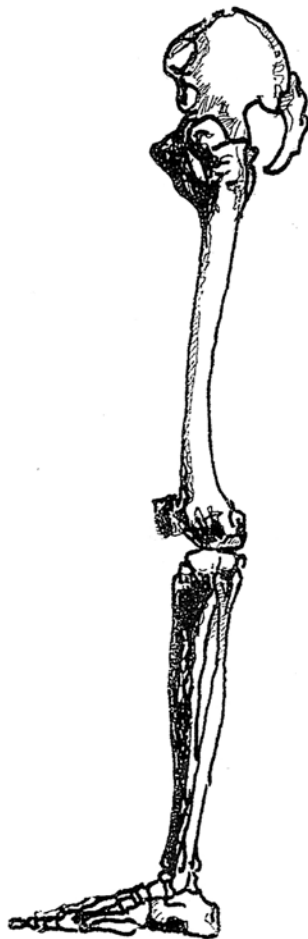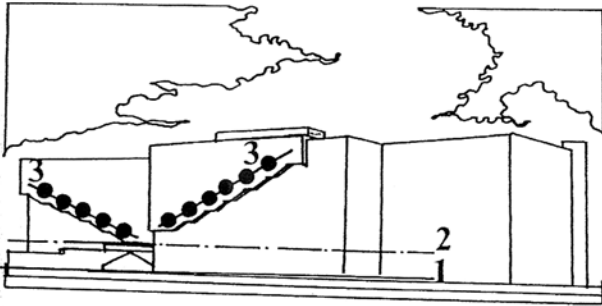
Figure 6. Pages from Paul Klee's "Pedagogical Sketchbook." It will help to consider now how the formal character of shared spaces in Baker House, regardless of scale, will perform their role in the structure of the whole spatial organization. The human skeleton, as a tectonic metaphor, intrigued Paul Klee. In his "Pedagogical Sketchbook," he examines "The natural organism of movement as kinetic will" as a basis for understanding additive growth. Through a similar metaphor we can consider the social spaces not as mere rooms but as key elements in a larger organism.

While the skeleton's marvelous architecture seems endlessly complex and articulated, each bone can be diagrammed identically. The elongated portion (link) of the bone is linear and serves within certain proportional limits as a path that transmits forces from joint to joint. The role of the elongated bone is limited and passive in determining movement. The joints, on the other hand, are responsible for continuity between the elements of structure. Their configuration enables certain kinds of movement from the simplest to the most complex. As places of connection they could be at rest or transient, regulating movement according to their shape and specific functions in harmony with the purpose of the whole. The links (streets, bridges, edges, or corridors in architectural morphology) do not invite choice and are purposefully singular and one-directional. Joints have their architectural equivalents in plazas, lobbies, places for social interaction of different kinds and sizes. They are nondirectional. They invite stopping and orientation, allowing for continued involvement. Since links never connect directly to links, joints are the sole agents for additive growth of an entire system.

