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A Primer of Easy Pieces: Teaching through Typological Narrative



The 'primer' format is associated with a step-by-step approach to elementary education. A primer is traditionally composed of two parts: a basic vocabulary and a basic grammar. Architecture can be considered as made up of a typology of 'easy pieces', and a particular "syntax of structure" might provide the basis for composing them into an 'accommodating' whole.² To these ends, therefore, a "Form Primer" has served as my model for developing an approach to fundamentals of the introductory design studios at Princeton University.

The exercises comprising the primer, which constituted the application of this step-by-step approach, began with the structural notion of the cave and the tent and then proceeded to establish the megaron as the model for accommodating unity. To this simple sheltering space (the megaron), projected by the students for a deliberately fictitious site on the Isle of Malta, were added, in incremental fashion, one door and one window, one attic and one basement. The idea of 'space' was changed to 'place' through typological elements which were made to respond, in general, to the pragmatic requirements of the required activity as well as, in particular, to the "narrative" characteristics of the actor. The actors—monks and musicians, mayors and maidens—all appeared and reap-

peared in these exercises in the role of both the self-confident *inhabitant* as well as the self-conscious *guest*. The "mythology of the place"³ (context) was reinforced in terms of the street and the garden by considering the properties of porch and patio, facade and fence. The final exercise required a simultaneous reconsideration, a kind of minuet, if you will, involving separate typological elements in an immediate and real context—for known users and for familiar tasks.

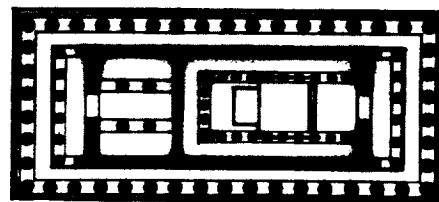
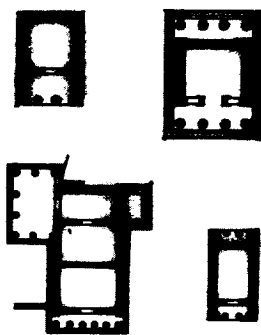
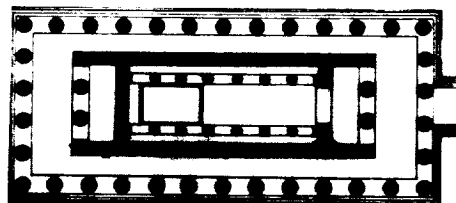
"Of Megarons"

The megaron, an early Greek building type, is a particularly useful model by which to establish the notion of a "syntax of structure." In a discipline which now celebrates the making of rooms, as opposed to another generation's fascination with space, the megaron offers a provocative testament to both positions working in useful harmony. The megaron combines both the *cella*, a walled enclosure, with the trabeated *portico*, a framing system, to produce two clear zones of spatial demarcation, plus one apparently ambiguous one. The inside is private, the outside is public, and, importantly, the realm-in-between is architectural: the potential place of significant spatial depth measured by what I would like to term here, 'social narrative'.

An investigation of the two systems in isolation, the wall (cave) and the frame (tent), suggests an extensive range of didactic oppositions that seem generously accommodated without compromise in the megaron model. An analytic investigation of the phenomenon of the megaron throughout history, from suggestive Karnak to polemical Maison Cook, suggests a response to the dilemma of space and place for students of today. Such a structural and spatial analysis constituted the first 'priming' exercise for the puzzle-like synthesis exercises to follow.

"Of Malta"

Children's fairytales begin with, "Long, long ago, and far, far away . . .," at once removing the readers from the immediacy of time and place, as well as reconnecting their nascent consciousness with the notion of history and the value of memory, understood as arising from a distant but



Greek Temple Plans

common heritage. The Form Primer is specifically and intentionally modeled after the notion of an architectural fairytale. That is, it places great value in the establishment of a distant but primal context, in a sense of time that is both ancient as well as current, and in a cast of characters all at once comfortably familiar and exotically estranged. Malta becomes the fabled isle (and the fictitious site), both removed from the immediate experience of most students but reconstructed by a "mythology of the place" as the locus, or cross-roads, of all of man's most primal spatial myths. From the program statement:

The myth of Malta is as old as the story of Noah. Because Malta is an island, man had to come ashore first as a guest before he would linger as an inhabitant. It has, consequently, developed into a quiet, deeply introverted island retreat for the native populations of the entire Mediterranean basin and recalls a long and curious history. First a pleasure garden of sorts, the only permanent settlement was founded by Aeneas with pre-Cartesian logic as a rest and recreation refuge en route to and from encounters with Dido. Years later, the Romans came to Didoville, among them Anthony and Cleopatra, and left their mark upon the city. Malta's life and urban form were regularized along a Caesarian sense of cardinal orientations reconstructing in particular the four gates and town center to accommodate an Egyptian sensibility to the sun, in general, and Cleopatra's obsession with obelisks in particular. In the 8th Century, A.D. young Muhammed, following Hannibal's footsteps, en route from Carthage to Sardinia renewed himself repeatedly in one walled-in-garden after another, leaving a stunned legacy to a beleaguered population. Since then, the Maltese have developed a citadel tradition in the midst of paradise. The people of Malta have developed a defensive, insular, attitude in the institutions that reflect their social form.

"Of Monks and Musicians"

The idea of a continuum—in this case, a continuity of generalized character types and particular but familiar personalities—is critical to the primer format as a fairytale. "Dick and Jane and Spot" are engraved within the memory of generations of Americans as the cast of characters of our best-known reading primer. At Princeton my own perennial cast were "Sigismundo Malatesta and his Lady Malcontenta, along with ever-present Mortimor." These apochryphal figures were intended to engage the young designer's mind and spirit with those of the participants for whom they were to provide shelter.

In the very first exercise, a mythology of the place (context) as well as a cast of characters (users) were identified and substantiated through subsequent exercises. "Monks and Musicians" were used to identify the individual and the group, private acts and public responsibilities, ritual and celebration, the opportunity for both

place and space. Above all, the monks-and-the-musicians concept proposed the idea of architecture for the inhabitant as well as the guest, for going out as well as coming in, for public plazas and private gardens, for work as well as labor.⁴

Dualism and Easy Pieces

Doors and windows, attics and basements describe the easy pieces by which architecture is formed. These components constitute an elementary *typology* of generic problems, values and solutions which is inclusive of a wide range of human themes within the disciplined reconsideration of the four "sheltering necessities."⁵ From the program:

The door as threshold, the window as frame, the basement as the place of engagement with the ground, and the attic as the spatial resolution of the roof and the ceiling, describe a sheltering space for hierophancy beneath the sky.

These exercises permitted an awareness of not only the visibility of space but also the prerequisites for mass.

The specific application of this typological approach to introductory design education might be called a "two-step." That is, each topical step was intended to develop a constructive understanding of our environment in terms of recurrent dualities. In philosophy, *dualism* is "the theory that the world is ultimately composed of or explicable in terms of (a series of) two basic but interrelated entities," and in theology, "the doctrine that there are mutually related juxtaposed principles in the universe."⁶

The Form Primer did not pretend, of course, to be philosophical theory or theological doctrine. Rather, it offered the fundamental proposition that perhaps our constructed world might be understood more simply, appreciated more richly, and rearranged more aggressively, if conceived in terms of specific and recurrent dualities.

Each student was to initially understand the forces of gravity upon shelter in terms of two structural systems: the bearing wall and the frame. Subsequently the easy pieces of architecture—the doors and the windows, the attics and the basements, were reassembled to satisfy elemental human needs (as well as aspirations) for the inhabitant (as well as the guest). The more difficult issue of context was addressed in the dualism of urban street and private garden. The ultimate strategy was to understand architectural invention as occurring *between* dual realms and to appreciate it as presenting the conjunction of itself.

Students were presented with a series of dual options intended to comprise such basic design issues as structural enclosures and site constraints. For example, structural enclosures could be thought of as: gravity and order, the cave and the tent, the megaron and the basilica; the arch and the

lintel, the vault and the frame, the membrane and the grid, the free plan and free section. User requirements were seen as: characteristics of the actor, the individual and the group, rites and responsibilities, private and public, cellular and entroidal space. Site constraints were thought in terms of: house and garden, temple and paradise, floor and ground, symmetry and balance, scale and size.

Core Exercises

What follows is a description of four introductory 'puzzles' and one synthetic problem which were given as the core of a series of lecture and design sessions. The lectures attempted to demonstrate the richness of experience inherent in very simple, fundamental human activities and became the models for the inclusive considerations inherent in each student exercise.

The first exercise dealt with structural enclosure and was called "The Cave and the Tent." It was introduced with the following narrative:

Not so long ago, but far away, there was a young lad named Mortimor Philander, a second year student of architecture, who, while on summer holiday, devised a scheme to transform his Uncle Sigismundo's Maltese estate, "Cartesian Fields," into a resort wonderland. However, Sigismundo was rather wary of young Mortimor's extravagant intentions and approved only one initial project: A Tourist Information Center.

