

A PATTERN LANGUAGE

TOWNS • BUILDINGS • CONSTRUCTION

Christopher Alexander

Sara Ishikawa Murray Silverstein

with

Max Jacobson Ingrid Fiksdahl-King Shlomo Angel

NEW YORK

OXFORD UNIVERSITY PRESS

1977

Copyright © 1977 by Christopher Alexander
Library of Congress Catalogue Card Number: 74-22874
ISBN-13 978-0-19-501919-3

printing, last digit: 40 39 38 37 36 35 34
Printed in the United States of America
on acid-free paper

CONTENTS

USING THIS BOOK

<i>A pattern language</i>	ix
<i>Summary of the language</i>	xviii
<i>Choosing a language for your project</i>	xxxv
<i>The poetry of the language</i>	xl

TOWNS

<i>Using the language</i>	3
<i>Patterns</i>	10-457

BUILDINGS

<i>Using the language</i>	463
<i>Patterns</i>	467-931

CONSTRUCTION

<i>Using the language</i>	935
<i>Patterns</i>	939-1166



ACKNOWLEDGMENTS	1167
-----------------	------

USING THIS BOOK

A PATTERN LANGUAGE

Volume 1, *The Timeless Way of Building*, and Volume 2, *A Pattern Language*, are two halves of a single work. This book provides a language, for building and planning; the other book provides the theory and instructions for the use of the language. This book describes the detailed patterns for towns and neighborhoods, houses, gardens, and rooms. The other book explains the discipline which makes it possible to use these patterns to create a building or a town. This book is the sourcebook of the timeless way; the other is its practice and its origin.

The two books have evolved very much in parallel. They have been growing over the last eight years, as we have worked on the one hand to understand the nature of the building process, and on the other hand to construct an actual, possible pattern language. We have been forced by practical considerations, to publish these two books under separate covers; but in fact, they form an indivisible whole. It is possible to read them separately. But to gain the insight which we have tried to communicate in them, it is essential that you read them both.

The Timeless Way of Building describes the fundamental nature of the task of making towns and buildings.

It is shown there, that towns and buildings will not be able to become alive, unless they are made by all the people in society, and unless these people share a common pattern language, within which to make these buildings, and unless this common pattern language is alive itself.

In this book, we present one possible pattern language, of the kind called for in *The Timeless Way*. This language is extremely practical. It is a language that we have distilled from our own building and planning efforts over the last eight years. You can use it to work with your neighbors, to improve your town and neighborhood. You can use it to design a house for yourself, with your family; or to work with other people to design an office or a workshop or a public building like a school. And you can use it to guide you in the actual process of construction.

The elements of this language are entities called patterns. Each pattern describes a problem which occurs over and over again in our environment, and then describes the core of the solution to that problem, in such a way that you can use this solution a million times over, without ever doing it the same way twice.

For convenience and clarity, each pattern has the same format. First, there is a picture, which shows an archetypal example of that pattern. Second, after the picture, each pattern has an introductory paragraph, which sets the context for the pattern, by explaining how it helps to complete certain larger patterns. Then there are three diamonds to mark the beginning of the problem. After the diamonds there is a headline, in bold type. This

headline gives the essence of the problem in one or two sentences. After the headline comes the body of the problem. This is the longest section. It describes the empirical background of the pattern, the evidence for its validity, the range of different ways the pattern can be manifested in a building, and so on. Then, again in bold type, like the headline, is the solution—the heart of the pattern—which describes the field of physical and social relationships which are required to solve the stated problem, in the stated context. This solution is always stated in the form of an instruction—so that you know exactly what you need to do, to build the pattern. Then, after the solution, there is a diagram, which shows the solution in the form of a diagram, with labels to indicate its main components.

After the diagram, another three diamonds, to show that the main body of the pattern is finished. And finally, after the diamonds there is a paragraph which ties the pattern to all those smaller patterns in the language, which are needed to complete this pattern, to embellish it, to fill it out.

There are two essential purposes behind this format. First, to present each pattern connected to other patterns, so that you grasp the collection of all 253 patterns as a whole, as a language, within which you can create an infinite variety of combinations. Second, to present the problem and solution of each pattern in such a way that you can judge it for yourself, and modify it, without losing the essence that is central to it.

Let us next understand the nature of the connection between patterns.

The patterns are ordered, beginning with the very largest, for regions and towns, then working down through neighborhoods, clusters of buildings, buildings, rooms and alcoves, ending finally with details of construction.

This order, which is presented as a straight linear sequence, is essential to the way the language works. It is presented, and explained more fully, in the next section. What is most important about this sequence, is that it is based on the connections between the patterns. Each pattern is connected to certain "larger" patterns which come above it in the language; and to certain "smaller" patterns which come below it in the language. The pattern helps to complete those larger patterns which are "above" it, and is itself completed by those smaller patterns which are "below" it.

Thus, for example, you will find that the pattern ACCESSIBLE GREEN (60), is connected first to certain larger patterns: SUBCULTURE BOUNDARY (13), IDENTIFIABLE NEIGHBORHOOD (14), WORK COMMUNITY (41), and QUIET BACKS (59). These appear on its first page. And it is also connected to certain smaller patterns: POSITIVE OUTDOOR SPACE (107), TREE PLACES (171), and GARDEN WALL (173). These appear on its last page.

What this means, is that IDENTIFIABLE NEIGHBORHOOD, SUBCULTURE BOUNDARY, WORK COMMUNITY, and QUIET BACKS are incomplete, unless they contain an ACCESSIBLE GREEN; and that an ACCESSIBLE GREEN is itself incomplete, unless it contains POSITIVE OUTDOOR SPACE, TREE PLACES, and a GARDEN WALL.

And what it means in practical terms is that, if you

want to lay out a green according to this pattern, you must not only follow the instructions which describe the pattern itself, but must also try to embed the green within an IDENTIFIABLE NEIGHBORHOOD or in some SUB-CULTURE BOUNDARY, and in a way that helps to form QUIET BACKS; and then you must work to complete the green by building in some POSITIVE OUTDOOR SPACE, TREE PLACES, and a GARDEN WALL.

In short, no pattern is an isolated entity. Each pattern can exist in the world, only to the extent that is supported by other patterns: the larger patterns in which it is embedded, the patterns of the same size that surround it, and the smaller patterns which are embedded in it.

This is a fundamental view of the world. It says that when you build a thing you cannot merely build that thing in isolation, but must also repair the world around it, and within it, so that the larger world at that one place becomes more coherent, and more whole; and the thing which you make takes its place in the web of nature, as you make it.

Now we explain the nature of the relation between problems and solutions, within the individual patterns.

Each solution is stated in such a way that it gives the essential field of relationships needed to solve the problem, but in a very general and abstract way—so that you can solve the problem for yourself, in your own way, by adapting it to your preferences, and the local conditions at the place where you are making it.

For this reason, we have tried to write each solution in a way which imposes nothing on you. It contains only those essentials which cannot be avoided if you really

want to solve the problem. In this sense, we have tried, in each solution, to capture the invariant property common to all places which succeed in solving the problem.

But of course, we have not always succeeded. The solutions we have given to these problems vary in significance. Some are more true, more profound, more certain, than others. To show this clearly we have marked every pattern, in the text itself, with two asterisks, or one asterisk, or no asterisks.

In the patterns marked with two asterisks, we believe that we have succeeded in stating a true invariant: in short, that the solution we have stated summarizes a *property* common to *all possible ways* of solving the stated problem. In these two-asterisk cases we believe, in short, that it is not possible to solve the stated problem properly, without shaping the environment in one way or another according to the pattern that we have given—and that, in these cases, the pattern describes a deep and inescapable property of a well-formed environment.

In the patterns marked with one asterisk, we believe that we have made some progress towards identifying such an invariant: but that with careful work it will certainly be possible to improve on the solution. In these cases, we believe it would be wise for you to treat the pattern with a certain amount of disrespect—and that you seek out variants of the solution which we have given, since there are almost certainly possible ranges of solutions which are not covered by what we have written.

Finally, in the patterns without an asterisk, we are certain that we have *not* succeeded in defining a true

invariant—that, on the contrary, there are certainly ways of solving the problem different from the one which we have given. In these cases we have still stated a solution, in order to be concrete—to provide the reader with at least one way of solving the problem—but the task of finding the true invariant, the true property which lies at the heart of all possible solutions to this problem, remains undone.

We hope, of course, that many of the people who read, and use this language, will try to improve these patterns—will put their energy to work, in this task of finding more true, more profound invariants—and we hope that gradually these more true patterns, which are slowly discovered, as time goes on, will enter a common language, which all of us can share.

You see then that the patterns are very much alive and evolving. In fact, if you like, each pattern may be looked upon as a hypothesis like one of the hypotheses of science. In this sense, each pattern represents our current best guess as to what arrangement of the physical environment will work to solve the problem presented. The empirical questions center on the problem—does it occur and is it felt in the way we have described it?—and the solution—does the arrangement we propose in fact resolve the problem? And the asterisks represent our degree of faith in these hypotheses. But of course, no matter what the asterisks say, the patterns are still hypotheses, all 253 of them—and are therefore all tentative, all free to evolve under the impact of new experience and observation.

Let us finally explain the status of this language, why

we have called it "A Pattern Language" with the emphasis on the word "A," and how we imagine this pattern language might be related to the countless thousands of other languages we hope that people will make for themselves, in the future.

The Timeless Way of Building says that every society which is alive and whole, will have its own unique and distinct pattern language; and further, that every individual in such a society will have a unique language, shared in part, but which as a totality is unique to the mind of the person who has it. In this sense, in a healthy society there will be as many pattern languages as there are people—even though these languages are shared and similar.

The question then arises: What exactly is the status of this published language? In what frame of mind, and with what intention, are we publishing this language here? The fact that it is published as a book means that many thousands of people can use it. Is it not true that there is a danger that people might come to rely on this one printed language, instead of developing their own languages, in their own minds?

The fact is, that we have written this book as a first step in the society-wide process by which people will gradually become conscious of their own pattern languages, and work to improve them. We believe, and have explained in *The Timeless Way of Building*, that the languages which people have today are so brutal, and so fragmented, that most people no longer have any language to speak of at all—and what they do have is not based on human, or natural considerations.

We have spent years trying to formulate this language, in the hope that when a person uses it, he will be so impressed by its power, and so joyful in its use, that he will understand again, what it means to have a living language of this kind. If we only succeed in that, it is possible that each person may once again embark on the construction and development of his own language—perhaps taking the language printed in this book, as a point of departure.

And yet, we do believe, of course, that this language which is printed here is something more than a manual, or a teacher, or a version of a possible pattern language. Many of the patterns here are archetypal—so deep, so deeply rooted in the nature of things, that it seems likely that they will be a part of human nature, and human action, as much in five hundred years, as they are today. We doubt very much whether anyone could construct a valid pattern language, in his own mind, which did not include the pattern *ARCADES* (119) for example, or the pattern *ALCOVES* (179).

In this sense, we have also tried to penetrate, as deep as we are able, into the nature of things in the environment: and hope that a great part of this language, which we print here, will be a core of any sensible human pattern language, which any person constructs for himself, in his own mind. In this sense, at least a part of the language we have presented here, is the archetypal core of all possible pattern languages, which can make people feel alive and human.

SUMMARY OF THE LANGUAGE

A pattern language has the structure of a network. This is explained fully in *The Timeless Way of Building*. However, when we use the network of a language, we always use it as a *sequence*, going through the patterns, moving always from the larger patterns to the smaller, always from the ones which create structures, to the ones which then embellish those structures, and then to those which embellish the embellishments. . . .

Since the language is in truth a network, there is no one sequence which perfectly captures it. But the sequence which follows, captures the broad sweep of the full network; in doing so, it follows a line, dips down, dips up again, and follows an irregular course, a little like a needle following a tapestry.

The sequence of patterns is both a summary of the language, and at the same time, an index to the patterns. If you read through the sentences which connect the groups of patterns to one another, you will get an overview of the whole language. And once you get this overview, you will then be able to find the patterns which are relevant to your own project.

And finally, as we shall explain in the next section, this sequence of patterns is also the "base map," from

SUMMARY OF THE LANGUAGE

which you can make a language for your own project, by choosing the patterns which are most useful to you, and leaving them more or less in the order that you find them printed here.



We begin with that part of the language which defines a town or community. These patterns can never be "designed" or "built" in one fell swoop—but patient piecemeal growth, designed in such a way that every individual act is always helping to create or generate these larger global patterns, will, slowly and surely, over the years, make a community that has these global patterns in it.

1. INDEPENDENT REGIONS

within each region work toward those regional policies which will protect the land and mark the limits of the cities;

2. THE DISTRIBUTION OF TOWNS

3. CITY COUNTRY FINGERS

4. AGRICULTURAL VALLEYS

5. LACE OF COUNTRY STREETS

6. COUNTRY TOWNS

7. THE COUNTRYSIDE

SUMMARY OF THE LANGUAGE

through city policies, encourage the piecemeal formation of those major structures which define the city;

8. MOSAIC OF SUBCULTURES

9. SCATTERED WORK

10. MAGIC OF THE CITY

11. LOCAL TRANSPORT AREAS

build up these larger city patterns from the grass roots, through action essentially controlled by two levels of self-governing communities, which exist as physically identifiable places;

12. COMMUNITY OF 7000

13. SUBCULTURE BOUNDARY

14. IDENTIFIABLE NEIGHBORHOOD

15. NEIGHBORHOOD BOUNDARY

connect communities to one another by encouraging the growth of the following networks;

16. WEB OF PUBLIC TRANSPORTATION

17. RING ROADS

18. NETWORK OF LEARNING

19. WEB OF SHOPPING

20. MINI-BUSES

establish community and neighborhood policy to control the character of the local environment according to the following fundamental principles;

21. FOUR-STORY LIMIT

SUMMARY OF THE LANGUAGE

22. NINE PER CENT PARKING

23. PARALLEL ROADS

24. SACRED SITES

25. ACCESS TO WATER

26. LIFE CYCLE

27. MEN AND WOMEN

both in the neighborhoods and the communities, and in between them, in the boundaries, encourage the formation of local centers;

28. ECCENTRIC NUCLEUS

29. DENSITY RINGS

30. ACTIVITY NODES

31. PROMENADE

32. SHOPPING STREET

33. NIGHT LIFE

34. INTERCHANGE

around these centers, provide for the growth of housing in the form of clusters, based on face-to-face human groups;

35. HOUSEHOLD MIX

36. DEGREES OF PUBLICNESS

37. HOUSE CLUSTER

38. ROW HOUSES

39. HOUSING HILL

40. OLD PEOPLE EVERYWHERE

SUMMARY OF THE LANGUAGE

between the house clusters, around the centers, and especially in the boundaries between neighborhoods, encourage the formation of work communities;

41. WORK COMMUNITY
42. INDUSTRIAL RIBBON
43. UNIVERSITY AS A MARKETPLACE
44. LOCAL TOWN HALL
45. NECKLACE OF COMMUNITY PROJECTS
46. MARKET OF MANY SHOPS
47. HEALTH CENTER
48. HOUSING IN BETWEEN

between the house clusters and work communities, allow the local road and path network to grow informally, piecemeal;

49. LOOPED LOCAL ROADS
50. T JUNCTIONS
51. GREEN STREETS
52. NETWORK OF PATHS AND CARS
53. MAIN GATEWAYS
54. ROAD CROSSING
55. RAISED WALK
56. BIKE PATHS AND RACKS
57. CHILDREN IN THE CITY

SUMMARY OF THE LANGUAGE

in the communities and neighborhoods, provide public open land where people can relax, rub shoulders and renew themselves;

- 58. CARNIVAL
- 59. QUIET BACKS
- 60. ACCESSIBLE GREEN
- 61. SMALL PUBLIC SQUARES
- 62. HIGH PLACES
- 63. DANCING IN THE STREET
- 64. POOLS AND STREAMS
- 65. BIRTH PLACES
- 66. HOLY GROUND

in each house cluster and work community, provide the smaller bits of common land, to provide for local versions of the same needs;

- 67. COMMON LAND
- 68. CONNECTED PLAY
- 69. PUBLIC OUTDOOR ROOM
- 70. GRAVE SITES
- 71. STILL WATER
- 72. LOCAL SPORTS
- 73. ADVENTURE PLAYGROUND
- 74. ANIMALS

within the framework of the common land, the clusters, and the work communities encourage transformation of

SUMMARY OF THE LANGUAGE

the smallest independent social institutions: the families, workgroups, and gathering places. The family, in all its forms;

75. THE FAMILY

76. HOUSE FOR A SMALL FAMILY

77. HOUSE FOR A COUPLE

78. HOUSE FOR ONE PERSON

79. YOUR OWN HOME

the workgroups, including all kinds of workshops and offices and even children's learning groups;

80. SELF-GOVERNING WORKSHOPS
AND OFFICES

81. SMALL SERVICES WITHOUT RED TAPE

82. OFFICE CONNECTIONS

83. MASTER AND APPRENTICES

84. TEENAGE SOCIETY

85. SHOPFRONT SCHOOLS

86. CHILDREN'S HOME

the local shops and gathering places.

87. INDIVIDUALLY OWNED SHOPS

88. STREET CAFE

89. CORNER GROCERY

90. BEER HALL

91. TRAVELER'S INN

92. BUS STOP

SUMMARY OF THE LANGUAGE

93. FOOD STANDS

94. SLEEPING IN PUBLIC

This completes the global patterns which define a town or a community. We now start that part of the language which gives shape to groups of buildings, and individual buildings, on the land, in three dimensions. These are the patterns which can be "designed" or "built"—the patterns which define the individual buildings and the space between buildings; where we are dealing for the first time with patterns that are under the control of individuals or small groups of individuals, who are able to build the patterns all at once.

The first group of patterns helps to lay out the overall arrangement of a group of buildings: the height and number of these buildings, the entrances to the site, main parking areas, and lines of movement through the complex;

95. BUILDING COMPLEX

96. NUMBER OF STORIES

97. SHIELDED PARKING

98. CIRCULATION REALMS

99. MAIN BUILDING

100. PEDESTRIAN STREET

101. BUILDING THOROUGHFARE

102. FAMILY OF ENTRANCES

103. SMALL PARKING LOTS

SUMMARY OF THE LANGUAGE

fix the position of individual buildings on the site, within the complex, one by one, according to the nature of the site, the trees, the sun: this is one of the most important moments in the language;

104. SITE REPAIR

105. SOUTH FACING OUTDOORS

106. POSITIVE OUTDOOR SPACE

107. WINGS OF LIGHT

108. CONNECTED BUILDINGS

109. LONG THIN HOUSE

within the buildings' wings, lay out the entrances, the gardens, courtyards, roofs, and terraces: shape both the volume of the buildings and the volume of the space between the buildings at the same time—remembering that indoor space and outdoor space, yin and yang, must always get their shape together;

110. MAIN ENTRANCE

111. HALF-HIDDEN GARDEN

112. ENTRANCE TRANSITION

113. CAR CONNECTION

114. HIERARCHY OF OPEN SPACE

115. COURTYARDS WHICH LIVE

116. CASCADE OF ROOFS

117. SHELTERING ROOF

118. ROOF GARDEN

SUMMARY OF THE LANGUAGE

when the major parts of buildings and the outdoor areas have been given their rough shape, it is the right time to give more detailed attention to the paths and squares between the buildings;

- 119. ARCADES
- 120. PATHS AND GOALS
- 121. PATH SHAPE
- 122. BUILDING FRONTS
- 123. PEDESTRIAN DENSITY
- 124. ACTIVITY POCKETS
- 125. STAIR SEATS
- 126. SOMETHING ROUGHLY IN THE
MIDDLE

now, with the paths fixed, we come back to the buildings: within the various wings of any one building, work out the fundamental gradients of space, and decide how the movement will connect the spaces in the gradients;

- 127. INTIMACY GRADIENT
- 128. INDOOR SUNLIGHT
- 129. COMMON AREAS AT THE HEART
- 130. ENTRANCE ROOM
- 131. THE FLOW THROUGH ROOMS
- 132. SHORT PASSAGES
- 133. STAIRCASE AS A STAGE
- 134. ZEN VIEW
- 135. TAPESTRY OF LIGHT AND DARK

SUMMARY OF THE LANGUAGE

within the framework of the wings and their internal gradients of space and movement, define the most important areas and rooms. First, for a house;

136. COUPLE'S REALM

137. CHILDREN'S REALM

138. SLEEPING TO THE EAST

139. FARMHOUSE KITCHEN

140. PRIVATE TERRACE ON THE STREET

141. A ROOM OF ONE'S OWN

142. SEQUENCE OF SITTING SPACES

143. BED CLUSTER

144. BATHING ROOM

145. BULK STORAGE

then the same for offices, workshops, and public buildings;

146. FLEXIBLE OFFICE SPACE

147. COMMUNAL EATING

148. SMALL WORK GROUPS

149. RECEPTION WELCOMES YOU

150. A PLACE TO WAIT

151. SMALL MEETING ROOMS

152. HALF-PRIVATE OFFICE

add those small outbuildings which must be slightly independent from the main structure, and put in the access from the upper stories to the street and gardens;

SUMMARY OF THE LANGUAGE

- 153. ROOMS TO RENT
- 154. TEENAGER'S COTTAGE
- 155. OLD AGE COTTAGE
- 156. SETTLED WORK
- 157. HOME WORKSHOP
- 158. OPEN STAIRS

prepare to knit the inside of the building to the outside, by treating the edge between the two as a place in its own right, and making human details there;

- 159. LIGHT ON TWO SIDES OF EVERY ROOM
- 160. BUILDING EDGE
- 161. SUNNY PLACE
- 162. NORTH FACE
- 163. OUTDOOR ROOM
- 164. STREET WINDOWS
- 165. OPENING TO THE STREET
- 166. GALLERY SURROUND
- 167. SIX-FOOT BALCONY
- 168. CONNECTION TO THE EARTH

decide on the arrangement of the gardens, and the places in the gardens;

- 169. TERRACED SLOPE
- 170. FRUIT TREES
- 171. TREE PLACES

SUMMARY OF THE LANGUAGE

172. GARDEN GROWING WILD

173. GARDEN WALL

174. TRELLISED WALK

175. GREENHOUSE

176. GARDEN SEAT

177. VEGETABLE GARDEN

178. COMPOST

go back to the inside of the building and attach the necessary minor rooms and alcoves to complete the main rooms;

179. ALCOVES

180. WINDOW PLACE

181. THE FIRE

182. EATING ATMOSPHERE

183. WORKSPACE ENCLOSURE

184. COOKING LAYOUT

185. SITTING CIRCLE

186. COMMUNAL SLEEPING

187. MARRIAGE BED

188. BED ALCOVE

189. DRESSING ROOM

fine tune the shape and size of rooms and alcoves to make them precise and buildable;

190. CEILING HEIGHT VARIETY

SUMMARY OF THE LANGUAGE

- 191. THE SHAPE OF INDOOR SPACE
- 192. WINDOWS OVERLOOKING LIFE
- 193. HALF-OPEN WALL
- 194. INTERIOR WINDOWS
- 195. STAIRCASE VOLUME
- 196. CORNER DOORS

give all the walls some depth, wherever there are to be alcoves, windows, shelves, closets, or seats;

- 197. THICK WALLS
- 198. CLOSETS BETWEEN ROOMS
- 199. SUNNY COUNTER
- 200. OPEN SHELVES
- 201. WAIST-HIGH SHELF
- 202. BUILT-IN SEATS
- 203. CHILD CAVES
- 204. SECRET PLACE

At this stage, you have a complete design for an individual building. If you have followed the patterns given, you have a scheme of spaces, either marked on the ground, with stakes, or on a piece of paper, accurate to the nearest foot or so. You know the height of rooms, the rough size and position of windows and doors, and you know roughly how the roofs of the building, and the gardens are laid out.

The next, and last part of the language, tells how to

SUMMARY OF THE LANGUAGE

make a buildable building directly from this rough scheme of spaces, and tells you how to build it, in detail.

Before you lay out structural details, establish a philosophy of structure which will let the structure grow directly from your plans and your conception of the buildings;

205. STRUCTURE FOLLOWS SOCIAL SPACES

206. EFFICIENT STRUCTURE

207. GOOD MATERIALS

208. GRADUAL STIFFENING

within this philosophy of structure, on the basis of the plans which you have made, work out the complete structural layout; this is the last thing you do on paper, before you actually start to build;

209. ROOF LAYOUT

210. FLOOR AND CEILING LAYOUT

211. THICKENING THE OUTER WALLS

212. COLUMNS AT THE CORNERS

213. FINAL COLUMN DISTRIBUTION

put stakes in the ground to mark the columns on the site, and start erecting the main frame of the building according to the layout of these stakes;

214. ROOT FOUNDATIONS

215. GROUND FLOOR SLAB

216. BOX COLUMNS

SUMMARY OF THE LANGUAGE

217. PERIMETER BEAMS

218. WALL MEMBRANES

219. FLOOR-CEILING VAULTS

220. ROOF VAULTS

within the main frame of the building, fix the exact positions for openings—the doors and windows—and frame these openings;

221. NATURAL DOORS AND WINDOWS

222. LOW SILL

223. DEEP REVEALS

224. LOW DOORWAY

225. FRAMES AS THICKENED EDGES

as you build the main frame and its openings, put in the following subsidiary patterns where they are appropriate;

226. COLUMN PLACE

227. COLUMN CONNECTION

228. STAIR VAULT

229. DUCT SPACE

230. RADIANT HEAT

231. DORMER WINDOWS

232. ROOF CAPS

put in the surfaces and indoor details;

233. FLOOR SURFACE

234. LAPPED OUTSIDE WALLS

SUMMARY OF THE LANGUAGE

- 235. SOFT INSIDE WALLS
- 236. WINDOWS WHICH OPEN WIDE
- 237. SOLID DOORS WITH GLASS
- 238. FILTERED LIGHT
- 239. SMALL PANES
- 240. HALF-INCH TRIM

build outdoor details to finish the outdoors as fully as the indoor spaces;

- 241. SEAT SPOTS
- 242. FRONT DOOR BENCH
- 243. SITTING WALL
- 244. CANVAS ROOFS
- 245. RAISED FLOWERS
- 246. CLIMBING PLANTS
- 247. PAVING WITH CRACKS BETWEEN
THE STONES
- 248. SOFT TILE AND BRICK

complete the building with ornament and light and color and your own things;

- 249. ORNAMENT
- 250. WARM COLORS
- 251. DIFFERENT CHAIRS
- 252. POOLS OF LIGHT
- 253. THINGS FROM YOUR LIFE

CHOOSING A LANGUAGE FOR YOUR PROJECT

All 253 patterns together form a language. They create a coherent picture of an entire region, with the power to generate such regions in a million forms, with infinite variety in all the details.

It is also true that any small sequence of patterns from this language is itself a language for a smaller part of the environment; and this small list of patterns is then capable of generating a million parks, paths, houses, workshops, or gardens.

For example, consider the following ten patterns:

PRIVATE TERRACE ON THE STREET (140)

SUNNY PLACE (161)

OUTDOOR ROOM (163)

SIX-FOOT BALCONY (167)

PATHS AND GOALS (120)

CEILING HEIGHT VARIETY (190)

COLUMNS AT THE CORNERS (212)

FRONT DOOR BENCH (242)

RAISED FLOWERS (245)

DIFFERENT CHAIRS (251)

This short list of patterns is itself a language: it is one of a thousand possible languages for a porch, at the front of a house. One of us chose this small language, to build

CHOOSING A LANGUAGE FOR YOUR SUBJECT

a porch onto the front of his house. This is the way the language, and its patterns, helped to generate this porch.

I started with **PRIVATE TERRACE ON THE STREET** (140). That pattern calls for a terrace, slightly raised, connected to the house, and on the street side. **SUNNY PLACE** (161) suggests that a special place on the sunny side of the yard should be intensified and made into a place by the use of a patio, balcony, outdoor room, etc. I used these two patterns to locate a raised platform on the south side of the house.

To make this platform into an **OUTDOOR ROOM** (163), I put it half under the existing roof overhang, and kept a mature pyracanthus tree right smack in the middle of the platform. The overhead foliage of the tree added to the roof-like enclosure of the space. I put a wind screen of fixed glass on the west side of the platform too, to give it even more enclosure.

I used **SIX-FOOT BALCONY** (167) to determine the size of the platform. But this pattern had to be used judiciously and not blindly—the reasoning for the pattern has to do with the minimum space required for people to sit comfortably and carry on a discussion around a small side-table. Since I wanted space for at least two of these conversation areas—one under the roof for very hot or rainy days, and one out under the sky for days when you wanted to be full in the sun, the balcony had to be made 12 x 12 feet square.

NOW PATHS AND GOALS (120): Usually, this pattern deals with large paths in a neighborhood, and comes much earlier in a language. But I used it in a special way. It says that the paths which naturally get formed by people's walking, on the land, should be preserved and intensified. Since the path to our front door cut right across the corner of the place where I had planned to put the platform, I cut the corner off.

The height of the platform above the ground was determined by **CEILING HEIGHT VARIETY** (190). By building the platform approximately one foot above the ground line, the ceiling height of the covered portion came out at between 6 and 7 feet—just right for a space as small as this. Since this height above the ground level is just about right for sitting, the pattern **FRONT DOOR BENCH** (242) was automatically satisfied.

There were three columns standing, supporting the roof over

CHOOSING A LANGUAGE FOR YOUR SUBJECT

the old porch. They had to stay where they are, because they hold the roof up. But, following COLUMNS AT THE CORNERS (212), the platform was very carefully tailored to their positions—so that the columns help define the social spaces on either side of them.

Finally, we put a couple of flower boxes next to the “front door bench”—it’s nice to smell them when you sit there—according to RAISED FLOWERS (245). And the old chairs you can see in the porch are DIFFERENT CHAIRS (251).

You can see, from this short example, how powerful and simple a pattern language is. And you are now, perhaps ready to appreciate how careful you must be, when you construct a language for yourself and your own project.



The finished porch

The character of the porch is given by the ten patterns in this short language. In just this way, each part of the environment is given its character by the collection of patterns which we choose to build into it. The character of what you build, will be given to it by the language of patterns you use, to generate it.

CHOOSING A LANGUAGE FOR YOUR SUBJECT

For this reason, of course, the task of choosing a language for your project is fundamental. The pattern language we have given here contains 253 patterns. You can therefore use it to generate an almost unimaginably large number of possible different smaller languages, for all the different projects you may choose to do, simply by picking patterns from it.

We shall now describe a rough procedure by which you can choose a language for your own project, first by taking patterns from this language we have printed here, and then by adding patterns of your own.

1. First of all, make a copy of the master sequence (pages xix–xxxiv) on which you can tick off the patterns which will form the language for your project. If you don't have access to a copying machine, you can tick off patterns in the list printed in the book, use paper clips to mark pages, write your own list, use paper markers—whatever you like. But just for now, to explain it clearly, we shall assume that you have a copy of the list in front of you.

2. Scan down the list, and find the pattern which best describes the overall scope of the project you have in mind. This is the starting pattern for your project. Tick it. (If there are two or three possible candidates, don't worry: just pick the one which seems best: the others will fall in place as you move forward.)

3. Turn to the starting pattern itself, in the book, and read it through. Notice that the other patterns mentioned by name at the beginning and at the end, of the pattern you are reading, are also possible candidates for your language. The ones at the beginning will tend to be "larger" than your project. Don't include them, unless

CHOOSING A LANGUAGE FOR YOUR SUBJECT

you have the power to help create these patterns, at least in a small way, in the world around your project. The ones at the end are "smaller." Almost all of them will be important. Tick all of them, on your list, unless you have some special reason for not wanting to include them.

4. Now your list has some more ticks on it. Turn to the next highest pattern on the list which is ticked, and open the book to that pattern. Once again, it will lead you to other patterns. Once again, tick those which are relevant—especially the ones which are "smaller" that come at the end. As a general rule, do not tick the ones which are "larger" unless you can do something about them, concretely, in your own project.

5. When in doubt about a pattern, don't include it. Your list can easily get too long: and if it does, it will become confusing. The list will be quite long enough, even if you only include the patterns you especially like.

6. Keep going like this, until you have ticked all the patterns you want for your project.

7. Now, adjust the sequence by adding your own material. If there are things you want to include in your project, but you have not been able to find patterns which correspond to them, then write them in, at an appropriate point in the sequence, near other patterns which are of about the same size and importance. For example, there is no pattern for a sauna. If you want to include one, write it in somewhere near BATHING ROOM (144) in your sequence.

8. And of course, if you want to change any patterns, change them. There are often cases where you may have a personal version of a pattern, which is more true, or

CHOOSING A LANGUAGE FOR YOUR SUBJECT

more relevant for you. In this case, you will get the most “power” over the language, and make it your own most effectively, if you write the changes in, at the appropriate places in the book. And, it will be most concrete of all, if you change the name of the pattern too—so that it captures your own changes clearly.



Suppose now that you have a language for your project. The way to use the language depends very much on its scale. Patterns dealing with towns can only be implemented gradually, by grass roots action; patterns for a building can be built up in your mind, and marked out on the ground; patterns for construction must be built physically, on the site. For this reason we have given three separate instructions, for these three different scales. For towns, see page 3; for buildings, see page 463; for construction, see page 935.

The procedures for each of these three scales are described in much more detail with extensive examples, in the appropriate chapters of *The Timeless Way of Building*. For the town—see chapters 24 and 25; for an individual building—see chapters 20, 21, and 22; and for the process of construction which describes the way a building is actually built see chapter 23.

THE POETRY OF THE LANGUAGE

Finally, a note of caution. This language, like English, can be a medium for prose, or a medium for poetry. The difference between prose and poetry is not that different languages are used, but that the same language is used, differently. In an ordinary English sentence, each word has one meaning, and the sentence too, has one simple meaning. In a poem, the meaning is far more dense. Each word carries several meanings; and the sentence as a whole carries an enormous density of interlocking meanings, which together illuminate the whole.

The same is true for pattern languages. It is possible to make buildings by stringing together patterns, in a rather loose way. A building made like this, is an assembly of patterns. It is not dense. It is not profound. But it is also possible to put patterns together in such a way that many many patterns overlap in the same physical space: the building is very dense; it has many meanings captured in a small space; and through this density, it becomes profound.

In a poem, this kind of density, creates illumination, by making identities between words, and meanings, whose identity we have not understood before. In "O Rose thou art sick," the rose is identified with many

THE POETRY OF THE LANGUAGE

greater, and more personal things than any rose—and the poem illuminates the person, and the rose, because of this connection. The connection not only illuminates the words, but also illuminates our actual lives.

O Rose thou art sick.
The invisible worm,
That flies in the night
In the howling storm:

Has found out thy bed
Of crimson joy:
And his dark secret love
Does thy life destroy.

WILLIAM BLAKE

The same exactly, happens in a building. Consider, for example, the two patterns BATHING ROOM (144) and STILL WATER (71). One defines a part of a house where you can bathe yourself slowly, with pleasure, perhaps in company; a place to rest your limbs, and to relax. The other is a place in a neighborhood, where this is water to gaze into, perhaps to swim in, where children can sail boats, and splash about, which nourishes those parts of ourselves which rely on water as one of the great elements of the unconscious.

Suppose now, that we make a complex of buildings where individual bathing rooms are somehow connected to a common pond, or lake, or pool—where the bathing room merges with this common place; where there is no sharp distinction between the individual and family processes of the bathing room, and the common pleasure of the common pool. In this place, these two patterns

exist in the same space; they are identified; there is a compression of the two, which requires less space, and which is more profound than in a place where they are merely side by side. The compression illuminates each of the patterns, sheds light on its meaning; and also illuminates our lives, as we understand a little more about the connections of our inner needs.

But this kind of compression is not only poetic and profound. It is not only the stuff of poems and exotic statements, but to some degree, the stuff of every English sentence. To some degree, there is compression in every single word we utter, just because each word carries the whisper of the meanings of the words it is connected to. Even "Please pass the butter, Fred" has some compression in it, because it carries overtones that lie in the connections of these words to all the words which came before it.

Each of us, talking to our friends, or to our families, makes use of these compressions, which are drawn out from the connections between words which are given by the language. The more we can feel all the connections in the language, the more rich and subtle are the things we say at the most ordinary times.

And once again, the same is true in building. The compression of patterns into a single space, is not a poetic and exotic thing, kept for special buildings which are works of art. It is the most ordinary economy of space. It is quite possible that all the patterns for a house might, in some form be present, and overlapping, in a simple one-room cabin. The patterns do not need to be strung out, and kept separate. Every building, every room,

every garden is better, when all the patterns which it needs are compressed as far as it is possible for them to be. The building will be cheaper; and the meanings in it will be denser.

It is essential then, once you have learned to use the language, that you pay attention to the possibility of compressing the many patterns which you put together, in the smallest possible space. You may think of this process of compressing patterns, as a way to make the cheapest possible building which has the necessary patterns in it. It is, also, the only way of using a pattern language to make buildings which are poems.

18 NETWORK OF LEARNING*



. . . another network, not physical like transportation, but conceptual, and equal in importance, is the network of learning: the thousands of interconnected situations that occur all over the city, and which in fact comprise the city's "curriculum": the way of life it teaches to its young.



In a society which emphasizes teaching, children and students—and adults—become passive and unable to think or act for themselves. Creative, active individuals can only grow up in a society which emphasizes learning instead of teaching.

There is no need to add to the criticism of our public schools. The critique is extensive and can hardly be improved on. The processes of learning and teaching, too, have been exhaustively studied. . . . The question now is what to do. (George Dennison, *Lives of Children*, New York: Vintage Books, 1969, p. 3.)

To date, the most penetrating analysis and proposal for an alternative framework for education comes from Ivan Illich in his book, *De-Schooling Society*, and his article, "Education without Schools: How It Can Be Done," in the *New York Review of Books*, New York, 15 (12): 25-31, special supplement, July 1971.

Illich describes a style of learning that is quite the opposite from schools. It is geared especially to the rich opportunities for learning that are natural to every metropolitan area:

The alternative to social control through the schools is the voluntary participation in society through *networks* which provide access to all its resources for learning. In fact these networks now exist, but they are rarely used for educational purposes. The crisis of schooling, if it is to have any positive consequence, will inevitably lead to their incorporation into the educational process. . . .

Schools are designed on the assumption that there is a secret to everything in life; that the quality of life depends on knowing that secret; that secrets can be known only in orderly successions; and that only teachers can properly reveal these secrets. An individual with a schooled mind conceives of the world as a pyramid of classified packages accessible only to those who carry the proper tags.

New educational institutions would break apart this pyramid. Their purpose must be to facilitate access for the learner: to allow him to look into the windows of the control room or the parliament, if he cannot get in the door. Moreover, such new institutions should be channels to which the learner would have access without credentials or pedigree—public spaces in which peers and elders outside his immediate horizon now become available. . . .

While network administrators would concentrate primarily on the building and maintenance of roads providing access to resources, the pedagogue would help the student to find the path which for him could lead fastest to his goal. If a student wants to learn spoken Cantonese from a Chinese neighbor, the pedagogue would be available to judge their proficiency, and to help them select the textbook and methods most suitable to their talents, character, and the time available for study. He can counsel the would-be airplane mechanic on finding the best places for apprenticeship. He can recommend books to somebody who wants to find challenging peers to discuss African history. Like the network administrator, the pedagogical counselor conceives of himself as a professional educator. Access to either could be gained by individuals through the use of educational vouchers. . . .

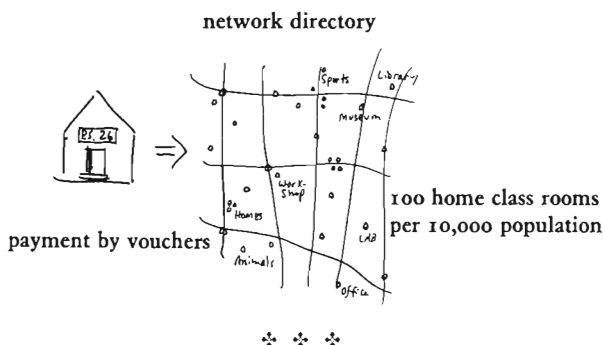
In addition to the tentative conclusions of the Carnegie Commission reports, the last year has brought forth a series of important documents which show that responsible people are becoming aware of the fact that schooling for certification cannot continue to be counted upon as the central educational device of a modern society. Julius Nyerere of Tanzania has announced plans to integrate education with the life of the village. In Canada, the Wright Commission on post-secondary education has reported that no known system of formal education could provide equal opportunities for the citizens of Ontario. The president of Peru has accepted the recommendation of his commission on education, which proposes to abolish free schools in favor of free educational opportunities provided throughout life. In fact he is reported to have insisted that this program proceed slowly at first in order to keep teachers in school and out of the way of true educators. (Abridged from pp. 76 and 99 in *Deschooling Society* by Ivan Illich. Vol. 44 in *World Perspectives Series*, edited by Ruth Nanda Anshen, New York: Harper & Row, 1971.)