Without attempting to over-stress the helpfulness of the metaphor, we could view the social/communal spaces and their hierarchy as formal and functional equivalents of joints and review the five generic categories found in the human skeleton as a taxonomy of their architectural counterparts. This will enable us to ascertain essential features of architectural morphology which can be seen at the heart of good architecture.
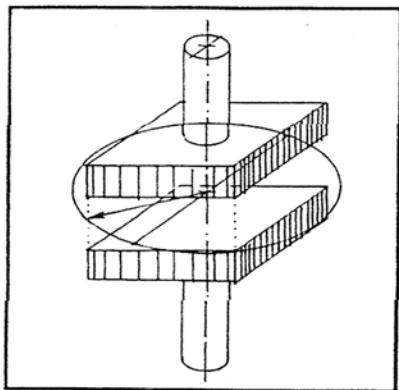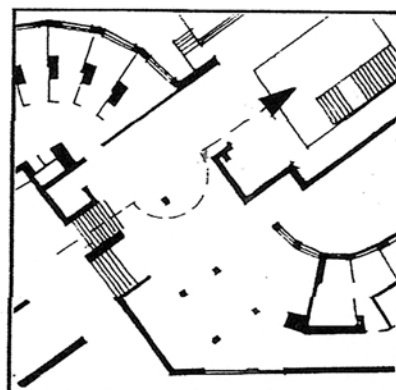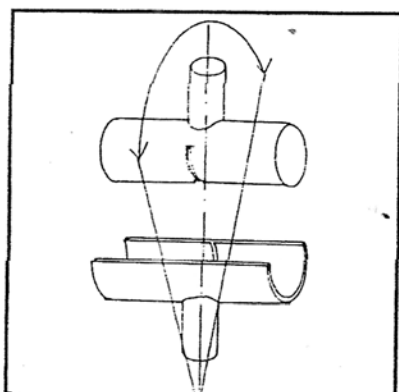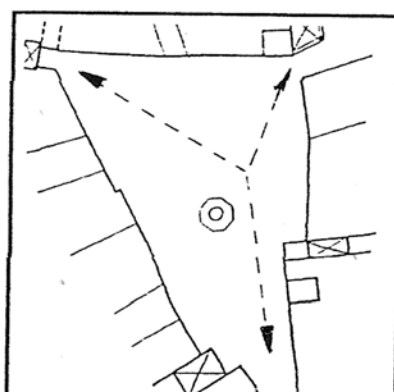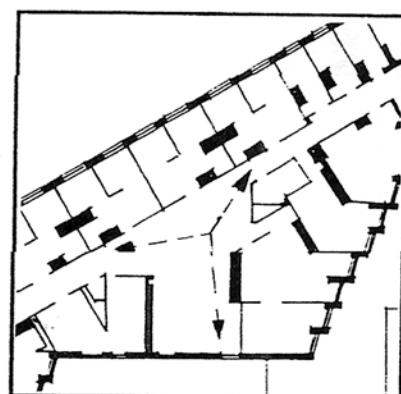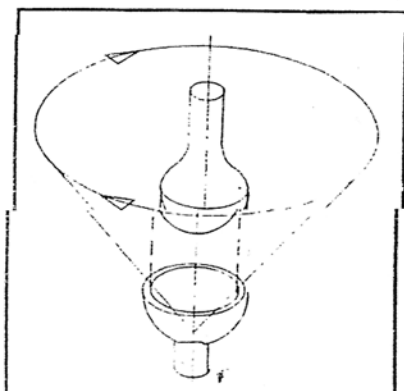
Notation A
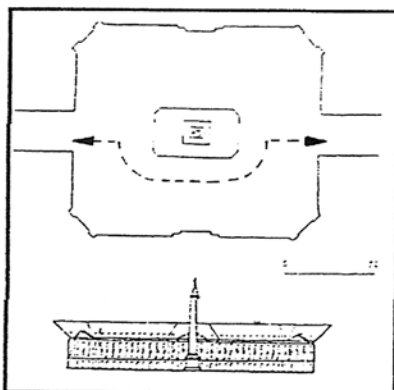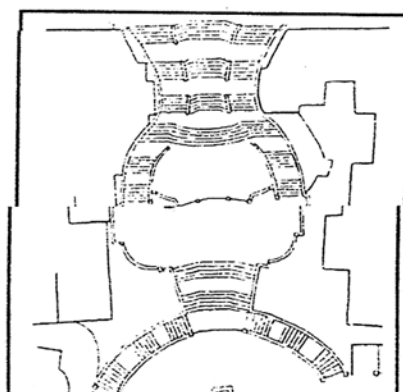

Place Vendome, Paris

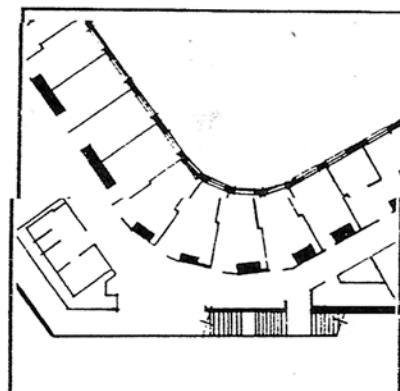

Baker House

Notation B

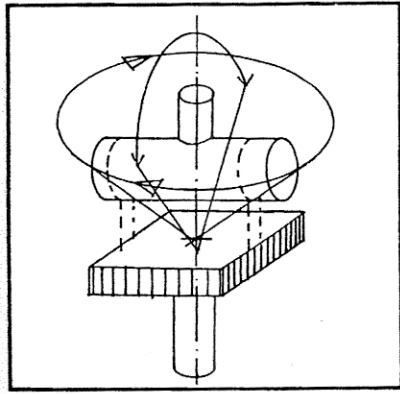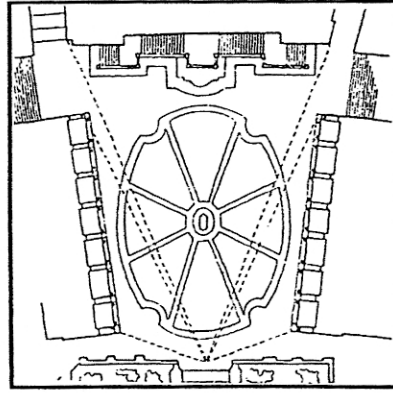
Piazza Cavour.
San Gimignano