The Tourist Center is to be designed by Mortimor [the student] as one large room 20' x 40', running south to north in the long direction, to display information concerning events, institutions, restaurants and hotel accommodations. All information is two-dimensional and is to be displayed on the flanking 20 foot high party walls. Entry is possible across the entire southern edge of the property which is centered on an urban piazza, and there is a magnificent view directly to the north. To the east is located the establishment of the aging Lady Malcontenta Malatesta, Sigismundo's estranged wife. Immediately to the west is the House of a myriad of Moroccan maidens who perform sirenic miracles for lost sailors and summering students, a kind of traveller's aid society.

In this ideal and tranquil setting, Sigismundo Malatesta, as Landlord and Mayor, insists on reigning over the Center as chief receptionist. An additional task for Mortimor is the inclusion of a specific stair to permit Sigismundo Malatesta to ascend to the flat roof to survey to the north and to the south the far reaches of his domain. Being an election year, he also wishes a place to address throngs of his most loyal subjects who will gather in the piazza. The final condition is that the designs presented by Mortimor should entice the interest and support of the members of the two building trades on the island: bearing walls for the masons and a wood column and beam framing system for the carpenters.

The objective of this exercise was to investigate the qualities inherent in the two juxtaposed structural and spatial systems, given program requirements for the exhibition of information for anonymous groups, and an "arena" in which an individual can address his constituency. The juxtaposed structures and specific stairway may be used to transform, by modulation, the simple double-cube shell. Doors and windows were to be specified only by structure and stair location for this idealized climate. Above all, students were to realize in this first exercise that architecture can be made not only from the simple relationship of stair to structure, of structure to party wall, but that the two separate solutions have the potential for establishing the notion of a dialectic based on type.

The second exercise, or puzzle, dealt with user requirements and was introduced as follows:

Hard times have fallen upon the Isle of Malta. The construction of the Tourist Center has drained the royal treasury, and Sigismundo has been forced to flee into a monastic order. Curiously, his monastic cell is to be his purgatory: the very Tourist Center that Mortimor designed has now caused his tragic end. Now "Fra" Sigismundo has literally closed the non-existent doors by erecting a wall to the south and has converted the space into a monk's cell by his most sparing use of furniture. However, once a week, two old musician-friends join with him to form the Maltese Chamber Group. The three guest musicians arrive early Sunday morning by climbing the walls from Lady Malcontenta's and join in prayer, practice, a Bacchanalian brunch, and a short snooze.

The objective of this puzzle was to take a given plan (allowing the student to select one or a composite of his previous structural solutions) and to prepare two arrangements: one for the individual, the other for the group. In both plan arrangements each student was to accommodate the same set of activities for each different 'actor-variable.' These activities involved rest, repast, research and recreation. Each student was to make an arrangement of places within the given space with furniture elements in two distinct plans which satisfied the individual and collective needs of the actors.

The arrangement for the monk was to be a 'connective landscape' of furniture elements within the given spatial bounds. That is, the furniture elements were to have been combined in what might be described as a massive whole or *configuration*, with at least one of the sides of each furniture element in contact with another such element. The arrangement for the musicians was to be *elemental*. That is, the furniture was to have been distributed in what might be described as a dominantly spatial or field arrangement, with none of the sides of the furniture in contact.

The given space was to have been de-

scribed as cellular and/or gridded. Characteristics of the individual were best described as associated with the ideas of solitude, privacy, closure and cellular retreat. The furniture configuration was to have consisted of a diagram of enclosive linear arrangement. Characteristics of the group were best described as those associated with celebration, communication, openness and gridded extension. The furniture composition for this group was to have been a diagram of a centroidal spatial arrangement.

The third exercise was introduced as follows:

Suddenly things are looking better for Monk Malatesta and morose Mortimor. Two Maltese institutions have sought to sponsor some major renovations for the former Tourist Center/ Monks' Retreat. Lady Malatesta will sponsor a new door for Sigismundo, to encourage him to get out more regularly and join his friends in music. Malcontenta, then, is asking Mortimor to provide a design of three doors in one porch: one public portico to accommodate the musicians, and two private passages for re-acquaintance and renewal. The "Maltese Friends of Matisse" wish to sponsor Sigismundo's real need for a good window to the north and have also asked Mortimor to coordinate his efforts on the door to the south with the proposition of a window made in the wall to the north.