In short, the educational system so radically decentralized becomes congruent with the urban structure itself. People of all walks of life come forth, and offer a class in the things they know and love: professionals and workgroups offer apprenticeships in their offices and workshops, old people offer to teach whatever their life work and interest has been, specialists offer tutoring in their special subjects. Living and learning are the

same. It is not hard to imagine that eventually every third or fourth household will have at least one person in it who is offering a class or training of some kind.

Therefore:

Instead of the lock-step of compulsory schooling in a fixed place, work in piecemeal ways to decentralize the process of learning and enrich it through contact with many places and people all over the city: workshops, teachers at home or walking through the city, professionals willing to take on the young as helpers, older children teaching younger children, museums, youth groups traveling, scholarly seminars, industrial workshops, old people, and so on. Conceive of all these situations as forming the backbone of the learning process; survey all these situations, describe them, and publish them as the city's "curriculum"; then let students, children, their families and neighborhoods weave together for themselves the situations that comprise their "school" paying as they go with standard vouchers, raised by community tax. Build new educational facilities in a way which extends and enriches this network.



Above all, encourage the formation of seminars and workshops in people's homes—HOME WORKSHOP (157); make sure that

each city has a "path" where young children can safely wander on their own—CHILDREN IN THE CITY (57); build extra public "homes" for children, one to every neighborhood at least—CHILDREN'S HOME (86); create a large number of work-oriented small schools in those parts of town dominated by work and commercial activity—SHOPFRONT SCHOOLS (85); encourage teenagers to work out a self-organized learning society of their own—TEENAGE SOCIETY (84); treat the university as scattered adult learning for all the adults in the region—UNIVERSITY AS A MARKETPLACE (43); and use the real work of professionals and tradesmen as the basic nodes in the network—MASTER AND APPRENTICES (83). . . .

19 WEB OF SHOPPING*

. . . this pattern defines a piecemeal process which can help to locate shops and services where they are needed, in such a way that they will strengthen the MOSAIC OF SUBCULTURES (8), SUBCULTURE BOUNDARIES (13), and the decentralized economy needed for SCATTERED WORK (9) and LOCAL TRANSPORT AREAS (11).



Shops rarely place themselves in those positions which best serve the people's needs, and also guarantee their own stability.

Large parts of towns have insufficient services. New shops which could provide these services often locate near the other shops and major centers, instead of locating themselves where they are needed. In an ideal town, where the shops are seen as part of the society's necessities and not merely as a way of making profit for the shopping chains, the shops would be much more widely and more homogeneously distributed than they are today.

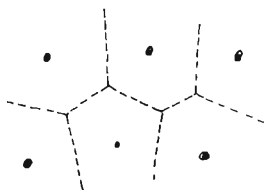
It is also true that many small shops are unstable. Two-thirds of the small shops that people open go out of business within a year. Obviously, the community is not well served by unstable businesses, and once again, their economic instability is largely linked to mistakes of location.

To guarantee that shops are stable, as well as distributed to meet community needs, each new shop must be placed where it will fill a gap among the other shops offering a roughly similar service and also be assured that it will get the threshold of customers which it needs in order to survive. We shall now try to express this principle in precise terms.

The characteristics of a stable system of shops is rather well known. It relies, essentially, on the idea that each unit of shopping has a certain catch basin—the population which it needs in order

19 WEB OF SHOPPING

to survive—and that units of any given type and size will therefore be stable if they are evenly distributed, each one at the center of a catch basin large enough to support it.



Catch basins.

The reason that shops and shopping centers do not always, automatically, distribute themselves according to their appropriate catch basins is easily explained by the situation known as *Hotelling's problem*. Imagine a beach in summer time—and, somewhere along the beach, an ice-cream seller. Suppose now, that you are also an ice-cream seller. You arrive on the beach. Where should you place yourself in relation to the first ice-cream seller? There are two possible solutions.



Two approaches to the ice-cream problem.

In the first case, you essentially decide to split the beach with the other ice-cream seller. You take half the beach, and leave him half the beach. In this case, you place yourself as far away from him as you can, in a position where half the people on the beach are nearer to you than to him.

In the second case, you place yourself right next to him. You decide, in short, to try and compete with him—and place yourself in such a way as to command the whole beach, not half of it.

Every time a shop, or shopping center opens, it faces a similar choice. It can either locate in a new area where there are no other competing businesses, or it can place itself exactly where all the other businesses are already in the hope of attracting their customers away from them.

The trouble is, very simply, that people tend to choose the second of these two alternatives, because it seems, on the surface, to be safer. In fact, however, the first of the two choices is both better and safer. It is better for the customers, who then have stores to serve them closer to their homes and work places than they do now; and it is safer for the shopkeepers themselves since—in spite of appearances—their stores are much more likely to survive when they stand, without competition, in the middle of a catch basin which needs their services.

Let us now consider the global nature of a web which has this character. In present cities, shops of similar types tend to be clustered in shopping centers. They are forced to cluster, in part because of zoning ordinances, which forbid them to locate in so-called residential areas; and they are encouraged to cluster by their mistaken notion that competition with other shops will serve them better than roughly equal sharing of the available customers. In the "peoples" web we are proposing, shops are far more evenly spread out, with less emphasis on competition and greater emphasis on service. Of course, there will still be competition, enough to make sure that very bad shops go out of business, because each shop will be capable of drawing customers from the nearby catch basins if it offers better service—but the accent is on cooperation instead of competition.



The existing web.



The peoples' web.

19 WEB OF SHOPPING

To generate this kind of homogeneous people's web, it is only necessary that each new shop follow the following three-step procedure when it chooses a location:

1. Identify all other shops which offer the service you are interested in; locate them on the map.
2. Identify and map the location of potential consumers. Wherever possible, indicate the density or total number of potential consumers in any given area.
3. Look for the biggest gap in the existing web of shops in those areas where there are potential consumers.



The gap in services.

Two colleagues of ours have tested the efficiency and potential stability of the webs created by this procedure. ("Computer Simulation of Market Location in an Urban Area," S. Angel and F. Loetterle, CES files, June 1967.) They chose to study markets. They began with a fixed area, a known population density and purchasing power, and a random distribution of markets of different sizes. They then created new markets and killed off old markets according to the following rules. (1) Among all of the existing markets, erase any that do not capture sufficient business to support their given size; (2) among all of the possible locations for a new market, find the one which would most strongly support a new market; (3) find that size for the new market that would be most economically feasible; (4) find that market among all those now existing that is the least economically feasible, and erase it from the web; (5) repeat steps (2) through (4) until no further improvement in the web can be made.

Under the impact of these rules, the random distribution of

markets at the beginning leads gradually to a fluctuating, pulsating distribution of markets which remains economically stable throughout its changes.

Now of course, even if shops of the *same* kind are kept apart by this procedure, shops of *different* kinds will tend to cluster. This follows, simply, from the convenience of the shopper. If we follow the rules of location given above—always locating a new shop in the biggest gap in the web of similar shops—then, within that gap there are still quite a large number of different possible places to locate: and naturally, we shall try to locate near the largest cluster of other shops within that gap, to increase the number of people coming past the shop, in short, to make it more convenient for shoppers.

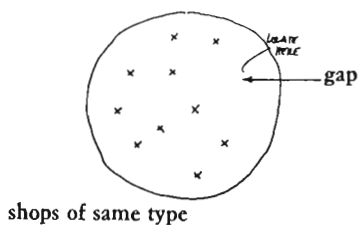
The clusters which emerge have been thoroughly studied by Berry. It turns out that the *levels* of clustering are remarkably similar, even though their spacing varies greatly according to population density. (See *Geography of Market Centers and Retail Distribution*, B. Berry, Englewood Cliffs, New Jersey: Prentice-Hall, Inc., 1967, pp. 32–33.) The elements in this web of clustering correspond closely to patterns defined in this language.

Therefore:

When you locate any individual shop, follow a three-step procedure:

1. Identify all other shops which offer the service you are interested in; locate them on the map.
2. Identify and map the location of potential consumers. Wherever possible, indicate the density or total number of potential consumers in any given area.
3. Look for the biggest gap in the existing web of shops in those areas where there are potential consumers.
4. Within the gap in the web of similar shops, locate your shop next to the largest cluster of other kinds of shops.

19 WEB OF SHOPPING



We estimate, that under the impact of this rule, a web of shopping with the following overall characteristics will emerge:

	Population	Distance Apart (Miles)
MAGIC OF THE CITY (10)	300,000	10*
PROMENADES (31)	50,000	4*
SHOPPING STREETS (32)	10,000	1.8*
MARKETS OF MANY SHOPS (46)	4,000	1.1*
CORNER GROCERIES (89)	1,000	0.5*

* These distances are calculated for an overall population density of 5000 per square mile. For a population density of D persons/square mile, divide the distances by $\sqrt{D/5000}$

20 MINI-BUSES*

. . . this pattern helps complete the LOCAL TRANSPORT AREAS (11) and the WEB OF PUBLIC TRANSPORTATION (16). The local transport areas rely heavily on foot traffic, and on bikes and carts and horses. The web of public transportation relies on trains and planes and buses. Both of these patterns need a more flexible kind of public transportation to support them.



Public transportation must be able to take people from any point to any other point within the metropolitan area.

Buses and trains, which run along lines, are too far from most origins and destinations to be useful. Taxis, which can go from point to point, are too expensive.

To solve the problem, it is necessary to have a kind of vehicle which is half way between the two—half like a bus, half like a taxi—a small bus which can pick up people at any point and take them to any other point, but which may also pick up other passengers on the way, to make the trip less costly than a taxi fare.

Recent research, and full-scale experiments, have shown that a system of mini-buses, on call by telephone, can function in this fashion, taking people from door to door in 15 minutes, for no more than 50 cents a ride (1974): and that the system is efficient enough to support itself. It works just like a taxi, except that it picks up and drops off other passengers while you are riding; it goes to the nearest corner to save time—not to your own front door; and it costs a quarter of an average taxi fare.

The system hinges, to a certain extent, on the development of sophisticated new computer programs. As calls come in, the computer examines the present movements of all the various mini-buses, each with its particular load of passengers, and decides which bus can best afford to pick up the new passenger, with the least detour. Two-way radio contact keeps the mini-buses in communication with the dispatcher at the computer switchboard. All this, and other details, are discussed fully in a review of current



Canadian mini-bus.

dial-a-bus research: *Summary Report—The Dial-a-Ride Transportation System*, M.I.T. Urban Systems Laboratory, Report # USL-TR-70-10, March 1971.

Dial systems for buses are actually coming into existence now because they are economically feasible. While conventional fixed-route public transport systems are experiencing a dangerous spiral of lower levels of service, fewer passengers, and increased public subsidies, over 30 working dial-a-bus systems are presently in successful operation throughout the world. For example, a dial-a-bus system in Regina, Saskatchewan, is the *only* part of the Regina Transit System which supports itself (*Regina Telebus Study: Operations Report, and Financial Report*, W. G. Atkinson et al., June 1972). In Batavia, New York, dial-a-bus is the sole means of public transport, serving a population of 16,000 at fares of 40 to 60 cents per ride.

We finish this pattern by reminding the reader of two vital problems of public transportation, which underline the importance of the mini-bus approach.

First, there are very large numbers of people in cities who cannot drive; we believe the mini-bus system is the only realistic way of meeting the needs of all these people.

Their numbers are much larger than one would think. They are, in effect, a silent minority comprising the uncomplaining old and physically handicapped, the young and the poor. In 1970, over 20 percent of U.S. households did not own a car. Fifty-seven and five-tenths percent of all households with incomes under \$3000 did not own a car. For households headed by persons 65 years of age or older, 44.9 percent did not own a car. Of the youths between 10 and 18 years of age, 80 percent are dependent on others, including public

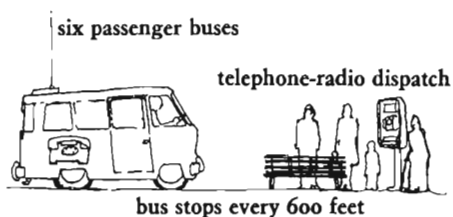
TOWNS

transit, for their mobility. Among the physically disabled about 5.7 million are potential riders of public transportation if the system could take them door-to-door. (Sumner Myers, "Turning Transit Subsidies into 'Compensatory Transportation,'" *City*, Vol. 6, No. 3, Summer 1972, p. 20.)

Second, quite apart from these special needs, the fact is that a web of public transportation, with large buses, boats, and trains, will not work anyway, without a mini-bus system. The large systems need feeders: some way of getting to the stations. If people have to get in their cars to go to the train, then, once in the car, they stay in it and do not use the train at all. The mini-bus system is essential for the purpose of providing feeder service in the larger web of public transportation.

Therefore:

Establish a system of small taxi-like buses, carrying up to six people each, radio-controlled, on call by telephone, able to provide point-to-point service according to the passengers' needs, and supplemented by a computer system which guarantees minimum detours, and minimum waiting times. Make bus stops for the mini-buses every 600 feet in each direction, and equip these bus stops with a phone for dialing a bus.



Place the bus stops mainly along major roads, as far as this can be consistent with the fact that no one ever has to walk more than 600 feet to the nearest one—PARALLEL ROADS (23); put one in every INTERCHANGE (34); and make each one a place where a few minutes' wait is pleasant—BUS STOP (92). . . .

establish community and neighborhood policy to control the character of the local environment according to the following fundamental principles:

- 21. FOUR-STORY LIMIT
- 22. NINE PER CENT PARKING
- 23. PARALLEL ROADS
- 24. SACRED SITES
- 25. ACCESS TO WATER
- 26. LIFE CYCLE
- 27. MEN AND WOMEN

26 LIFE CYCLE*



. . . a real community provides, in full, for the balance of human experience and human life—COMMUNITY OF 7000 (12). To a lesser extent, a good neighborhood will do the same—IDENTIFIABLE NEIGHBORHOOD (14). To fulfill this promise, communities and neighborhoods must have the range of things which life can need, so that a person can experience the full breadth and depth of life in his community.



All the world's a stage,
And all the men and women merely players:
They have their exits and their entrances;
And one man in his time plays many parts,
His acts being seven ages.

As, first the infant,
Mewling and puking in the nurse's arms.
And then the whining schoolboy, with his satchel
And shining morning face, creeping like snail
Unwillingly to school. And then the lover,
Sighing like furnace, with a woeful ballad
Made to his mistress' eyebrow. Then the soldier,
Full of strange oaths, and bearded like the pard,
Jealous in honour, sudden and quick in quarrel,
Seeking the bubble reputation
Even in the cannon's mouth. And then the justice,
In fair round belly with good capon lined,
With eyes severe and beard of formal cut,
Full of wise saws and modern instances;
And so he plays his part. The sixth age shifts
Into the lean and slipper'd pantaloon,
With spectacles on nose and pouch on side;
His youthful hose, well saved, a world too wide
For his shrunk shank; and his big manly voice,
Turning again toward childish treble, pipes
And whistles in his sound. Last scene of all,
That ends this strange eventful history,
Is second childishness and mere oblivion,
Sans teeth, sans eyes, sans taste, sans every thing.
(Shakespeare, *As You Like It*, II.viii.)

To live life to the fullest, in each of the seven ages, each age must be clearly marked, by the community, as a distinct well-marked time. And the ages will only seem clearly marked if the

ceremonies which mark the passage from one age to the next are firmly marked by celebrations and distinctions.

By contrast, in a flat suburban culture the seven ages are not at all clearly marked; they are not celebrated; the passages from one age to the next have almost been forgotten. Under these conditions, people distort themselves. They can neither fulfill themselves in any one age nor pass successfully on to the next. Like the sixty-year-old woman wearing bright red lipstick on her wrinkles, they cling ferociously to what they never fully had.

This proposition hinges on two arguments.

A. The cycle of life is a definite psychological reality. It consists of discrete stages, each one fraught with its own difficulties, each one with its own special advantages.

B. Growth from one stage to another is not inevitable, and, in fact, it will not happen unless the community contains a balanced life cycle.

A. The Reality of the Life Cycle.

Everyone can recognize the fact that a person's life traverses several stages—infancy to old age. What is perhaps not so well understood is the idea that each stage is a discrete reality, with its own special compensations and difficulties; that each stage has certain characteristic experiences that go with it.

The most inspired work along these lines has come from Erik Erikson: "Identity and the Life Cycle," in *Psychological Issues*, Vol. 1, No. 1, New York: International Universities Press, 1959; and *Childhood and Society*, New York: W. W. Norton, 1950.

Erikson describes the sequence of phases a person must pass through as he matures and suggests that each phase is characterized by a specific developmental task—a successful resolution of some life conflict—and that this task must be solved by a person before he can move wholeheartedly forward to the next phase. Here is a summary of the stages in Erikson's scheme, adapted from his charts:

1. *Trust vs. mistrust*: the infant; relationship between the infant and mother; the struggle for confidence that the environment will nourish.

2. *Autonomy vs. shame and doubt*: the very young child; relationship between the child and parents; the struggle to stand on

one's own two feet, to find autonomy in the face of experiences of shame and doubt as to one's capacity for self-control.

3. *Initiative vs. guilt*: the child; relationship to the family, the ring of friends; the search for action, and the integrity of one's acts; to make and eagerly learn, checked by the fear and guilt of one's own aggressions.

4. *Industry vs. inferiority*: the youngster; relationship to the neighborhood, the school; adaptation to the society's tools; the sense that one can make things well, alone, and with others, against the experience of failure, inadequacy.

5. *Identity vs. identity diffusion*: youth, adolescence; relationship to peers and "outgroups" and the search for models of adult life; the search for continuity in one's own character against confusion and doubt; a moratorium; a time to find and ally oneself with creeds and programs of the world.

6. *Intimacy vs. isolation*: young adults; partners in friendship, sex, work; the struggle to commit oneself concretely in relations with others; to lose and find oneself in another, against isolation and the avoidance of others.

7. *Generativity vs. stagnation*: adults; the relationship between a person and the division of labor, and the creation of a shared household; the struggle to establish and guide, to create, against the failure to do so, and the feelings of stagnation.

8. *Integrity vs. despair*: old age; the relationship between a person and his world, his kind, mankind; the achievement of wisdom; love for oneself and one's kind; to face death openly, with the forces of one's life integrated; vs. the despair that life has been useless.

B. But growth through the life cycle is not inevitable.

It depends on the presence of a balanced community, a community that can sustain the give and take of growth. Persons at each stage of life have something irreplaceable to give and to take from the community, and it is just these transactions which help a person to solve the problems that beset each stage. Consider the case of a young couple and their new child. The connection between them is entirely mutual. Of course, the child "depends" on the parents to give the care and love that is required to resolve the conflict of trust that goes with infancy. But simultaneously,

the child gives the parents the experience of raising and bearing, which helps them to meet their conflict of generativity, unique to adulthood.

We distort the situation if we abstract it in such a way that we consider the parent as "having" such and such a personality when the child is born and then, remaining static, impinging upon a poor little thing. For this weak and changing little being moves the whole family along. Babies control and bring up their families as much as they are controlled by them; in fact, we may say that the family brings up a baby by being brought up by him. Whatever reaction patterns are given biologically and whatever schedule is predetermined developmentally must be considered to be a series of potentialities for changing patterns of mutual regulation. [Erikson, *ibid.* p. 69.]

Similar patterns of mutual regulation occur between the very old and the very young; between adolescents and young adults, children and infants, teenagers and younger teenagers, young men and old women, young women and old men, and so on. And these patterns must be made viable by prevailing social institutions and those parts of the environment which help to maintain them—the schools, nurseries, homes, cafes, bedrooms, sports fields, workshops, studios, gardens, graveyards. . . .

We believe, however, that the balance of settings which allow normal growth through the life cycle has been breaking down. Contact with the entire cycle of life is less and less available to each person, at each moment in time. In place of natural communities with a balanced life cycle we have retirement villages, bedrooms suburbs, teenage culture, ghettos of unemployed, college towns, mass cemeteries, industrial parks. Under such conditions, one's chances for solving the conflict that comes with each stage in the life cycle are slim indeed.

To re-create a community of balanced life cycles requires, first of all, that the idea take its place as a principal guide in the development of communities. *Each building project, whether the addition to a house, a new road, a clinic, can be viewed as either helping or hindering the right balance for local communities.* We suspect that the community repair maps, discussed in *The Oregon Experiment*, Chapter V (Volume 3 in this series), can play an especially useful role in helping to encourage the growth of a balanced life cycle.

But this pattern can be no more than an indication of work

TOWNS

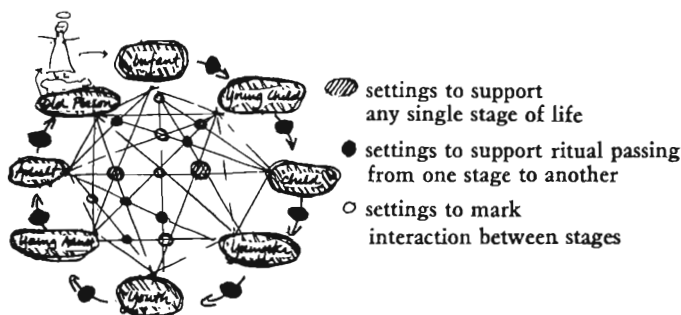
that needs to be done. Each community must find ways of taking stock of its own relative "balance" in this respect, and then define a growth process which will move it in the right direction. This is a tremendously interesting and vital problem; it needs a great deal of development, experiment, and theory. If Erikson is right, and if this kind of work does not come, it seems possible that the development of trust, autonomy, initiative, industry, identity, intimacy, generativity, integrity may disappear entirely.

STAGE	IMPORTANT SETTINGS	rites of passage
1. INFANT <i>Trust</i>	Home, crib, nursery, garden	Birth place, setting up the home out of the crib, making a place
2. YOUNG CHILD <i>Autonomy</i>	Own place, couple's realm, children's realm, commons, connected play	Walking, making a place, special birthday
3. CHILD <i>Initiative</i>	Play space, own place, common land, neighborhood, animals	First ventures in town joining
4. YOUNGSTER <i>Industry</i>	Children's home, school, own place, adventure play, club, community	Puberty rites, private entrance paying your way
5. YOUTH <i>Identity</i>	Cottage, teenage society, hostels, apprentice, town and region	Commencement, marriage, work, building
6. YOUNG ADULT <i>Intimacy</i>	Household, couple's realm, small work group, the family, network of learning	Birth of a child, creating social wealth . . building
7. ADULT <i>Generativity</i>	Work community, the family town hall, a room of one's own	Special birthday, gathering, change in work
8. OLD PERSON <i>Integrity</i>	Settled work, cottage, the family, independent regions	Death, funeral, grave sites

Therefore:

Make certain that the full cycle of life is represented and balanced in each community. Set the ideal of a balanced life cycle as a principal guide for the evolution of communities. This means:

1. That each community include a balance of people at every stage of the life cycle, from infants to the very old; and include the full slate of settings needed for all these stages of life;
2. That the community contain the full slate of settings which best mark the ritual crossing of life from one stage to the next.



The rites of passage are provided for, most concretely, by HOLY GROUND (66). Other specific patterns which especially support the seven ages of man and the ceremonies of transition are HOUSEHOLD MIX (35), OLD PEOPLE EVERYWHERE (40), WORK COMMUNITY (41), LOCAL TOWN HALL (44), CHILDREN IN THE CITY (57), BIRTH PLACES (65), GRAVE SITES (70), THE FAMILY (75), YOUR OWN HOME (79), MASTER AND APPRENTICES (83), TEENAGE SOCIETY (84), SHOPFRONT SCHOOLS (85), CHILDREN'S HOME (86), ROOMS TO RENT (153), TEENAGER'S COTTAGE (154), OLD AGE COTTAGE (155), SETTLED WORK (156), MARRIAGE BED (187).

30 ACTIVITY NODES**



. . . this pattern forms those essential nodes of life which help to generate IDENTIFIABLE NEIGHBORHOOD (14), PROMENADE (31), NETWORK OF PATHS AND CARS (52), and PEDESTRIAN STREET (100). To understand its action, imagine that a community and its boundary are growing under the influence of COMMUNITY OF 7000 (12), SUBCULTURE BOUNDARY (13), IDENTIFIABLE NEIGHBORHOOD (14), NEIGHBORHOOD BOUNDARY (15), ECCENTRIC NUCLEUS (28), and DENSITY RINGS (29). As they grow, certain "stars" begin to form, where the most important paths meet. These stars are potentially the vital spots of a community. The growth of these stars and of the paths which form them need to be guided to form genuine community crossroads.



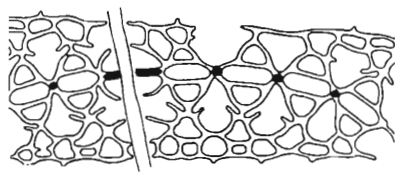
Community facilities scattered individually through the city do nothing for the life of the city.

One of the greatest problems in existing communities is the fact that the available public life in them is spread so thin that it has no impact on the community. It is not in any real sense available to the members of the community. Studies of pedestrian behavior make it clear that people seek out concentrations of other people, whenever they are available (for instance, Jan Gehl, "Mennesker til Fods (Pedestrians)," *Arkitekten*, No. 20, 1968).

To create these concentrations of people in a community, facilities must be grouped densely round very small public squares which can function as nodes—with all pedestrian movement in the community organized to pass through these nodes. Such nodes require four properties.

First, each node must draw together the main paths in the surrounding community. The major pedestrian paths should converge on the square, with minor paths funneling into the major ones, to create the basic star-shape of the pattern. This is much harder to do than one might imagine. To give an example of the difficulty which arises when we try to build this relationship into a town, we show the following plan—a scheme of

ours for housing in Peru—in which the paths are all convergent on a very small number of squares.



Public paths converge on centers of action.

This is not a very good plan—it is too stiff and formal. But it is possible to achieve the same relationship in a far more relaxed manner. In any case the relationship between paths, community facilities, and squares is vital and hard to achieve. It must be taken seriously, from the very outset, as a major feature of the city.

Second, to keep the activity concentrated, it is essential to make the squares rather small, smaller than one might imagine. A square of about 45×60 feet can keep the normal pace of public life well concentrated. This figure is discussed in detail under SMALL PUBLIC SQUARE (61).

Third, the facilities grouped around any one node must be chosen for their symbiotic relationships. It is not enough merely to group communal functions in so-called community centers. For example, church, cinema, kindergarten, and police station are all community facilities, but they do not support one another mutually. Different people go to them, at different times, with different things in mind. There is no point in grouping them together. To create intensity of action, the facilities which are placed together round any one node must function in a cooperative manner, and must attract the same kinds of people, at the same times of day. For example, when evening entertainments are grouped together, the people who are having a night out can use any one of them, and the total concentration of action increases—see NIGHT LIFE (33). When kindergartens and small parks and gardens are grouped together, young families with children may use either, so their total attraction is increased.

Fourth, these activity nodes should be distributed rather evenly

TOWNS

across the community, so that no house or workplace is more than a few hundred yards from one. In this way a contrast of "busy and quiet" can be achieved at a small scale—and large dead areas can be avoided.

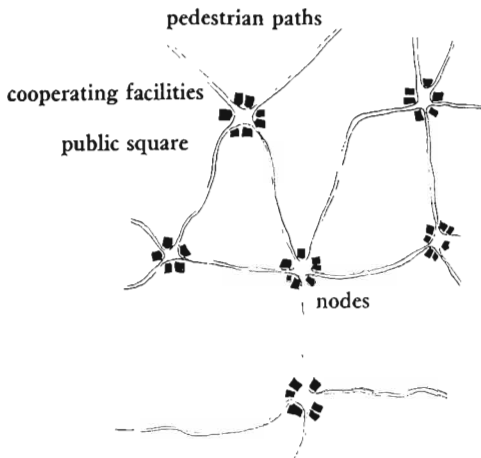


Nodes of different size.

Therefore:

Create nodes of activity throughout the community, spread about 300 yards apart. First identify those existing spots in the community where action seems to concentrate itself. Then modify the layout of the paths in the community to bring as many of them through these spots as possible. This makes each spot function as a "node" in the

path network. Then, at the center of each node, make a small public square, and surround it with a combination of community facilities and shops which are mutually supportive.



Connect those centers which are most dense, with a wider, more important path for strolling—PROMENADE (31); make special centers for night activities—NIGHT LIFE (33); whenever new paths are built, make certain that they pass through the centers, so that they intensify the life still further—PATHS AND GOALS (120); and differentiate the paths so they are wide near the centers and smaller away from them—DEGREES OF PUBLICNESS (36). At the heart of every center, build a small public square—SMALL PUBLIC SQUARES (61), and surround each square with an appropriate mix of mutually self-reinforcing facilities—WORK COMMUNITY (41), UNIVERSITY AS A MARKETPLACE (43), LOCAL TOWN HALL (44), HEALTH CENTER (47), BIRTH PLACES (65), TEENAGE SOCIETY (84), SHOPFRONT SCHOOL (85), INDIVIDUALLY OWNED SHOPS (87), STREET CAFE (88), BEER HALL (90), FOOD STANDS (93). . . .

31 PROMENADE**



. . . assume now that there is an urban area, subdivided into subcultures and communities each with its boundaries. Each subculture in the MOSAIC OF SUBCULTURES (8), and each COMMUNITY OF 7000 (12) has a promenade as its backbone. And each promenade helps to form ACTIVITY NODES (30) along its length, by generating the flow of people which the activity nodes need in order to survive.



Each subculture needs a center for its public life: a place where you can go to see people, and to be seen.

The promenade, "paseo," "passegiata," evening stroll, is common in the small towns of Italy, Spain, Mexico, Greece, Yugoslavia, Sicily, and South America. People go there to walk up and down, to meet their friends, to stare at strangers, and to let strangers stare at them.

Throughout history there have been places in the city where people who shared a set of values could go to get in touch with each other. These places have always been like street theaters: they invite people to watch others, to stroll and browse, and to loiter:

In Mexico, in any small town plaza every Thursday and Sunday night with the band playing and the weather mild, the boys walk this way, the girls walk that, around and around, and the mothers and fathers sit on iron-scrolled benches and watch. (Ray Bradbury, "The girls walk this way; the boys walk that way . . ." *West*, Los Angeles Times Sunday Magazine, April 5, 1970.)

In all these places the beauty of the promenade is simply this: people with a shared way of life gather together to rub shoulders and confirm their community.

Is the promenade in fact a purely Latin institution? Our experiments suggest that it is not. The fact is that the kinds of promenades where this strolling happens are not common in a city, and they are especially uncommon in a sprawling urban region. But experiments by Luis Racionero at the Department of

Architecture at the University of California, Berkeley, have shown that wherever the possibility of this public contact *does* exist, people will seek it, as long as it is close enough. Racionero interviewed 37 people in several parts of San Francisco, living various distances from a promenade, and found that people who lived within 20 minutes used it, while people who lived more than 20 minutes away did not.

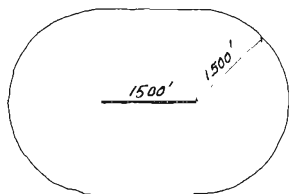
	<u>Use the promenade</u>	<u>Do not use the promenade</u>
People who live less than 20 minutes away	13	1
People who live more than 20 minutes away	5	18

It seems that people, of all cultures, may have a general need for the kind of human mixing which the promenade makes possible; but that if it is too far, the effort to get there simply outweighs the importance of the need. In short, to make sure that all the people in a city can satisfy this need, there must be promenades at frequent intervals.

Exactly how frequent should they be? Racionero establishes 20 minutes as the upper limit, but his survey does not investigate frequency of use. We know that the closer the promenade is, the more often people will use it. We guess that if the promenade is within 10 minutes or less, people will use it often—perhaps even once or twice a week.

The relation between the catch basin of the promenade, and the actual physical paved area of the promenade itself, is extremely critical. We show in *PEDESTRIAN DENSITY* (123), that places with less than one person for every 150 to 300 square feet of paved surface, will seem dead and uninviting. It is therefore essential to be certain that the number of people who might, typically, be out strolling on the promenade, is large enough to maintain this pedestrian density along its length. To check this relation, we calculate as follows:

A 10-minute walk amounts to roughly 1500 feet (150 feet per minute), which is probably also about the right length for the promenade itself. This means that the catch basin for a promenade has a shape roughly like this:



A promenade and its catch basin.

This area contains 320 acres. If we assume an average density of 50 people per gross acre, then there are 16,000 people in the area. If one-fifth of this population uses the promenade once a week, for an hour between 6 and 10 p.m., then at any given moment between those hours, there are some 100 people on the promenade. If it is 1500 feet long, at 300 square feet per person, it can therefore be 20 feet wide, at the most, and would be better if it were closer to 10 feet wide. It is feasible, but only just.

We see then, that a promenade 1500 feet long, with the catch basin we have defined and the population density stated, should be able to maintain a lively density of activity, provided that it is not more than about 20 feet wide. *We want to emphasize that a promenade will not work unless the pedestrian density is high enough, and that a calculation of this kind must always be made to check its feasibility.*

The preceding figures are meant to be illustrative. They establish a rough order of magnitude for promenades and their catch basin populations. But we have also seen successful promenades for populations of 2000 (a fishing village in Peru); and we have seen a promenade for 2,000,000 (Las Ramblas in Barcelona). They both work, although they are very different in character. The small one with its catch basin of 2000 works, because the cultural habit of the paseo is so strong there, a higher percentage of the people use it more often, and the density of people on the promenade is less than we would imagine—it is so beautiful that people enjoy it even if it is not so crowded. The large one works as a citywide event. People are willing to drive a long distance to it—they may not come as often, but when they do, it is worth the ride—it is exciting—packed—teeming with people.

We imagine the pattern of promenades in a city to be just as varied—a continuum ranging from small local promenades serv-

TOWNS

ing 2000 people to large intense ones serving the entire city—each different in character and density of action.

Finally, what are the characteristics of a successful promenade? Since people come to see people and to be seen, a promenade must have a high density of pedestrians using it. It must therefore be associated with places that in themselves attract people, for example, clusters of eating places and small shops.



A promenade in Paris.

Further, even though the real reasons for coming might have to do with seeing people and being seen, people find it easier to take a walk if they have a "destination." This destination may be real, like a coke shop or cafe, or it may be partly imaginary, "let's walk round the block." But the promenade must provide people with a strong goal.

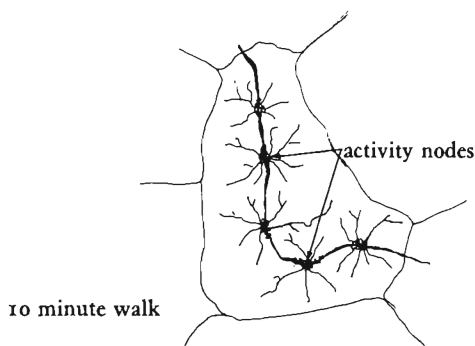
It is also important that people do not have to walk too far between the most important points along the promenade. Informal observation suggests that any point which is more than 150 feet from activity becomes unsavory and unused. In short, good promenades are part of a path through the most active parts of the community; they are suitable as destinations for an evening walk; the walk is not too long, and nowhere on it desolate: no point of the stroll is more than 150 feet from a hub of activity.

A variety of facilities will function as destinations along the promenade: ice cream parlors, coke shops, churches, public gardens, movie houses, bars, volleyball courts. Their potential will depend on the extent to which it is possible to make provisions for people to stay: widening of pedestrian paths, planting of trees, walls to lean against, stairs and benches and niches for sitting,

opening of street fronts to provide sidewalk cafes, or displays of activities or goods where people might like to linger.

Therefore:

Encourage the gradual formation of a promenade at the heart of every community, linking the main activity nodes, and placed centrally, so that each point in the community is within 10 minutes' walk of it. Put main points of attraction at the two ends, to keep a constant movement up and down.



No matter how large the promenade is, there must be enough people coming to it to make it dense with action, and this can be precisely calculated by the formula of PEDESTRIAN DENSITY (123). The promenade is mainly marked by concentrations of activity along its length—ACTIVITY NODES (30); naturally, some of these will be open at night—NIGHT LIFE (33); and somewhere on the promenade there will be a concentration of shops—SHOPPING STREET (32). It might also be appropriate to include CARNIVAL (58) and DANCING IN THE STREET (63) in very large promenades. The detailed physical character of the promenade is given by PEDESTRIAN STREET (100) and PATH SHAPE (121). . . .

36 DEGREES OF PUBLICNESS**



. . . within the neighborhoods—IDENTIFIABLE NEIGHBORHOOD (14)—there are naturally some areas where life is rather concentrated ACTIVITY NODES (30), others where it is slower, and others in between—DENSITY RINGS (29). It is essential to differentiate groups of houses and the paths which lead to them according to this gradient.



People are different, and the way they want to place their houses in a neighborhood is one of the most basic kinds of difference.

Some people want to live where the action is. Others want more isolation. This corresponds to a basic human personality dimension, which could be called the "extrovert-introvert" dimension, or the "community loving-privacy loving" dimension. Those who want the action like being near services, near shops, they like a lively atmosphere outside their houses, and they are happy to have strangers going past their houses all the time. Those who want more isolation like being away from services and shops, enjoy a very small scale in the areas outside their houses, and don't want strangers going past their houses. (See for example, Nancy Marshall, "Orientations Toward Privacy: Environmental and Personality Components," James Madison College, Michigan State University, East Lansing, Michigan.)

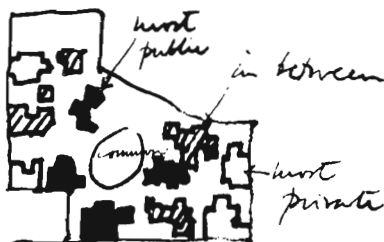
The variation of different people along the extrovert-introvert dimension is very well described by Frank Hendricks and Malcolm MacNair in "Concepts of Environmental Quality Standards Based on Life Styles," report to the American Public Health Association, February 12, 1969, pp. 11-15. The authors identify several kinds of persons and characterize each by the relative amount of time spent in extroverted activities and in introverted activities. Francis Loetterle has shed further light on the problem in "Environment Attitudes and Social Life in Santa Clara County," Santa Clara County Planning Department, San Jose,

California, 1967. He asked 3300 households how far they wanted to be from various community services. The results were: 20 per cent of the households interviewed wanted to be located less than three blocks from commercial centers; 60 per cent wanted to be located between four and six blocks away; 20 per cent wanted to be located more than six blocks away (mean block size in Santa Clara County is 150 yards). The exact distances apply only to Santa Clara. But the overall result overwhelmingly supports our contention that people vary in this way and shows that they have quite different needs as far as the location and character of houses is concerned.

To make sure that the different kinds of people can find houses which satisfy their own particular desires, we suggest that each cluster of houses, and each neighborhood should have three kinds of houses, in about equal numbers: those which are nearest to the action, those which are half-way between, and those which are almost completely isolated. And, to support this pattern we need, also, three distinct kinds of paths:

1. Paths along services, wide and open for activities and crowds, paths that connect activities and encourage busy through traffic.
2. Paths remote from services, narrow and twisting, to discourage through traffic, with many at right angles and dead ends.
3. Intermediate types of paths linking the most remote and quiet paths to the most central and busy ones.

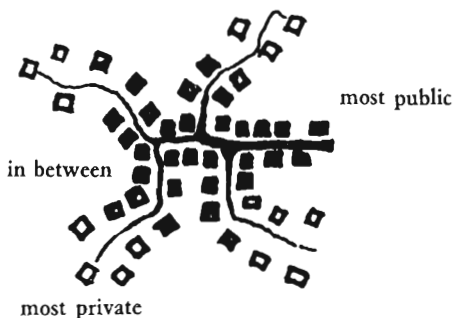
This pattern is as important in the design of a cluster of a few houses as it is in the design of a neighborhood. When we were helping a group of people to design their own cluster of houses, we first asked each person to consider his preference for location on the basis of extrovert-introvert. Three groups emerged: four "extroverts" who wished to be as near the pedestrian and community action as possible, four "introverts" who desired as much remoteness and privacy as possible, and the remaining four who wanted a bit of both. The site plan they made, using this pattern, is shown below, with the positions which the three kinds of people chose.



*In one house cluster: private homes,
public homes, and in-between.*

Therefore:

Make a clear distinction between three kinds of homes—those on quiet backwaters, those on busy streets, and those that are more or less in between. Make sure that those on quiet backwaters are on twisting paths, and that these houses are themselves physically secluded; make sure that the more public houses are on busy streets with many people passing by all day long and that the houses themselves are relatively exposed to the passers-by. The in-between houses may then be located on the paths half-way between the other two. Give every neighborhood about equal numbers of these three kinds of homes.