Baker House
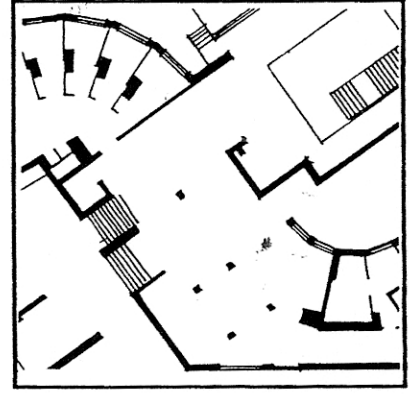

Notation C

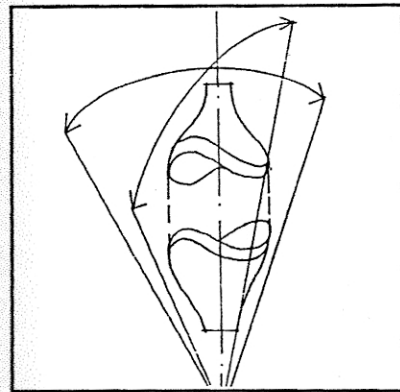Piazza Di Spagna,
Rome

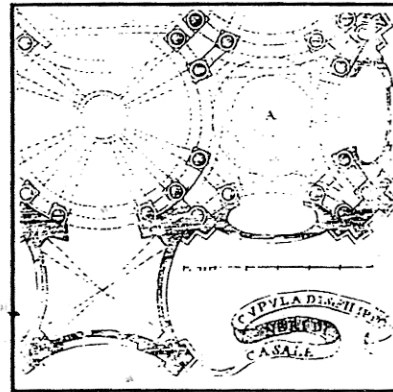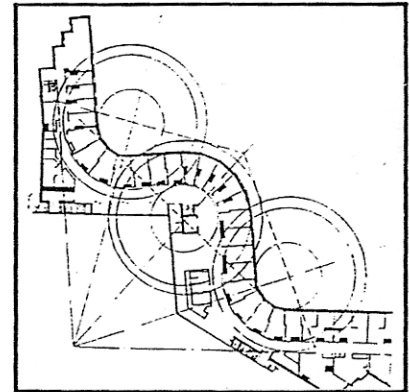Baker House

Notation D

Campidoglio,
Rome

Baker House

Notation E

S. Filippo Neri,
Guarino Guarini

Baker House

Figure 7. Planar notations of design situations, with architectural examples. Diagram A: The simplest form of movement—entering a room on an axis from a link and having to walk around an element located in the room to continue along the same direction.

Diagram B: A planar direction change is a more complex form of movement, which enables a simple planar direction change such as turning a corner along a path.

Diagram C: A spatial multidirectional rotation with one fixed stem is a more complex form of diagram B, in which the three-dimensional element permits one segment of the joint to rise or fall when its path must turn up or down.

Diagram D: Planar notation combined with multidirectional rotation—a composite of diagrams A and C—invites both three-dimensional upward movement as well as planar rotation.

Diagram E: This three-dimensional double rotation permits all movements, and its sophisticated form reflects sophisticated spatial and structural behavior.

These elements form places, ranging from the small to the large. Obviously this didactic analogue for the compositional attributes of communal spaces does not even begin to describe the rich, sensuous qualities they will incorporate in their developed design. Architecture depends on the active participation brought about by associations with the many polysensory aspects of our experiences.

Architecture cannot guarantee responsibility but good architecture can, with real intent, provide for some physical pattern of existence to guard against isolation and keep our elders at the very heart of our experience. Unlike science, architecture has no rules or inflexible axioms. Its principles, however, are sustained throughout the ages by reaching out for what C. G. Jung called the "typical modes of apprehension," the search and reinterpretation of archetypes.