Each student was to investigate the potential characteristics and form configurations of door and window for the cell of the monk using the previous structural system and furniture arrangement. Dual themes, such as passage and perspective, seal and ventilation, closure and opening, threshold and shutter, were established as the basic characteristics of those activities associated with doors and windows. Each student was to transform these requirements into a set of specific drawings describing these elements as a frontal elevation and a lateral section. The intention of pairing elevation and section for the first time in the course was to establish a sympathetic relationship, a useful harmony, between implied spatial depth in elevation (illusion) and the dimensional specification of massive and spatial thickness in section (inhabitation).

More precisely, the objective was to have each student exercise his capacity to suggest depth in a shallow window wall and to suggest a flat or shallow frontal plane in a potentially deep exterior porch. The premise behind the exercise itself was that the mode of inquiry we define as architecture implies *speculative* as well as *productive* space and mass. It was each student's task to project into the investigation on one window and one door the potential depth of this dual meaning.

"Attics and Basements"

The fourth exercise was introduced with the following narrative:

Recent events in Malta have produced some dramatic challenges for Sigismundo Malatesta. An earthquake has destroyed the ancient piazza, but the restrained, wall-like facades of the former square have been spared. Sigismundo has offered to re-enter the world of public politics and private pleasures. Under the guise of a town gardener, Malatesta requests that Mortimor come up with a site plan and section to enhance the newly re-opened Tourist Center with specific elements. The Tourist Center, complete with doors and window, is to front on the major town piazza, which measures 60' x 120', running from the short side of the Moroccan Maidens' house to the Tea House, and axially facing the Twin churches of Santa Theresa and San Bartolomeo, each with 25' fronts (which leaves the ancient 10' wide Aenean Way directly in-between, connecting the Piazza with the rest of the town). The west side of the Piazza is the only porous facade, a market agora with a 20' high, 120' long colonnade of trimmed Cedars of Lebanon screening a reciprocally-scaled double arcade. To the east are open fields providing a long vista of a "memorable horizontal" as well as serving as a pedestrian barrier to this platonic precinct.

In the midst of Sigismundo's short spiritual retreat, he had failed to notice that a volcanic eruption had raised a terraced garden from the sea depths to extend the rear of the now renewed Tourist Center. The garden measures precisely 20' x 60' and is to be a place of visual delight. Only the gardener may tend this paradise, reaching it by a stair or ramp that will connect Sigismundo's roof-top speaker's balcony to the south with his garden refuge to the north. Mortimor had redefined the Tourist Center/Monks' Retreat in terms of landscape and a skyscape, in terms of bottom and top, in terms of basement and attic. A place of public ceremony and private retreat is to be made exclusively with elements of the context in terms of urban conventions and private idiosyncrasies, in the memory of Matisse, whose Maltese Friends have donated their full support for this project.

The student task in this exercise was to offer alternate strategies for the public piazza and private paradise through the use of the following landscape elements: an amphitheatre and performance platform, two obelisks (each 6' diameter, 30' high), an olive orchard(s) of 32 trees at 8'-0" centers, a boxwood maze consisting of 12' diameter exedras for religious images plus a contemplative promenade connecting them, a vineyard of 64 vines with arbors at 4'-0" centers, a statue of Matisse and bust of Malatesta, a triumphal arch of no more than 30' in height, a stone mosaic 20' in diameter, and, finally, a moat and fountain connected by an irrigation system.

"The End of a Tale"

The fifth and final exercise was intended to serve as the culmination for the preceding four. The program excerpt:

The end of a tale . . . It has been a remarkable year for Sigismundo Malatesta. From Lord Mayor to monk, he has experienced the heights of leadership and involvement as well as the depths of isolation and retreat. He has made a decision to accept an invitation to become a professor of Landscape Architecture for a full calendar year—to teach and to reside within the precinct of a new school garden. The garden is to be developed from campus grounds adjacent to a school of architecture. You are asked to replace Mortimor and to design (in a four week exercise) the garden precinct and to locate and develop the Templo di Sigismundo Malatesta as a guest studio within its bounds. The garden is to be used exclusively by the school of architecture with access directly from the existing building, and with walls proposed to keep the rest of the campus out. The studio should be detached from the building but accessible from it.