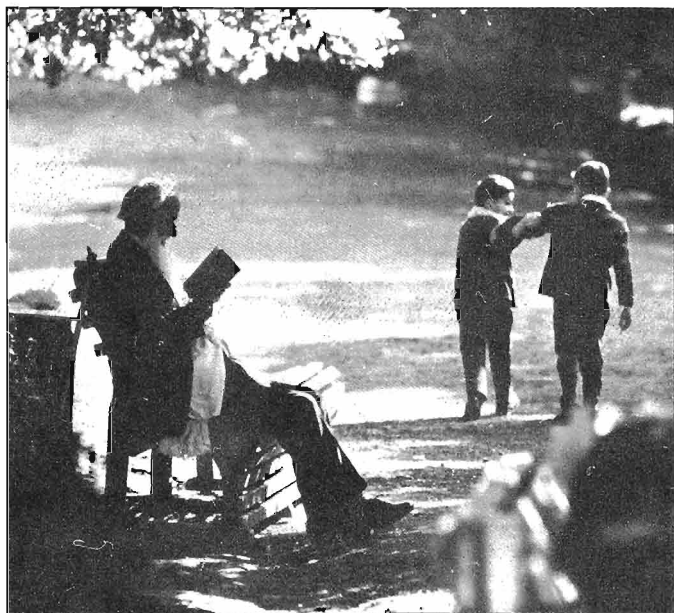


TOWNS



Use this pattern to help differentiate the houses both in neighborhoods and in house clusters. Within a neighborhood, place higher density clusters along the busier streets—HOUSING HILL (39), ROW HOUSES (38), and lower density clusters along the backwaters—HOUSE CLUSTER (37), ROW HOUSES (38). The actual busy streets themselves should either be PEDESTRIAN STREETS (100) or RAISED WALKS (55) on major roads; the backwaters GREEN STREETS (51), or narrow paths with a distinct PATH SHAPE (121). Where lively streets are wanted, make sure the density of housing is high enough to generate the liveliness—PEDESTRIAN DENSITY (123). . . .

40 OLD PEOPLE
EVERYWHERE**



. . . when neighborhoods are properly formed they give the people there a cross section of ages and stages of development—IDENTIFIABLE NEIGHBORHOOD (14), LIFE CYCLE (26), HOUSEHOLD MIX (35); however, the old people are so often forgotten and left alone in modern society, that it is necessary to formulate a special pattern which underlines their needs.



Old people need old people, but they also need the young, and young people need contact with the old.

There is a natural tendency for old people to gather together in clusters or communities. But when these elderly communities are too isolated or too large, they damage young and old alike. The young in other parts of town, have no chance of the benefit of older company, and the old people themselves are far too isolated.

Treated like outsiders, the aged have increasingly clustered together for mutual support or simply to enjoy themselves. A now familiar but still amazing phenomenon has sprung up in the past decade: dozens of good-sized new towns that exclude people under 65. Built on cheap, outlying land, such communities offer two-bedroom houses starting at \$18,000 plus a refuge from urban violence . . . and generational pressures. (*Time*, August 3, 1970.)

But the choice the old people have made by moving to these communities and the remarks above are a serious and painful reflection of a very sad state of affairs in our culture. The fact is that contemporary society shunts away old people; and the more shunted away they are, the deeper the rift between the old and young. The old people have no choice but to segregate themselves—they, like anyone else, have pride; they would rather not be with younger people who do not appreciate them, and they feign satisfaction to justify their position.

And the segregation of the old causes the same rift inside each individual life: as old people pass into old age communities their ties with their own past become unacknowledged, lost, and there-

fore broken. Their youth is no longer alive in their old age—the two become dissociated; their lives are cut in two.

In contrast to the situation today, consider how the aged were respected and needed in traditional cultures:

Some degree of prestige for the aged seems to have been practically universal in all known societies. This is so general, in fact, that it cuts across many cultural factors that have appeared to determine trends in other topics related to age. (*The Role of Aged in Primitive Society*, Leo W. Simmons, New Haven: Yale University Press, 1945, p. 69.)

More specifically:

. . . Another family relationship of great significance for the aged has been the commonly observed intimate association between the very young and the very old. Frequently they have been left together at home while the able-bodied have gone forth to earn the family living. These oldsters, in their wisdom and experience, have protected and instructed the little ones, while the children, in turn, have acted as the "eyes, ears, hands, and feet" of their feeble old friends. Care of the young has thus very generally provided the aged with a useful occupation and a vivid interest in life during the long dull days of senescence. (*Ibid.* p. 199.)

Clearly, old people cannot be integrated socially as in traditional cultures unless they are first integrated physically—unless they share the same streets, shops, services, and common land with everyone else. But, at the same time, they obviously need other old people around them; and some old people who are infirm need special services.

And of course old people vary in their need or desire to be among their own age group. The more able-bodied and independent they are, the less they need to be among other old people, and the farther they can be from special medical services. The variation in the amount of care they need ranges from complete nursing care; to semi-nursing care involving house calls once a day or twice a week; to an old person getting some help with shopping, cooking, and cleaning; to an old person being completely independent. Right now, there is no such fine differentia-

TOWNS

tion made in the care of old people—very often people who simply need a little help cooking and cleaning are put into rest homes which provide total nursing care, at huge expense to them, their families, and the community. It is a psychologically debilitating situation, and they turn frail and helpless because that is the way they are treated.

We therefore need a way of taking care of old people which provides for the full range of their needs:

1. It must allow them to stay in the neighborhood they know best—hence some old people in every neighborhood.

2. It must allow old people to be together, yet in groups small enough not to isolate them from the younger people in the neighborhood.

3. It must allow those old people who are independent to live independently, without losing the benefits of communality.

4. It must allow those who need nursing care or prepared meals, to get it, without having to go to nursing homes far from the neighborhood.

All these requirements can be solved together, very simply, if every neighborhood contains a small pocket of old people, not concentrated all in one place, but fuzzy at the edges like a swarm of bees. This will both preserve the symbiosis between young and old, *and* give the old people the mutual support they need within the pockets. Perhaps 20 might live in a central group house, another 10 or 15 in cottages close to this house, but interlaced with other houses, and another 10 to 15 also in cottages, still further from the core, in among the neighborhood, yet always within 100 or 200 yards of the core, so they can easily walk there to play chess, have a meal, or get help from the nurse.

The number 50 comes from Mumford's argument:

The first thing to be determined is the number of aged people to be accommodated in a neighborhood unit; and the answer to this, I submit, is that the normal age distribution in the community as a whole should be maintained. This means that there should be from five to eight people over sixty-five in every hundred people; so that in a neighborhood unit of, say, six hundred people, there would be between thirty and fifty old people. (Lewis Mumford, *The Human Prospect*, New York, 1968, p. 49.)

As for the character of the group house, it might vary from

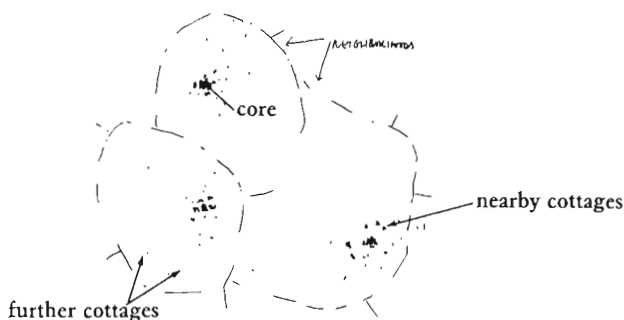
case to case. In some cases it might be no more than a commune, where people cook together and have part-time help from young girls and boys, or professional nurses. However, about 5 per cent of the nation's elderly need full-time care. This means that two or three people in every 50 will need complete nursing care. Since a nurse can typically work with six to eight people, this suggests that every second or third neighborhood group house might be equipped with complete nursing care.

Therefore:

Create dwellings for some 50 old people in every neighborhood. Place these dwellings in three rings . . .

1. A central core with cooking and nursing provided.
2. Cottages near the core.
3. Cottages further out from the core, mixed among the other houses of the neighborhood, but never more than 200 yards from the core.

. . . in such a way that the 50 houses together form a single coherent swarm, with its own clear center, but interlocked at its periphery with other ordinary houses of the neighborhood.



Treat the core like any group house; make all the cottages, both those close to and those further away, small—OLD AGE

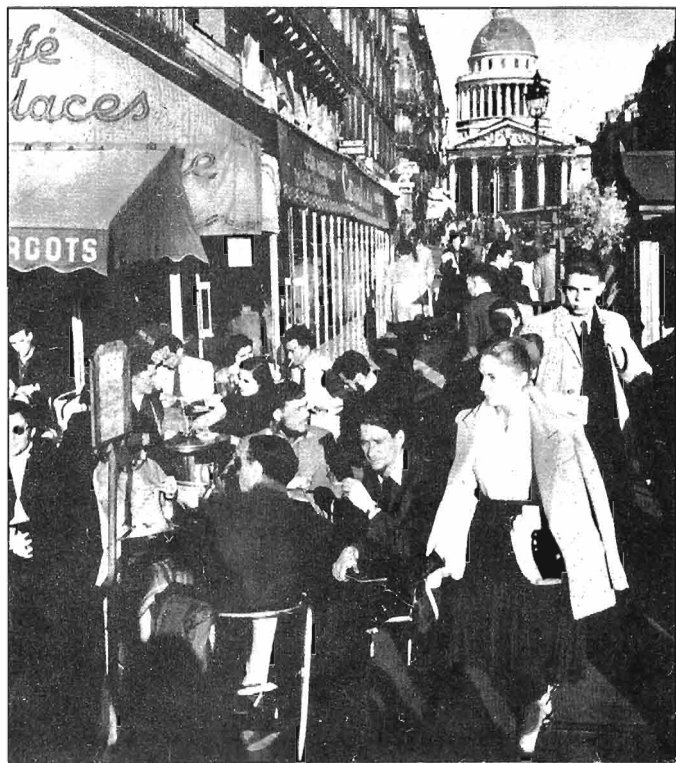
TOWNS

COTTAGE (155), some of them perhaps connected to the larger family houses in the neighborhood—THE FAMILY (75); provide every second or third core with proper nursing facilities; somewhere in the orbit of the old age pocket, provide the kind of work which old people can manage best—especially teaching and looking after tiny children—NETWORK OF LEARNING (18), CHILDREN'S HOME (86), SETTLED WORK (156), VEGETABLE GARDEN (177). . . .

between the house clusters, around the centers, and especially in the boundaries between neighborhoods, encourage the formation of work communities;

- 41. WORK COMMUNITY
- 42. INDUSTRIAL RIBBON
- 43. UNIVERSITY AS A MARKETPLACE
- 44. LOCAL TOWN HALL
- 45. NECKLACE OF COMMUNITY PROJECTS
- 46. MARKET OF MANY SHOPS
- 47. HEALTH CENTER
- 48. HOUSING IN BETWEEN

43 UNIVERSITY AS A MARKETPLACE



. . . the NETWORK OF LEARNING (18) has established the importance of a whole society devoted to the learning process with decentralized opportunities for learning. The network of learning can be greatly helped by building a university, which treats the learning process as a normal part of adult life, for all the people in society.



Concentrated, cloistered universities, with closed admission policies and rigid procedures which dictate who may teach a course, kill opportunities for learning.

The original universities in the middle ages were simply collections of teachers who attracted students because they had something to offer. They were marketplaces of ideas, located all over the town, where people could shop around for the kinds of ideas and learning which made sense to them. By contrast, the isolated and over-administered university of today kills the variety and intensity of the different ideas at the university and also limits the student's opportunity to shop for ideas.

To re-create this kind of academic freedom and the opportunity for exchange and growth of ideas two things are needed.

First, the social and physical environment must provide a setting which encourages rather than discourages individuality and freedom of thought. Second, the environment must provide a setting which encourages the student to see for himself which ideas make sense—a setting which gives him the maximum opportunity and exposure to a great variety of ideas, so that he can make up his mind for himself.

The image which most clearly describes this kind of setting is the image of the traditional marketplace, where hundreds of tiny stalls, each one developing some specialty and unique flavor which can attract people by its genuine quality, are so arranged that a potential buyer can circulate freely, and examine the wares before he buys.

What would it mean to fashion the university after this model?

1. *Anyone can take a course.* To begin with, in a university marketplace there are no admission procedures. Anyone, at any age, may come forward and seek to take a class. In effect, the "course catalog" of the university is published and circulated at large, in the newspapers and on radio, and posted in public places throughout the region.

2. *Anyone can give a course.* Similarly, in a university marketplace, anyone can come forward and offer a course. There is no hard and fast distinction between teachers and the rest of the citizenry. If people come forward to take the course, then it is established. There will certainly be groups of teachers banding together and offering interrelated classes; and teachers may set prerequisites and regulate enrollment however they see fit. But, like a true marketplace, the students create the demand. If over a period of time no one comes forward to take a professor's course, then he must change his offering or find another way to make a living.

Many courses, once they are organized, can meet in homes and meeting rooms all across the town. But some will need more space or special equipment, and all the classes will need access to libraries and various other communal facilities. The university marketplace, then, needs a physical structure to support its social structure.

Certainly, a marketplace could never have the form of an isolated campus. Rather it would tend to be open and public, woven through the city, perhaps with one or two streets where university facilities are concentrated.

In an early version of this pattern, written expressly for the University of Oregon in Eugene, we described in detail the physical setting which we believe complements the marketplace of ideas. We advised:

Make the university a collection of small buildings, situated along pedestrian paths, each containing one or two educational projects. Make all the horizontal circulation among these projects, in the public domain, at ground floor. This means that all projects open directly to a pedestrian path, and that the upper floors of buildings are connected directly to the ground, by stairs and entrances. Connect all the pedestrian paths, so that, like a marketplace, they form one major pedestrian system, with many entrances and openings off it. The over-

TOWNS

all result of this pattern, is that the environment becomes a collection of relatively low buildings, opening off a major system of pedestrian paths, each building containing a series of entrances and staircases, at about 50 foot intervals.

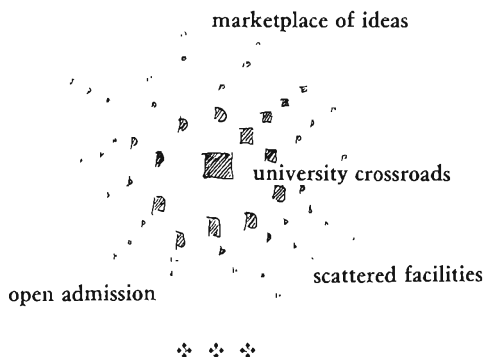
We still believe that this image of the university, as a marketplace scattered through the town, is correct. Most of these details are given by other patterns, in this book: BUILDING COMPLEX (95), PEDESTRIAN STREET (100), ARCADES (119), and OPEN STAIRS (158).

Finally, how should a university marketplace be administered? We don't know. Certainly a voucher system where everyone has equal access to payment vouchers seems sensible. And some technique for balancing payment to class size is required, so teachers are not simply paid according to how many students they enroll. Furthermore, some kind of evaluation technique is needed, so that reliable information on courses and teachers filters out to the towns people.

There are several experiments going forward in higher education today which may help to solve these administrative questions. The Open University of England, the various "free" universities, such as Heliotrope in San Francisco, the 20 branches of the University Without Walls all over the United States, the university extension programs, which gear their courses entirely to working people—they are all examples of institutions experimenting with different aspects of the marketplace idea.

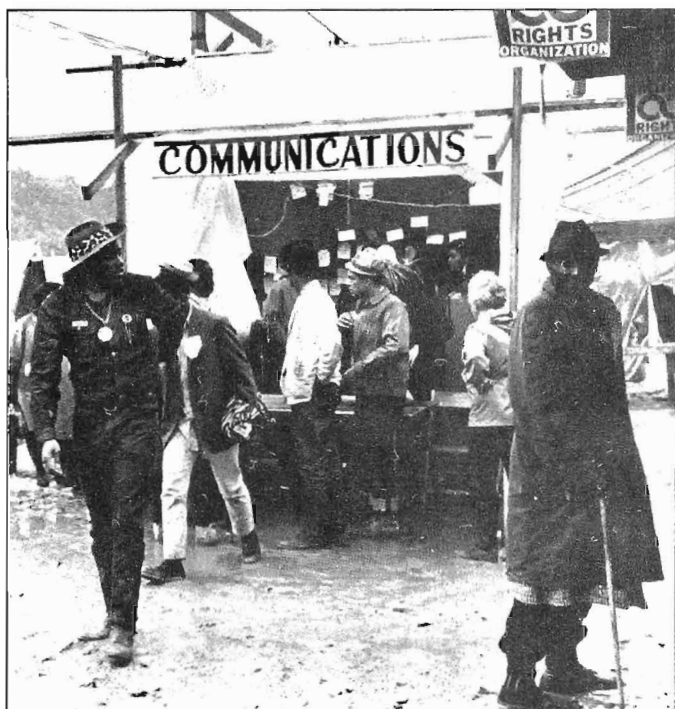
Therefore:

Establish the university as a marketplace of higher education. As a social conception this means that the university is open to people of all ages, on a full-time, part-time, or course by course basis. Anyone can offer a class. Anyone can take a class. Physically, the university marketplace has a central crossroads where its main buildings and offices are, and the meeting rooms and labs ripple out from this crossroads—at first concentrated in small buildings along pedestrian streets and then gradually becoming more dispersed and mixed with the town.



Give the university a PROMENADE (31) at its central crossroads; and around the crossroads cluster the buildings along streets—BUILDING COMPLEX (95), PEDESTRIAN STREET (100). Give this central area access to quiet greens—QUIET BACKS (59); and a normal distribution of housing—HOUSING IN BETWEEN (48); as for the classes, wherever possible let them follow the model of MASTER AND APPRENTICES (83). . . .

45 NECKLACE OF COMMUNITY PROJECTS



. . . LOCAL TOWN HALL (44) calls for small centers of local government at the heart of every community. This pattern embellishes the local town hall and other public institutions like it—UNIVERSITY AS A MARKETPLACE (43) and HEALTH CENTER (47)—with a ground for community action.



The local town hall will not be an honest part of the community which lives around it, unless it is itself surrounded by all kinds of small community activities and projects, generated by the people for themselves.

A lively process of community self-government depends on an endless series of ad hoc political and service groups, functioning freely, each with a proper chance to test its ideas before the townspeople. The spatial component of this idea is crucial: this process will be stymied if people cannot get started in an office on a shoestring.

We derive the geometry of this pattern from five requirements:

1. Small, grass roots movements, unpopular at their inception, play a vital role in society. They provide a critical opposition to established ideas; their presence is a direct correlate of the right to free speech; a basic part of the self-regulation of a successful society, which will generate counter movements whenever things get off the track. Such movements need a place to manifest themselves, in a way which puts their ideas directly into the public domain. At this writing, a quick survey of the East Bay shows about 30 or 40 bootstrap groups that are suffering for lack of such a place: for example, Alcatraz Indians, Bangla Desh Relief, Solidarity Films, Tenant Action Project, November 7th Movement, Gay Legal Defense, No on M, People's Translation Service. . . .

2. But as a rule these groups are small and have very little money. To nourish this kind of activity, the community must provide minimal space to any group of this sort, rent free, with some limit on the duration of the lease. The space must be like a

TOWNS

small storefront and have typewriters, duplicating machines, and telephones; and access to a meeting room.

3. To encourage the atmosphere of honest debate, these storefront spaces must be near the town hall, the main crossroads of public life. If they are scattered across the town, away from the main town hall, they cannot seriously contend with the powers that be.

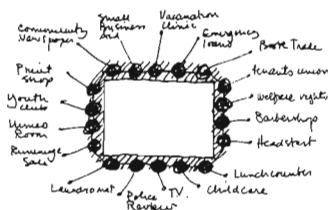
4. The space must be highly visible. It must be built in a way which lets the group get their ideas across, to people on the street. And it must be physically organized to undermine the natural tendency town governments have to wall themselves in and isolate themselves from the community once they are in power.

5. Finally, to bring these groups into natural contact with the community, the fabric of storefronts should be built to include some of the stable shops and services that the community needs—barbershop, cafe, laundromat.

These five requirements suggest a necklace of rather open storefront spaces around the local town hall. This necklace of spaces is a physical embodiment of the political process in an open society: everyone has access to equipment, space to mount a campaign, and the chance to get their ideas into the public arena.

Therefore:

Allow the growth of shop-size spaces around the local town hall, and any other appropriate community building. Front these shops on a busy path, and lease them for a minimum rent to ad hoc community groups for political work, trial services, research, and advocate groups. No ideological restrictions.





Make each shop small, compact, and easily accessible like INDIVIDUALLY OWNED SHOPS (87); build small public spaces for loitering amongst them—PUBLIC OUTDOOR ROOM (69). Use them to form the building edge—BUILDING FRONTS (122), BUILDING EDGE (160), and keep them open to the street—OPENING TO THE STREET (165). . . .

57 CHILDREN IN THE CITY



. . . roads, bike paths, and main pedestrian paths are given their position by PARALLEL ROADS (23), PROMENADE (31), LOOPED LOCAL ROADS (49), GREEN STREETS (51), NETWORK OF PATHS AND CARS (52), BIKE PATHS AND RACKS (56). Some of them are safe for children, others are less safe. Now, finally, to complete the paths and roads, it is essential to define at least one place, right in the very heart of cities, where children can be completely free and safe. If handled properly, this pattern can play a great role in helping to create the NETWORK OF LEARNING (18).



If children are not able to explore the whole of the adult world round about them, they cannot become adults. But modern cities are so dangerous that children cannot be allowed to explore them freely.

The need for children to have access to the world of adults is so obvious that it goes without saying. The adults transmit their ethos and their way of life to children through their actions, not through statements. Children learn by doing and by copying. If the child's education is limited to school and home, and all the vast undertakings of a modern city are mysterious and inaccessible, it is impossible for the child to find out what it really means to be an adult and impossible, certainly, for him to copy it by doing.

This separation between the child's world and the adult world is unknown among animals and unknown in traditional societies. In simple villages, children spend their days side by side with farmers in the fields, side by side with people who are building houses, side by side, in fact, with all the daily actions of the men and women round about them: making pottery, counting money, curing the sick, praying to God, grinding corn, arguing about the future of the village.

But in the city, life is so enormous and so dangerous, that children can't be left alone to roam around. There is constant danger from fast-moving cars and trucks, and dangerous machinery. There is a small but ominous danger of kidnap, or rape,

or assault. And, for the smallest children, there is the simple danger of getting lost. A small child just doesn't know enough to find his way around a city.

The problem seems nearly insoluble. But we believe it can be at least partly solved by enlarging those parts of cities where small children can be left to roam, alone, and by trying to make sure that these protected children's belts are so widespread and so far-reaching that they touch the full variety of adult activities and ways of life.

We imagine a carefully developed childrens' bicycle path, within the larger network of bike paths. The path goes past and through interesting parts of the city; and it is relatively safe. It is part of the overall system and therefore used by everyone. It is not a special children's "ride"—which would immediately be shunned by the adventurous young—but it does have a special name, and perhaps it is specially colored.



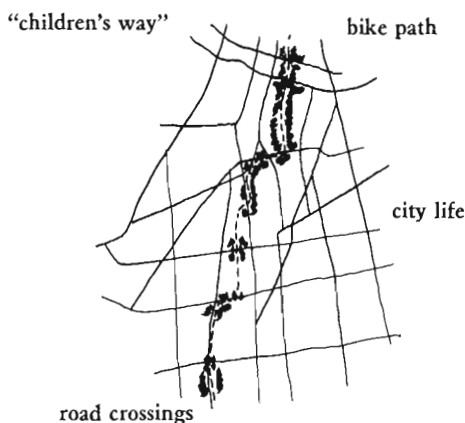
The path is always a bike path; it never runs beside cars. Where it crosses traffic there are lights or bridges. There are many homes and shops along the path—adults are nearby, especially the old enjoy spending an hour a day sitting along this path, themselves riding along the loop, watching the kids out of the corner of one eye.

And most important, the great beauty of this path is that it passes along and even through those functions and parts of a town which are normally out of reach: the place where newspapers are printed, the place where milk arrives from the countryside and is bottled, the pier, the garage where people make doors and windows, the alley behind restaurant row, the cemetery.

Therefore:

As part of the network of bike paths, develop one system of paths that is extra safe—entirely separate from automo-

biles, with lights and bridges at the crossings, with homes and shops along it, so that there are always many eyes on the path. Let this path go through every neighborhood, so that children can get onto it without crossing a main road. And run the path all through the city, down pedestrian streets, through workshops, assembly plants, warehouses, interchanges, print houses, bakeries, all the interesting "invisible" life of a town—so that the children can roam freely on their bikes and trikes.



Line the children's path with windows, especially from rooms that are in frequent use, so that the eyes upon the street make it safe for the children—STREET WINDOWS (164); make it touch the children's places all along the path—CONNECTED PLAY (68), ADVENTURE PLAYGROUND (73), SHOPFRONT SCHOOLS (85), CHILDREN'S HOME (86), but also make it touch other phases of the life cycle—OLD PEOPLE EVERYWHERE (40), WORK COMMUNITY (41), UNIVERSITY AS A MARKETPLACE (43), GRAVE SITES (70), LOCAL SPORTS (72), ANIMALS (74), TEENAGE SOCIETY (84). . . .

in the communities and neighborhoods provide public open land where people can relax, rub shoulders and renew themselves;

- 58. CARNIVAL
- 59. QUIET BACKS
- 60. ACCESSIBLE GREEN
- 61. SMALL PUBLIC SQUARES
- 62. HIGH PLACES
- 63. DANCING IN THE STREET
- 64. POOLS AND STREAMS
- 65. BIRTH PLACES
- 66. HOLY GROUND

58 CARNIVAL



. . . once in a while, in a subculture which is particularly open to it, a promenade may break into a wilder rhythm—**PROMENADE** (31), **NIGHT LIFE** (33)—and perhaps every promenade may have a touch of this.



Just as an individual person dreams fantastic happenings to release the inner forces which cannot be encompassed by ordinary events, so too a city needs its dreams.

Under normal circumstances, in today's world the entertainments which are available are either healthy and harmless—going to the movies, watching TV, cycling, playing tennis, taking helicopter rides, going for walks, watching football—or downright sick and socially destructive—shooting heroin, driving recklessly, group violence.

But man has a great need for mad, subconscious processes to come into play, without unleashing them to such an extent that they become socially destructive. There is, in short, a need for socially sanctioned activities which are the social, outward equivalents of dreaming.

In primitive societies this kind of process was provided by the rites, witch doctors, shamans. In Western civilization during the last three or four hundred years, the closest available source of this outward acknowledgment of underground life has been the circus, fairs, and carnivals. In the middle ages, the market place itself had a good deal of this kind of atmosphere.

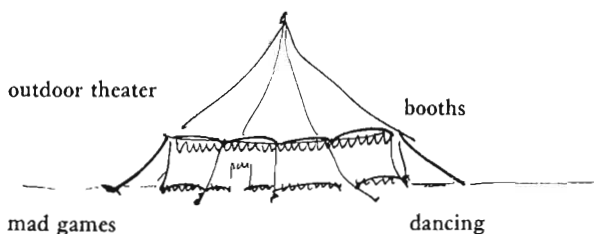
Today, on the whole, this kind of experience is gone. The circuses and the carnivals are drying up. But the need persists. In the Bay Area, the annual Renaissance Fair goes a little way to meet the need—but it is much too bland. We imagine something more along the following lines: street theater, clowns, mad games in the streets and squares and houses; during certain weeks, people may live in the carnival; simple food and shelter are free; day and night people mixing; actors who mingle with the crowd and involve you, willy nilly, in processes whose end cannot be

foreseen; fighting—two men with bags on a slippery log, in front of hundreds; Fellini—clowns, death, crazy people, brought into mesh.

Remember the hunchbacked dwarf in *Ship of Fools*, the only reasonable person on the ship, who says "Everyone has a problem; but I have the good fortune to wear mine on my back, where everyone can see it."

Therefore:

Set aside some part of the town as a carnival—mad side-shows, tournaments, acts, displays, competitions, dancing, music, street theater, clowns, transvestites, freak events, which allow people to reveal their madness; weave a wide pedestrian street through this area; run booths along the street, narrow alleys; at one end an outdoor theater; perhaps connect the theater stage directly to the carnival street, so the two spill into and feed one another.



Dancing in the street, food stands, an outdoor room or two, a square where the theater is, and tents and canvas will all help to make it even livelier—SMALL PUBLIC SQUARES (61), DANCING IN THE STREET (63), PUBLIC OUTDOOR ROOM (69), FOOD STANDS (93), PEDESTRIAN STREET (100), CANVAS ROOFS (244). . . .

63 DANCING IN THE STREET*



. . . several patterns have laid the groundwork for evening activity in public—MAGIC OF THE CITY (10), PROMENADE (31), NIGHT LIFE (33), CARNIVAL (58), SMALL PUBLIC SQUARES (61). To make these places alive at night, there is nothing like music and dancing; this pattern simply states the physical conditions which will encourage dancing and music to fill the streets.



Why is it that people don't dance in the streets today?

All over the earth, people once danced in the streets; in theater, song, and natural speech, "dancing in the street" is an image of supreme joy. Many cultures still have some version of this activity. There are the Balinese dancers who fall into a trance whirling around in the street; the mariachi bands in Mexico—every town has several squares where the bands play and the neighborhood comes out to dance; there is the European and American tradition of bandstands and jubilees in the park; there is the *bon odori* festival in Japan, when everybody claps and dances in the streets.

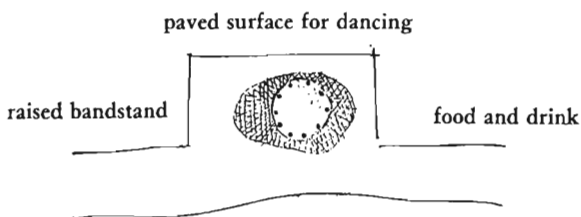
But in those parts of the world that have become "modern" and technically sophisticated, this experience has died. Communities are fragmented; people are uncomfortable in the streets, afraid with one another; not many people play the right kind of music; people are embarrassed.

Certainly there is no way in which a change in the environment, as simple as the one which we propose, can remedy these circumstances. But we detect a change in mood. The embarrassment and the alienation are recent developments, blocking a more basic need. And as we get in touch with these needs, things start to happen. People remember how to dance; everyone takes up an instrument; many hundreds form little bands. At this writing, in San Francisco, Berkeley, and Oakland there is a controversy over "street musicians"—bands that have spontaneously begun playing in streets and plazas whenever the weather is good—where should they be allowed to play, do they obstruct traffic, shall people dance?

It is in this atmosphere that we propose the pattern. Where there is feeling for the importance of the activity re-emerging, then the right setting can actualize it and give it roots. The essentials are straightforward: a platform for the musicians, perhaps with a cover; hard surface for dancing, all around the bandstand; places to sit and lean for people who want to watch and rest; provision for some drink and refreshment (some Mexican bandstands have a beautiful way of building tiny stalls into the base of the bandstand, so that people are drawn though the dancers and up to the music, for a fruit drink or a beer); the whole thing set somewhere where people congregate.

Therefore:

Along promenades, in squares and evening centers, make a slightly raised platform to form a bandstand, where street musicians and local bands can play. Cover it, and perhaps build in at ground level tiny stalls for refreshment. Surround the bandstand with paved surface for dancing—no admission charge.



Place the bandstand in a pocket of activity, toward the edge of a square or a promenade—ACTIVITY POCKETS (124); make it a room, defined by trellises and columns—PUBLIC OUTDOOR ROOM (69); build FOOD STANDS (93) around the bandstand; and for dancing, maybe colored canvas canopies, which reach out over portions of the street, and make the street, or parts of it, into a great, half-open tent—CANVAS ROOFS (244). . . .

68 CONNECTED PLAY*

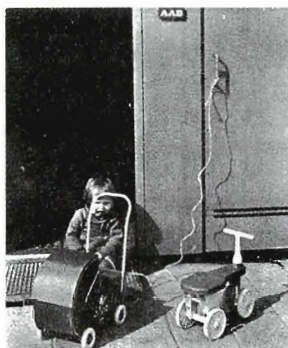


. . . suppose the common land that connects clusters to one another is being provided—COMMON LAND (67). Within this common land, it is necessary to identify play space for children and, above all, to make sure that the relationship between adjacent pieces of common land allows this play space to form.



If children don't play enough with other children during the first five years of life, there is a great chance that they will have some kind of mental illness later in their lives.

Children need other children. Some findings suggest that they need other children even more than they need their own mothers. And empirical evidence shows that if they are forced to spend their early years with too little contact with other children, they will be likely to suffer from psychosis and neurosis in their later years.



Alone . . .

Since the layout of the land between the houses in a neighborhood virtually controls the formation of play groups, it therefore has a critical effect on people's mental health. A typical suburban subdivision with private lots opening off streets almost confines

children to their houses. Parents, afraid of traffic or of their neighbors, keep their small children indoors or in their own gardens: so the children never have enough chance meetings with other children of their own age to form the groups which are essential to a healthy emotional development.

We shall show that children will only be able to have the access to other children which they need, if each household opens onto some kind of safe, connected common land, which touches at least 64 other households.

First, let us review the evidence for the problem. The most dramatic evidence comes from the Harlows' work on monkeys. The Harlows have shown that monkeys isolated from other infant monkeys during the first six months of life are incapable of normal social, sexual, or play relations with other monkeys in their later lives:

They exhibit abnormalities of behavior rarely seen in animals born in the wild. They sit in their cages and stare fixedly into space, circle their cages in a repetitively stereotyped manner, and clasp their heads in their hands or arms and rock for long periods of time . . . the animal may chew and tear at its body until it bleeds . . . similar symptoms of emotional pathology are observed in deprived children in orphanages and in withdrawn adolescents and adults in mental hospitals. (Henry F. Harlow and Margaret K. Harlow, "The Effect of Rearing Conditions on Behavior," *Bull. Menniger Clinic*, 26, 1962, pp. 213-14.)

It is well known that infant monkeys—like infant human beings—have these defects if brought up without a mother or a mother surrogate. It is not well known that the effects of separation from other infant monkeys are even stronger than the effects of maternal deprivation. Indeed, the Harlows showed that although monkeys can be raised successfully without a mother, provided that they have other infant monkeys to play with, they cannot be raised successfully by a mother alone, without other infant monkeys, even if the mother is entirely normal. They conclude: "It seems possible that the infant-mother affectional system is dispensable, whereas the infant-infant system is a sine-qua-non for later adjustment in all spheres of monkey life." (Harry F. Harlow and Margaret K. Harlow, "Social Deprivation in Monkeys," *Scientific American*, 207, No. 5, 1962, pp. 136-46.)

TOWNS

The first six months of a rhesus monkey's life correspond to the first three years of a child's life. Although there is no formal evidence to show that lack of contact during these first three years damages human children—and as far as we know, it has never been studied—there is very strong evidence for the effect of isolation between the ages of four to ten.

Herman Lantz questioned a random sample of 1,000 men in the United States Army, who had been referred to a mental hygiene clinic because of emotional difficulties. (Herman K. Lantz, "Number of Childhood Friends as Reported in the Life Histories of a Psychiatrically Diagnosed Group of 1,000," *Marriage and Family Life*, May 1956, pp. 107-108.) Army psychiatrists classified each of the men as normal, suffering from mild psychoneurosis, severe psychoneurosis, or psychosis. Lantz then put each man into one of three categories: those who reported having five friends or more at any typical moment when they were between four and ten years old, those who reported an average of about two friends, and those who reported having no friends at that time. The following table shows the relative percentages in each of the three friendship categories separately. The results are astounding:

	5 or More Friends	About 2 Friends	No Friends
Normal	39.5	7.2	0.0
Mild psychoneurosis	22.0	16.4	5.0
Severe psychoneurosis	27.0	54.6	47.5
Psychosis	0.8	3.1	37.5
Other	10.7	18.7	10.0
	100.0	100.0	100.0

Among people who have five friends or more as children, 61.5 per cent have mild cases, while 27.8 per cent have severe cases. Among people who had no friends, only 5 per cent have mild cases, and 85 per cent have severe cases.

On the positive side, an informal account by Anna Freud shows how powerful the effect of contact among tiny children can be on the emotional development of the children. She describes five young German children who lost their parents during infancy

in a concentration camp, and then looked after one another inside the camp until the war ended, at which point they were brought to England. (Anna Freud and Sophie Dann, "An Experiment in Group Upbringing," *Reading in Child Behavior and Development*, ed. Celia Stendler, New York, 1964, pp. 122-40.) She describes the beautiful social and emotional maturity of these tiny children. Reading the account, one feels that these children, at the age of three, were more aware of each other and more sensitive to each other's needs than many people ever are.

It is almost certain, then, that contact is essential, and that lack of contact, when it is extreme, has extreme effects. A considerable body of literature beyond that which we have quoted, is given in Christopher Alexander, "The City as a Mechanism for Sustaining Human Contact," *Environment for Man*, ed. W. R. Ewald, Indiana University Press, Bloomington, 1967, pp. 60-109.

If we assume that informal, neighborhood contact between children is a vital experience, we may then ask what kinds of neighborhoods support the formation of spontaneous play groups. The answer, we believe, is some form of safe common land, connected to a child's home, and from which he can make contact with several other children. The critical question is: How many households need to share this connected play space?

The exact number of households that are required depends on the child population within the households. Let us assume that children represent about one-fourth of a given population (slightly less than the modal figure for suburban households), and that these children are evenly distributed in age from 0 to 18. Roughly speaking, a given pre-school child who is x years old will play with children who are $x - 1$ or x or $x + 1$ years old. In order to have a reasonable amount of contact, and in order for playgroups to form, each child must be able to reach at least five children in his age range. Statistical analysis shows that for each child to have a 95 per cent chance of reaching five such potential playmates, each child must be in reach of 64 households.

The problem may be stated as follows: In an infinite population of children, one-sixth are the right age and five-sixths are the wrong age for any given child. A group of r children is

TOWNS

chosen at random. The probability that this group of r children contains 5 or more right-age children in it is $1 - \sum_{k=0}^4 P_{r,k}$, where $P_{r,k}$ is the hypergeometric distribution. If we now ask what is the least r which makes $1 - \sum_{k=0}^4 P_{r,k} > 0.95$, r turns out to be 54.

If we need 54 children, we need a total population of $4(54) = 216$, which at 3.4 persons per household, needs 64 households.

Sixty-four is a rather large number of households to share connected common land. In fact, in the face of this requirement, there is a strong temptation to try to solve the problem by grouping 10 or 12 homes in a cluster. But this will not work: while it is a useful configuration for other reasons—HOUSE CLUSTER (37) and COMMON LAND (67)—by itself it will not solve the problem of connected play space for children. There must also be safe paths to connect the bits of common land.

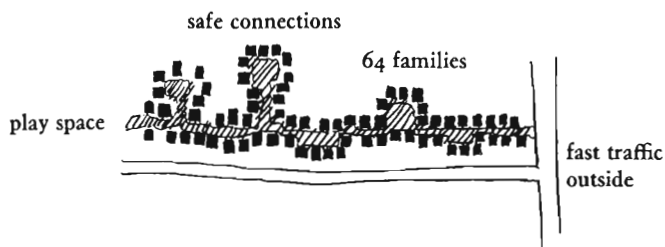


Connecting paths.

Therefore:

Lay out common land, paths, gardens, and bridges so that groups of at least 64 households are connected by a

swath of land that does not cross traffic. Establish this land as the connected play space for the children in these households.



Do this by connecting several HOUSE CLUSTERS (37) with GREEN STREETS (51) and safe paths. Place the local CHILDREN'S HOME (86) in this play space. Within the play space, make sure the children have access to mud, and plants, and animals, and water—STILL WATER (71), ANIMALS (74); set aside one area where there is all kinds of junk that they can use to make things—ADVENTURE PLAYGROUND (73). . . .

69 PUBLIC OUTDOOR ROOM**



. . . the common land in MAIN GATEWAYS (53), ACCESSIBLE GREEN (60), SMALL PUBLIC SQUARES (61), COMMON LAND (67), PEDESTRIAN STREET (100), PATHS AND GOALS (120) needs at least some place where hanging out and being "out" in public become possible. For this purpose it is necessary to distinguish one part of the common land and to define it with a little more elaboration. Also, if none of the larger patterns exist yet, this pattern can act as a nucleus, and help them to crystallize around it.



There are very few spots along the streets of modern towns and neighborhoods where people can hang out, comfortably, for hours at a time.

Men seek corner beer shops, where they spend hours talking and drinking; teenagers, especially boys, choose special corners too, where they hang around, waiting for their friends. Old people like a special spot to go to, where they can expect to find others; small children need sand lots, mud, plants, and water to play with in the open; young mothers who go to watch their children often use the children's play as an opportunity to meet and talk with other mothers.

Because of the diverse and casual nature of these activities, they require a space which has a subtle balance of being defined and yet not too defined, so that any activity which is natural to the neighborhood at any given time can develop freely and yet has something to start from.

For example, it would be possible to leave an outdoor room unfinished, with the understanding it can be finished by people who live nearby, to fill whatever needs seem most pressing. It may need sand, or water faucets, or play equipment for small children—ADVENTURE PLAYGROUND (73); it may have steps and seats, where teenagers can meet—TEENAGE SOCIETY (84); someone may build a small bar or coffee shop in a house that opens into the area, with an arcade, making the arcade a place to eat and

TOWNS

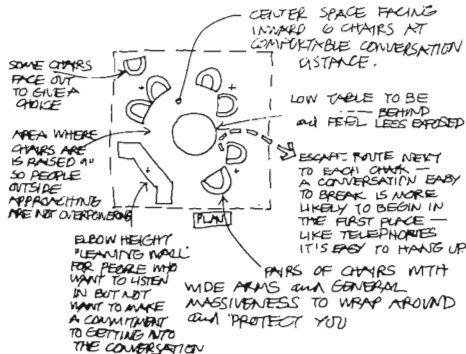
drink—FOOD STANDS (93); there may be games like chess and checkers for old people.

