The knowledge that is contained in these three elements is the knowledge which completes this phase.⁸ It is significant that these small informal models and the phase of development they represent, though extremely simple, are entirely different from the "deliverables" normally considered appropriate for early stages of design in current architectural practice. The normal deliverables include a site plan and rough schematic drawings, and sometimes, preliminary drawings. Such items cannot adequately

represent a solved problem. They do not contain enough information, and one cannot feel certain, from them, whether the life of the site has been preserved and extended.

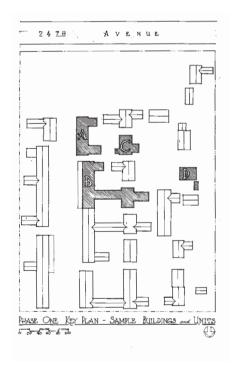
The three deliverables mentioned here, made in the form I have described them, different from today's standard professional deliverables, give a reasonable guarantee that the life of the site has been preserved, that the solution is reliable, that it is intense, and that the building does intensify the city or the land.



9 / EMERGENCE OF BUILDING VOLUMES IN A MORE REPETITIVE PROJECT

Amazon village, a larger housing project of 300 apartments for graduate students, was to be the extension of the Agate student housing and was to occupy an area of about eleven acres on flat land near the university.

The initial plan showed us the existence of a pedestrian street, connecting two parking lots,



Southwest portion of my Amazon village plan, showing overall arrangement generated by the fundamental process

with buildings lining the street, and less and less dense courtyards of buildings, forming a gradient away from the street. There is a latent gradient inherent in the site diagram. Further structure-preserving transformations make this gradient physically real, by height and intensity of buildings, and create small paths leading away from the main street, and create gardens — progressively more and more open as one moves away from the pedestrian street.

Along the street the buildings are three stories high, there are arcades, and all the buildings are connected. Applying structure-preserving transformations to form the small paths, each path is made a series of lines, joining new centers, courtyards, and gardens.

The buildings near the spine are higher and longer, with arcades. The walkways going across form small pathways, not disruptive of the main spine. Each of these paths goes to lower density as one goes away from the spine, leaving a more tranquil atmosphere further away, and a more active atmosphere near to it. All this new structure not only preserves the structure of the land. Here we see how the structure-preserving process also begins to establish volumes and positions on the land, major space, major volumes.

Within the framework of this volumetric structure, detailed volumes and smaller spaces develop like twigs growing off branches, to form

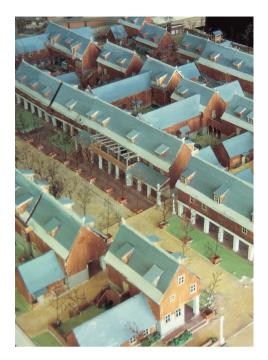
THE POSITIVE PATTERN OF SPACE AND VOLUME



The Amazon project, showing buildings and details as the fundamental process allowed us to define them



The Amazon project, showing buildings and details as the fundamental process allowed us to define them



Amazon village, a complex of 300 apartments for University of Oregon students, looking at the central pedestrian street and its arcades. Christopher Alexander, with Hajo Neis and others, 1992.

a further system of volume and space, also by preserving the structure and creating a positive space and volumetric texture on the land. Here the architecture itself, the style of the volumes, the walkways, courtyards, building heights, building thicknesses, all develop by respecting and preserving and continuing the structure which is there, according to the fundamental process.

When combinations of the fundamental process are used to place and shape building volumes, the land always ends with a certain sort of pattern: a combination of nearly rectangular and rectangular volumes, not quite rectilinear in their placing, placed rather in relation to contours, flat places, slight lines of slope, positions of other buildings. Some of the volumes typically end up with roofs that create strong centers; the buildings surround and form courts and terraces and gardens as important as the building volumes, circulation realms, trees and pockets in the land honored by space, steps and terraces.

Subject to these influences, the rectangles are hardly ever perfectly rectangular. Even the building volumes typically have odd excrescences sticking out from them added on, and, occasional departures from the perfect 90 degrees in their corners, all done so that the syncopated and more subtle structure can accommodate the fitness to the contour, to the positive



Agate student housing, University of Oregon. Four apartment buildings, all similar in plan and form, but each one individually tailored to the site, position, sunlight, trees, roads and views.

Christopher Alexander, Hajo Neis, James Maguire, Gary Black, David Edrington, Rob Thallon, Chuck Han, 1992.



Spring 1985, twilight. The judo hall when tulip trees and cherry blossoms first came into flower.



Winter 1986, snow. The Eishin campus in the distance.

space of neighborhood buildings, to the accidents of a rock, or of a great tree, or of a bridge.

All this follows from the creation of positive centers, under the impact of the fundamental process. The pattern which results, though contemporary and of our time, will also, necessarily, resemble an ancient and universal one. It could as well be Chinese, or Italian, or Peruvian or African. This, more than anything else, belongs to the future, too, because it is the building/land/form which will arise whenever

living processes really have occurred—in the language of pages 21–24, a class-one structure not a class-two structure. Once our obsession with structure-destroying modernity has subsided, and we have stopped blindly destroying valuable structure in cities and landscapes, we may, in a far-distant future, be able to create similar patterns in a new form, again and again, all over the Earth. And the Earth, with such building volumes on it, may then perpetually seem fresh and young.



10 / THE MOST VITAL STEP IN ANY BUILDING PROCESS

Once this work on site and volume design is done, the essential feeling of the coming buildings—their contribution to the world, their structure-preserving character—has been established. It is the most vital single step in the emergence of a new building or a new group of buildings. If the volume is congruent with the wholeness which existed previously in the city or on the land, a profound feeling can often come from its congruence.

What follows, in later stages of design or construction process, must never be allowed to undo this congruence or damage it. If the feeling is genuine and does arise out of the site itself, then it must be thought of as an absolute which later stages of unfolding — detailed design and construction — must only strengthen, deepen. If, on the other hand, the volume that you have

reached at this first crucial stage is in any sense inadequate, then you must fix it now. Any depth of feeling which exists in the thing will hinge on this volume and its placing on the land. You may try to tell yourself that you can fix it later, but you will not be able to. Later will be too late. The deep feeling can never be made essentially different later. If the disposition of volume and space has force in it — magic — now, then you have a chance of keeping it, and enlarging it by later actions of design. But a bad beginning of volume and space can never be set right later.

When it exists only in your mind's eye, or as a tiny cardboard model, your job is to make that feeling so intense that it captures the soul of that place, and fits harmoniously and with intense feeling into that piece of land.



11 / REMEMBER THAT EACH BUILDING EXISTS MAINLY TO ACTIVATE THE LAND

The most crucial thing to understand throughout the volume-creating processes, is that IT IS THE LAND WHICH MATTERS. The purpose of the buildings is to bring life to the land. The building volumes are the tools with which we undertake this task. This is a radical point of view. It puts the building in a humble