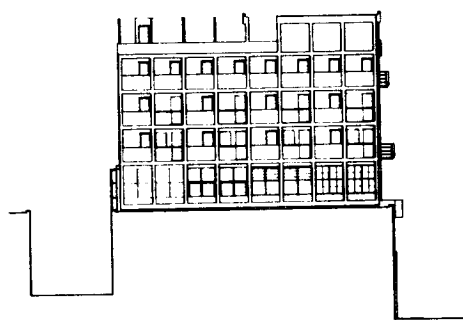
The garden and the studio elements were intended to enable students to develop the notion of mutual interdependence, in order to achieve unity and order as well as the discrete articulation of the specific events and places developed in the course up to that point, established as the student's, and client's, 'collective memory'. The garden component had three parts: places for student celebration and faculty contemplation and a guest's habitation. The house was to have two parts: a space for public interaction and a room for private retreat. The spatial requirements of the garden were of a general nature: to make clear the distinction between landscape and paradise. The spatial requirements of the studio were more specific: a celebratory space (no more than 400 square feet) where students, faculty and seminarians could gather. This space was to include a source of water, a hearth and a table, only one door, one window and one oculus. The private retreat (no more than 200 square feet) was a room where Sigismundo might rest, bathe and dress. It was to have been marked by both the rising of the sun and the setting of the moon, and to have included a bed, storage, and appropriate sanitary fixtures, with two doors, two windows and two oculi. The memory of the megaron was to have been respected.

In this course I have attempted to introduce students to some elements of buildings and landscapes, to some attitudes of composition, and to various modes of representation. I see the value of this course as one of acquiring an attitude rather than the development of skills. This attitude has been encouraged by the basic narrative. The insistence of the problem statements on establishing the primacy of a narrative in specific human terms was predicated upon the belief that architecture is responsible for the location of the individual with respect to one's world.⁷ It assumes that invention is the responsibility of the educated architect and not the license of the

spirited designer. Above all, students were asked to translate dreams—fables—into architecture by means of discipline and invention.

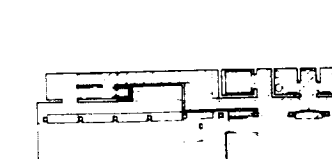
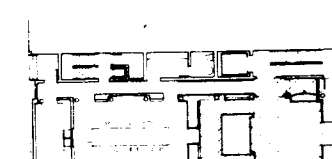
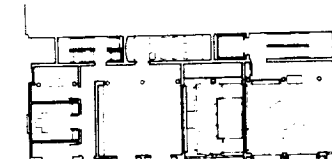
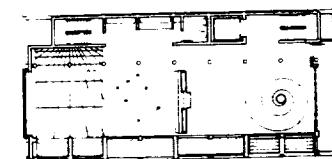
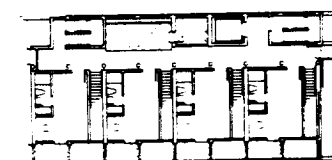
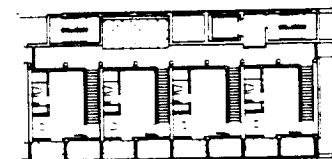
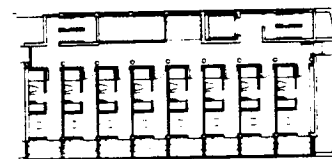
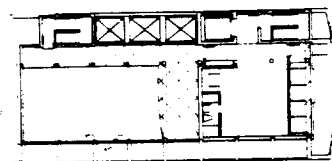
References

- ¹ "Syntax of Structure" was one of the specified conference themes at the ACSA 1979 Annual Conference, San Antonio, Texas.
- ² Accommodating whole is used in contradistinction to the "difficult whole" of Venturi, in *Complexity and Contradiction in Architecture*, pp 89–103. It suggests that the megaron might serve as the model for respecting the integrity of the difficult whole, while providing for Van Eyck's notion of a positive, intermediary space.
- ³ This term is borrowed from Emilio Ambasz's Buenos Aires: The Cosmography of the City, prepared as part of his Master's Thesis, Princeton, 1966.
- ⁴ Hannah Arendt, *The Human Condition*, University of Chicago, 1958. In addition, refer to Kenneth Frampton's article, "Labour Work and Architecture," *Meaning in Architecture*, edited by Charles Jencks and George Baird, George Braziller, New York, 1970.
- ⁵ This phrase was used by Joseph Rykwert, *On Adams House in Paradise: The Idea and the Primitive Hut in Architectural History*, MIT Press.
- ⁶ Both definitions from Webster's New World Dictionary.
- ⁷ See, for example, *Le Corbusier, Vers Une Architecture: Primitive Man/Primitive House/Primitive Temple*.



Facade

Maltese Institute for Advanced Studies—Graduate Student D B Rixey. A synthesis of the Exercises.



Plans