Modern housing projects especially suffer from the lack of this kind of space. When indoor community rooms are provided, they are rarely used. People don't want to plunge into a situation which they don't know; and the degree of involvement created in such an enclosed space is too intimate to allow a casual passing interest to build up gradually. On the other hand, vacant land is not enclosed enough. It takes years for anything to happen on vacant land; it provides too little shelter, and too little "reason to be there."

What is needed is a framework which is just enough defined so that people naturally tend to stop there; and so that curiosity naturally takes people there, and invites them to stay. Then, once community groups begin to gravitate toward this framework, there is a good chance that they will themselves, if they are permitted, create an environment which is appropriate to their activities.

We conjecture that a small open space, roofed, with columns, but without walls at least in part, will just about provide the necessary balance of "openness" and "closedness."

A beautiful example of the pattern was built by Dave Chapin and George Gordon with architecture students from Case Western Reserve in Cleveland, Ohio. They built a sequence of public out-

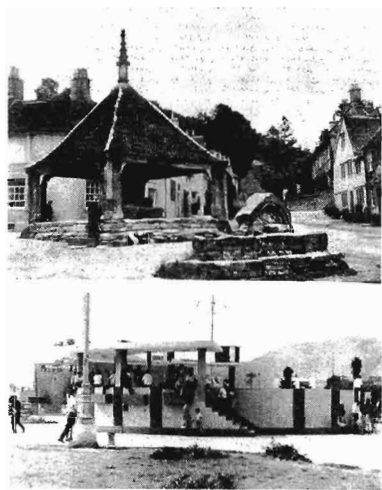


Public outdoor room built by Chapin and Gordon in Cleveland, Ohio.

door rooms on the grounds and on the public land surrounding a local mental health clinic. According to staff reports, these places changed the life of the clinic dramatically: many more people than had been usual were drawn into the outdoors, public talk was more animated, outdoor space that had always been dominated by automobiles suddenly became human and the cars had to inch along.

In all, Chapin and Gordon and their crew built seven public outdoor rooms in the neighborhood. Each one was slightly different, varying according to views, orientation, size.

We have also discovered a version of this pattern from medieval society. Apparently, in the twelfth and thirteenth centuries there were many such public structures dotted through the towns. They were the scene of auctions, open-air meetings, and market fairs. They are very much in the spirit of the places we are proposing for neighborhoods and work communities.



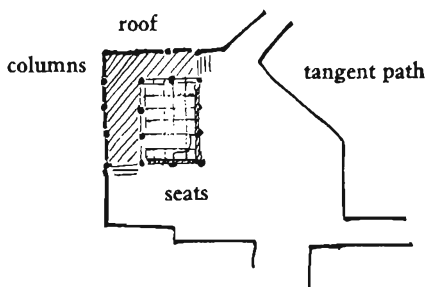
Outdoor rooms in England and Peru.

Therefore:

In every neighborhood and work community, make a

TOWNS

piece of the common land into an outdoor room—a partly enclosed place, with some roof, columns, without walls, perhaps with a trellis; place it beside an important path and within view of many homes and workshops.



Place the outdoor room where several paths are tangent to it, like any other common area—COMMON AREAS AT THE HEART (129); in the bulge of a path—PATH SHAPE (121); or around a square—ACTIVITY POCKETS (124); use surrounding BUILDING EDGES (160) to define part of it; build it like any smaller outdoor room, with columns, and half-trellised roofs—OUTDOOR ROOM (163); perhaps put an open courtyard next to it—COURTYARDS WHICH LIVE (115), an ARCADE (119) around the edge, or other simple cover—CANVAS ROOFS (244), and seats for casual sitting—STAIR SEATS (125), SEAT SPOTS (241). . . .

75 THE FAMILY*



. . . assume now, that you have decided to build a house for yourself. If you place it properly, this house can help to form a cluster, or a row of houses, or a hill of houses—HOUSE CLUSTER (37), ROW HOUSES (38), HOUSING HILL (39)—or it can help to keep a working community alive—HOUSING IN BETWEEN (48). This next pattern now gives you some vital information about the social character of the household itself. If you succeed in following this pattern, it will help repair LIFE CYCLE (26) and HOUSEHOLD MIX (35) in your community.



The nuclear family is not by itself a viable social form.

Until a few years ago, human society was based on the extended family: a family of at least three generations, with parents, children, grandparents, uncles, aunts, and cousins, all living together in a single or loosely knit multiple household. But today people move hundreds of miles to marry, to find education, and to work. Under these circumstances the only family units which are left are those units called nuclear families: father, mother, and children. And many of these are broken down even further by divorce and separation.

Unfortunately, it seems very likely that the nuclear family is not a viable social form. It is too small. Each person in a nuclear family is too tightly linked to other members of the family; any one relationship which goes sour, even for a few hours, becomes critical; people cannot simply turn away toward uncles, aunts, grandchildren, cousins, brothers. Instead, each difficulty twists the family unit into ever tighter spirals of discomfort; the children become prey to all kinds of dependencies and oedipal neuroses; the parents are so dependent on each other that they are finally forced to separate.

Philip Slater describes this situation for American families and finds in the adults of the family, especially the women, a terrible, brooding sense of deprivation. There are simply not enough people around, not enough communal action, to give the ordinary

experience around the home any depth or richness. (Philip E. Slater, *The Pursuit of Loneliness*, Boston: Beacon Press, 1970, p. 67, and throughout.)

It seems essential that the people in a household have at least a dozen people round them, so that they can find the comfort and relationships they need to sustain them during their ups and downs. Since the old extended family, based on blood ties, seems to be gone—at least for the moment—this can only happen if small families, couples, and single people join together in voluntary “families” of ten or so.

In his final book, *Island*, Aldous Huxley portrayed a lovely vision of such a development:

“How many homes does a Palanese child have?”

“About twenty on the average.”

“Twenty? My God!”

“We all belong,” Susila explained, “to a MAC—a Mutual Adoption Club. Every MAC consists of anything from fifteen to twenty-five assorted couples. Newly elected brides and bridegrooms, old-timers with growing children, grandparents and great-grandparents—everybody in the club adopts everyone else. Besides our own blood relations, we all have our quota of deputy mothers, deputy fathers, deputy aunts and uncles, deputy brothers and sisters, deputy babies and toddlers and teen-agers.”

Will shook his head. “Making twenty families grow where only one grew before.”

“But what grew before was *your* kind of family. . . .” As though reading instructions from a cookery book, “Take one sexually inept wage slave,” she went on, “one dissatisfied female, two or (if preferred) three small television addicts; marinate in a mixture of Freudism and dilute Christianity; then bottle up tightly in a four-room flat and stew for fifteen years in their own juice. *Our* recipe is rather different: Take twenty sexually satisfied couples and their offspring; add science, intuition and humor in equal quantities; steep in Tantrik Buddhism and simmer indefinitely in an open pan in the open air over a brisk flame of affection.”

“And what comes out of your open pan?” he asked.

“An entirely different kind of family. Not exclusive, like your families, and not predestined, not compulsory. An inclusive, unpredestined and voluntary family. Twenty pairs of fathers and mothers, eight or nine ex-fathers and ex-mothers, and forty or fifty assorted children of all ages.” (Aldous Huxley, *Island*, New York: Bantam, 1962, pp. 89-90.)

Physically, the setting for a large voluntary family must provide

for a balance of privacy and communality. Each small family, each person, each couple, needs a private realm, almost a private household of their own, according to their territorial need. In the movement to build communes, it is our experience that groups have not taken this need for privacy seriously enough. It has been shrugged off, as something to overcome. But it is a deep and basic need; and if the setting does not let each person and each small household regulate itself on this dimension, it is sure to cause trouble. We propose, therefore, that individuals, couples, people young and old—each subgroup—have its own legally independent household—in some cases, physically separate households and cottages, at least separate rooms, suites, and floors.

The private realms are then set off against the common space and the common functions. The most vital commons are the kitchen, the place to sit down and eat, and a garden. Common meals, at least several nights a week, seem to play the biggest role in binding the group. The meals, and taking time at the cooking, provide the kind of casual meeting time when everything else can be comfortably discussed: the child care arrangements, maintenance, projects—see COMMUNAL EATING (147).

This would suggest, then, a large family room-farmhouse kitchen, right at the heart of the site—at the main crossroads, where everyone would tend to meet toward the end of the day. Again, according to the style of the family, this might be a separate building, with workshop and gardens, or one wing of a house, or the entire first floor of a two or three story building.

There is some evidence that processes which generate large voluntary group households are already working in the society. (Cf. Pamela Hollie, "More families share houses with others to enhance 'life style,'" *Wall Street Journal*, July 7, 1972.)

One way to spur the growth of voluntary families: When someone turns over or sells their home or room or apartment, they first tell everyone living around them—their neighbors. These neighbors then have the right to find friends of theirs to take the place—and thus to extend their "family." If friends are able to move in, then they can arrange for themselves how to create a functioning family, with commons, and so on. They might build a connection between the homes, knock out a wall, add a

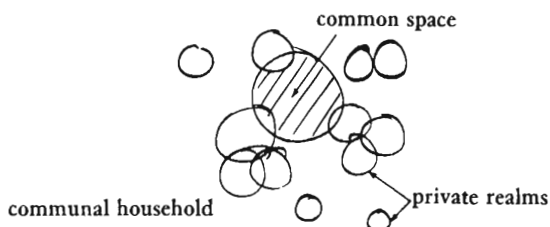
TOWNS

room. If the people immediately around the place cannot make the sale in a few months, then it reverts to the normal marketplace.

Therefore:

Set up processes which encourage groups of 8 to 12 people to come together and establish communal households. Morphologically, the important things are:

1. Private realms for the groups and individuals that make up the extended family: couple's realms, private rooms, sub-households for small families.
2. Common space for shared functions: cooking, working, gardening, child care.
3. At the important crossroads of the site, a place where the entire group can meet and sit together.



Each individual household within the larger family must, at all costs, have a clearly defined territory of its own, which it controls—YOUR OWN HOME (79); treat the individual territories according to the nature of the individual households—HOUSE FOR A SMALL FAMILY (76), HOUSE FOR A COUPLE (77), HOUSE FOR ONE PERSON (78); and build common space between them, where the members of the different smaller households can meet and eat together—COMMON AREAS AT THE HEART (129), COMMUNAL EATING (147). For the shape of the building, gardens, parking, and surroundings, begin with BUILDING COMPLEX (95). . . .

76 HOUSE FOR A SMALL FAMILY*



. . . according to THE FAMILY (75), each nuclear family ought to be a member household of a larger group household. If this is not possible, do what you can, when building a house for a small family, to generate some larger, possible group household, by tying it together with the next door households; in any case, at the very least, form the beginning of a HOUSE CLUSTER (37).



In a house for a small family, it is the relationship between children and adults which is most critical.

Many small households, not large enough to have a full fledged nursery, not rich enough to have a nanny, find themselves swamped by the children. The children naturally want to be where the adults are; their parents don't have the heart, or the energy, to keep them out of special areas; so finally the whole house has the character of a children's room—children's clothes, drawings, boots and shoes, tricycles, toy trucks, and disarray.

Yet, obviously few parents feel happy to give up the calm and cleanliness and quiet of the adult world in every square inch of their homes. To help achieve a balance, a house for a small family needs three distinct areas: a couple's realm, reserved for the adults; a children's realm, where children's needs hold sway; and a common area, between the two, connected to them both.

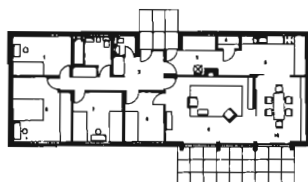
The couple's realm should be more than a room, although rooms are a part of it. It is territory which sustains them as two adults, a couple—not father and mother. Other parts of their lives are involved with children, friends, work; there must be a place which becomes naturally an expression of them as adults, alone. The children come in and out of this territory, but when they are there, they are clearly in the adults' world. See COUPLE'S REALM (136).

The children's world must also be looked upon as territory that they share, as children, CHILDREN'S REALM (137); here, it is important to establish that this is a part of the house, in balance with the others. Again, the critical feature is not that adults are

“excluded” but that, when they are in this world, they are in children’s territory.

The common area contains those functions that the children and the adults share: eating together, sitting together, games, perhaps bathing, gardening—again, whatever captures their needs for shared territory. Quite likely, the common territory will be larger than the two other parts of the house.

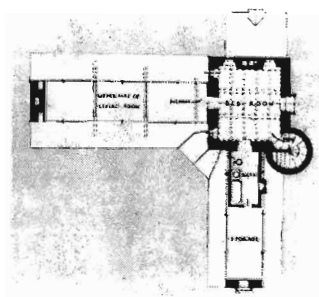
Finally, realize that this pattern is different from the way most small family homes are made today. For example, a popular current conception, comparable to this, but quite different, is a suburban *two part house*: sleeping and commons.



A typical suburban two part house.

Even though there is a “master bedroom” the sleeping part of the house is essentially one thing—the children are all around the master bedroom. This plan does not have the distinctions we are arguing for.

Here is a beautiful plan which does:

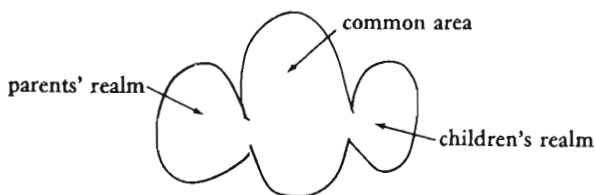


A three-part house—the couple’s realm upstairs.

TOWNS

Therefore:

Give the house three distinct parts: a realm for parents, a realm for the children, and a common area. Conceive these three realms as roughly similar in size, with the commons the largest.



Treat the house, like every house, as a distinct piece of territory—YOUR OWN HOME (79); build the three main parts according to the specific patterns for those parts—COMMON AREAS AT THE HEART (129), COUPLE'S REALM (136), BED CLUSTER (143) and connect the common areas, and the bed cluster according to the CHILDREN'S REALM (137). . . .

77 HOUSE FOR A COUPLE*



. . . again, ideally, every couple is a part of a larger group household—THE FAMILY (75). If this can not be so, try to build the house for the couple in such a way as to tie it together with some other households, to form the beginnings of a group household, or, if this fails, at least to form the beginnings of a HOUSE CLUSTER (37).



In a small household shared by two, the most important problem which arises is the possibility that each may have too little opportunity for solitude or privacy.

Consider these forces:

1. Of course, the couple need a shared realm, where they can function together, invite friends, be alone together. This realm needs to be made up of functions which they share.

2. But it is also true that each partner is trying to maintain an individuality, and not be submerged in the identity of the other, or the identity of the "couple." Each partner needs *space* to nourish this need.

It is essential, therefore, that a small house be conceived as a place where the two people may be together but where, from time to time, either one of them may also be alone, in comfort, in dignity, and in such a way that the other does not feel left out or isolated. To this end, there must be two small places—perhaps rooms, perhaps large alcoves, perhaps a corner, screened off by a half-wall—places which are clearly understood as private territories, where each person can keep to himself, pursue his or her own activities.

Still, the problem of the balance of privacy in a couple's lives is delicate. Even with a small place of one's own, tenuously connected to the house, one partner may feel left out at various moments. While we believe that the solution proposed in this pattern helps, the problem will not be entirely settled until the couple itself is in some close, neighborly, and family-like rela-

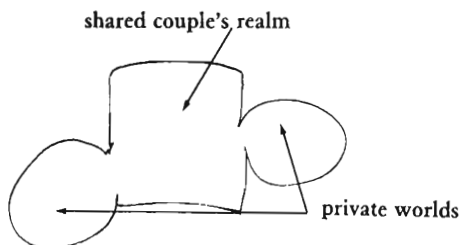
tionship to other adults. Then, when one needs privacy, the other has other possibilities for companionship at hand. This idea and its physical implications are discussed in the pattern, *THE FAMILY* (75).

Once the opportunity for withdrawal is satisfied, there is also a genuine opportunity for the couple to be together; and then the house can be a place where genuine intimacy, genuine connection can happen.

There is one other problem, unique to a house for a couple, that must be mentioned. In the first years of a couple's life, as they learn more about each other, and find out if indeed they have a future together, the evolution of the house plays a vital role. Improving the house, fixing it up, enlarging it, provides a frame for learning about one another: it brings out conflict, and offers the chance, like almost no other activity, for concrete resolution and growth. This suggests that a couple find a place that they can change gradually over the years, and *not* build or buy for themselves a "dream" home from scratch. The experience of making simple changes in the house, and tuning it to their lives, provides some grist for their own growth. Therefore, it is best to start small, with plenty of room for growth and change.

Therefore:

Conceive a house for a couple as being made up of two kinds of places—a shared couple's realm and individual private worlds. Imagine the shared realm as half-public and half-intimate; and the private worlds as entirely individual and private.

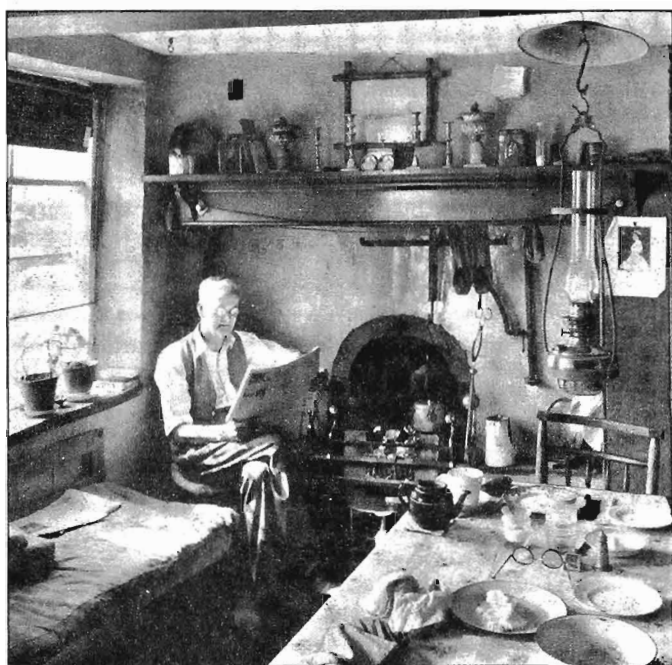


TOWNS



Again, treat the house as a distinct piece of territory, in some fashion owned by its users—YOUR OWN HOME (79). Lay out the common part, according to the pattern COUPLE'S REALM (136), and give both persons an individual world of their own where they can be alone—A ROOM OF ONE'S OWN (141). . . .

78 HOUSE FOR ONE PERSON*



. . . the households with one person in them, more than any other, need to be a part of some kind of larger household—**THE FAMILY** (75). Either build them to fit into some larger group household, or even attach them, as ancillary cottages to other, ordinary family households like **HOUSE FOR A SMALL FAMILY** (76) or **HOUSE FOR A COUPLE** (77).



Once a household for one person is part of some larger group, the most critical problem which arises is the need for simplicity.

The housing market contains few houses or apartments specifically built for one person. Most often men and women who choose to live alone, live in larger houses and apartments, originally built for two people or families. And yet for one person these larger places are most often uncompact, unwieldy, hard to live in, hard to look after. Most important of all, they do not allow a person to develop a sense of self-sufficiency, simplicity, compactness, and economy in his or her own life.

The kind of place which is most closely suited to one person's needs, and most nearly overcomes this problem, is a place of the utmost simplicity, in which only the bare bones of necessity are there: a place, built like a ploughshare, where every corner, every table, every shelf, each flower pot, each chair, each log, is placed according to the simplest necessity, and supports the person's life directly, plainly, with the harmony of nothing that is not needed, and everything that is.

The plan of such a house will be characteristically different from other houses, primarily because it requires almost no differentiation of its spaces: it need only be one room. It can be a cottage or a studio, built on the ground or in a larger building, part of a group household or a detached structure. In essence, it is simply a central space, with nooks around it. The nooks replace the rooms in a larger house; they are for bed, bath, kitchen, workshop and entrance.

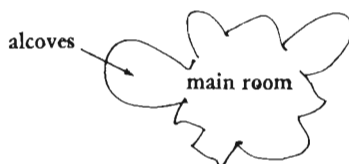
It is important to realize that very many of the patterns in this book can be built into a small house; small size does not pre-

clude richness of form. The trick is to intensify and to overlay; to compress the patterns; to reduce them to simple expressions; to make every inch count double. When it is well done, a small house feels wonderfully continuous—cooking a bowl of soup fills the house; there is no rattling around. This cannot happen if the place is divided into rooms.

We have found it necessary to call special attention to this pattern because it is nearly impossible to build a house this small in cities—there is no way to get hold of a very small lot. Zoning codes and banking practices prohibit such tiny lots; they prohibit “normal” lots from splitting down to the kind of scale that a house for one person requires. The correct development of this pattern will require a change in these ordinances.

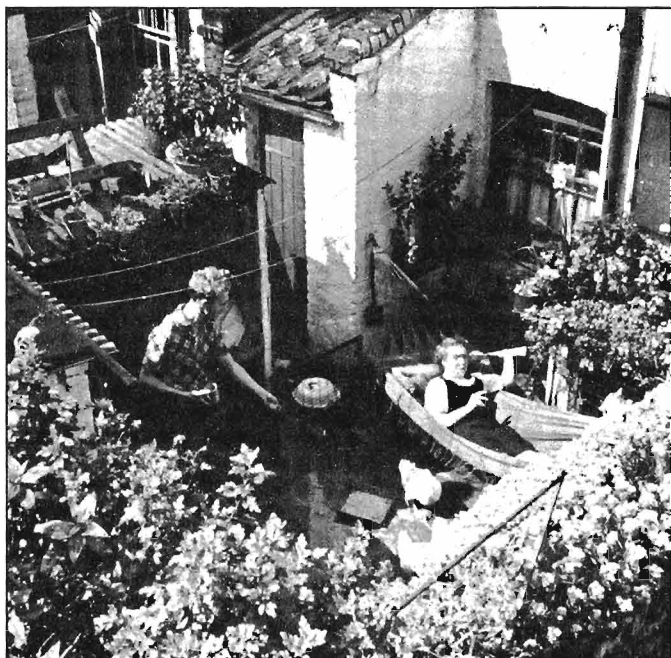
Therefore:

Conceive a house for one person as a place of the utmost simplicity: essentially a one-room cottage or studio, with large and small alcoves around it. When it is most intense, the entire house may be no more than 300 to 400 square feet.



And again, make the house an individual piece of territory, with its own garden, no matter how small—YOUR OWN HOME (79); make the main room essentially a kind of farmhouse kitchen—FARMHOUSE KITCHEN (139), with alcoves opening off it for sitting, working, bathing, sleeping, dressing—BATHING ROOM (144), WINDOW PLACE (180), WORKSPACE ENCLOSURE (183), BED ALCOVE (188), DRESSING ROOM (189); if the house is meant for an old person, or for someone very young, shape it also according to the pattern for OLD AGE COTTAGE (155) or TEEN-AGER'S COTTAGE (154). . . .

79 YOUR OWN HOME,**



. . . according to THE FAMILY (75), each individual household should be a part of a larger family group household. Whether this is so, or not, each individual household, must also have a territory of its own which it controls completely—HOUSE FOR A SMALL FAMILY (76), HOUSE FOR A COUPLE (77), HOUSE FOR ONE PERSON (78); this pattern, which simply sets down the need for such a territory, helps especially to form higher density house clusters like ROW HOUSES (38), HOUSING HILL (39), which often do not have well-defined individual territories for the separate households.



People cannot be genuinely comfortable and healthy in a house which is not theirs. All forms of rental—whether from private landlords or public housing agencies—work against the natural processes which allow people to form stable, self-healing communities.



Income property.

. . . in the imperishable primal language of the human heart house means my house, your house, a man's own house. The house is the winning throw of the dice which man has wrested from the uncanniness of universe; it is his defense against the chaos that threatens to invade him. Therefore his deeper wish is that it be his own house, that he not have to share with anyone other than his own family. (Martin Buber, *A Believing Humanism: Gleanings*, New York: Simon and Shuster, 1969, p. 93.)

This pattern is not intended as an argument in favor of "private

property," or the process of buying and selling land. Indeed, it is very clear that all those processes which encourage speculation in land, for the sake of profit, are unhealthy and destructive, because they invite people to treat houses as commodities, to build things for "resale," and not in such a way as to fit their own needs.

And just as speculation and the profit motive make it impossible for people to adapt their houses to their own needs, so tenancy, rental, and landlords do the same. Rental areas are always the first to turn to slums. The mechanism is clear and well known. See, for example, George Sternlieb, *The Tenement Landlord* (Rutgers University Press, 1966). The landlord tries to keep his maintenance and repair costs as low as possible; the residents have no incentive to maintain and repair the homes—in fact, the opposite—since improvements add to the wealth of the landlord, and even justify higher rent. And so the typical piece of rental property degenerates over the years. Then landlords try to build new rental properties which are immune to neglect—gardens are replaced with concrete, carpets are replaced with linoleum, and wooden surfaces by formica: it is an attempt to make the new units maintenance-free, and to stop the slums by force; but they turn out cold and sterile and again turn into slums, because nobody loves them.

People will only be able to feel comfortable in their houses, if they can change their houses to suit themselves, add on whatever they need, rearrange the garden as they like it; and, of course, they can only do this in circumstances where they are the legal owners of the house and land; and if, in high density multi-story housing, each apartment, like a house, has a well-defined volume, in which the owner can make changes as he likes.

This requires then, that every house is owned—in some fashion—by the people that live in it; it requires that every house, whether at ground level or in the air, has a well-defined volume within which the family is free to make whatever changes they want; and it requires a form of ownership which discourages speculation.

Several approaches have been put forward in recent years to solve the problem of providing each household with a "home."

At one extreme there are ideas like Habraken's high density "support" system, where families buy pads on publicly owned superstructures and gradually develop their own homes. And at the other extreme there are the rural communes, where people have forsaken the city to create their own homes in the country. Even modified forms of rental can help the situation if they allow people to change their houses according to their needs and give people some financial stake in the process of maintenance. This helps, because renting is often a step along the way to home ownership; but unless tenants can somehow recover their investments in money and labor, the hopeless cycle of degeneration of rental property and the degeneration of the tenants' financial capability will continue. (Cf. Rolf Goetze, "Urban Housing Rehabilitation," in Turner and Fichter, eds., *The Freedom to Build*, New York: Macmillan, 1972.)

A common element in all these cases is the understanding that the successful development of a household's "home" depends upon these features: Each household must possess a clearly defined site for both a house and an outdoor space, and the household must own this site in the sense that they are in full control of its development.

Therefore:

Do everything possible to make the traditional forms of rental impossible, indeed, illegal. Give every household its own home, with space enough for a garden. Keep the emphasis in the definition of ownership on control, not on financial ownership. Indeed, where it is possible to construct forms of ownership which give people control over their houses and gardens, but make financial speculation impossible, choose these forms above all others. In all cases give people the legal power, and the physical opportunity to modify and repair their own places. Pay attention to this rule especially, in the case of high density apartments: build the apartments in such a way that every individual apartment has a garden, or a terrace where vegetables will grow, and that even in this situation, each family

can build, and change, and add on to their house as they wish.



For the shape of the house, begin with BUILDING COMPLEX (95). For the shape of the lot, do not accept the common notion of a lot which has a narrow frontage and a great deal of depth. Instead, try to make every house lot roughly square, or even long along the street and shallow. All this is necessary to create the right relation between house and garden—HALF-HIDDEN GARDEN (111).

*the workgroups, including all kinds of workshops
and offices and even children's learning groups;*

80. SELF-GOVERNING WORKSHOPS AND OFFICES

81. SMALL SERVICES WITHOUT RED TAPE

82. OFFICE CONNECTIONS

83. MASTER AND APPRENTICES

84. TEENAGE SOCIETY

85. SHOPFRONT SCHOOLS

86. CHILDREN'S HOME

81 SMALL SERVICES
WITHOUT RED TAPE*



. . . all offices which provide service to the public—WORK COMMUNITY (41), UNIVERSITY AS A MARKETPLACE (43), LOCAL TOWN HALL (44), HEATH CENTER (47), TEENAGE SOCIETY (84) need subsidiary departments, where the members of the public go. And of course, piecemeal development of these small departments, one department at a time, can also help to generate these larger patterns gradually.



Departments and public services don't work if they are too large. When they are large, their human qualities vanish; they become bureaucratic; red tape takes over.

There is a great deal of literature on the way red tape and bureaucracy work against human needs. See, for example, Gideon Sjöberg, Richard Brymer, and Buford Farris, "Bureaucracy and the Lower Class," *Sociology and Social Research*, 50, April, 1966, pp. 325-77; and Alvin W. Gouldner, "Red Tape as a Social Problem," in Robert Merton, *Reader in Bureaucracy*, Free Press, 1952, pp. 410-18.

According to these authors, red tape can be overcome in two ways. First, it can be overcome by making each service program small and autonomous. A great deal of evidence shows that red tape occurs largely as a result of impersonal relationships in large institutions. When people can no longer communicate on a face-to-face basis, they need formal regulations, and in the lower echelons of the organization, these formal regulations are followed blindly and narrowly.

Second, red tape can be overcome by changing the passive nature of the clients' relation to service programs. There is considerable evidence to show that when clients have an active relationship with a social institution, the institution loses its power to intimidate them.

We have therefore concluded that no service should have more than 12 persons total (all staff, including clerks). We base this figure on the fact that 12 seems to be the largest number of

TOWNS

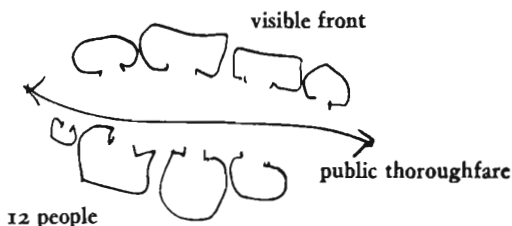
people that can sit down in a face-to-face discussion. It seems likely that a smaller staff size will work better still. Furthermore, each service should be relatively autonomous—subject only to a few simple, coordinative regulations from parent organizations—and that this should be emphasized by physical autonomy. In order to be physically autonomous, each service must have an area which is entirely under its own jurisdiction; with its own door on a public thoroughfare, and complete physical separation from other services.

This pattern applies equally to the departments of a city hall, a medical center, or to the local branches of a welfare agency. In most of these cases the pattern would require basic changes in administrative organization. However difficult they may be to implement, we believe these changes are required.

Therefore:

In any institution whose departments provide public service:

1. Make each service or department autonomous as far as possible.
2. Allow no one service more than 12 staff members total.
3. House each one in an identifiable piece of the building.
4. Give each one direct access to a public thoroughfare.





Arrange these departments in space, according to the prescription of OFFICE CONNECTIONS (82) and BUILDING COMPLEX (95); if the public thoroughfare is indoors, make it a BUILDING THOROUGHFARE (101), and make the fronts of the services visible as a FAMILY OF ENTRANCES (102); wherever the services are in any way connected to the political life of the community, mix them with ad hoc groups created by the citizens or users—NECKLACE OF COMMUNITY PROJECTS (45); arrange the inside space of the department according to FLEXIBLE OFFICE SPACE (146); and provide rooms where people can team up in two's and three's—SMALL WORK GROUPS (148). . . .

82 OFFICE CONNECTIONS*

. . . in any work community or any office, there are always various human groups—and it is always important to decide how these groups shall be placed, in space. Which should be near each other, which ones further apart? This pattern gives the answer to this question, and in doing so, helps greatly to construct the inner layout of a WORK COMMUNITY (41) or of SELF-GOVERNING WORKSHOPS AND OFFICES (80) or of SMALL SERVICES WITHOUT RED TAPE (81).



If two parts of an office are too far apart, people will not move between them as often as they need to; and if they are more than one floor apart, there will be almost no communication between the two.

Current architectural methods often include a proximity matrix, which shows the amount of movement between different people and functions in an office or a hospital. These methods always make the tacit assumption that the functions which have the most movement between them should be closest together. *However, as usually stated, this concept is completely invalid.*

The concept has been created by a kind of Taylorian quest for efficiency, in which it is assumed that the less people walk about, the less of their salary is spent on “wasteful” walking. The logical conclusion of this kind of analysis is that, if it were only possible, people should not have to walk at all, and should spend the day vegetating in their armchairs.

The fact is that people work best only when they are healthy in mind and body. A person who is forced to sit all day long behind a desk, without ever stretching his legs, will become restless and unable to work, and inefficient in this way. Some walking is very good for you. It is not only good for the body, but also gives people an opportunity for a change of scene, a way

of thinking about something else, a chance to reflect on some detail of the morning's work or one of the everyday human problems in the office.

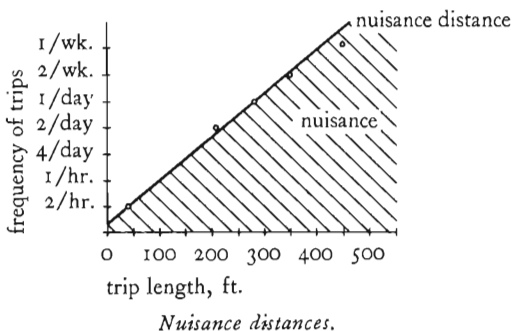
On the other hand, if a person has to make the same trip, many times, there is a point at which the length of the trip becomes time-consuming and annoying, and then inefficient, because it makes the person irritable, and finally critical when a person starts avoiding trips because they are too long and too frequent.

An office will function efficiently so long as the people who work there do not feel that the trips they have to take are a nuisance. Trips need to be short enough so they are not felt a nuisance—but they do not need to be any shorter.

The nuisance of a trip depends on the relationship between length and frequency. You can walk 10 feet to a file many times a day without being annoyed by it; you can walk 400 feet occasionally without being annoyed. In the graph below we plot the nuisance threshold for various combinations of length and frequency.

The graph is based on 127 observations in the Berkeley City Hall. People were asked to define all the trips they had to make regularly during the work week, to state their frequency, and then to state whether they considered the trip to be a nuisance.

The line on the graph shows the median of the distances said to be a nuisance for each different frequency. We define distances to the right of this line as nuisance distances. The nuisance distance for any trip frequency is the distance at which we predict that at least 50 per cent of all people will begin to consider this distance a nuisance.



So far, our discussion of proximity has been based on *horizontal* distances. How do stairs enter in? What part does vertical distance play in the experience of proximity? Or, to put it more precisely, what is the horizontal equivalent of one flight of stairs? Suppose two departments need to be within 100 feet of one another, according to the proximity graph—and suppose that they are for some reason on different stories, one floor apart. How much of the 100 feet does the stair eat up: with the stair between them, how far apart can they be horizontally?

We do not know the exact answer to this question. However, we do have some indirect evidence from an unpublished study by Marina Estabrook and Robert Sommer. As we shall see, this study shows that stairs play a much greater role, and eat up much more “distance” than you might imagine.

Estabrook and Sommer studied the formation of acquaintances in a three-story university building, where several different departments were housed. They asked people to name all the people they knew in departments other than their own. Their results were as follows:

Percent of people known:	When departments are:
12.2	on same floor
8.9	one floor apart
2.2	two floors apart

People knew 12.2 per cent of the people from other departments on the *same* floor as their own, 8.9 per cent of the people from other departments *one* floor apart from their own floor, and only 2.2 per cent of the people from other departments *two* floors apart from their own. In short, by the time departments are separated by two floors or more, there is virtually no informal contact between the departments.

Unfortunately, our own study of proximity was done before we knew about these findings by Estabrook and Sommer; so we have not yet been able to define the relation between the two kinds of distance. It is clear, though, that one stair must be equivalent to a rather considerable horizontal distance; and that two flights of stairs have almost three times the effect of a single stair. On the basis of this evidence, we conjecture that one stair is equal to about 100 horizontal feet in its effect on interaction

and feelings of distance; and that two flights of stairs are equal to about 300 horizontal feet.

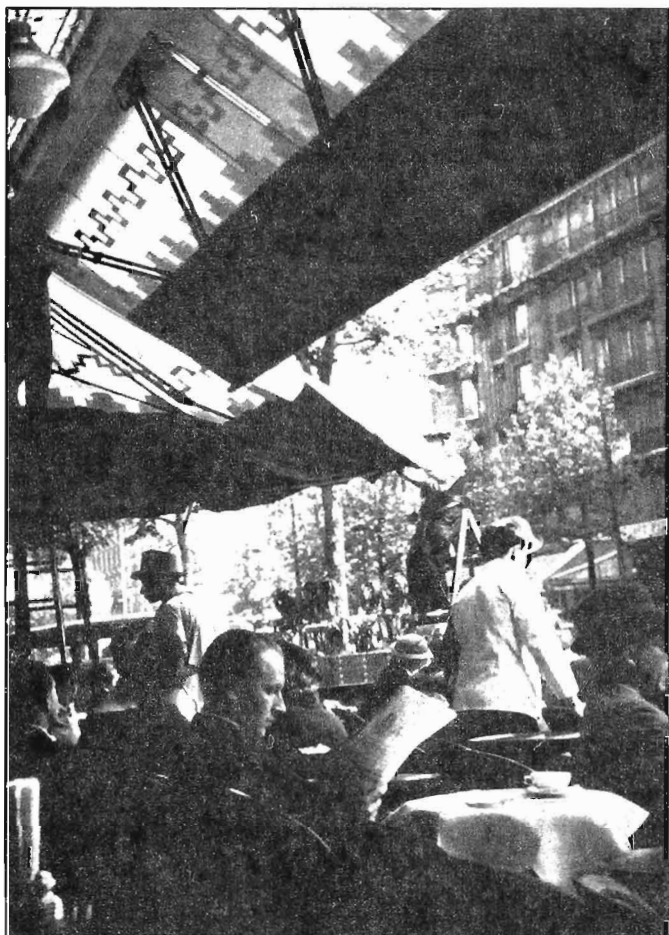
Therefore:

To establish distances between departments, calculate the number of trips per day made between each two departments; get the "nuisance distance" from the graph above; then make sure that the physical distance between the two departments is less than the nuisance distance. Reckon one flight of stairs as about 100 feet, and two flights of stairs as about 300 feet.



Keep the buildings which house the departments in line with the FOUR-STORY LIMIT (21), and get their shape from BUILDING COMPLEX (95). Give every working group on upper storys its own stair to connect it directly to the public world—PEDESTRIAN STREET (100), OPEN STAIRS (158); if there are internal corridors between groups, make them large enough to function as streets—BUILDING THOROUGHFARE (101); and identify each workgroup clearly, and give it a well-marked entrance, so that people easily find their way from one to another—FAMILY OF ENTRANCES (102). . . .

88 STREET CAFE**



. . . neighborhoods are defined by IDENTIFIABLE NEIGHBORHOOD (14); their natural points of focus are given by ACTIVITY NODES (30) and SMALL PUBLIC SQUARES (61). This pattern, and the ones which follow it, give the neighborhood and its points of focus, their identity.



The street cafe provides a unique setting, special to cities: a place where people can sit lazily, legitimately, be on view, and watch the world go by.

The most humane cities are always full of street cafes. Let us try to understand the experience which makes these places so attractive.

We know that people enjoy mixing in public, in parks, squares, along promenades and avenues, in street cafes. The preconditions seem to be: the setting gives you the right to be there, by custom; there are a few things to do that are part of the scene, almost ritual: reading the newspaper, strolling, nursing a beer, playing catch; and people feel safe enough to relax, nod at each other, perhaps even meet. A good cafe terrace meets these conditions. But it has in addition, special qualities of its own: a person may sit there for hours—in public! Strolling, a person must keep up a pace; loitering is only for a few minutes. You can sit still in a park, but there is not the volume of people passing, it is more a private, peaceful experience. And sitting at home on one's porch is again different: it is far more protected; and there is not the mix of people passing by. But on the cafe terrace, you can sit still, relax, and be very public. As an experience it has special possibilities; "perhaps the next person . . ."; it is a risky place.

It is this experience that the street cafe supports. And it is one of the attractions of cities, for only in cities do we have the concentration of people required to bring it off. But this experience need not be confined to the special, extraordinary parts of town. In European cities and towns, there is a street cafe in every neighborhood—they are as ordinary as gas stations are in the United

States. And the existence of such places provides social glue for the community. They become like clubs—people tend to return to their favorite, the faces become familiar. When there is a successful cafe within walking distance of your home, in the neighborhood, so much the better. It helps enormously to increase the identity of a neighborhood. It is one of the few settings where a newcomer to the neighborhood can start learning the ropes and meeting the people who have been there many years.

The ingredients of a successful street cafe seem to be:

1. There is an established local clientele. That is, by name, location, and staff, the cafe is very much anchored in the neighborhood in which it is situated.

2. In addition to the terrace which is open to the street, the cafe contains several other spaces: with games, fire, soft chairs, newspapers. . . . This allows a variety of people to start using it, according to slightly different social styles.

3. The cafe serves simple food and drinks—some alcoholic drinks, but it is not a bar. It is a place where you are as likely to go in the morning, to start the day, as in the evening, for a nightcap.

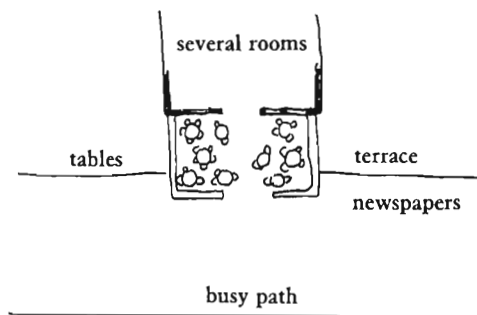
When these conditions are present, and the cafe takes hold, it offers something unique to the lives of the people who use it: it offers a setting for discussions of great spirit—talks, two-bit lectures, half-public, half-private, learning, exchange of thought.

When we worked for the University of Oregon, we compared the importance of such discussion in cafes and cafe-like places, with the instruction students receive in the classroom. We interviewed 30 students to measure the extent that shops and cafes contributed to their intellectual and emotional growth at the University. We found that "talking with a small group of students in a coffee shop" and "discussion over a glass of beer" scored as high and higher than "examinations" and "laboratory study." Apparently the informal activities of shops and cafes contribute as much to the growth of students, as the more formal educational activities.

We believe this phenomenon is general. The quality that we tried to capture in these interviews, and which is present in a neighborhood cafe, is essential to all neighborhoods—not only student neighborhoods. It is part of their life-blood.

Therefore:

Encourage local cafes to spring up in each neighborhood. Make them intimate places, with several rooms, open to a busy path, where people can sit with coffee or a drink and watch the world go by. Build the front of the cafe so that a set of tables stretch out of the cafe, right into the street.



Build a wide, substantial opening between the terrace and the indoors—OPENING TO THE STREET (165); make the terrace double as A PLACE TO WAIT (150) for nearby bus stops and offices; both indoors and on the terrace use a great variety of different kinds of chairs and tables—DIFFERENT CHAIRS (251); and give the terrace some low definition at the street edge if it is in danger of being interrupted by street action—STAIR SEATS (125), SITTING WALL (243), perhaps a CANVAS ROOF (244). For the shape of the building, the terrace, and the surroundings, begin with BUILDING COMPLEX (95). . . .

92 BUS STOP*



. . . within a town whose public transportation is based on **MINI-BUSES** (20), genuinely able to serve people, almost door to door, for a low price, and very fast, there need to be bus stops within a few hundred feet of every house and workplace. This pattern gives the form of the bus stops.



Bus stops must be easy to recognize, and pleasant, with enough activity around them to make people comfortable and safe.

Bus stops are often dreary because they are set down independently, with very little thought given to the experience of waiting there, to the relationship between the bus stop and its surroundings. They are places to stand idly, perhaps anxiously, waiting for the bus, always watching for the bus. It is a shabby experience; nothing that would encourage people to use public transportation.

The secret lies in the web of relationships that are present in the tiny system around the bus stop. If they knit together, and reinforce each other, adding choice and shape to the experience, the system is a good one: but the relationships that make up such a system are extremely subtle. For example, a system as simple as a traffic light, a curb, and street corner can be enhanced by viewing it as a distinct node of public life: people wait for the light to change, their eyes wander, perhaps they are not in such a hurry. Place a newsstand and a flower wagon at the corner and the experience becomes more coherent.

The curb and the light, the paperstand and the flowers, the awning over the shop on the corner, the change in people's pockets—all this forms a web of mutually sustaining relationships.

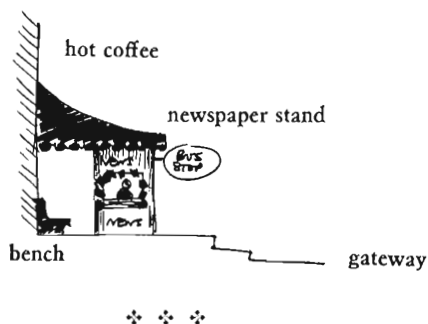
The possibilities for each bus stop to become part of such a web are different—in some cases it will be right to make a system that will draw people into a private reverie—an old tree; another time one that will do the opposite—give shape to the social possibilities—a coffee stand, a canvas roof, a decent place to sit for people who are not waiting for the bus.



Two bus stops.

Therefore:

Build bus stops so that they form tiny centers of public life. Build them as part of the gateways into neighborhoods, work communities, parts of town. Locate them so that they work together with several other activities, at least a newsstand, maps, outdoor shelter, seats, and in various combinations, corner groceries, smoke shops, coffee bar, tree places, special road crossings, public bathrooms, squares. . . .



Make a full gateway to the neighborhood next to the bus stop, or place the bus stop where the best gateway is already—MAIN GATEWAY (53); treat the physical arrangement according to the patterns for PUBLIC OUTDOOR ROOM (69), PATH SHAPE (121), and A PLACE TO WAIT (150); provide a FOOD STAND (93); place the seats according to sun, wind protection, and view—SEAT SPOTS (241). . . .

93 FOOD STANDS*



. . . throughout the neighborhood there are natural public gathering places—ACTIVITY NODES (30), ROAD CROSSINGS (54), RAISED WALKS (55), SMALL PUBLIC SQUARES (61), BUS STOPS (92). All draw their life, to some extent, from the food stands, the hawkers, and the vendors who fill the street with the smell of food.



Many of our habits and institutions are bolstered by the fact that we can get simple, inexpensive food on the street, on the way to shopping, work, and friends.

The food stands which make the best food, and which contribute most to city life, are the smallest shacks and carts from which individual vendors sell their wares. Everyone has memories of them.

But in their place we now have shining hamburger kitchens, fried chicken shops, and pancake houses. They are chain operations, with no roots in the local community. They sell "plastic," mass-produced frozen food, and they generate a shabby quality of life around them. They are built to attract the eye of a person driving: the signs are huge; the light is bright neon. They are insensitive to the fabric of the community. Their parking lots around them kill the public open space.

If we want food in our streets contributing to the social life of the streets, not helping to destroy it, the food stands must be made and placed accordingly.

We propose four rules:

1. The food stands are concentrated at ROAD CROSSINGS (54) of the NETWORK OF PATHS AND CARS (52). It is possible to see them from cars and to expect them at certain kinds of intersections, but they do not have special parking lots around them—see NINE PER CENT PARKING (22).

2. The food stands are free to take on a character that is compatible with the neighborhood around them. They can be

TOWNS

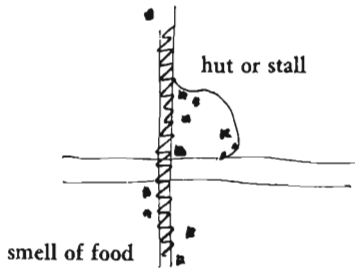
freestanding carts, or built into the corners and crevices of existing buildings; they can be small huts, part of the fabric of the street.

3. The smell of the food is out in the street; the place can be surrounded with covered seats, sitting walls, places to lean and sip coffee, part of the larger scene, not sealed away in a plate glass structure, surrounded by cars. The more they smell, the better.

4. They are never franchises, but always operated by their owners. The best food always comes from family restaurants; and the best food in a foodstand always comes when people prepare the food and sell it themselves, according to their own ideas, their own recipes, their own choice.

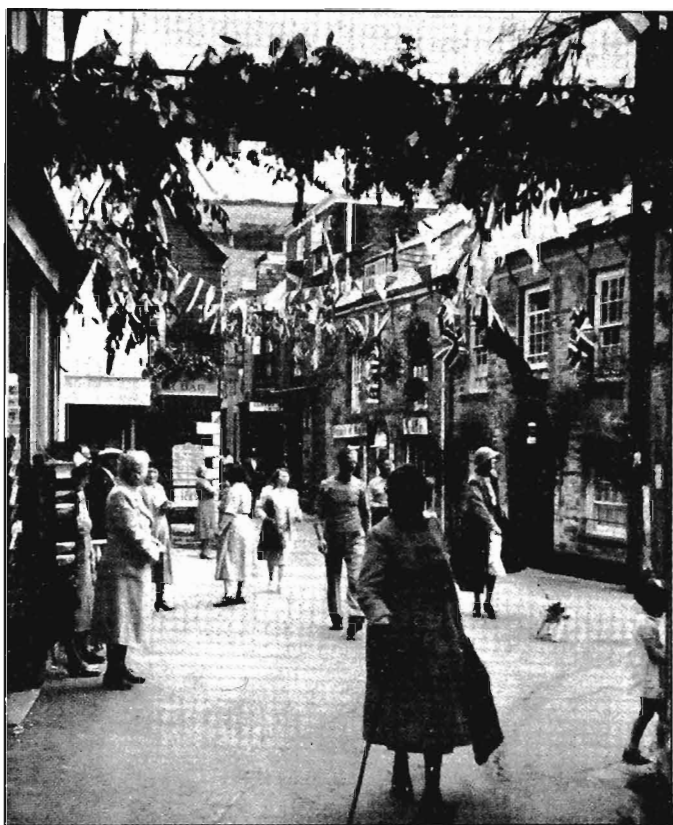
Therefore:

Concentrate food stands where cars and paths meet—either portable stands or small huts, or built into the fronts of buildings, half-open to the street.



Treat these food stands as **ACTIVITY POCKETS** (124) when they are part of a square; Use canvas roofs to make a simple shelter over them—**CANVAS ROOF** (244); and keep them in line with the precepts of **INDIVIDUALLY OWNED SHOPS** (87): the best food always comes from people who are in business for themselves, who buy the raw food, and prepare it in their own style. . . .

100 PEDESTRIAN STREET**



. . . the earlier patterns—PROMENADE (31), SHOPPING STREET (32) and NETWORK OF PATHS AND CARS (52), all call for dense pedestrian streets; ROW HOUSES (38), HOUSING HILL (39), UNIVERSITY AS A MARKETPLACE (43), MARKET OF MANY SHOPS (46), all do the same; and within the BUILDING COMPLEX (95), CIRCULATION REALMS (98) calls for the same. As you build a pedestrian street, make sure you place it so that it helps to generate a NETWORK OF PATHS AND CARS (52), RAISED WALKS (55), and CIRCULATION REALMS (98) in the town around it.



The simple social intercourse created when people rub shoulders in public is one of the most essential kinds of social "glue" in society.

In today's society this situation, and therefore this glue, is largely missing. It is missing in large part because so much of the actual process of movement is now taking place in indoor corridors and lobbies, instead of outdoors. This happens partly because the cars have taken over streets, and made them uninhabitable, and partly because the corridors, which have been built in response, encourage the same process. But it is doubly damaging in its effect.

It is damaging because it robs the streets of people. Most of the moving about which people do is indoors—hence lost to the street; the street becomes abandoned and dangerous.

And it is damaging because the indoor lobbies and corridors are most often dead. This happens partly because indoor space is not as public as outdoor space; and partly because, in a multi-story building each corridor carries a lower density of traffic than a public outdoor street. It is therefore unpleasant, even unnerving, to move through them; people in them are in no state to generate, or benefit from, social intercourse.

To recreate the social intercourse of public movement, as far as possible, the movement between rooms, offices, departments, buildings, must actually be outdoors, on sheltered walks, arcades, paths,

BUILDINGS

streets, which are truly public and separate from cars. Individual wings, small buildings, departments must as often as possible have their own entrances—so that the number of entrances onto the street increases and life comes back to the street.

In short, the solution to these two problems we have mentioned—the streets infected by cars and the bland corridors—is the pedestrian street. Pedestrian streets are both places to walk along (from car, bus, or train to one's destination) and places to pass through (between apartments, shops, offices, services, classes).

To function properly, pedestrian streets need two special properties. First, of course, no cars; but frequent crossings by streets with traffic, see *NETWORK OF PATHS AND CARS* (52): deliveries and other activities which make it essential to bring cars and trucks onto the pedestrian street must be arranged at the early hours of the morning, when the streets are deserted. Second, the buildings along pedestrian streets must be planned in a way which as nearly as possible eliminates indoor staircases, corridors, and lobbies, and leaves most circulation outdoors. This creates a street lined with stairs, which lead from all upstairs offices and rooms directly to the street, and many many entrances, which help to increase the life of the street.

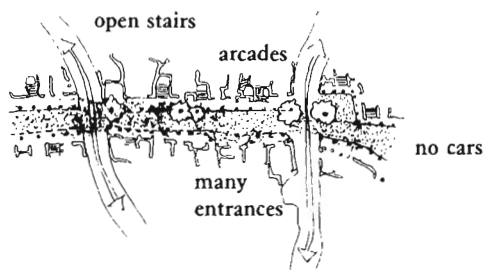
Finally it should be noted that the pedestrian streets which seem most comfortable are the ones where the width of the street does not exceed the height of the surrounding buildings. (See "Vehicle free zones in city centers," *International Brief* #16, U.S. Department of Housing and Urban Development, Office of International Affairs, June 1972).



About square . . . or even narrower.

Therefore:

Arrange buildings so that they form pedestrian streets with many entrances and open stairs directly from the upper stories to the street, so that even movement between rooms is outdoors, not just movement between buildings.



The street absolutely will not work unless its total area is small enough to be well filled by the pedestrians in it—PEDESTRIAN DENSITY (123). Make frequent entrances and open stairs along the street, instead of building indoor corridors, to bring the people out; and give these entrances a family resemblance so one sees them as a system—FAMILY OF ENTRANCES (102), OPEN STAIRS (158); give people indoor and outdoor spaces which look on the street—PRIVATE TERRACE ON THE STREET (140), STREET WINDOWS (164), OPENING TO THE STREET (165), GALLERY SURROUND (166), SIX-FOOT BALCONY (167); and shape the street to make a space of it—ARCADE (119), PATH SHAPE (121). . . .

120 PATHS AND GOALS*



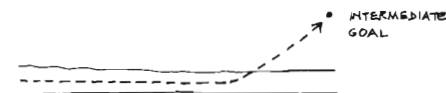
. . . once buildings and arcades and open spaces have been roughly fixed by BUILDING COMPLEX (95), WINGS OF LIGHT (107), POSITIVE OUTDOOR SPACE (106), ARCADES (119)—it is time to pay attention to the paths which run between the buildings. This pattern shapes these paths and also helps to give more detailed form to DEGREES OF PUBLICNESS (36), NETWORK OF PATHS AND CARS (52), and CIRCULATION REALMS (98).



The layout of paths will seem right and comfortable only when it is compatible with the process of walking. And the process of walking is far more subtle than one might imagine.

Essentially there are three complementary processes:

1. As you walk along you scan the landscape for intermediate destinations—the furthest points along the path which you can see. You try, more or less, to walk in a straight line toward these points. This naturally has the effect that you will cut corners and take “diagonal” paths, since these are the ones which often form straight lines between your present position and the point which you are making for.

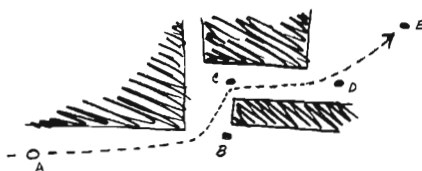


Path to a goal.

2. These intermediate destinations keep changing. The further you walk, the more you can see around the corner. If you always walk straight toward this furthest point and the furthest point keeps changing, you will actually move in a slow curve, like a missile tracking a moving target.

*Series of goals.*

3. Since you do not want to keep changing direction while you walk and do not want to spend your whole time re-calculating your best direction of travel, you arrange your walking process in such a way that you pick a temporary "goal"—some clearly visible landmark—which is more or less in the direction you want to take and then walk in a straight line toward it for a hundred yards, then, as you get close, pick another new goal, once more a hundred yards further on, and walk toward it. . . . You do this so that in between, you can talk, think, daydream, smell the spring, without having to think about your walking direction every minute.

*The actual path.*

In the diagram above a person begins at A and heads for point E. Along the way, his intermediate goals are points B, C, and D. Since he is trying to walk in a roughly straight line toward E, his intermediate goal changes from B to C, as soon as C is visible; and from C to D, as soon as D is visible.

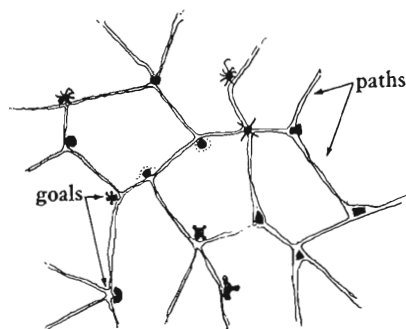
The proper arrangements of paths is one with enough intermediate goals, to make this process workable. If there aren't enough intermediate goals, the process of walking becomes more difficult, and consumes unnecessary emotional energy.

Therefore:

To lay out paths, first place goals at natural points of interest. Then connect the goals to one another to form the

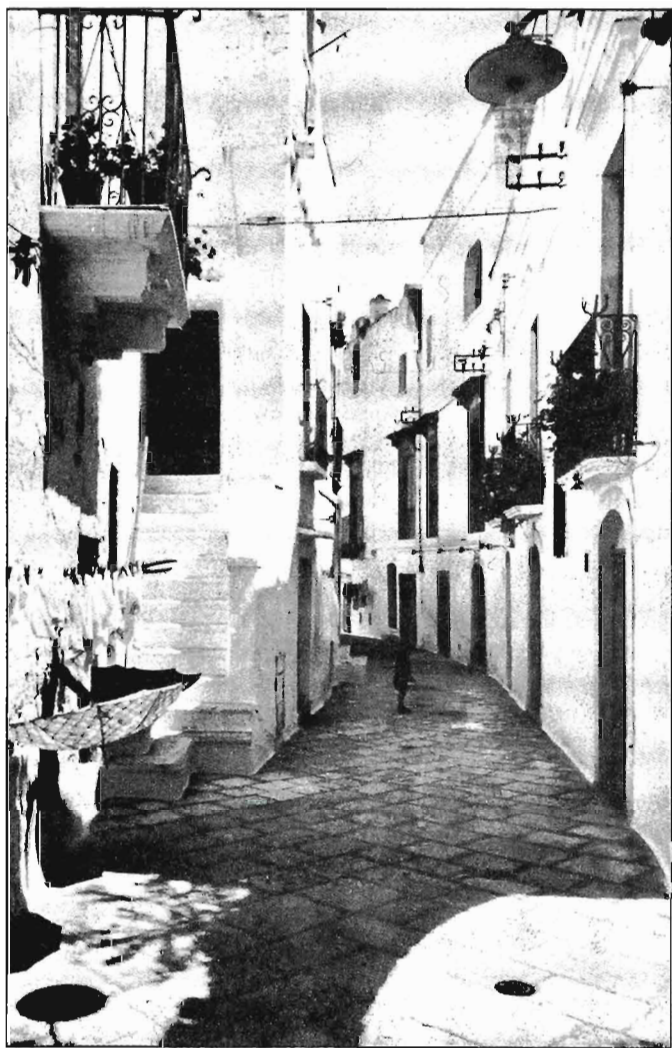
BUILDINGS

paths. The paths may be straight, or gently curving between goals; their paving should swell around the goal. The goals should never be more than a few hundred feet apart.



All the ordinary things in the outdoors—trees, fountains, entrances, gateways, seats, statues, a swing, an outdoor room—can be the goals. See FAMILY OF ENTRANCES (102), MAIN ENTRANCE (110), TREE PLACES (171), SEAT SPOTS (241), RAISED FLOWERS (245); build the “goals” according to the rules of SOMETHING ROUGHLY IN THE MIDDLE (126); and shape the paths according to PATH SHAPE (121). To pave the paths use PAVING WITH CRACKS BETWEEN THE STONES (247). . . .

121 PATH SHAPE*



. . . paths of various kinds have been defined by larger patterns—PROMENADE (31), SHOPPING STREET (32), NETWORK OF PATHS AND CARS (52), RAISED WALK (55), PEDESTRIAN STREET (100), and PATHS AND GOALS (120). This pattern defines their shape: and it can also help to generate these larger patterns piecemeal, through the very process of shaping parts of the path.



Streets should be for staying in, and not just for moving through, the way they are today.

For centuries, the street provided city dwellers with usable public space right outside their houses. Now, in a number of subtle ways, the modern city has made streets which are for “going through,” not for “staying in.” This is reinforced by regulations which make it a crime to loiter, by the greater attractions inside the side itself, and by streets which are so unattractive to stay in, that they almost force people into their houses.

From an environmental standpoint, the essence of the problem is this: streets are “centrifugal” not “centripetal”: they drive people out instead of attracting them in. In order to combat this effect, the pedestrian world outside houses must be made into the kind of place where you stay, rather than the kind of place you move through. It must, in short, be made like a kind of outside public room, with a greater sense of enclosure than a street.

This can be accomplished if we make residential pedestrian streets subtly convex in plan with seats and galleries around the edges, and even sometimes roof the streets with beams or trellis-work.

Here are two examples of this pattern, at two different scales. First, we show a plan of ours for fourteen houses in Peru. The street shape is created by gradually stepping back the houses, in plan. The result is a street with a positive, somewhat elliptical shape. We hope it is a place that will encourage people to slow down and spend time there.



The path shape formed by fourteen houses.

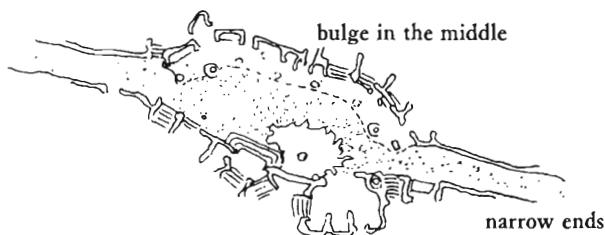
The second example is a very small path, cutting through a neighborhood in the hills of Berkeley. Again, the shape swells out subtly, just in those places where it is good to pause and sit.



A spot along a path in the hills of Berkeley.

Therefore:

Make a bulge in the middle of a public path, and make the ends narrower, so that the path forms an enclosure which is a place to stay, not just a place to pass through.



BUILDINGS



Above all, to create the shape of the path, move the building fronts into the right positions, and on no account allow a set-back between the building and the path—BUILDING FRONTS (122); decide on the appropriate area for the “bulge” by using the arithmetic of PEDESTRIAN DENSITY (123); then form the details of the bulge with ARCADES (119), ACTIVITY POCKETS (124) and STAIR SEATS (125); perhaps even with a PUBLIC OUTDOOR ROOM (69); and give as much life as you can to the path all along its length with windows—STREET WINDOWS (164). . . .

122 BUILDING FRONTS*

. . . this pattern helps to shape the paths and buildings simultaneously; and so completes BUILDING COMPLEX (95), WINGS OF LIGHT (107), POSITIVE OUTDOOR SPACE (106), ARCADES (119), PATH SHAPE (121), and also ACTIVITY POCKETS (124).



Building set-backs from the street, originally invented to protect the public welfare by giving every building light and air, have actually helped greatly to destroy the street as a social space.

In POSITIVE OUTDOOR SPACE (106) we have described the fact that buildings are not merely placed into the outdoors, but that they actually shape the outdoors. Since streets and squares have such enormous social importance, it is natural to pay close attention to the way that they are shaped by building fronts.

The early twentieth-century urge for "cleanliness" at all costs, and the social efforts to clean up slums, led social reformers to pass laws which make it necessary to place buildings several feet back from the street edge, to make sure that buildings cannot crowd the street and cut off sunshine, light, and air.

But, the set backs have destroyed the streets. Since it is possible to guarantee plenty of air and sun in buildings and streets in other ways—see, for example, FOUR-STORY LIMIT (21) and WINGS OF LIGHT (107)—it is essential to build the front of buildings on the street, so that the streets which they create are usable.

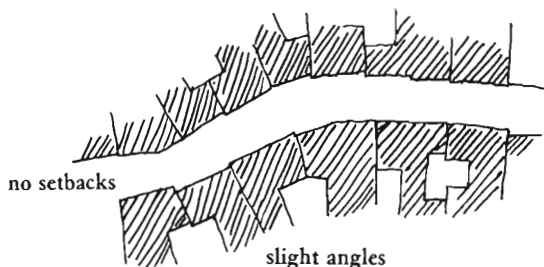
Finally, note that the positive shape of the street cannot be achieved by merely staggering building fronts. If the building fronts are adjusted to the shape of the outdoors, they will almost always take on a variety of slightly uneven angles.



Slight angles in the building fronts.

Therefore:

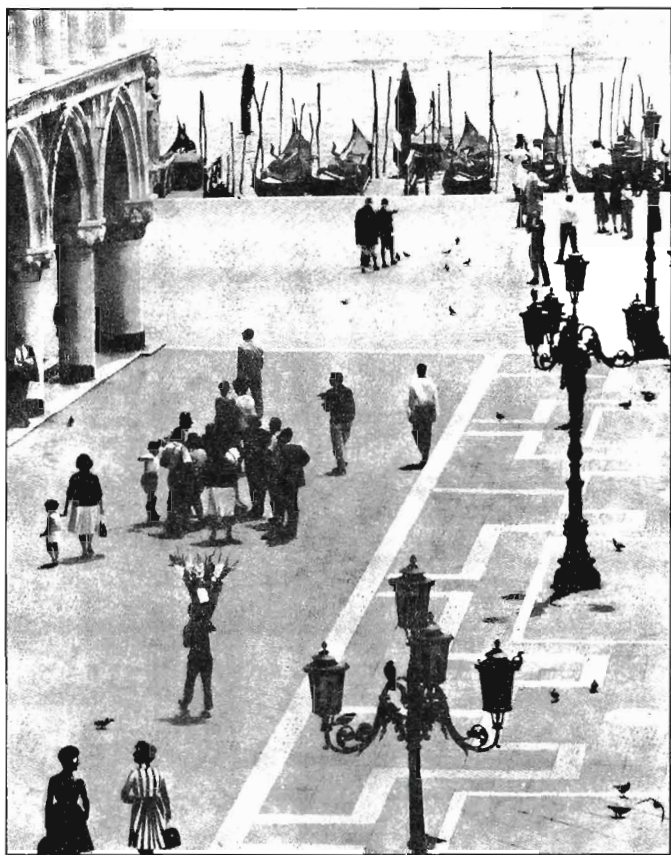
On no account allow set-backs between streets or paths or public open land and the buildings which front on them. The set-backs do nothing valuable and almost always destroy the value of the open areas between the buildings. Build right up to the paths; change the laws in all communities where obsolete by-laws make this impossible. And let the building fronts take on slightly uneven angles as they accommodate to the shape of the street.





Detail the fronts of buildings, indeed the whole building perimeter, according to the pattern BUILDING EDGE (160). If some outdoor space is needed at the front of the building, make it part of the street life by making it a PRIVATE TERRACE ON THE STREET (140) or GALLERY SURROUND (166); and give the building many openings onto the street—STAIR SEATS (125), OPEN STAIRS (158), STREET WINDOWS (164), OPENING TO THE STREET (165), FRONT DOOR BENCH (242). . . .

123 PEDESTRIAN DENSITY*



. . . in various places there are pedestrian areas, paved so that people will congregate there or walk up and down—PROMENADE (31), SMALL PUBLIC SQUARES (61), PEDESTRIAN STREET (100), BUILDING THOROUGHFARE (101), PATH SHAPE (121). It is essential to limit the sizes of these places very strictly, especially the size of areas which are paved, so that they stay alive.



Many of our modern public squares, though intended as lively plazas, are in fact deserted and dead.

In this pattern, we call attention to the relationship between the number of people in a pedestrian area, the size of the area, and a subjective estimate of the extent to which the area is alive.

We do not say categorically that the number of people per square foot *controls* the apparent liveliness of a pedestrian area. Other factors—the nature of the land around the edge, the grouping of people, what the people are doing—obviously contribute greatly. People who are running, especially if they are making noise, add to the liveliness. A small group attracted to a couple of folk singers in a plaza give much more life to the place than the same number sunning on the grass.

However, the number of square feet per person does give a reasonably crude estimate of the liveliness of a space. Christie Coffin's observations show the following figures for various public places in and around San Francisco. Her estimate of the liveliness of the places is given in the right-hand column.

	<u>Sq. ft. per person</u>	
Golden Gate Plaza, noon:	1000	Dead
Fresno Mall:	100	Alive
Sproul Plaza, daytime:	150	Alive
Sproul Plaza, evening:	2000	Dead
Union Square, central part:	600	Half-dead

Although these subjective estimates are clearly open to question, they suggest the following rule of thumb: At 150 square feet per person, an area is lively. If there are more than 500 square feet per person, the area begins to be dead.

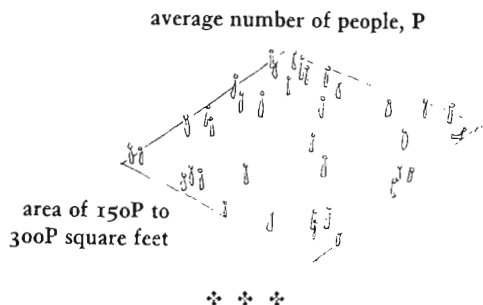
BUILDINGS

Even if these figures are only correct to within an order of magnitude, we can use them to shape public pedestrian areas—squares, indoor streets, shopping streets, promenades.

To use the pattern it is essential to make a rough estimate of the number of people that are *typically* found in a given space at any moment of its use. In the front area of a market, for example, we might find that typically there are three people lingering and walking. Then we shall want the front of this market to form a little square, no larger than 450 square feet. If we estimate a pedestrian street will typically contain 35 people window shopping and walking, we shall want the street to form an enclosure of roughly 5000 square feet. (For an example of this calculation in a more complicated case—the case of a square in a public building that has yet to be built—see *A Pattern Language Which Generates Multi-Service Centers*, Alexander, Ishikawa, Silverstein, Center for Environmental Structure, 1968, p. 148.)

Therefore:

For public squares, courts, pedestrian streets, any place where crowds are drawn together, estimate the mean number of people in the place at any given moment (P), and make the area of the place between $150P$ and $300P$ square feet.



Embellish the density and feeling of life with areas at the edge which are especially crowded—STREET CAFE (88), ACTIVITY POCKETS (124), STAIR SEATS (125), PRIVATE TERRACE ON THE STREET (140), BUILDING EDGE (160), STREET WINDOWS (164), OPENING TO THE STREET (165), GALLERY SURROUND (166). . . .

124 ACTIVITY POCKETS**



. . . in many large scale patterns which define public space, the edge is critical: PROMENADE (31), SMALL PUBLIC SQUARES (61), PUBLIC OUTDOOR ROOM (69), PEDESTRIAN STREET (100), BUILDING THOROUGHFARE (101), PATH SHAPE (121). This pattern helps complete the edge of all these larger patterns.



The life of a public square forms naturally around its edge. If the edge fails, then the space never becomes lively.

In more detail: people gravitate naturally toward the edge of public spaces. They do not linger out in the open. If the edge does not provide them with places where it is natural to linger, the space becomes a place to walk through, not a place to stop. It is therefore clear that a public square should be surrounded by pockets of activity: shops, stands, benches, displays, rails, courts, gardens, news racks. In effect, the edge must be scalloped.

Further, the process of lingering is a gradual one; it happens; people do not make up their minds to stay; they stay or go, according to a process of gradual involvement. This means that the various pockets of activity around the edge should all be next to paths and entrances so that people pass right by them as they pass through. The goal-oriented activity of coming and going then has a chance to turn gradually into something more relaxed. And once many small groups form around the edge, it is likely that they will begin to overlap and spill in toward the center of the square. We therefore specify that pockets of activity must alternate with access points.



A conceptual diagram.

The scalloped edge must surround the space entirely. We may see this clearly as follows: draw a circle to represent the space, and darken some part of its perimeter to stand for the scalloped edge. Now draw chords which join different points along this darkened perimeter. As the length of the darkened edge gets smaller, the area of the space covered by these chords wanes drastically. This shows how quickly the life in the space will drop when the length of the scalloped edge gets shorter. To make the space lively, the scalloped edge must surround the space completely.



*As the activities grow around the space,
it becomes more lively.*

When we say that the edge must be scalloped with activity, we mean this conceptually—not literally. In fact, to build this pattern, you must build the activity pockets *forward* into the square: first rough out the major paths that cross the space and the spaces left over between these paths; then build the activity pockets into these “in-between” spaces, bringing them forward, into the square.



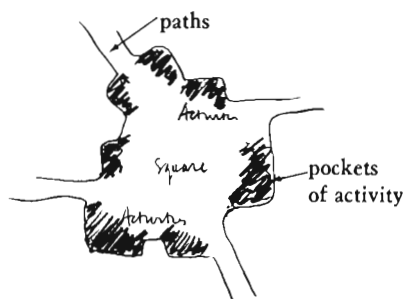
A pocket of activity which bulges into the square.

Therefore:

Surround public gathering places with pockets of activity—small, partly enclosed areas at the edges, which jut for-

BUILDINGS

ward into the open space between the paths, and contain activities which make it natural for people to pause and get involved.



Lead paths between the pockets of activity—PATHS AND GOALS (120)—and shape the pockets themselves with arcades and seats, and sitting walls, and columns and trellises—ARCADES (119), OUTDOOR ROOM (163), TRELLISED WALK (174), SEAT SPOTS (241), SITTING WALL (243); above all shape them with the fronts of buildings—BUILDING FRONTS (122); and include, within the pockets, newsstands—BUS STOPS (92), FOOD STANDS (93), gardens, games, small shops, STREET CAFES (88), and A PLACE TO WAIT (150). . . .

125 STAIR SEATS*



. . . we know that paths and larger public gathering places need a definite shape and a degree of enclosure, with people looking into them, not out of them—SMALL PUBLIC SQUARES (61), POSITIVE OUTDOOR SPACE (106), PATH SHAPE (121). Stairs around the edge do it just perfectly; and they also help embellish FAMILY OF ENTRANCES (102), MAIN ENTRANCES (110), and OPEN STAIRS (158).



Wherever there is action in a place, the spots which are the most inviting, are those high enough to give people a vantage point, and low enough to put them in action.

On the one hand, people seek a vantage point from which they can take in the action as a whole. On the other hand, they still want to be part of the action; they do not want to be mere onlookers. Unless a public space provides for both these tendencies, a lot of people simply will not stay there.

For a person looking at the horizon, the visual field is far larger below the horizon than above it. It is therefore clear that anybody who is "people-watching" will naturally try to take up a position a few feet above the action.

The trouble is that this position will usually have the effect of removing a person from the action. Yet most people want to be able to take the action in and to be part of it at the same time. This means that any places which are slightly elevated must also be within easy reach of passers-by, hence on circulation paths, and directly accessible from below.

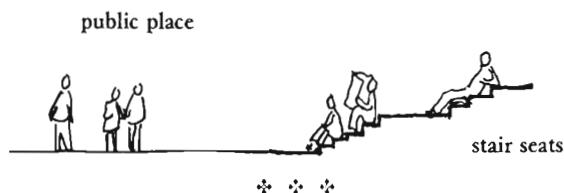
The bottom few steps of stairs, and the balusters and rails along stairs, are precisely the kinds of places which resolve these tendencies. People sit on the edges of the lower steps, if they are wide enough and inviting, and they lean against the rails.

There is a simple kind of evidence, both for the reality of the forces described here and for the value of the pattern. When there are areas in public places which are both slightly raised and very accessible, people naturally gravitate toward them.

Stepped cafe terraces, steps surrounding public plazas, stepped porches, stepped statues and seats, are all examples.

Therefore:

In any public place where people loiter, add a few steps at the edge where stairs come down or where there is a change of level. Make these raised areas immediately accessible from below, so that people may congregate and sit to watch the goings-on.



Give the stair seats the same orientation as SEAT SPOTS (241). Make the steps out of wood or tile or brick so that they wear with time, and show the marks of feet, and are soft to the touch for people sitting on them—SOFT TILE AND BRICK (248); and make the steps connect directly to surrounding buildings—CONNECTION TO THE EARTH (168). . . .

126 SOMETHING ROUGHLY IN THE MIDDLE

. . . SMALL PUBLIC SQUARES (61), COMMON LAND (67), COURTYARDS WHICH LIVE (115), PATII SHAPE (121) all draw their life from the activities around their edges—ACTIVITY POCKETS (124) and STAIR SEATS (125). But even then, the middle is still empty, and it needs embellishment.



A public space without a middle is quite likely to stay empty.

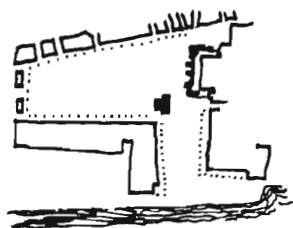
We have discussed the fact that people tend to take up positions from which they are protected, partly, at their backs—HIERARCHY OF OPEN SPACE (114), and the way this fact tends to make the action grow around the edge of public squares—ACTIVITY POCKETS (124), STAIR SEATS (125). If the space is a tiny one, there is no need for anything beyond an edge. But if there is a reasonable area in the middle, intended for public use, it will be wasted unless there are trees, monuments, seats, fountains—a place where people can protect their backs, as easily as they can around the edge. This reason for setting something roughly in the middle of a square is obvious and practical. But perhaps there is an even more primitive instinct at work.

Imagine a bare table in your house. Think of the power of the instinct which tells you to put a candle or a bowl of flowers in the middle. And think of the power of the effect once you have done it. Obviously, it is an act of great significance; yet clearly it has nothing to do with activities at the edge or in the center.

Apparently the effect is purely geometrical. Perhaps it is the sheer fact that the space of the table is given a center, and the point at the center then organizes the space around it, and makes it clear, and puts it roughly at rest. The same thing happens in a courtyard or a public square. It is perhaps related to the man-

dala instinct, which finds in any centrally symmetric figure a powerful receptacle for dreams and images and for conjugations of the self.

We believe that this instinct is at work in every courtyard and every square. Even in the Piazza San Marco, one of the few squares without an obvious center piece, the campanile juts out and creates an off beat center to the two plazas together.



The campanile forms a rough center to the two piazzas.

Camillo Sitte, the great Italian planner, describes the evolution of such focal points and their functional significance in his book *City Planning According to Artistic Principles* (New York: Random House, 1965, pp. 20-31). But interestingly, he claims that the impulse to center something *perfectly* in a square is an "affliction" of modern times.

Imagine the open square of a small market town in the country, covered with deep snow and criss-crossed by several roads and paths that, shaped by the traffic, form the natural lines of communication. Between them are left irregularly distributed patches untouched by traffic. . . .

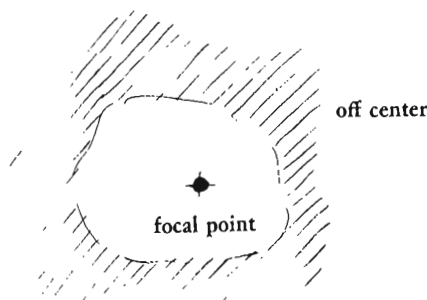
On exactly such spots, undisturbed by the flow of vehicles, rose the fountains and monuments of old communities. . . .

Therefore:

Between the natural paths which cross a public square or courtyard or a piece of common land choose something to stand roughly in the middle: a fountain, a tree, a statue, a clock-tower with seats, a windmill, a bandstand. Make

BUILDINGS

it something which gives a strong and steady pulse to the square, drawing people in toward the center. Leave it exactly where it falls between the paths; resist the impulse to put it exactly in the middle.



Connect the different “somethings” to one another with the path system—PATHS AND GOALS (120). They may include HIGH PLACES (62), DANCING IN THE STREETS (63), POOLS AND STREAMS (64), PUBLIC OUTDOOR ROOM (69), STILL WATER (71), TREE PLACES (171); make sure that each one has a SITTING WALL (243) around it. . . .

Now, with the paths fixed, we come back to the building: Within the various wings of any one building, work out the fundamental gradients of space, and decide how the movement will connect the spaces in the gradients;

127. INTIMACY GRADIENT

128. INDOOR SUNLIGHT

129. COMMON AREAS AT THE HEART

130. ENTRANCE ROOM

131. THE FLOW THROUGH ROOMS

132. SHORT PASSAGES

133. STAIRCASE AS A STAGE

134. ZEN VIEW

135. TAPESTRY OF LIGHT AND DARK

127 INTIMACY GRADIENT**

. . . if you know roughly where you intend to place the building wings—WINGS OF LIGHT (107), and how many stories they will have—NUMBER OF STORIES (96), and where the MAIN ENTRANCE (110) is, it is time to work out the rough disposition of the major areas on every floor. In every building the relationship between the public areas and private areas is most important.



Unless the spaces in a building are arranged in a sequence which corresponds to their degrees of privateness, the visits made by strangers, friends, guests, clients, family, will always be a little awkward.

In any building—house, office, public building, summer cottage—people need a gradient of settings, which have different degrees of intimacy. A bedroom or boudoir is most intimate; a back sitting room or study less so; a common area or kitchen more public still; a front porch or entrance room most public of all. When there is a gradient of this kind, people can give each encounter different shades of meaning, by choosing its position on the gradient very carefully. In a building which has its rooms so interlaced that there is no clearly defined gradient of intimacy, it is not possible to choose the spot for any particular encounter so carefully; and it is therefore impossible to give the encounter this dimension of added meaning by the choice of space. This homogeneity of space, where every room has a similar degree of intimacy, rubs out all possible subtlety of social interaction in the building.

We illustrate this general fact by giving an example from Peru—a case which we have studied in detail. In Peru, friendship is taken very seriously and exists at a number of levels. Casual neighborhood friends will probably never enter the house at all.

Formal friends, such as the priest, the daughter's boyfriend, and friends from work may be invited in, but tend to be limited to a well-furnished and maintained part of the house, the *sala*. This room is sheltered from the clutter and more obvious informality of the rest of the house. Relatives and intimate friends may be made to feel at home in the family room (*comedor-estar*), where the family is likely to spend much of its time. A few relatives and friends, particularly women, will be allowed into the kitchen, other workspaces, and, perhaps, the bedrooms of the house. In this way, the family maintains both privacy and pride.

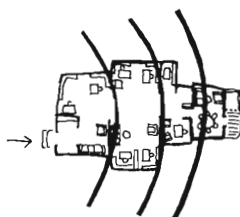
The phenomenon of the intimacy gradient is particularly evident at the time of a *fiesta*. Even though the house is full of people, some people never get beyond the *sala*; some do not even get beyond the threshold of the front door. Others go all the way into the kitchen, where the cooking is going on, and stay there throughout the evening. Each person has a very accurate sense of his degree of intimacy with the family and knows exactly how far into the house he may penetrate, according to this established level of intimacy.

Even extremely poor people try to have a *sala* if they can: we saw many in the *barriadas*. Yet modern houses and apartments in Peru combine *sala* and family room in order to save space. Almost everyone we talked to complained about this situation. As far as we can tell, a Peruvian house must not, under any circumstances, violate the principle of the intimacy gradient.

The intimacy gradient is unusually crucial in a Peruvian house. But in some form the pattern seems to exist in almost all cultures. We see it in widely different cultures—compare the plan of an African compound, a traditional Japanese house, and early American colonial homes—and it also applies to almost every building type—compare a house, a small shop, a large office building, and even a church. It is almost an archetypal ordering principle for all man's buildings. All buildings, and all parts of buildings which house well-defined human groups, need a definite gradient from "front" to "back," from the most formal spaces at the front to the most intimate spaces at the back.

In an office the sequence might be: entry lobby, coffee and reception areas, offices and workspaces, private lounge.

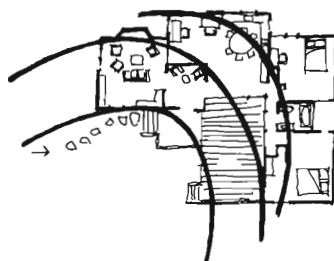
BUILDINGS



Office intimacy gradient.

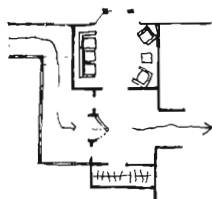
In a small shop the sequence might be: shop entrance, customer milling space, browsing area, sales counter, behind the counter, private place for workers.

In a house: gate, outdoor porch, entrance, sitting wall, common space and kitchen, private garden, bed alcoves.



Intimacy gradient in a house.

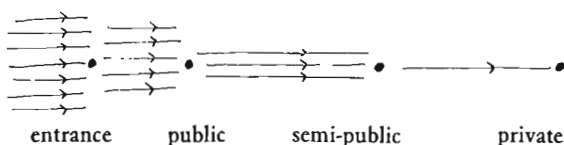
And in a more formal house, the sequence might begin with something like the Peruvian *sala*—a parlor or sitting room for guests.



Formal version of the front of the gradient.

Therefore:

Lay out the spaces of a building so that they create a sequence which begins with the entrance and the most public parts of the building, then leads into the slightly more private areas, and finally to the most private domains.



✧ ✧ ✧

At the same time that common areas are to the front, make sure that they are also at the heart and soul of the activity, and that all paths between more private rooms pass tangent to the common ones—COMMON AREAS AT THE HEART (129). In private houses make the ENTRANCE ROOM (130) the most formal and public place and arrange the most private areas so that each person has a room of his own, where he can retire to be alone—A ROOM OF ONE'S OWN (141). Place bathing rooms and toilets half-way between the common areas and the private ones, so that people can reach them comfortably from both—BATHING ROOM (144); and place sitting areas at all the different degrees of intimacy, and shape them according to their position in the gradient—SEQUENCE OF SITTING SPACES (142). In offices put RECEPTION WELCOMES YOU (149) at the front of the gradient and HALF-PRIVATE OFFICE (152) at the back. . . .

129 COMMON AREAS AT THE HEART**

. . . along the INTIMACY GRADIENT (127), in every building and in every social group within the building, it is necessary to place the common areas. Place them on the sunlit side to reinforce the pattern of INDOOR SUNLIGHT (128); and, when they are large, give them the higher roofs of the CASCADE OF ROOFS (116).



No social group—whether a family, a work group, or a school group—can survive without constant informal contact among its members.

Any building which houses a social group supports this kind of contact by providing common areas. The form and location of the common areas is critical. Here is a perfect example—a description of the family room in a Peruvian worker's house:

For a low-income Peruvian family, the family room is the heart of family life. The family eat here, they watch TV here, and everyone who comes into the house comes into this room to say hello to the others, kiss them, shake hands with them, exchange news. The same happens when people leave the house.

The family room functions as the heart of the family life by helping to support these processes. The room is so placed in the house, that people naturally pass through it on their way into and out of the house. The end where they pass through it allows them to linger for a few moments, without having to pull out a chair to sit down. The TV set is at the opposite end of the room from this throughway, and a glance at the screen is often the excuse for a moment's further lingering. The part of the room for the TV set is often darkened; the family room and the TV function just as much during midday as they do at night.

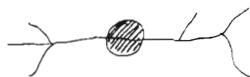
Let us now generalize from this example. If a common area is

located at the end of a corridor and people have to make a special, deliberate effort to go there, they are not likely to use it informally and spontaneously.



. . . *At one end.*

Alternatively, if the circulation path cuts too deeply through the common area, the space will be too exposed, it will not be comfortable to linger there and settle down.



. . . *Through the middle.*

The only balanced situation is the one where a common path, which people use every day, runs *tangent* to the common areas and is open to them in passing. Then people will be constantly passing the space; but because the path is to one side, they are not forced to stop. If they want to, they can keep going. If they want to, they can stop for a moment, and see what's happening; if they want to, they can come right in and settle down.



. . . *Tangent.*

It is worth mentioning, that this pattern has occurred, in some form, in every single project we have worked on. In the multi-service center, we had a pattern called *Staff lounge* based on the same geometry (*A pattern language which generates multi-service centers*, C.E.S., 1968, p. 241); in our work on mental health centers, we had *Patient's choice of being involved*, the same pattern again, as an essential element in therapy; in our work on Peruvian housing, we had *Family room circulation*—this is the example we have given for a family (*Houses generated by patterns*, C.E.S., 1969, p. 140); and in our work on universities, *The*

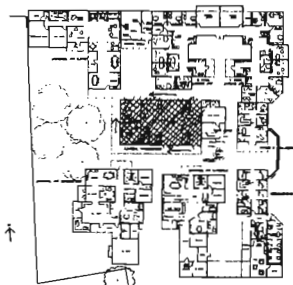
BUILDINGS

Oregon Experiment, we had a pattern called *Department hearth*, again the same, for each department. It is perhaps the most basic pattern there is in forming group cohesion.

In detail, we have isolated three characteristics for a successful common area:

1. It must be at the center of gravity of the building complex, building, or building wing which the group occupies. In other words, it must be at the physical heart of the organization, so that it is equally accessible to everyone and can be felt as the center of the group.

2. Most important of all, it must be "on the way" from the entrance to private rooms, so people always go by it on the way in and out of the building. It is crucial that it not be a dead-end room which one would have to go out of one's way to get to. For this reason, the paths which pass it must lie tangent to it.

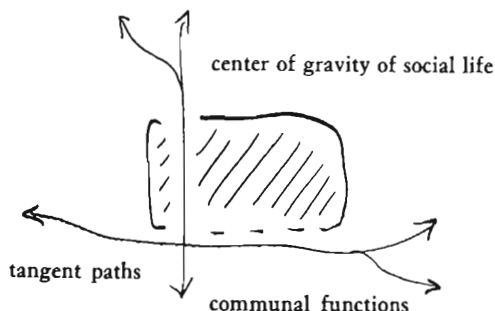


The common area of a clinic we have built in Modesto, California, where we managed to put tangent paths on all four sides.

3. It must have the right components in it—usually a kitchen and eating space, since eating is one of the most communal of activities, and a sitting space—at least some comfortable chairs, so people will feel like staying. It should also include an outdoor area—on nice days there is always the longing to be outside—to step out for a smoke, to sit down on the grass, to carry on a discussion.

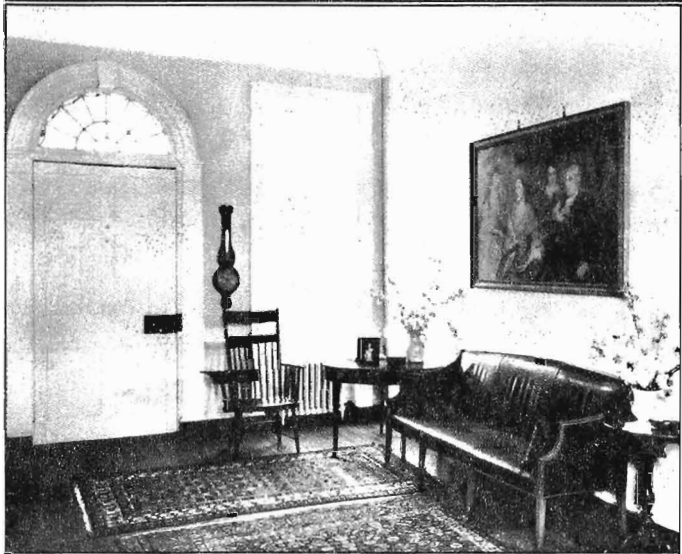
Therefore:

Create a single common area for every social group. Locate it at the center of gravity of all the spaces the group occupies, and in such a way that the paths which go in and out of the building lie tangent to it.



Most basic of all to common areas are food and fire. Include FARMHOUSE KITCHEN (139), COMMUNAL EATING (147), and THE FIRE (181). For the shape of the common area in fine detail, see LIGHT ON TWO SIDES OF EVERY ROOM (159) and THE SHAPE OF INDOOR SPACE (191). Make sure that there are plenty of different sitting places, different in character for different kinds of moments—SEQUENCE OF SITTING SPACES (142). Include an OUTDOOR ROOM (163). And make the paths properly tangent to the common areas—ARCADES (119), THE FLOW THROUGH ROOMS (131), SHORT PASSAGES (132). . . .

130 ENTRANCE ROOM**



. . . the position and overall shape of entrances is given by FAMILY OF ENTRANCES (102), MAIN ENTRANCE (110) and ENTRANCE TRANSITION (112). This pattern gives the entrances their detailed shape, their shape and body and three dimensions, and helps complete the form begun by CAR CONNECTION (113), and the PRIVATE TERRACE ON THE STREET (140).



Arriving in a building, or leaving it, you need a room to pass through, both inside the building and outside it. This is the entrance room.

The most impressionistic and intuitive way to describe the need for the entrance room is to say that the time of arriving, or leaving, seems to swell with respect to the minutes which precede and follow it, and that in order to be congruent with the importance of the moment, the space too must follow suit and swell with respect to the immediate inside and the immediate outside of the building.

We shall see now that there are a tremendous number of miniscule forces which all come together to support this general intuition. All these forces, tendencies, and solutions were originally describe by Alexander and Poyner, in the *Atoms of Environmental Structure*, Ministry of Public Works, Research and Development, SFB Ba4, London, 1966. At that time it seemed important to emphasize the separate and individual patterns defined by these forces. However, at the present writing it seems clear that these original patterns are, in fact, all faces of the one larger and more comprehensive entity, which we call the ENTRANCE ROOM (130).

1. The relationship of windows to the entrance

(a) A person answering the door often tries to see who is at the door before they open it.

(b) People do not want to go out of their way to peer at people on the doorstep.

BUILDINGS

(c) If the people meeting are old friends, they seek a chance to shout out and wave in anticipation.

The entrance room therefore needs a window—or windows—on the path from the family room or kitchen to the door, facing the area outside the door from the side.

2. *The need for shelter outside the door*

(a) People try to get shelter from the rain, wind, and cold while they are waiting.

(b) People stand near the door while they are waiting for it to open.

On the outside, therefore, give the entrance room walls enclosing three sides of a covered space.

3. *The subtleties of saying goodbye*

When hosts and guests are saying goodbye, the lack of a clearly marked “goodbye” point can easily lead to endless “Well, we really must be going now,” and then further conversations lingering on, over and over again.

(a) Once they have finally decided to go, people try to leave without hesitation.

(b) People try to make their goodbye as nonabrupt as possible and seek a comfortable break.

Give the entrance room, therefore, a clearly defined area, at least 20 square feet, outside the front door, raised with a natural threshold—perhaps a railing, or a low wall, or a step—between it and the visitors’ cars.

4. *Shelf near the entrance*

When a person is going into the house with a package:

(a) He tries to hold onto the package; he tries to keep it upright, and off the ground.

(b) At the same time he tries to get both hands free to hunt through pockets or handbag for a key.

And leaving the house with a package:

(c) At the moment of leaving people tend to be preoccupied with other things, and this makes them forget the package which they meant to take.

You can avoid these conflicts if there are shelves both inside and outside the door, at about waist height; a place to leave packages in readiness; a place to put them down while opening the door.

5. *Interior of the entrance room*

(a) Politeness demands that when someone comes to the door, the door is opened wide.

(b) People seek privacy for the inside of their houses.

(c) The family, sitting, talking, or at table, do not want to feel disturbed or intruded upon when someone comes to the door.

Make the inside of the entrance room zigzag, or obstructed, so that a person standing on the doorstep of the open door can see no rooms inside, except the entrance room itself, nor through the doors of any rooms.

6. *Coats, shoes, children's bikes . . .*

(a) Muddy boots have got to come off.

(b) People need a five foot diameter of clear space to take off their coats.

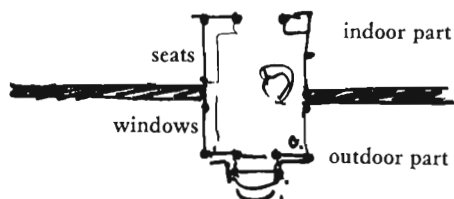
(c) People take prams, bicycles, and so on indoors to protect them from theft and weather; and children will tend to leave all kinds of clutter—bikes, wagons, roller skates, trikes, shovels, balls—around the door they use most often.

Therefore, give the entrance room a dead corner for storage, put coat pegs in a position which can be seen from the front door, and make an area five feet in diameter next to the pegs.

Therefore:

At the main entrance to a building, make a light-filled room which marks the entrance and straddles the boundary between indoors and outdoors, covering some space outdoors and some space indoors. The outside part may be like an old-fashioned porch; the inside like a hall or sitting room.

BUILDINGS



Give that part of the entrance which sticks out into the street or garden a physical character which, as far as possible, make it one of the family of entrances along the street—FAMILY OF ENTRANCES (102); where it is appropriate, make it a porch—GALLERY SURROUND (166); and include a bench or seat, where people can watch the world go by or wait for someone—FRONT DOOR BENCH (242). As for the indoor part of the entrance room, above all, make sure that it is filled with light from two or even three sides, so that the first impression of the building is of light—TAPESTRY OF LIGHT AND DARK (135), LIGHT ON TWO SIDES OF EVERY ROOM (159). Put windows in the door itself—SOLID DOORS WITH GLASS (237). Put in BUILT-IN SEATS (202) and make the room part of the SEQUENCE OF SITTING SPACES (142); provide a WAIST-HIGH SHELF (201) for packages. And finally, for the overall shape of the entrance room and its construction, begin with THE SHAPE OF INDOOR SPACE (191). . . .

131 THE FLOW THROUGH
ROOMS



. . . next to the gradient of spaces created by INTIMACY GRADIENT (127) and COMMON AREAS AT THE HEART (129), the way that rooms connect to one another will play the largest role in governing the character of indoor space. This pattern describes the most fundamental way of linking rooms to one another.



The movement between rooms is as important as the rooms themselves; and its arrangement has as much effect on social interaction in the rooms, as the interiors of the rooms.

The movement between rooms, the circulation space, may be generous or mean. In a building where the movement is mean, the passages are dark and narrow—rooms open off them as dead ends; you spend your time entering the building, or moving between rooms, like a crab scuttling in the dark.

Compare this with a building where the movement is generous. The passages are broad, sunlit, with seats in them, views into gardens, and they are more or less continuous with the rooms themselves, so that the smell of woodsmoke and cigars, the sound of glasses, whispers, laughter, all that which enlivens a room, also enlivens the places where you move.

These two approaches to movement have entirely different psychological effects.

In a complex social fabric, human relations are inevitably subtle. It is essential that each person feels free to make connections or not, to move or not, to talk or not, to change the situation or not, according to his judgment. If the physical environment inhibits him and reduces his freedom of action, it will prevent him from doing the best he can to keep healing and improving the social situations he is in as he sees fit.

The building with generous circulation allows each person's instincts and intuitions full play. The building with ungenerous circulation inhibits them. It not only separates rooms from one another to such an extent that it is an ordeal to move from room

to room, but kills the joy of time spent between rooms and may discourage movement altogether.

The following incident shows how important freedom of movement is to the life of a building. An industrial company in Lausanne had the following experience. They installed TV-phone intercoms between all offices to improve communication. A few months later, the firm was going down the drain—and they called in a management consultant. He finally traced their problems back to the TV-phones. People were calling each other on the TV-phone to ask specific questions—but as a result, people never talked in the halls and passages any more—no more “Hey, how are you, say, by the way, what do you think of this idea. . .” The organization was falling apart, because the informal talk—the glue which held the organization together—had been destroyed. The consultant advised them to junk the TV-phones—and they lived happily ever after.

This incident happened in a large organization. But the principle is just the same in a small work group or a family. The possibility of small momentary conversations, gestures, kindnesses, explanations which clear up misunderstandings, jokes and stories is the lifeblood of a human group. If it gets prevented, the group will fall apart as people’s individual relationships go gradually downhill.

It is almost certain that the building with ungenerous circulation makes it harder for people to maintain their social fabric. In the long run, there is a good chance that social order in the building with ungenerous circulation will break down altogether.

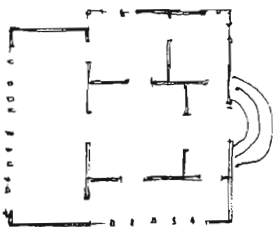
The generosity of movement depends on the overall arrangement of the movement in the building, not on the detailed design of individual passages. In fact, it is at its most generous, when there are no passages at all and movement is created by a string of interconnecting rooms with doors between them.



A sequence of rooms without a passage.

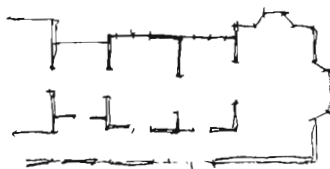
BUILDINGS

Even better, is the case where there is a loop. A loop, which passes through all the major rooms, public and common, establishes an enormous feeling of generosity. With a loop it is always possible to come and go in two different directions. It is possible to walk around and around, and it ties the rooms together. And, when such a loop passes through rooms (at one end so as not to disturb them), it connects rooms far more than a simple passage does.



A generous circulation loop.

A building where there is a chain of rooms in sequence also works like this, if there is a passage in parallel with the chain of rooms.

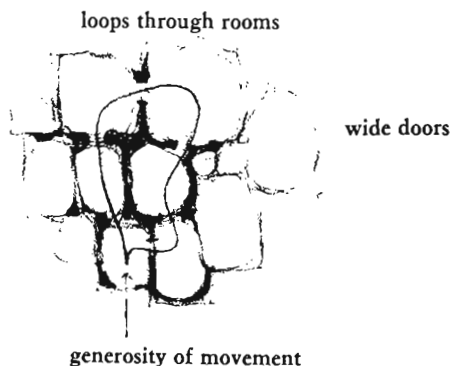


Passage in parallel forms the loop.

Therefore:

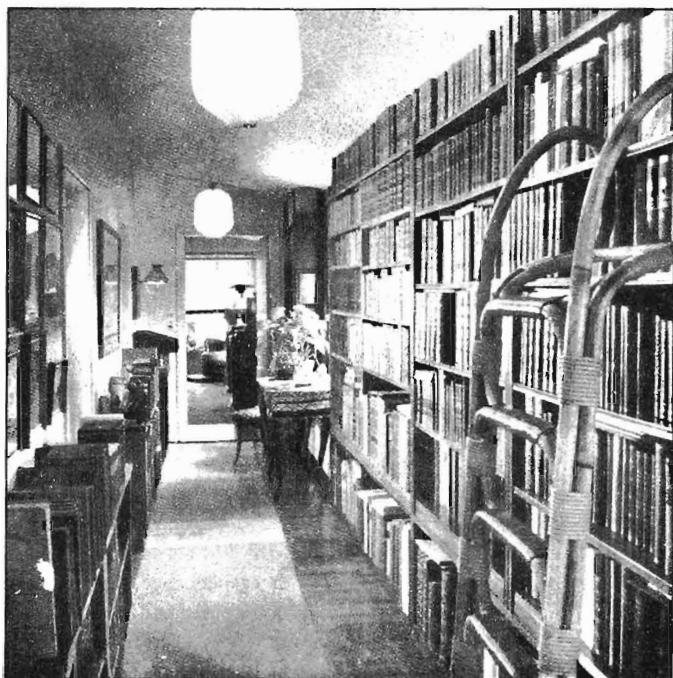
As far as possible, avoid the use of corridors and passages. Instead, use public rooms and common rooms as rooms for movement and for gathering. To do this, place the common rooms to form a chain, or loop, so that it becomes possible to walk from room to room—and so that private rooms open directly off these public rooms. In every

case, give this indoor circulation from room to room a feeling of great generosity, passing in a wide and ample loop around the house, with views of fires and great windows.



Whenever passages or corridors are unavoidable, make them wide and generous too; and try to place them on one side of the building, so that they can be filled with light—SHORT PASSAGES (132). Furnish them like rooms, with carpets, bookshelves, easy chairs and tables, filtered light, and do the same for ENTRANCE ROOM (130) and STAIRCASE AS A STAGE (133). Always make sure that these rooms for movement have plenty of light in them and perhaps a view—ZEN VIEW (134), TAPESTRY OF LIGHT AND DARK (135), and LIGHT ON TWO SIDES OF EVERY ROOM (159). Keep doors which open into rooms, or doors between rooms which create the flow through rooms, in the corners of the rooms—CORNER DOORS (196). . . .

I 32 SHORT PASSAGES*



. . . THE FLOW THROUGH ROOMS (131) describes the generosity of light and movement in the way that rooms connect to one another and recommends against the use of passages. But when there has to be a passage in an office or a house and when it is too small to be a BUILDING THOROUGHFARE (101), it must be treated very specially, as if it were itself a room. This pattern gives the character of these smallest passages, and so completes the circulation system laid down by CIRCULATION REALMS (98) and BUILDING THOROUGHFARE (101) and THE FLOW THROUGH ROOMS (131).



“ . . long, sterile corridors set the scene for everything bad about modern architecture.”

In fact, the ugly long repetitive corridors of the machine age have so far infected the word “corridor” that it is hard to imagine that a corridor could ever be a place of beauty, a moment in your passage from room to room, which means as much as all the moments you spend in the rooms themselves.



Long corridors.

We shall now try to pinpoint the difference between the corridors which live, which give pleasure, and make people feel

BUILDINGS

alive, and those which do not. There are four main issues.

The most profound issue, to our minds, is natural light. A hall or passage that is generously lit by the sun is almost always pleasant. The archetype is the one-sided hall, lined with windows and doors on its open side. (Notice that this is one of the few places where it is a good idea to light a space from one side).

The second issue is the relation of the passage to the rooms which open off it. Interior windows, opening from these rooms into the hall, help animate the hall. They establish a flow between the rooms and the passage; they support a more informal style of communication; they give the person moving through the hall a taste of life inside the rooms. Even in an office, this contact is fine so long as it is not extreme; so long as the workplaces are protected individually by distance or by a partial wall—see *HALF-PRIVATE OFFICE* (152), *WORKSPACE ENCLOSURE* (183).

The third issue which makes the difference between a lively passage and a dead one is the presence of furnishings. If the passage is made in a way which invites people to furnish it with book cases, small tables, places to lean, even seats, then it becomes very much a part of the living space of the building, not something entirely separate.

And finally, there is the critical issue of length. We know intuitively that corridors in office buildings, hospitals, hotels, apartment buildings—even sometimes in houses—are far too long. People dislike them: they represent bureaucracy and monotony. And there is even evidence to show that they do actual damage.

Consider a study by Mayer Spivack on the unconscious effects of long hospital corridors on perception, communication, and behavior:

Four examples of long mental hospital corridors are examined . . . it is concluded that such spaces interfere with normal verbal communication due to their characteristic acoustical properties. Optical phenomena common to these passageways obscure the perception of the human figure and face, and distort distance perception. Paradoxical visual cues produced by one tunnel created interrelated, cross-sensory illusions involving room size, distance, walking speed and time. Observations of patient behavior suggest the effect of narrow corridors upon anxiety is via the penetration of the personal

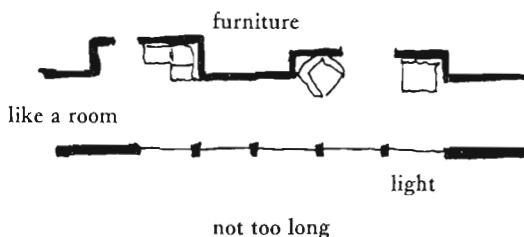
space envelope. (M. Spivack, "Sensory Distortion in Tunnels and Corridors," *Hospital and Community Psychiatry*, 18, No. 1, January 1967.)

When does a corridor become too long? In an earlier version of this pattern (*Short corridors in A Pattern Language Which Generates Multi-Service Centers*, CES, 1967, pp. 179-82), we have presented evidence which suggests that there is a definite cognitive breakpoint between long corridors and short halls: the evidence points to a figure of some 50 feet as a critical threshold. Beyond that, passages begin to feel dead and monotonous.

Of course it is possible to make even very long corridors in a human way; but if they have to be longer than 50 feet, it is essential to break down their scale in some fashion. For example, a long hall that is lit in patches from one side at short intervals can be very pleasant indeed: the sequence of light and dark and the chance to pause and glance out, breaks down the feeling of the endless dead corridor; or a hall which opens out into wider rooms, every now and then, has the same effect. However, do everything you can to keep the passages really short.

Therefore:

Keep passages short. Make them as much like rooms as possible, with carpets or wood on the floor, furniture, bookshelves, beautiful windows. Make them generous in shape, and always give them plenty of light; the best corridors and passages of all are those which have windows along an entire wall.

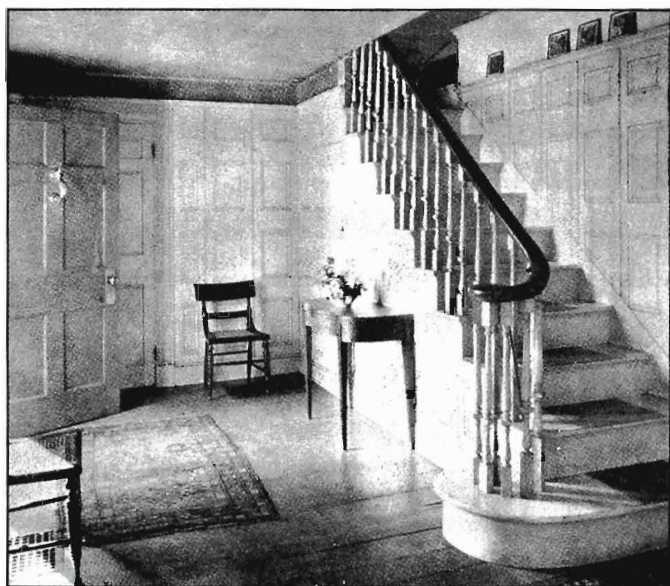


BUILDINGS



Put in windows, bookshelves, and furnishings to make them as much like actual rooms as possible, with alcoves, seats along the edge—LIGHT ON TWO SIDES OF EVERY ROOM (159), ALCOVES (179), WINDOW PLACE (180), THICK WALLS (197), CLOSETS BETWEEN ROOMS (198); open up the long side into the garden or out onto balconies—OUTDOOR ROOM (163), GALLERY SURROUND (166), LOW SILL (222). Make interior windows between the passage and the rooms which open off it—INTERIOR WINDOWS (194), SOLID DOORS WITH GLASS (237). And finally, for the shape of the passages, in detail, start with THE SHAPE OF INDOOR SPACE (191). . . .

I 33 STAIRCASE AS A STAGE



. . . if the entrances are in position—MAIN ENTRANCE (110); and the pattern of movement through the building is established—THE FLOW THROUGH ROOMS (131), SHORT PASSAGES (132), the main stairs must be put in and given an appropriate social character.



A staircase is not just a way of getting from one floor to another. The stair is itself a space, a volume, a part of the building; and unless this space is made to live, it will be a dead spot, and work to disconnect the building and to tear its processes apart.

Our feelings for the general shape of the stair are based on this conjecture: changes of level play a crucial role at many moments during social gatherings; they provide special places to sit, a place where someone can make a graceful or dramatic entrance, a place from which to speak, a place from which to look at other people while also being seen, a place which increases face to face contact when many people are together.

If this is so, then the stair is one of the few places in a building which is capable of providing for this requirement, since it is almost the only place in a building where a transition between levels occurs naturally.

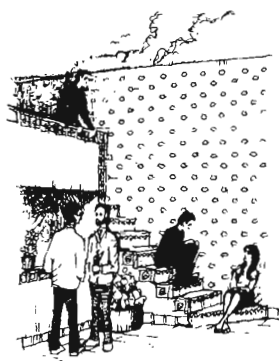
This suggests that the stair always be made rather open to the room below it, embracing the room, coming down around the outer perimeter of the room, so that the stairs together with the room form a socially connected space. Stairs that are enclosed in stairwells or stairs that are free standing and chop up the space



Examples of stair rooms.

below, do not have this character at all. But straight stairs, stairs that follow the contour of the walls below, or stairs that double back can all be made to work this way.

Furthermore, the first four or five steps are the places where people are most likely to sit if the stair is working well. To support this fact, make the bottom of the staircase flare out, widen the steps, and make them comfortable to sit on.



Stair seats.

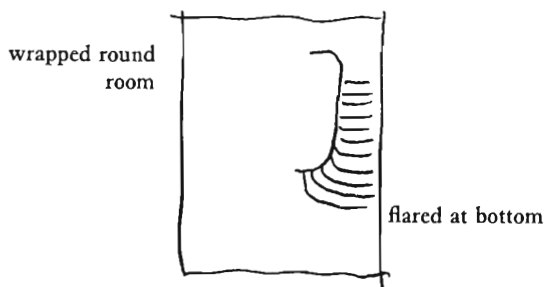
Finally, we must decide where to place the stair. On the one hand, of course, the stair is the key to movement in a building. It must therefore be visible from the front door; and, in a building with many different rooms upstairs, it must be in a position which commands as many of these rooms as possible, so that it forms a kind of axis people can keep clearly in their minds.

However, if the stair is too near the door, it will be so public that its position will undermine the vital social character we have described. Instead, we suggest that the stair be clear, and central, yes—but in the common area of the building, a little further back from the front door than usual. Not usually in the ENTRANCE ROOM (130), but in the COMMON AREA AT THE HEART (129). Then it will be clear and visible, and also keep its necessary social character.

Therefore:

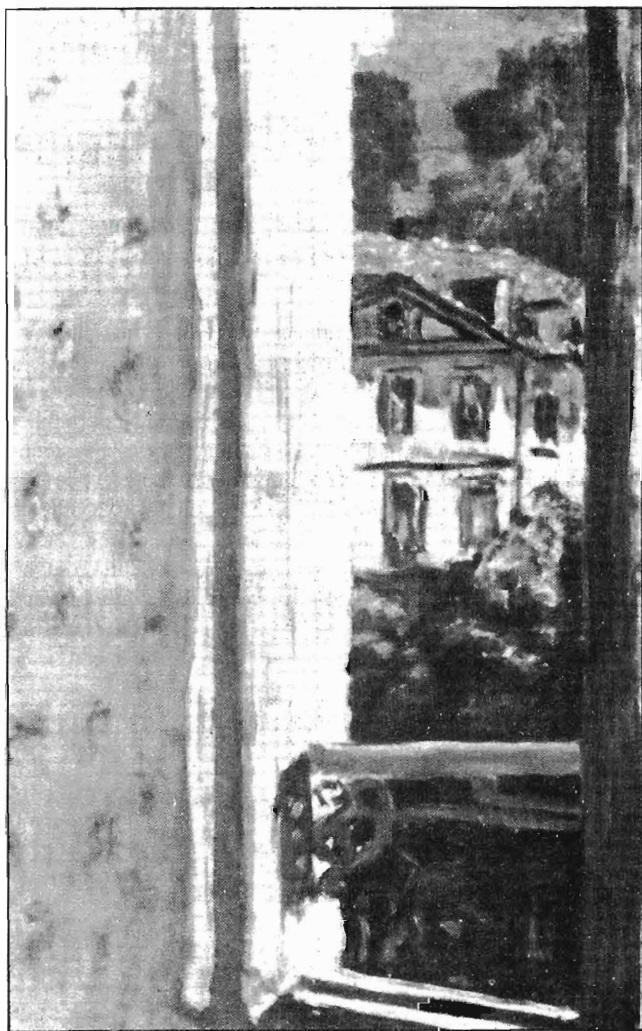
Place the main stair in a key position, central and vis-

ible. Treat the whole staircase as a room (or if it is outside, as a courtyard). Arrange it so that the stair and the room are one, with the stair coming down around one or two walls of the room. Flare out the bottom of the stair with open windows or balustrades and with wide steps so that the people coming down the stair become part of the action in the room while they are on the stair, and so that people below will naturally use the stair for seats.



Treat the bottom steps as STAIR SEATS (125); provide a window or a view half-way up the stair, both to light the stair and to create a natural focus of attention—ZEN VIEW (134), TAPESTRY OF LIGHT AND DARK (135); remember to calculate the length and shape of the stair while you are working out its position—STAIRCASE VOLUME (195). Get the final shape of the staircase room and the beginnings of its construction from THE SHAPE OF INDOOR SPACE (191). . . .

I 34 ZEN VIEW*

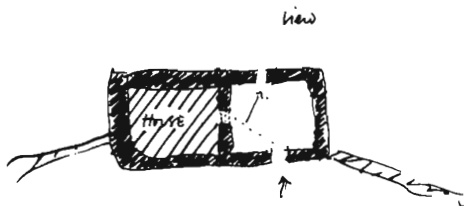


. . . how should we make the most of a view? It turns out that the pattern which answers this question helps to govern not the rooms and windows in a building, but the places of transition. It helps to place and detail ENTRANCE TRANSITION (112), ENTRANCE ROOM (130), SHORT PASSAGES (132), THE STAIRCASE AS A STAGE (133)—and outside, PATHS AND GOALS (120).



The archetypal zen view occurs in a famous Japanese house, which gives this pattern its name.

A Buddhist monk lived high in the mountains, in a small stone house. Far, far in the distance was the ocean, visible and beautiful from the mountains. But it was not visible from the monk's house itself, nor from the approach road to the house. However, in front of the house there stood a courtyard surrounded by a thick stone wall. As one came to the house, one passed through a gate into this court, and then diagonally across the court to the front door of the house. On the far side of the courtyard there was a slit in the wall, narrow and diagonal, cut through the thickness of the wall. As a person walked across the court, at one spot, where his position lined up with the slit in the wall, for an instant, he could see the ocean. And then he was past it once again, and went into the house.



The monk's house.

What is it that happens in this courtyard? The view of the distant sea is so restrained that it stays alive forever. Who, that

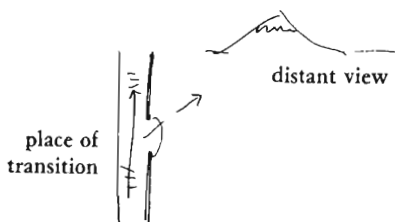
has ever seen that view, can ever forget it? Its power will never fade. Even for the man who lives there, coming past that view day after day for fifty years, it will still be alive.

This is the essence of the problem with any view. It is a beautiful thing. One wants to enjoy it and drink it in every day. But the more open it is, the more obvious, the more it shouts, the sooner it will fade. Gradually it will become part of the building, like the wallpaper; and the intensity of its beauty will no longer be accessible to the people who live there.

Therefore:

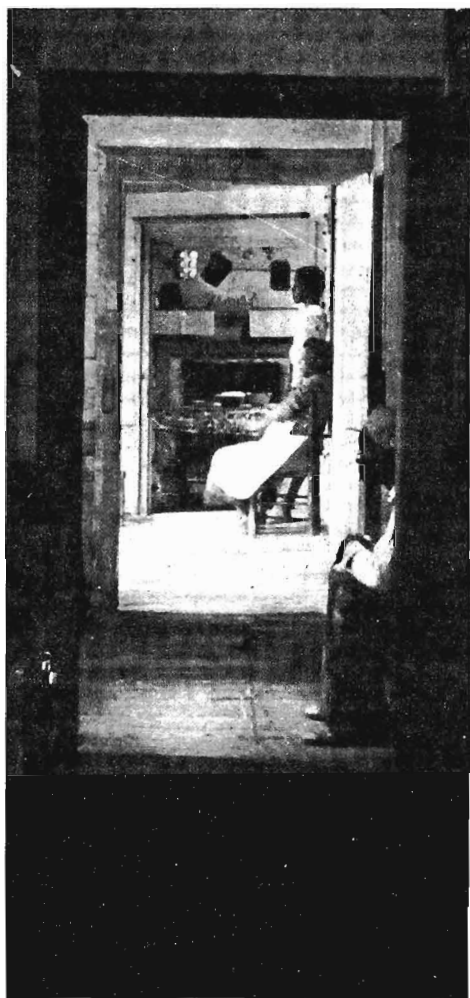
If there is a beautiful view, don't spoil it by building huge windows that gape incessantly at it. Instead, put the windows which look onto the view at places of transition—along paths, in hallways, in entry ways, on stairs, between rooms.

If the view window is correctly placed, people will see a glimpse of the distant view as they come up to the window or pass it: but the view is never visible from the places where people stay.



Put in the windows to complete the indirectness of the view—NATURAL DOORS AND WINDOWS (221); place them to help the TAPESTRY OF LIGHT AND DARK (135); and build a seat from which a person can enjoy the view—WINDOW PLACE (180). If the view must be visible from inside a room, make a special corner of the room which looks onto the view, so that the enjoyment of the view becomes a definite act in its own right. . . .

I 35 TAPESTRY OF LIGHT
AND DARK*



. . . passages, entrances, stairs are given their rough position by THE FLOW THROUGH ROOMS (131), SHORT PASSAGES (132), STAIRCASE AS A STAGE (133), ZEN VIEW (134). This pattern helps you fine tune their positions by placing light correctly.



In a building with uniform light level, there are few “places” which function as effective settings for human events. This happens because, to a large extent, the places which make effective settings are defined by light.

People are by nature phototropic—they move toward light, and, when stationary, they orient themselves toward the light. As a result the much loved and much used places in buildings, where the most things happen, are places like window seats, verandas, fireside corners, trellised arbors; all of them defined by non-uniformities in light, and all of them allowing the people who are in them to orient themselves toward the light.

We may say that these places become the settings for the human events that occur in the building. Since there is good reason to believe that people need a rich variety of settings in their lives (see for instance, Roger Barker, *The Stream of Behavior: Explorations of its Structure and Content*, New York: Appleton-Century-Crofts, 1963), and since settings are defined by “places,” which in turn seem often to be defined by light, and since light places can only be defined by contrast with darker ones, this suggests that the interior parts of buildings where people spend much time should contain a great deal of alternating light and dark. The building needs to be a tapestry of light and dark.

This tapestry of light and dark must then fit together with the flow of movement, too. As we have said, people naturally tend to walk toward the light. It is therefore obvious that any entrance, or any key point in a circulation system, must be systematically lighter than its surroundings—with light (daylight and artificial light) flooded there, so that its intensity becomes a

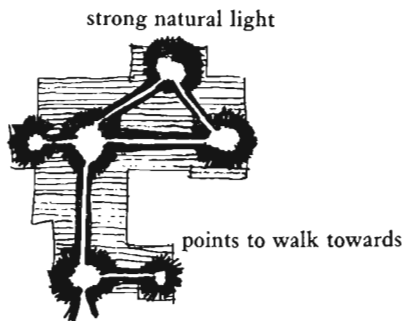
BUILDINGS

natural target. The reason is simple. If there are places which have more light than the entrances and circulation nodes, people will tend to walk toward *them* (because of their phototropic tendency) and will therefore end up in the wrong place—with frustration and confusion as the only possible result.

If the places where the light falls are not the places you are meant to go toward, or if the light is uniform, the environment is giving information which contradicts its own meaning. The environment is only functioning in a single-hearted manner, as information, when the lightest spots coincide with the points of maximum importance.

Therefore:

Create alternating areas of light and dark throughout the building, in such a way that people naturally walk toward the light, whenever they are going to important places: seats, entrances, stairs, passages, places of special beauty, and make other areas darker, to increase the contrast.



Where the light to walk toward is natural light, build seats and alcoves in those windows which attract the movement—WINDOW PLACE (180). If you use skylights, then make the surfaces around the skylight warm in color—WARM COLORS (250); otherwise the direct light from the sky is almost always cold. At night make pools of incandescent light which guide the movement—POOLS OF LIGHT (252). . . .

within the framework of the wings and their internal gradients of space and movement, define the most important areas and rooms. First, for a house;

136. COUPLE'S REALM

137. CHILDREN'S REALM

138. SLEEPING TO THE EAST

139. FARMHOUSE KITCHEN

140. PRIVATE TERRACE ON THE STREET

141. A ROOM OF ONE'S OWN

142. SEQUENCE OF SITTING SPACES

143. BED CLUSTER

144. BATHING ROOM

145. BULK STORAGE

136 COUPLE'S REALM*



. . . this pattern helps to complete THE FAMILY (75), HOUSE FOR A SMALL FAMILY (76) and HOUSE FOR A COUPLE (77). It also ties in to a particular position on the INTIMACY GRADIENT (127), and can be used to help generate that gradient, if it doesn't exist already.



The presence of children in a family often destroys the closeness and the special privacy which a man and wife need together.

Every couple start out sharing each other's adult lives. When children come, concern for parenthood often overwhelms the private sharing, and everything becomes exclusively oriented toward the children.

In most houses this is aggravated by the physical design of the environment. Specifically:

1. Children are able to run everywhere in the house, and therefore tend to dominate all of it. No rooms are private.
2. The bathroom is often placed so that adults must walk past children's bedrooms to reach it.
3. The walls of the master bedroom are usually too thin to afford much acoustical privacy.

The result is that the private life of the couple is continually interrupted by the awareness that the children are nearby. Their role as parents rather than as a couple permeates all aspects of their private relations.

On the other hand, of course, they do not want to be completely separated from the children's rooms. They also want to be close to them, especially while the children are young. A mother wants to run quickly to the bed of an infant in an emergency.

These problems can only be solved if there is a part of the house, which we call the couple's realm; that is, a world in which the intimacy of the man and woman, their joys and sorrows, can be shared and lived through. It is a place not only insulated from the children's world, but also complete in itself, a

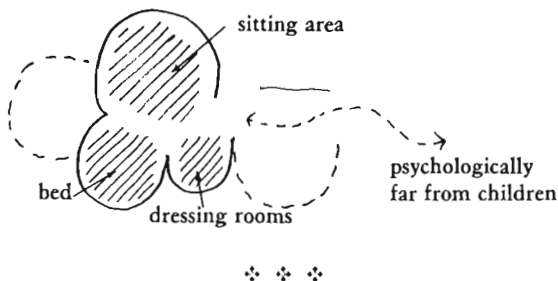
BUILDINGS

world, a domain. In many respects it is a version of the pattern HOUSE FOR A COUPLE (77), embedded in the larger house with children.

The couple's realm needs to be the kind of place that one might sit in and talk privately, perhaps with its own entrance to the outdoors, to a balcony. It is a sitting room, a place for privacy, a place for projects; the bed is part of it, but tucked away into an alcove with its own window; a fireplace is wonderful; and it needs some kind of a double door, an ante-room, to protect its privacy.

Therefore:

Make a special part of the house distinct from the common areas and all the children's rooms, where the man and woman of the house can be together in private. Give this place a quick path to the children's rooms, but, at all costs, make it a distinctly separate realm.



Even if it's very tiny, give it a sitting area, a place to relax, read, make love, play music—SITTING CIRCLE (185). Give it LIGHT ON TWO SIDES (159). At the heart of the couple's realm, place the bed—MARRIAGE BED (187) so it has morning light—SLEEPING TO THE EAST (138), and, beside it, the DRESSING ROOM (189); if possible, try to place the bathing room to open off the couple's realm—BATHING ROOM (144). For the shape of this room in fine detail and its construction, see THE SHAPE OF INDOOR SPACE (191). And keep the area private with a LOW DOORWAY (224) or two doors—CLOSETS BETWEEN ROOMS (198). . . .

137 CHILDREN'S REALM*



. . . in a HOUSE FOR A SMALL FAMILY (76), there are three main areas: a COMMON AREA AT THE HEART (129), a COUPLE'S REALM (136), and a CHILDREN'S REALM which overlaps the common area. If the common area and couple's realm are in position, it is now possible to weave in this partly separate, partly overlapping place for children, which we call a realm, although we recognize that it is not a separate realm but more an aspect of the house, reserved for children, a mode of functioning which is physically separate only in certain parts. It is that component of CONNECTED PLAY (68) which acts within the individual houses.



If children do not have space to release a tremendous amount of energy when they need to, they will drive themselves and everybody else in the family up the wall.



A frenzy in the dining room.

For a graphic example, visualize what happens when children bring in friends after school and have a whole number of ideas in their heads of what to do or play. They are loud and boisterous after being pent up in school all day and they need a lot of indoor and outdoor space to expend all this energy. Obviously, the mood calls for space which contains long distances because they suggest the possibility of physical freedom much more.

And, in general, the child's world is not some single space or room—it is a continuum of spaces. The sidewalk where he sells lemonade and talks with friends, the outdoor play area of his house into which he can invite his friends, the indoor play-space, his private space in the house where he can be alone with a friend, the bathroom, the kitchen where his mother is, the family room where the rest of the family is—for the child, all of these together form his world. If any other kind of space interrupts this continuum, it will be swallowed up into the child's world as part of his circulation path.

If the private rooms, the couple's realm, the quiet sitting areas are scattered randomly among the places that form the children's world, then they will certainly be violated. But if the children's world is one continuous swath, then these quiet, private, adult places will be protected by the mere fact that they are not part of the continuum. We therefore conclude that all the places which children need and use should form one continuous geometrical swath, which does not include the couple's realm, the adult private rooms, or any formal, quiet sitting spaces. This continuous playspace needs certain additional properties.

1. Children are apt to be very demanding of everyone's attention when they are in this specially energetic state. The mother is particularly susceptible to being totally swallowed up by them. They will want to show her things, ask her questions, ask her to do things . . . "Look what I found. Look what I made. Where shall I put this? Where's the clay? Make some paint." The mother must be available for all this, but not forced to be in the thick of it. Her workroom and the kitchen need to be protected, yet tangential to the playspace.

2. The family room is also part of the continuum since it is where children and the rest of the family have contact with each other. The playspace, therefore, should enter the common area—preferably to one side—*see COMMON AREA AT THE HEART* (129).

3. The children's private spaces (whether they are alcoves or bedrooms) can be off the playspace, but it must be possible to close them off. Children naturally want to be exclusive at times—they often invite their closest friends into such a space for a private chat or to show off some prized possession.

BUILDINGS

4. It is usually too expensive to create a special playspace; but it is always possible to make a hallway function as the indoor part of the playspace. It needs to be a bit wider than a normal hall (perhaps seven feet) with nooks and stages along the edge. Children take up the suggestive qualities of spaces—on sight of a little cave-like space, they will decide to play house; on sight of a raised platform, they will decide to put on a play. Thus, both indoor and outdoor parts of the playspace need different levels, little nooks, counters, or tables, and so on. A lot of open storage for toys, costumes, and so forth should also be provided in these spaces. When toys are visible, they are more likely to be used.

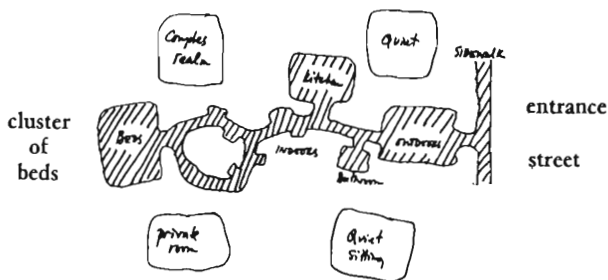
5. The outdoor space just adjacent to the indoor space should be partially roofed, to provide transition between the two and to reinforce the continuity.

Remember that this kind of playspace is as much in the interest of the adults in the family, as in the interest of the children. If the house is organized so that the children's world gradually spreads throughout the home, it will disrupt and dominate the world of tranquility, preciousness, and freedom that adults need, to live their own lives. If there is an adequate children's world, in the manner described in this pattern, then both the adults and children can co-exist, each without dominating the other.

Therefore:

Start by placing the small area which will belong entirely to the children—the cluster of their beds. Place it in a separate position toward the back of the house, and in such a way that a continuous playspace can be made from this cluster to the street, almost like a wide swath inside the house, muddy, toys strewn along the way, touching those family rooms which children need—the bathroom and the kitchen most of all—passing the common area along one side (but leaving quiet sitting areas and the couple's realm entirely separate and inviolate), reaching out to the street, either through its own door or through the entrance room, and ending in an outdoor room, connected

to the street, and sheltered, and large enough so that the children can play in it when it rains, yet still be outdoors.



As you place this swath between the children's beds and the street, place the FARMHOUSE KITCHEN (139) and the HOME WORKSHOP (157) to one side of the path, touching it, yet not violated by it. Do the same for BATHING ROOM (144), and give it some connection to the children's beds. Develop the cluster of children's beds according to BED CLUSTERS (143); make the long passages which form the realm as light and warm as possible—SHORT PASSAGES (132); make the OUTDOOR ROOM (163) large enough for boisterous activity. . . .

141 A ROOM OF ONE'S OWN**



. . . the INTIMACY GRADIENT (127) makes it clear that every house needs rooms where individuals can be alone. In any household which has more than one person, this need is fundamental and essential—THE FAMILY (75), HOUSE FOR A SMALL FAMILY (76), HOUSE FOR A COUPLE (77). This pattern, which defines the rooms that people can have to themselves, is the natural counterpart and complement to the social activity provided for in COMMON AREAS AT THE HEART (129).



No one can be close to others, without also having frequent opportunities to be alone.

A person in a household without a room of his own will always be confronted with a problem: he wants to participate in family life and to be recognized as an important member of that group; but he cannot individualize himself because no part of the house is totally in his control. It is rather like expecting one drowning man to save another. Only a person who has a well-developed strong personal self, can venture out to participate in communal life.

This notion has been explored by two American sociologists, Foote and Cottrell:

There is a critical point beyond which closer contact with another person will no longer lead to an increase in empathy. (A) Up to a certain point, intimate interaction with others increases the capacity to empathize with them. But when others are too constantly present, the organism appears to develop a protective resistance to responding to them. . . . This limit to the capacity to empathize should be taken into account in planning the optimal size and concentration of urban populations, as well as in planning the schools and the housing of individual families. (B) Families who provide time and space for privacy, and who teach children the utility and satisfaction of withdrawing for private reveries, will show higher average empathic capacity than those who do not. (Foote, N. and L. Cottrell, *Identity and Interpersonal Competence*, Chicago, 1955, pp. 72-73, 79.)

Alexander Leighton has made a similar point, emphasizing the mental damage that results from a *systematic lack of privacy*

["Psychiatric Disorder and Social Environment," *Psychiatry*, 18 (3), p. 374, 1955].

In terms of space, what is required to solve the problem? Simply, a room of one's own. A place to go and close the door; a retreat. Visual and acoustic privacy. And to make certain that the rooms are truly private, they must be located at the extremities of the house: at the ends of building wings; at the ends of the INTIMACY GRADIENT (127); far from the common areas.

We shall now look at the individual members of the family one at a time, in slightly more detail.

Wife. We put the wife first, because, classically, it is she who has the greatest difficulty with this problem. She belongs everywhere, and every place inside the house is in a vague sense hers—yet it is only very rarely that the woman of the house has a small room which is specifically and exclusively her own. Virginia Woolf's famous essay "A room of one's own" is the strongest and most important statement on this issue—and has given this pattern its name.

Husband. In older houses, the man of the house usually had a study or a workshop of his own. However, in modern houses and apartments, this has become as rare as the woman's own room. And it is certainly just as essential. Many a man associates his house with the mad scene of young children and the enormous demands put on him there. If he has no room of his own, he has to stay at his office, away from home, to get peace and quiet.

Teenagers. For teenage children, we have devoted an entire pattern to this problem: TEENAGER'S COTTAGE (154). We have argued there that it is the teenagers who are faced with the problem of building a firm and strong identity; yet among the adults, it is the young who are most often prevented from having a place in the home that is clearly marked as their own.

Children. Very young children experience the need for privacy less—but they still experience it. They need some place to keep their possessions, to be alone at times, to have a private visit with a playmate. See BED CLUSTER (143) and BED ALCOVE (188). John Madge has written a good survey of a family's need for private space ("Privacy and Social Interaction," *Transactions of the Bartlett Society*, Vol. 3, 1964-65), and concerning the children he says:

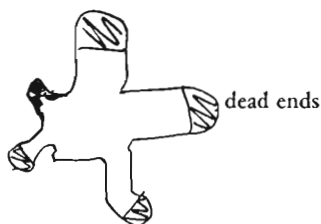
The bedroom is often the repository of most of these items of personal property around which the individual builds his own satisfactions and which help to differentiate him from the other members of the inner circle of his life—indeed he will often reveal them more freely to a peer in age and sex than to a member of his own family.

In summary then, we propose that a room of one's own—an alcove or bed nook for younger children—is essential for each member of the family. It helps develop one's own sense of identity; it strengthens one's relationship to the rest of the family; and it creates personal territory, thereby building ties with the house itself.

Therefore:

Give each member of the family a room of his own, especially adults. A minimum room of one's own is an alcove with desk, shelves, and curtain. The maximum is a cottage—like a *TEENAGER'S COTTAGE* (154), or an *OLD AGE COTTAGE* (155). In all cases, especially the adult ones, place these rooms at the far ends of the intimacy gradient—far from the common rooms.

private rooms



Use this pattern as an antidote to the extremes of "togetherness" created by *COMMON AREAS AT THE HEART* (129). Even for

BUILDINGS

small children, give them at least an alcove in the communal sleeping area—BED ALCOVE (188); and for the man and woman, give each of them a separate room, beyond the couples realm they share; it may be an expanded dressing room—DRESSING ROOM (189), a home workshop—HOME WORKSHOP (157), or once again, an alcove off some other room—ALCOVES (179), WORK-SPACE ENCLOSURE (183). If there is money for it, it may even be possible to give a person a cottage, attached to the main structure—TEENAGER'S COTTAGE (154), OLD AGE COTTAGE (155). In every case there must at least be room for a desk, a chair, and THINGS FROM YOUR LIFE (253). And for the detailed shape of the room, see LIGHT ON TWO SIDES OF EVERY ROOM (159) and THE SHAPE OF INDOOR SPACE (191). . . .

142 SEQUENCE OF SITTING SPACES*

. . . at various points along the INTIMACY GRADIENT (127) of a house, or office, or a public building, there is a need for sitting space. Some of this space may take the form of rooms devoted entirely to sitting, like the formal sitting rooms of old; others may be simply areas or corners of other rooms. This pattern states the range and distribution of these sitting spaces, and helps create the intimacy gradient by doing so.



Every corner of a building is a potential sitting space. But each sitting space has different needs for comfort and enclosure according to its position in the intimacy gradient.

We know from INTIMACY GRADIENT (127) that a building has a natural sequence of spaces in it, ranging from the most public areas, outside the entrance, to the most private, in individual rooms and couples realms. Here is a sequence of sitting spaces that would correspond roughly to the INTIMACY GRADIENT (127):

1. Outside the entrance—ENTRANCE ROOM (130), FRONT DOOR BENCH (242)
2. Inside the entrance—ENTRANCE ROOM (130), RECEPTION WELCOMES YOU (149)
3. Common rooms—COMMON AREAS AT THE HEART (129), SHORT PASSAGES (132), FARMHOUSE KITCHEN (139), SMALL MEETING ROOMS (151)
4. Half-private rooms—CHILDREN'S REALM (137), PRIVATE TERRACE ON THE STREET (140), HALF-PRIVATE OFFICE (152), ALCOVES (179)
5. Private rooms—COUPLE'S REALM (136), A ROOM OF ONE'S OWN (141), GARDEN SEAT (176).

BUILDINGS

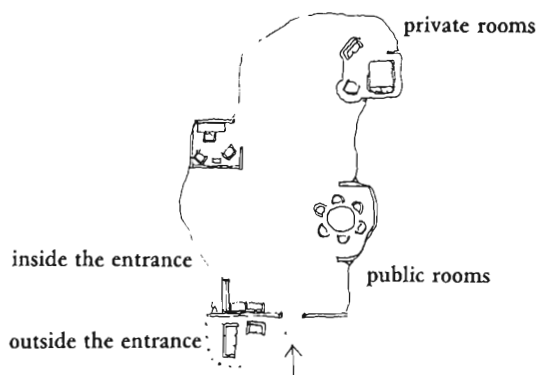
Now, what is the problem? Simply, it is the following. People have a tendency to think about *the* sitting room, as though a building, and especially a house, has just one room made for sitting. Within this frame of reference, this one sitting room gets a great deal of care and attention. But the fact that human activity naturally occurs all through the house, at a variety of degrees of intensity and intimacy, is forgotten—and the sitting spaces throughout the building fail to support the real rhythms of sitting and hanging around.

To solve the problem, recognize that your building should contain a sequence of sitting spaces of varying degrees of intimacy, and that each space in this sequence needs the degree of enclosure and comfort appropriate to its position. Pay attention to the full sequence, not just to one room. Ask yourself if the building you are making or repairing has the full sequence of sitting spaces, and what needs to be done to create this sequence, in its full richness and variety.

Of course, you may want to build a special sitting room—a *sala* or a parlor or a library or a living room—as one of the sitting spaces in your house. But remember that each office and workroom needs a sitting space too; so does a kitchen, so does a couple's realm, so does a garden, so does an entrance room, so does a corridor even, so does a roof, so does a window place. Pick the sequence of sitting spaces quite deliberately, mark it, and pay equal attention to the various spaces in the sequence as you go further into the details of the design.

Therefore:

Put in a sequence of graded sitting spaces throughout the building, varying according to their degree of enclosure. Enclose the most formal ones entirely, in rooms by themselves; put the least formal ones in corners of other rooms, without any kind of screen around them; and place the intermediate one with a partial enclosure round them to keep them connected to some larger space, but also partly separate.



Put the most formal sitting spaces in the COMMON AREAS AT THE HEART (129) and in the ENTRANCE ROOM (130); put the intermediate spaces also in the COMMON AREAS AT THE HEART (129), in FLEXIBLE OFFICE SPACE (146), in a PLACE TO WAIT (150), and on the PRIVATE TERRACE ON THE STREET (140); and put the most intimate and most informal sitting spaces in the COUPLE'S REALM (136), the FARMHOUSE KITCHEN (139), the ROOMS OF ONE'S OWN (141), and the HALF-PRIVATE OFFICES (152). Build the enclosure round each space, according to its position in the scale of sitting spaces—THE SHAPE OF INDOOR SPACE (191); and make each one, wherever it is, comfortable and lazy by placing chairs correctly with respect to fires and windows—ZEN VIEW (134), WINDOW PLACE (180), THE FIRE (181), SITTING CIRCLE (185), SEAT SPOTS (241). . . .

150 A PLACE TO WAIT*



. . . in any office, or workshop, or public service, or station, or clinic, where people have to wait—INTERCHANGE (34), HEALTH CENTER (47), SMALL SERVICES WITHOUT RED TAPE (81), OFFICE CONNECTIONS (82), it is essential to provide a special place for waiting, and doubly essential that this place not have the sordid, enclosed, time-slowed character of ordinary waiting rooms.



The process of waiting has inherent conflicts in it.

On the one hand, whatever people are waiting for—the doctor, an airplane, a business appointment—has built in uncertainties, which make it inevitable that they must spend a long time hanging around, waiting, doing nothing.

On the other hand, they cannot usually afford to enjoy this time. Because it is unpredictable, they must hang at the very door. Since they never know exactly when their turn will come, they cannot even take a stroll or sit outside. They must stay in the narrow confine of the waiting room, waiting their turn. But this, of course, is an extremely demoralizing situation: nobody wants to wait at somebody else's beck and call. Kafka's greatest works, *The Castle* and *The Trial*, both deal almost entirely with the way this kind of atmosphere destroys a man.

The classic "waiting room" does nothing to resolve this problem. A tight dreary little room, with people staring at each other, fidgeting, a magazine or two to flip—this is the very situation which creates the conflict. Evidence for the deadening effect of this situation comes from Scott Briar ("Welfare From Below: Recipients' Views of the Public Welfare System," in Jacobus Tenbroek, ed., *The Law and the Poor*, San Francisco: Chandler Publishing Company, 1966, p. 52). We all know that time seems to pass more slowly when we are bored or anxious or restless. Briar found that people waiting in welfare agencies consistently thought they had been waiting for longer than they really had. Some thought they had been waiting four times as long.

The fundamental problem then, is this. How can the people

who are waiting, spend their time wholeheartedly—live the hours or minutes while they wait, as fully as the other hours of their day—and yet still be on hand, whenever the event or the person they are waiting for is ready?

It can be done best when the waiting is fused with some other activity: an activity that draws in other people who are not there essentially to wait—a cafe, pool tables, tables, a reading room, where the activities and the seats around them are within earshot of the signal that the interviewer (or the plane, or whatever) is ready. For example, the Pediatrics Clinic at San Francisco General Hospital built a small playground beside the entrance, to serve as a waiting area for children and a play area for the neighborhood.



Waiting room at the pediatrics clinic.

In another example we know, a horseshoe pit was built alongside a terrace where people came to wait for appointments. The people waiting inevitably started pitching horseshoes, others joined in, people left as their appointments came up—there was an easy flow between the horseshoe pit, the terrace, and the offices.

Waiting can also be a situation where the person waiting finds himself with free time, and, with the support of the surroundings, is able to draw into himself, become still, meditative—quite the opposite of the activity described above.

The right atmosphere will come naturally if the waiting area provides some places that are quiet, protected, and do not draw out the anxiety of the wait. Some examples: a seat near a bus

BUILDINGS

stop, under a tree, protected from the street; a window seat that looks down upon a street scene below; a protected seat in a garden, a swing or a hammock; a dark place and a glass of beer, far enough away from passages so that a person is not always looking up when someone comes or goes; a private seat by a fish tank.

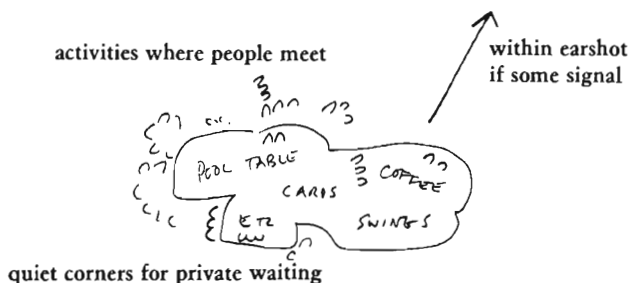
In summary, then, people who are waiting must be free to do what they want. If they want to sit outside the interviewer's door, they can. If they want to get up and take a stroll, or play a game of pool, or have a cup of coffee, or watch other people, they can. If they want to sit privately and fall into a daydream, they can. And all this without having to fear that they are losing their place in line.



Quiet waiting.

Therefore:

In places where people end up waiting (for a bus, for an appointment, for a plane), create a situation which makes the waiting positive. Fuse the waiting with some other activity—newspaper, coffee, pool tables, horseshoes; something which draws people in who are not simply waiting. And also the opposite: make a place which can draw a person waiting into a reverie; quiet; a positive silence.



The active part might have a window on the street—STREET WINDOWS (164), WINDOW PLACE (180), a cafe—STREET CAFE (88), games, positive engagements with the people passing by—OPENING TO THE STREET (165). The quiet part might have a quiet garden seat—GARDEN SEAT (176), a place for people to doze—SLEEPING IN PUBLIC (94), perhaps a pond with fish in it—STILL WATER (71). To the extent that this waiting space is a room, or a group of rooms, it gets its detailed shape from LIGHT ON TWO SIDES OF EVERY ROOM (159) and THE SHAPE OF INDOOR SPACE (191). . . .

154 TEENAGER'S COTTAGE*



. . . in any house which has teenagers in it—THE FAMILY (75), HOUSE FOR A SMALL FAMILY (76)—it is necessary to give special consideration to their rooms—A ROOM OF ONE'S OWN (141). If possible, these rooms should be attached but separate, and made to help create the possibility of later being ROOMS TO RENT (153).



If a teenager's place in the home does not reflect his need for a measure of independence, he will be locked in conflict with his family.

In most family homes the rooms for children and adolescents are essentially the same. But when children become adolescents, their relationship to the family changes considerably. They become less and less dependent on the family; they take on greater responsibilities; their life outside the home becomes richer, more absorbing. Most of the time they want more independence; occasionally they really need the family to fall back on; sometimes they are terrified by the confusion within and around them. All of this places new demands on the organization of the family and, accordingly, on the organization of the house.

To really help a young person go through this time, home life must strike a subtle balance. It must offer tremendous opportunities for initiative and independence, as well as a constant sense of support, no matter what happens. But American family life never seems to strike this balance. The studies of adolescent family life depict a time of endless petty conflict, tyranny, delinquency, and acquiescence. As a social process, adolescence, it seems, is geared more to breaking the spirit of young boys and girls, than to helping them find themselves in the world. (See, for example, Jules Henry, *Culture Against Man*, New York: Random House, 1963.)

In physical terms these problems boil down to this. A teenager needs a place in the house that has more autonomy and character and is more a base for independent action than a child's bedroom or bed alcove. He needs a place from which he can come

and go as he pleases, a place within which his privacy is respected. At the same time he needs the chance to establish a closeness with his family that is more mutual and less strictly dependent than ever before. What seems to be required is a cottage which, in its organization and location, strikes the balance between a new independence and new ties to the family.

The teenager's cottage might be made from the child's old bedroom, the boy and his father knocking a door through the wall and enlarging the room. It might be built from scratch, with the intention that it later serve as a workshop, or a place for grandfather to live out his life, or a room to rent. The cottage might even be an entirely detached structure in the garden, but in this case, a very strong connection to the main house is essential: perhaps a short covered path from the cottage into the main kitchen. Even in row housing, or apartments, it is possible to give teenagers rooms with private entry.

Is the idea of the teenage cottage acceptable to parents? Silverstein interviewed 12 mothers living in Foster City, a suburb of San Francisco, and asked them whether they would like a teenage cottage in their family. Their resistance to the idea revolved around three objections:

1. The cottage would be useful for only a few years, and would then stand empty.
2. The cottage would break up the family; it isolates the teenager.
3. It gives the teenager too much freedom in his comings and goings.

Silverstein then suggested three modifications, to meet these objections:

To meet the first objection, make the space double as a workshop, guest room, studio, place for grandmother; and build it with wood, so it can be modified easily with hand tools.

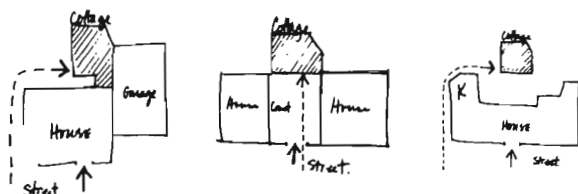
To meet the second objection, attach the cottage to the house, but with its own entrance; attach the cottage to the house via a short hall or vestibule or keep the cottage to the back of the lot, behind the house.

To meet the third objection, place the cottage so that the path from the room to the street passes through an important communal part of the house—the kitchen, a courtyard.

BUILDINGS

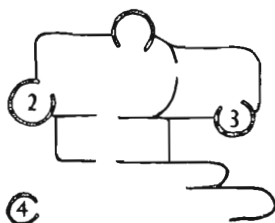
He discussed these modifications with the same twelve mothers. Eleven of the twelve now felt that the modified version had some merit, and was worth trying. This material is reported by Murray Silverstein, in "The Boy's Room: Twelve Mothers Respond to an Architectural Pattern," University of California, Department of Architecture, December 1967.

Here are some possible variants containing these modifications.



Variations of teenager's cottage.

Among the Comanches, "... the boy after puberty was given a separate tepee in which he slept, entertained his friends, and spent most of his time." (Abram Kardiner, *Psychological Frontiers of Society*, New York: Columbia University Press, 1945, p. 75.)



Plan of a Yungur Compound, Africa; 2 is the master bedroom; 3 is the daughter's hut; 4 is the son's hut.

And finally, from Simone De Beauvoir:

When I was twelve I had suffered through not having a private retreat of my own at home. Leafing through *Mon Journal* I had found a story about an English schoolgirl, and gazed enviously at

the colored illustration portraying her room. There was a desk, and a divan, and shelves filled with books. Here, within these gaily painted walls, she read and worked and drank tea, with no one watching her—how envious I felt! For the first time ever I had glimpsed a more fortunate way of life than my own. And now, at long last, I too had a room to myself. My grandmother had stripped her drawing room of all its armchairs, occasional tables, and knick-knacks. I had bought some unpainted furniture, and my sister had helped me to give it a coat of brown varnish. I had a table, two chairs, a large chest which served both as a seat and as a hold-all, shelves for my books. I papered the walls orange, and got a divan to match. From my fifth-floor balcony I looked out over the Lion of Belfort and the plane trees on the Rue Denfert-Rochereau. I kept myself warm with an evil-smelling kerosene stove. Somehow its stink seemed to protect my solitude, and I loved it. It was wonderful to be able to shut my door and keep my daily life free of other people's inquisitiveness. For a long time I remained indifferent to the decor of my surroundings. Possibly because of that picture in *Mon Journal* I preferred rooms that offered me a divan and bookshelves, but I was prepared to put up with any sort of retreat in a pinch. To have a door that I could shut was still the height of bliss for me . . . I was free to come and go as I pleased. I could get home with the milk, read in bed all night, sleep till midday, shut myself up for forty-eight hours at a stretch, or go out on the spur of the moment . . . my chief delight was in doing as I pleased. (Simone De Beauvoir, *The Prime of Life*, New York: Lancer Books, 1966, pp. 9-10.)

Therefore:

To mark a child's coming of age, transform his place in the home into a kind of cottage that expresses in a physical way the beginnings of independence. Keep the cottage attached to the home, but make it a distinctly visible bulge, far away from the master bedroom, with its own private entrance, perhaps its own roof.

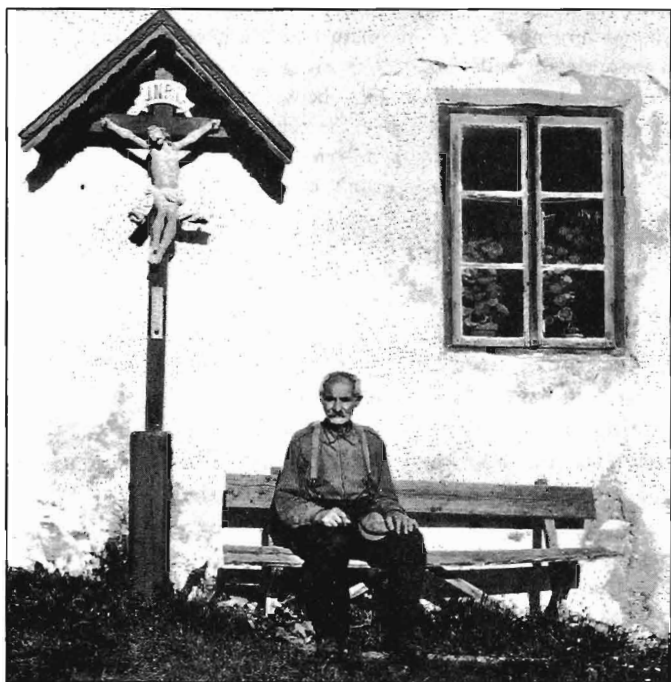


BUILDINGS



Arrange the cottage to contain a SITTING CIRCLE (185) and a BED ALCOVE (188) but not a private bath and kitchen—sharing these is essential: it allows the boy or girl to keep enough connection with the family. Make it a place that can eventually become a guest room, room to rent, workshop, and so on—ROOMS TO RENT (153), HOME WORKSHOP (157). If it is on an upper story, give it a separate private OPEN STAIR (158). And for the shape of the cottage and its construction, start with THE SHAPE OF INDOOR SPACE (191) and STRUCTURE FOLLOWS SOCIAL SPACES (205). . . .

I 55 OLD AGE COTTAGE**



. . . we have explained, in *OLD PEOPLE EVERYWHERE* (40), that it is essential to have a balanced number of old people in every neighborhood, partly centered around a communal place, but largely strung out among the other houses of the neighborhood. This pattern now defines the nature of the houses for old people in more detail: both those which are a part of clusters and those which are tucked, autonomously, between the larger houses. As we shall see, it seems desirable that every family should have a cottage like this, attached to it—*THE FAMILY* (75). Like *ROOMS TO RENT* (153) and *TEENAGER'S COTTAGE* (154), this cottage can be rented out or used for other purposes in time of trouble.



Old people, especially when they are alone, face a terrible dilemma. On the one hand, there are inescapable forces pushing them toward independence: their children move away; the neighborhood changes; their friends and wives and husbands die. On the other hand, by the very nature of aging, old people become dependent on simple conveniences, simple connections to the society about them.

This conflict is reflected often in their children's conflict. On the one hand, children feel responsible for their parents, because, of course, they sense their growing need for care and comfort. On the other hand, as families are whittled down, parent-child conflicts become more acute, and few people can imagine actually being able or willing to take care of their parents in their dotage.

The conflict can be partly resolved, if each house which houses a nuclear family has, somewhere near it, a small cottage where a grandparent can live, far enough away to be independent, and yet close enough to feel some tie and to be cared for in a time of trouble or approaching death.

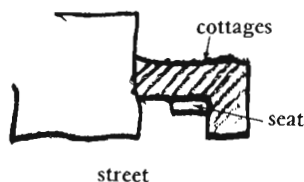
But the conflict is more general. Even if we ignore, altogether, the complexities of parent-child relationships, the fact is that most old people face enormous difficulties as they grow older. The wel-

fare state tries to replace the comfort of the extended family with payments—social security or pensions. This income is always tiny; and inflation makes it worse. In the United States, one-quarter of the population over 65 lives on less than \$4000 a year. Many of the old people in our society are forced to live in miserable tiny rooms, way in the back of some run-down old folks hotel. They cannot have a decent house, because there are no decent tiny houses compatible with a small income and reduced activity.

This second conflict, between the need for someplace really small and modest and the need for social contact, a view of passing people, someone to nod to, a place in the sun, can also be resolved, like the first conflict, by cottages. It can be resolved, if there are many tiny cottages, dotted among the houses of communities and always strung along pedestrian paths—tiny enough to be really cheap.

Therefore:

Build small cottages specifically for old people. Build some of them on the land of larger houses, for a grandparent; build others on individual lots, much smaller than ordinary lots. In all cases, place these cottages at ground level, right on the street, where people are walking by, and close to neighborhood services and common land.

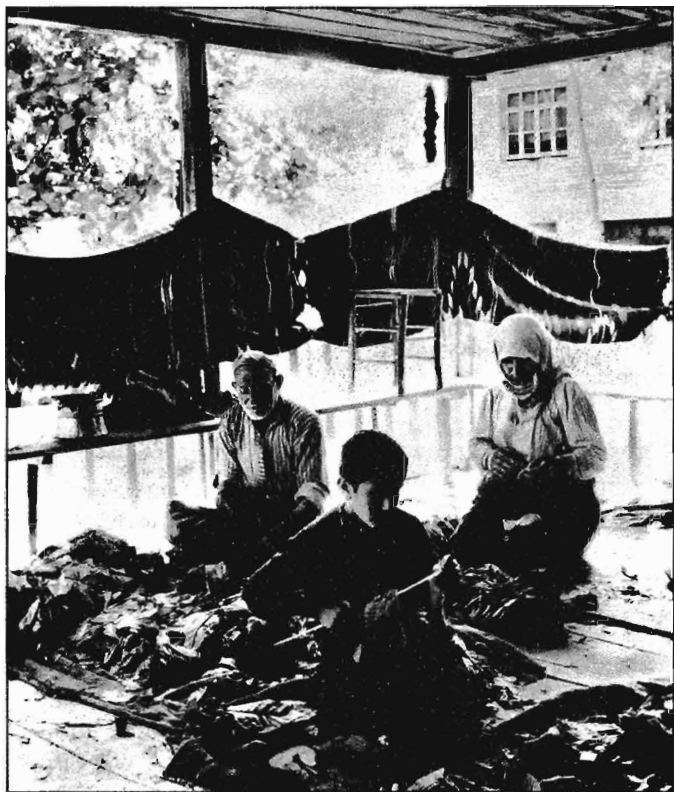


BUILDINGS



Perhaps the most important part of an old age cottage is the front porch and front door bench outside the door, right on the street—PRIVATE TERRACE ON THE STREET (140), FRONT DOOR BENCH (242); for the rest, arrange the cottage pretty much according to the layout of any HOUSE FOR ONE PERSON (78); make provisions for SETTLED WORK (156); and give the cottage a STREET WINDOW (164). And for the shape of the cottage start with THE SHAPE OF INDOOR SPACE (191) and STRUCTURE FOLLOWS SOCIAL SPACES (205). . . .

157 HOME WORKSHOP



. . . at the center of each HOUSE CLUSER (37) and in YOUR OWN HOME (79) there needs to be one room or outbuilding, which is freely attached and accessible from the outside. This is the workshop. The following pattern tells us how important workshops are, how widely they ought to be scattered, how omnipresent, and when they are built, how easy to reach, and how public they should always be. It helps to reinforce the patterns of SCATTERED WORK (9), NETWORK OF LEARNING (18), and MEN AND WOMEN (27).



As the decentralization of work becomes more and more effective, the workshop in the home grows and grows in importance.

We have explained in SCATTERED WORK (9), NETWORK OF LEARNING (18), MEN AND WOMEN (27), SELF-GOVERNING WORKSHOPS AND OFFICES (80), and other patterns that we imagine a society in which work and family are far more intermingled than today; a society in which people—businessmen, artists, craftsmen, shopkeepers, professionals—work for themselves, alone and in small groups, with much more relation to their immediate surroundings than they have today.

In such a society, the home workshop becomes far more than a basement or a garage hobby shop. It becomes an integral part of every house; as central to the house's function as the kitchen or the bedrooms. And we believe its most important characteristic is its relationship to the public street. For most of us, work life is relatively public. Certainly, compared to the privacy of the hearth, it is a public affair. Even where the public relationship is slight, there is something to be gained, both for the worker and the community, by enlarging the connection between the two.

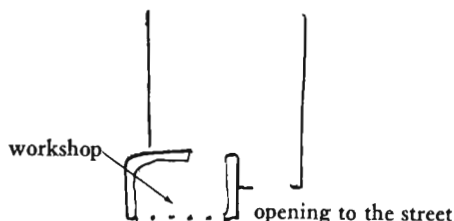
In the case of the home workshop, the public nature of the work is especially valuable. It brings the workshop out of the realm of backyard hobbies and into the public domain. The people working there have a view of the street; they are exposed

to the people passing by. And the people passing learn something about the nature of the community. The children especially are enlivened by this contact. And according to the nature of the work, the public connection takes the form of a shopfront, a driveway for loading and unloading materials, a work bench in the open, a small meeting room . . .

We therefore advocate provision for a substantial workshop with all the character of a real workplace and some degree of connection to the public street: at least a glancing connection so that people can see in and out; and perhaps a full connection, like an open shop front.

Therefore:

Make a place in the home, where substantial work can be done; not just a hobby, but a job. Change the zoning laws to encourage modest, quiet work operations to locate in neighborhoods. Give the workshop perhaps a few hundred square feet; and locate it so it can be seen from the street and the owner can hang out a shingle.



Give the workshop a corner where it is especially nice to work—LIGHT ON TWO SIDES (159), WORKSPACE ENCLOSURE (183); a strong connection to the street—OPENING TO THE STREET (165), WINDOWS OVERLOOKING LIFE (192); perhaps a place to work in the sun on warm days—SUNNY PLACE (161). For the shape of the workshop and its construction, start with THE SHAPE OF INDOOR SPACE (191). . . .

158 OPEN STAIRS*



. . . most of the last patterns—ROOMS TO RENT (153), TEEN-AGER'S COTTAGE (154), SETTLED WORK (156), HOME WORKSHOP (157)—can be upstairs, provided that they have direct connections to the street. Far more generally, it is true that many of the households, public services, and workgroups given by earlier patterns can be successful when they lie upstairs, only if they are given direct connections to the street. For instance, in a work community SELF-GOVERNING WORKSHOPS AND OFFICES (80), SMALL SERVICES WITHOUT RED TAPE (81), SMALL WORK GROUPS (148) all require direct access to the public street when they are on the upper storys of a building. And in the individual households—HOUSE FOR A SMALL FAMILY (76), HOUSE FOR A COUPLE (77), HOUSE FOR ONE PERSON (78) also need direct connections to the street, so people do not need to go through lower floors to get to them. This pattern describes the open stairs which may be used to form these many individual connections to the street. They play a major role in helping to create PEDESTRIAN STREETS (100).



Internal staircases reduce the connection between upper stories and the life of the street to such an extent that they can do enormous social damage.

The simple fact of the matter is that an apartment on the second floor of a building is wonderful when it has a direct stair to the street, and much less wonderful when it is merely one of several apartments served by an internal stair. The following, perhaps rather laborious discussion, is our effort to explain this vital and commonplace intuition.

In a traditional culture where buildings are built incrementally, outdoor stairs leading to upper stories are common. And half "outdoor" stairs—protected by walls and roofs, but nonetheless open to the street—are also common.

BUILDINGS



The beauty of open stairs.

By contrast, in industrialized, authoritarian societies most stairs are indoor stairs. The access to these stairs is from internal lobbies and corridors; the upper stories are cut off from direct access to the life of the street.



This is not an open stair—don't be fooled.

This difference is not an incidental by-product of fire laws or construction techniques. It is fundamental to the difference between a free anarchical society, in which there is a voluntary exchange of ideas between equals, and a highly centralized authoritarian society, in which most individuals are subservient to large government and business organizations.

In effect we are saying that a centralized entrance, which funnels everyone in a building through it, has in its nature the trappings of control; while the pattern of many open stairs, leading off the public streets, direct to private doors, has in its nature the fact of independence, free comings and goings.

We can see this most easily in the cases where the centralized door is, without question, a source of social control. In workplaces with a central entrance and a time-clock, workers punch in and out, and they have to make excuses when they are leaving at a time that is not normal. In some kinds of student housing, people are asked to sign in and out; and if they are not back by "lock-out" time, they are in trouble.

Then there are cases where the control is more subtle. In an apartment house or a workplace where everyone is free to come or go as he pleases it is not uncommon for the main door to be kept locked. Of course the residents have a key to the building; but their friends do not. When the front door is locked—after normal hours, say—they are effectively cut off from the spontaneous "dropping in" that can occur freely only where all paths are public right up to the thresholds of private territory.

Then there is the still more subtle fact that, even where the centralized entrance carries with it no explicit policy of social control—let us say that it is a door that is always open—it still has an uneasy feeling about it for people who cherish basic liberties. The single, centralized entrance is the precise pattern that a tyrant *would* propose who wanted to control people's comings and goings. It makes one uneasy to live with such a form, even where the social policy is relatively free.

This may very easily sound paranoid. But the point is this: socially, a libertarian society tries to build for itself structures which cannot easily be controlled by one person or one group "at the helm." It tries to decentralize social structures so that there are *many* centers, and no one group can come to have excessive control.

A physical environment which supports the same libertarian ideal will certainly put a premium on structures that allow people freedom to come and go as they please. And it will try to protect this right by building it into the very ground plan of buildings and cities. When we feel uneasy in a building that is spatially over-centralized and authoritarian, it is because we feel unprotected in this way; we feel that one of our basic rights is potentially vulnerable and is not being fully affirmed by the physical structure of the environment.

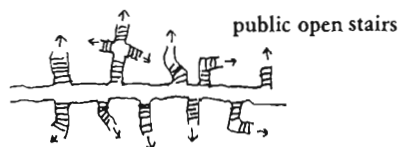
Open stairs which act as extensions of the public world and which reach up to the very threshold of each household's and each

BUILDINGS

workgroup's own space solve this problem. These spaces are then connected directly to the world at large. People on the street recognize each entry as the domain of real people—not the domain of corporations and institutions, which have the actual or potential power to tyrannize.

Therefore:

Do away, as far as possible, with internal staircases in institutions. Connect all autonomous households, public services, and workgroups on the upper floors of buildings directly to the ground. Do this by creating open stairs which are approached directly from the street. Keep the stair roofed or unroofed, according to climate, but at all events leave the stair open at ground level, without a door, so that the stair is functionally a continuation of the street. And build no upstairs corridors. Instead, make open landings or an open arcade where upstairs units share a single stair.



Where the stair comes down to the ground, make an entrance which helps to repair the family of entrances that exist already on the street—FAMILY OF ENTRANCES (102); make the landings and the top of the stair, where it reaches the roof, into gardens where things can grow and where people can sit in the sun—ROOF GARDEN (118), SUNNY PLACE (161). Remember STAIR SEATS (125), and build the stair according to STAIRCASE VOLUME (195). . . .

prepare to knit the inside of the building to the outside, by treating the edge between the two as a place in its own right, and making human details there;

159. LIGHT ON TWO SIDES OF EVERY ROOM

160. BUILDING EDGE

161. SUNNY PLACE

162. NORTH FACE

163. OUTDOOR ROOM

164. STREET WINDOWS

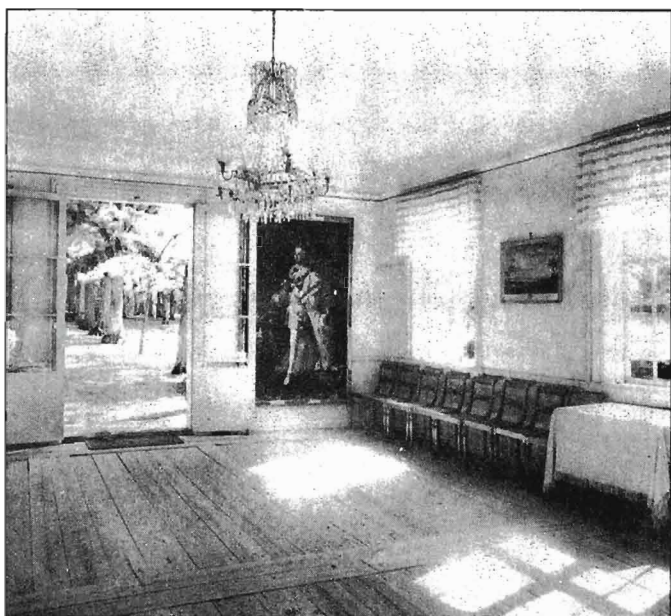
165. OPENING TO THE STREET

166. GALLERY SURROUND

167. SIX-FOOT BALCONY

168. CONNECTION TO THE EARTH

159 LIGHT ON TWO SIDES
OF EVERY ROOM**



. . . once the building's major rooms are in position, we have to fix its actual shape: and this we do essentially with the position of the edge. The edge has got its rough position already from the overall form of the building—WINGS OF LIGHT (107), POSITIVE OUTDOOR SPACE (106), LONG THIN HOUSE (109), CASCADE OF ROOFS (116). This pattern now completes the work of WINGS OF LIGHT (107), by placing each individual room exactly where it needs to be to get the light. It forms the exact line of the building edge, according to the position of these individual rooms. The next pattern starts to shape the edge.



When they have a choice, people will always gravitate to those rooms which have light on two sides, and leave the rooms which are lit only from one side unused and empty.

This pattern, perhaps more than any other single pattern, determines the success or failure of a room. The arrangement of daylight in a room, and the presence of windows on two sides, is fundamental. If you build a room with light on one side only, you can be almost certain that you are wasting your money. People will stay out of that room if they can possibly avoid it. Of course, if all the rooms are lit from one side only, people will have to use them. But we can be fairly sure that they are subtly uncomfortable there, always wishing they weren't there, wanting to leave—just because we are so sure of what people do when they do have the choice.

Our experiments on this matter have been rather informal and drawn out over several years. We have been aware of the idea for some time—as have many builders. (We have even heard that “light on two sides” was a tenet of the old Beaux Arts design tradition.) In any case, our experiments were simple: over and over again, in one building after another, wherever we happened to find ourselves, we would check to see if the pattern held. Were people in fact avoiding rooms lit only on one side, preferring the two-sided rooms—what did they think about it?

BUILDINGS

We have gone through this with our friends, in offices, in many homes—and overwhelmingly the two-sided pattern seems significant. People are aware, or half-aware of the pattern—they understand exactly what we mean.



With light on two sides . . . and without

If this evidence seems too haphazard, please try these observations yourself. Bear the pattern in mind, and examine all the buildings you come across in your daily life. We believe that you will find, as we have done, that those rooms you intuitively recognize as pleasant, friendly rooms have the pattern; and those you intuitively reject as unfriendly, unpleasant, are the ones which do not have the pattern. In short, this one pattern alone, is able to distinguish good rooms from unpleasant ones.

The importance of this pattern lies partly in the social atmosphere it creates in the room. Rooms lit on two sides, with natural light, create less glare around people and objects; this lets us see things more intricately; and most important, it allows us to read in detail the minute expressions that flash across people's faces, the motion of their hands . . . and thereby understand, more clearly, the meaning they are after. *The light on two sides allows people to understand each other.*

In a room lit on only one side, the light gradient on the walls and floors inside the room is very steep, so that the part furthest from the window is uncomfortably dark, compared with the part near the window. Even worse, since there is little reflected light on the room's inner surfaces, the interior wall immediately next to the window is usually dark, creating discomfort and glare against this light. *In rooms lit on one side, the glare which sur-*

rounds people's faces prevents people from understanding one another.

Although this glare may be somewhat reduced by supplementary artificial lighting, and by well-designed window reveals, the most simple and most basic way of overcoming glare, is to give every room two windows. The light from each window illuminates the wall surfaces just inside the other window, thus reducing the contrast between those walls and the sky outside. For details and illustrations, see R. G. Hopkinson, *Architectural Physics: Lighting*, London: Building Research Station, 1963, pp. 29, 103.

A supreme example of the complete neglect of this pattern is Le Corbusier's Marseilles Block apartments. Each apartment unit is very long and relatively narrow, and gets all its light from one end, the narrow end. The rooms are very bright just at the windows and dark everywhere else. And, as a result, the glare created by the light-dark contrast around the windows is very disturbing.

In a small building, it is easy to give every room light on two sides: one room in each of the four corners of a house does it automatically.

In a slightly larger building, it is necessary to wrinkle the edge, turn corners, to get the same effect. Juxtaposition of large rooms and small, helps also.



Wrinkle the edge.

In an even larger building, it may be necessary to build in some sort of systematic widening in the plan or to convolute the edge still further, to get light on two sides for every room.

BUILDINGS

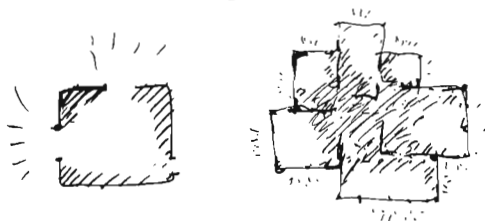
But of course, no matter how clever we are with the plan, no matter how carefully we convolute the building edge, sometimes it is just impossible. In these cases, the rooms can get the effect of light on two sides under two conditions. They can get it, if the room is very shallow—not more than about eight feet deep—with at least two windows side by side. The light bounces off the back wall, and bounces sideways between the two windows, so that the light still has the glare-free character of light on two sides.

And finally, if a room simply has to be more than eight feet deep, but cannot have light from two sides—then the problem can be solved by making the ceiling very high, by painting the walls very white, and by putting great high windows in the wall, set into very deep reveals, deep enough to offset the glare. Elizabethan dining halls and living rooms in Georgian mansions were often built like this. Remember, though, that it is very hard to make it work.

Therefore:

Locate each room so that it has outdoor space outside it on at least two sides, and then place windows in these outdoor walls so that natural light falls into every room from more than one direction.

each room has light on two sides

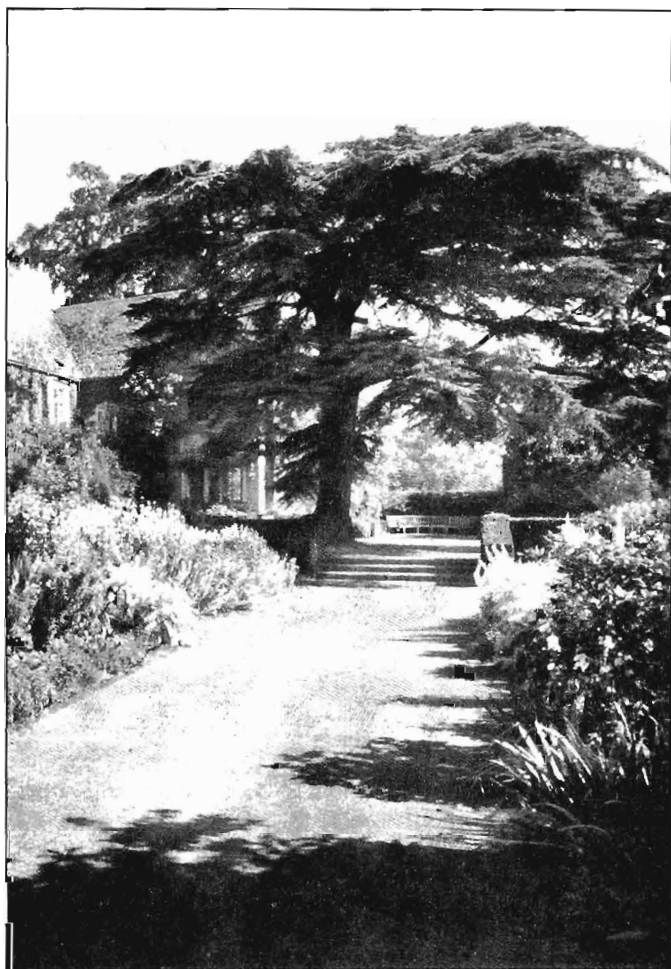


Don't let this pattern make your plans too wild—otherwise you will destroy the simplicity of POSITIVE OUTDOOR SPACE (106), and you will have a terrible time roofing the building—ROOF

LAYOUT (209). Remember that it is possible to keep the essence of the pattern with windows on one side, if the room is unusually high, if it is shallow compared with the length of the window wall, the windows large, the walls of the room white, and massive deep reveals on the windows to make quite certain that the big windows, bright against the sky, do not create glare.

Place the individual windows to look onto something beautiful—WINDOWS OVERLOOKING LIFE (192), NATURAL DOORS AND WINDOWS (221); and make one of the windows in the room a special one, so that a place gathers itself around it—WINDOW PLACE (180). Use DEEP REVEALS (223) and FILTERED LIGHT (238). . . .

171 TREE PLACES**



. . . trees are precious. Keep them. Leave them intact. If you have followed SITE REPAIR (104), you have already taken care to leave the trees intact and undisturbed by new construction; you may have planted FRUIT TREES (170); and you may perhaps also have other additional trees in mind. This pattern re-emphasizes the importance of leaving trees intact, and shows you how to plant them, and care for them, and use them, in such a way that the spaces which they form are useful as extensions of the building.



When trees are planted or pruned without regard for the special places they can create, they are as good as dead for the people who need them.

Trees have a very deep and crucial meaning to human beings. The significance of old trees is archetypal; in our dreams very often they stand for the wholeness of personality: "Since . . . psychic growth cannot be brought about by a conscious effort of will power, but happens involuntarily and naturally, it is in dreams frequently symbolized by the tree, whose slow, powerful involuntary growth fulfills a definite pattern." (M. L. von Franz, "The process of individuation," in C. G. Jung, *Man and his Symbols*, New York: Doubleday, 1964, pp. 161, 163-64.)

There is even indication that trees, along with houses and other people, constitute one of the three most basic parts of the human environment. The House-Tree-Person Technique, developed by Psychologist John Buck, takes the drawings a person makes of each of these three "wholes" as a basis for projective tests. The mere fact that trees are considered as full of meaning, as houses and people, is, alone, a very powerful indication of their importance (V. J. Bieliauskas, *The H-T-P Research Review*, 1965 Edition, Western Psychological Services, Los Angeles, California, 1965; and Isaac Jolles, *Catalog for the Qualitative Interpretation of the House-Tree-Person*, Los Angeles, California: Western Psychological Services, 1964, pp. 75-97).

But for the most part, the trees that are being planted and transplanted in cities and suburbs today do not satisfy people's craving for trees. They will never come to provide a sense of beauty and peace, because they are being set down and built around *without regard for the places they create*.

The trees that people love create special social places: places to be in, and pass through, places you can dream about, and places you can draw. Trees have the potential to create various kinds of social places: an *umbrella*—where a single, low-sprawling tree like an oak defines an outdoor room; a *pair*—where two trees form a gateway; a *grove*—where several trees cluster together; a *square*—where they enclose an open space; and an *avenue*—where a double row of trees, their crowns touching, line a path or street. It is only when a tree's potential to form places is realized that the real presence and meaning of the tree is felt.

The trees that are being set down nowadays have nothing of this character—they are in tubs on parking lots and along streets, in specially "landscaped areas" that you can see but cannot get to. They do not form places in any sense of the word—and so they mean nothing to people.

Now, there is a great danger that a person who has read this argument so far, may misinterpret it to mean that trees should be "used" instrumentally for the good of people. And there is, unfortunately, a strong tendency in cities today to do just that—to treat trees instrumentally, as means to our own pleasure.

But our argument says just the opposite. Trees in a city, round a building, in a park, or in a garden are not in the forest. They need attention. As soon as we decide to have trees in a city, we must recognize that the tree becomes a different sort of ecological being. For instance, in a forest, trees grow in positions favorable to them: their density, sunlight, wind, moisture are all chosen by the process of selection. But in a city, a tree grows where it is planted, and it will not survive unless it is most carefully tended—pruned, watched, cared for when its bark gets pierced . . .

But now we come to a very subtle interaction. The trees will not get tended unless the places where they grow are liked and used by people. If they are randomly planted in some garden or in the shrubbery of some park, they are not near enough to

BUILDINGS

people to make people aware of them; and this in turn makes it unlikely that they will get the care they need.

So, finally, we see the nature of the complex interactive symbiosis between trees and people.

1. First, people need trees—for the reasons given.
2. But when people plant trees, the trees need care (unlike the forest trees).
3. The trees won't get the care they need unless they are in places people like.
4. And this in turn requires that the trees form social spaces.
5. Once the trees form social spaces, they are able to grow naturally.

So we see, by a curious twist of circumstances, trees in cities can only grow well, and in a fashion true to their own nature, when they cooperate with people and help to form spaces which the people need.

Therefore:

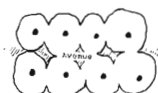
If you are planting trees, plant them according to their nature, to form enclosures, avenues, squares, groves, and single spreading trees toward the middle of open spaces. And shape the nearby buildings in response to trees, so that the trees themselves, and the trees and buildings together, form places which people can use.



umbrella



grove



avenue



Make the trees form "rooms" and spaces, avenues, and squares, and groves, by placing trellises between the trees, and walks, and seats under the trees themselves—OUTDOOR ROOM (163), TRELLISED WALK (174), GARDEN SEAT (176), SEAT SPOTS (241). One of the nicest ways to make a place beside a tree is to build a low wall, which protects the roots and makes a seat—SITTING WALL (243). . . .

172 GARDEN GROWING WILD**



. . . with terracing in place and trees taken care of—TERRACED SLOPE (169), FRUIT TREES (170), TREE PLACES (171), we come to the garden itself—to the ground and plants. In short, we must decide what kind of garden to have, what kind of plants to grow, what style of gardening is compatible with both artifice and nature.



A garden which grows true to its own laws is not a wilderness, yet not entirely artificial either.

Many gardens are formal and artificial. The flower beds are trimmed like table cloths or painted designs. The lawns are clipped like perfect plastic fur. The paths are clean, like new polished asphalt. The furniture is new and clean, fresh from the department store.

These gardens have none of the quality which brings a garden to life—the quality of a wilderness, tamed, still wild, but cultivated enough to be in harmony with the buildings which surround it and the people who move in it. This balance of wilderness and cultivation reached a high point in the oldest English gardens.

In these gardens things are arranged so that the natural processes which come into being will maintain the condition of the garden and not degrade it. For example, mosses and grasses will grow between paving stones. In a sensible and natural garden, the garden is arranged so that this process enhances the garden and does not threaten it. In an unnatural garden these kinds of small events have constantly to be “looked after”—the gardener must constantly try to control and eradicate the processes of seeding, weeds, the spread of roots, the growth of grass.

In the garden growing wild the plants are chosen, and the boundaries placed, in such a way that the growth of things regulates itself. It does not need to be regulated by control. But it does not grow fiercely and undermine the ways in which it is planted. Natural wild plants, for example, are planted among

flowers and grass, so that there is no room for so-called weeds to fill the empty spaces and then need weeding. Natural stone edges form the boundaries of grass so that there is no need to chop the turf and clip the edge every few weeks. Rocks and stones are placed where there are changes of level. And there are small rock plants placed between the stones, so that once again there is no room for weeds to grow.

A garden growing wild is healthier, more capable of stable growth, than the more clipped and artificial garden. The garden can be left alone, it will not go to ruin in one or two seasons.

And for the people too, the garden growing wild creates a more profound experience. The gardener is in the position of a good doctor, watching nature take its course, occasionally taking action, pruning, pulling out some species, only to give the garden more room to grow and become itself. By contrast, the gardens that have to be tended obsessively, enslave a person to them; you cannot learn from them in quite the same way.

Therefore:

Grow grasses, mosses, bushes, flowers, and trees in a way which comes close to the way that they occur in nature: intermingled, without barriers between them, without bare earth, without formal flower beds, and with all the boundaries and edges made in rough stone and brick and wood which become a part of the natural growth.

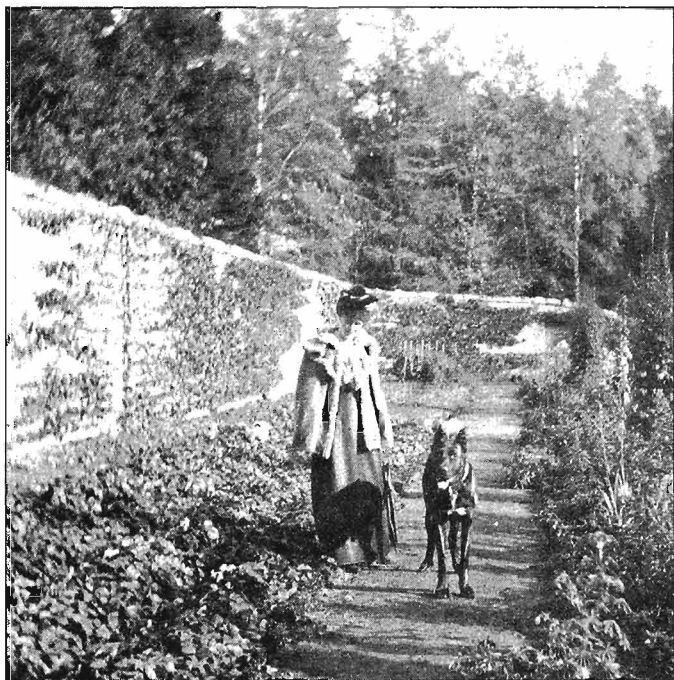


BUILDINGS



Include no formal elements, except where something is specifically called for by function—like a greenhouse—GREENHOUSE (175), a quiet seat—GARDEN SEAT (176), some water—STILL WATER (71), or flowers placed just where people can touch them and smell them—RAISED FLOWERS (245). . . .

173 GARDEN WALL*



. . . in private houses, both the HALF-HIDDEN GARDEN (111) and the PRIVATE TERRACE ON THE STREET (140) require walls. More generally, not only private gardens, but public gardens too, and even small parks and greens—QUIET BACKS (59), ACCESSIBLE GREEN (60), need some kind of enclosure round them, to make them as beautiful and quiet as possible.



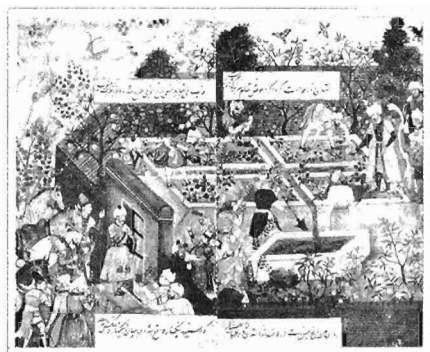
Gardens and small public parks don't give enough relief from noise unless they are well protected.

People need contact with trees and plants and water. In some way, which is hard to express, people are able to be more whole in the presence of nature, are able to go deeper into themselves, and are somehow able to draw sustaining energy from the life of plants and trees and water.

In a city, gardens and small parks try to solve this problem; but they are usually so close to traffic, noise, and buildings that the impact of nature is entirely lost. To be truly useful, in the deepest psychological sense, they must allow the people in them to be in touch with nature—and must be shielded from the sight and sound of passing traffic, city noises, and buildings. This requires walls, substantial high walls, and dense planting all around the garden.

In those few cases where there are small walled gardens in a city, open to the public—Alhambra, Copenhagen Royal Library Garden—these gardens almost always become famous. People understand and value the peace which they create.

. . . your garden or park wall of brick . . . has indeed often an unkind look on the outside, but there is more modesty in it than unkindness. It generally means, not that the builder of it wants to shut you out from the view of his garden, but from the view of himself: it is a frank statement that as he needs a certain portion of time to himself, so he needs a certain portion of ground to himself, and must not be stared at when he digs there in his shirt-



Walled gardens—Mughal.

sleeves, or plays at leapfrog with his boys from school, or talks over old times with his wife, walking up and down in the evening sunshine. Besides, the brick wall has good practical service in it, and shelters you from the east wind, and ripens your peaches and nectarines, and glows in autumn like a sunny bank. And, moreover, your brick wall, if you build it properly, so that it shall stand long enough, is a beautiful thing when it is old, and has assumed its grave purple red, touched with mossy green. . . . (John Ruskin, *The Two Paths*, New York: Dutton, 1907, pp. 202-205.)

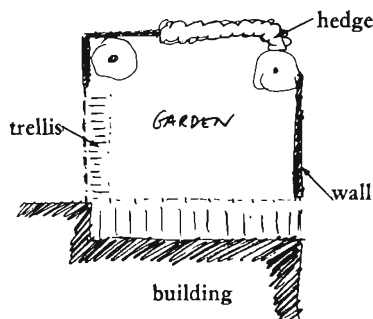
This pattern applies to all private gardens and to small parks in cities. We are not convinced that it applies to *all* small parks—but it is hard to differentiate precisely between the places where a walled garden is desirable and the places where it is not. There are definitely situations where a small park, and perhaps even a small garden that is *open* to the rush of life around it, is just right. However, there are far more parks and gardens left open, that need to be walled, than vice versa, so we emphasize the walled condition.

Therefore:

Form some kind of enclosure to protect the interior of a quiet garden from the sights and sounds of passing traffic. If it is a large garden or a park, the enclosure can

BUILDINGS

be soft, can include bushes, trees, slopes, and so on. The smaller the garden, however, the harder and more definite the enclosure must become. In a very small garden, form the enclosure with buildings or walls; even hedges and fences will not be enough to keep out sound.



Use the garden wall to help form positive outdoor space—POSITIVE OUTDOOR SPACE (106); but pierce it with balustrades and windows to make connections between garden and street, or garden and garden—PRIVATE TERRACE ON THE STREET (140), TRELLISED WALK (174), HALF-OPEN WALL (193), and above all, give it openings to make views into other larger and more distant spaces—HIERARCHY OF OPEN SPACE (114), ZEN VIEW (134). . . .

174 TRELLISED WALK**



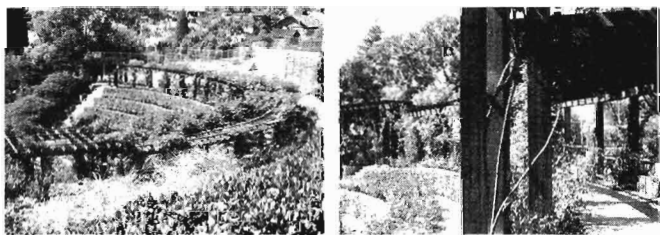
. . . suppose the main spots of the garden have been defined—OUTDOOR ROOM (163), TREE PLACES (171), GREENHOUSE (175), FRUIT TREES (170). Now, where there is a special need to emphasize a path—PATHS AND GOALS (120)—or, even more important, where the edges between two parts of a garden need to be marked without making a wall, an open trellised walk which can enclose space, is required. Above all, these trellised walks help to form the POSITIVE OUTDOOR SPACES (106) in a garden or a park; and may perhaps help to form an ENTRANCE TRANSITION (112).



Trellised walks have their own special beauty. They are so unique, so different from other ways of shaping a path, that they are almost archetypal.

In PATH SHAPE (121), we have described the need for outdoor paths to have a shape, like rooms. In POSITIVE OUTDOOR SPACE (106), we have explained the need for larger outdoor areas to have positive shape. A trellised walk does both. It makes it possible to implement both these patterns at the same time—simply and elegantly. But it does it in such a fundamental way that we have decided to treat it as a separate pattern; and we shall try to define the places where a trellised structure over a path is appropriate.

1. Use it to emphasize the path it covers, and to set off one part of the path as a special section of a longer path in order to make it an especially nice and inviting place to walk.

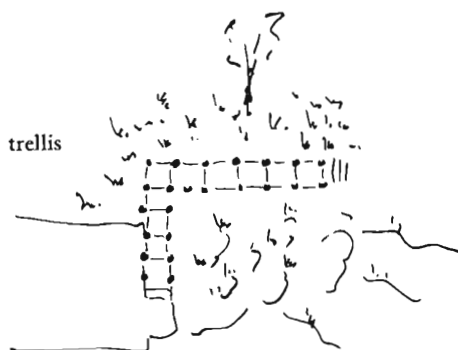


A trellis gives shape to an outdoor area.

2. Since the trellised path creates enclosure around the spaces which it bounds, use it to create a virtual wall to define an outdoor space. For example, a trellised walk can form an enormous outdoor room by surrounding, or partially surrounding, a garden.

Therefore:

Where paths need special protection or where they need some intimacy, build a trellis over the path and plant it with climbing flowers. Use the trellis to help shape the outdoor spaces on either side of it.



Think about the columns that support the trellis as themselves capable of creating places—seats, bird feeders—COLUMN PLACES (226). Pave the path with loosely set stones—PAVING WITH CRACKS BETWEEN THE STONES (247). Use climbing plants and a fine trellis work to create the special quality of soft, filtered light underneath the trellis—FILTERED LIGHT (238), CLIMBING PLANTS (246). . . .

175 GREENHOUSE



. . . to keep a garden alive, it is almost essential that there be a "workshop"—a kind of halfway house between the garden and the house itself, where seedlings grow, and where, in temperate climates, plants can grow in spite of cold. In a HOUSE CLUSTER (37) or a WORK COMMUNITY (41), this workshop makes an essential contribution to the COMMON LAND (67).



Many efforts are being made to harness solar energy by converting it into hot water or electric power. And yet the easiest way to harness solar energy is the most obvious and the oldest: namely, to trap the heat inside a greenhouse and use it for growing flowers and vegetables.

Imagine a simple greenhouse, attached to a living room, turned to the winter sun, and filled with shelves for flowers and vegetables. It has an entrance from the house—so you can go into it and use it in the winter without going outdoors. And it has an entrance from the garden—so you can use it as a workshop while you are out in the garden and not have to walk through the house.

This greenhouse then becomes a wonderful place: a source of life, a place where flowers can be grown as part of the life of the house. The classic conservatory was a natural part of countless houses in the temperate climates.

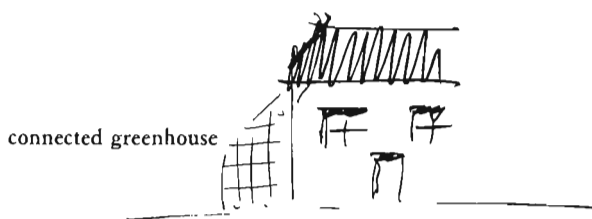
For someone who has not experienced a greenhouse as an extension of the house, it may be hard to recognize how fundamental it becomes. It is a world unto itself, as definite and wonderful as fire or water, and it provides an experience which can hardly be matched by any other pattern. Hewitt Ryan, the psychiatrist for whom we built the clinic in Modesto with the help of this pattern language, thought greenhouses so essential that he included one as a basic part of the clinic: a place beside the common area, where people could reintegrate themselves by growing seedlings that would be gradually transplanted to form gardens for the clinic.

BUILDINGS

Several recent “energy-systems” inspired by the ecology movement have sought to make greenhouses a fundamental part of human settlements. For example, Grahame Gaines’ self-contained eco-house includes a large greenhouse as a source of heat and food. (See *London Observer*, October 1972.) And Chahroudi’s Grow Hole—a glazed sunken pit for growing vegetables in winter—is another kind of greenhouse (*Progressive Architecture*, July 1970, p. 85).

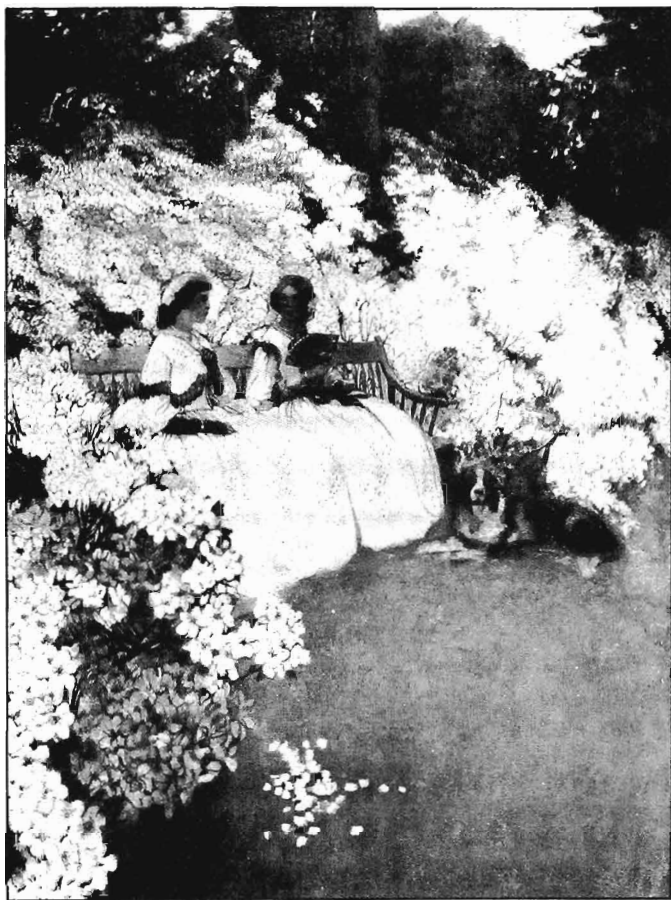
Therefore:

In temperate climates, build a greenhouse as part of your house or office, so that it is both a “room” of the house which can be reached directly without going outdoors and a part of the garden which can be reached directly from the garden.



Place the greenhouse so that it has easy access to the VEGETABLE GARDEN (177) and the COMPOST (178). Arrange its interior so that it is surrounded with WAIST-HIGH SHELVES (201) and plenty of storage space—BULK STORAGE (145); perhaps give it a special seat, where it is possible to sit comfortably—GARDEN SEAT (176), WINDOW PLACE (180). . . .

176 GARDEN SEAT



. . . with the character of the garden fixed—GARDEN GROWING WILD (172), we consider the special corners which make the garden valuable and somewhat secret. Of these, the most important is the SUNNY PLACE (161), which has already been described, because it is so fundamental to the building. Now we add to this another seat, more private, where a person can go to sit and think and dream.



Somewhere in every garden, there must be at least one spot, a quiet garden seat, in which a person—or two people—can reach into themselves and be in touch with nothing else but nature.

Throughout the patterns in this pattern language we have said, over and again, how very essential it is to give ourselves environments in which we can be in touch with the nature we have sprung from—see especially CITY COUNTRY FINGERS (3) and QUIET BACKS (59). But among all the various statements of this fact there is not one so far which puts this need right in our own houses, as close to us as fire and food.

Wordsworth built his entire politics, as a poet, around the fact that tranquility in nature was a basic right to which everyone was entitled. He wanted to integrate the need for solitude-in-nature with city living. He imagined people literally stepping off busy streets and renewing themselves in private gardens—every day. And now many of us have come to learn that without such a place life in a city is impossible. There is so much activity, days are so easily filled with jobs, family, friends, things to do—that time alone is rare. And the more we live without the habit of stillness, the more we tie ourselves to this active life, the stranger and more disquieting the experience of stillness and solitude becomes: city people are notoriously busy-busy, and cannot be alone, without “input,” for a moment.

It is in this context that we propose the isolated garden seat: a place hidden in the garden where one or two people can sit alone, undisturbed, near growing things. It may be on a roof

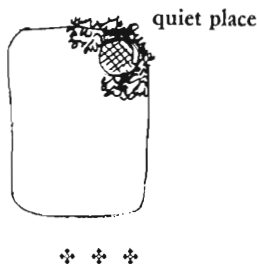
top, on the ground, perhaps even half-sunken in an embankment.

There are literally hundreds of old books about gardens which testify to this pattern. One is Hildegard Hawthorne's *The Lure of the Garden*, New York: The Century Co., 1911. We quote from a passage describing the special kind of small talk that is drawn out of people by quiet garden seats:

Perhaps, of all the various forms of gossip overheard by the garden, the loveliest is that between a young and an old person who are friends. Real friendship between the generations is rare, but when it exists it is of the finest. That youth is fortunate who can pour his perplexities into the ear of an older man or woman, and who knows a comradeship and an understanding exceeding in beauty the facile friendships created by like interests and common pursuits; and fortunate too the girl who is able to impart the emotions and ideas aroused in her by her early meetings with the world and life to some one old in experience but comprehendingly young in heart. Both of them will remember those hours long after the garden gate has closed behind their friend forever; as long, indeed, as they remember anything that went to the making of the best in them.

Therefore:

Make a quiet place in the garden—a private enclosure with a comfortable seat, thick planting, sun. Pick the place for the seat carefully; pick the place that will give you the most intense kind of solitude.



Place the garden seat, like other outdoor seats, where it commands a view, is in the sun, is sheltered from the wind—SEAT SPOTS (241); perhaps under bushes and trees where light is soft and dappled—FILTERED LIGHT (238). . . .

185 SITTING CIRCLE*



. . . according to the SEQUENCE OF SITTING SPACES (142), there will be a variety of different kinds of sitting space throughout an office building or a house or workshop—some formal, some informal, some large, some small, laid out in part according to the INTIMACY GRADIENT (127). This pattern deals with the actual physical layout of any one of these sitting spaces. And of course, it can be used to help create the sequence of sitting spaces, piecemeal, one space at a time.



A group of chairs, a sofa and a chair, a pile of cushions—these are the most obvious things in everybody's life—and yet to make them work, so people become animated and alive in them, is a very subtle business. Most seating arrangements are sterile, people avoid them, nothing ever happens there. Others seem somehow to gather life around them, to concentrate and liberate energy. What is the difference between the two?

Most important of all, perhaps, is their position. A sitting circle needs essentially the same position as a COMMON AREA AT THE HEART (129), but in miniature: a well defined area, with paths running past it, not cutting through it, and placed so that people naturally pass by it, stop and talk, lean on the backs of chairs, gradually sit down, move position, get up again. These characteristics are vital. The reasons are exactly the same as those given in COMMON AREAS AT THE HEART (129); only the scale is different.

Second, the rough shape of a circle. When people sit down to talk together they try to arrange themselves roughly in a circle. Empirical evidence for this has been presented by Margaret Mead ("Conference Behavior," *Columbia University Forum*, Summer, 1967, pp. 20-25). Perhaps one reason for the circle, as opposed to other forms, is the fact that people like to sit at an angle to one another, not side by side (Robert Sommer, "Studies in Personal Space," *Sociometry*, 22 September 1959, pp. 247-60.)

185 SITTING CIRCLE

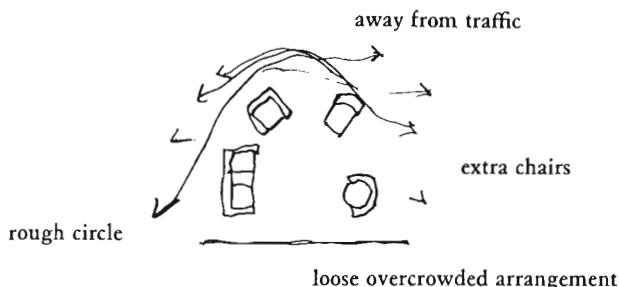
In a circle, even neighbors are at a slight angle to one another. This, together with the first point, suggests that a rough circle is best.

But it is not enough for the chairs to be in a circle. The chairs themselves will only hold this position if the actual architecture—the columns, walls, fire, windows—subtly suggest a partly contained, defined area, which is roughly a circle. The fire especially helps to anchor a sitting circle. Other things can do it almost as well.

Third, we have observed that the seating arrangement needs to be slightly loose—not too formal. Relatively loose arrangements, where there are many different sofas, cushions, and chairs, all free to move, work to bring a sitting circle to life. The chairs can be adjusted slightly, they can be turned at slight angles; and if there are one or two too many, all the better: this seems to animate the group. People get up and walk around, then sometimes sit back down in a new chair.

Therefore:

Place each sitting space in a position which is protected, not cut by paths or movement, roughly circular, made so that the room itself helps to suggest the circle—not too strongly—with paths and activities around it, so that people naturally gravitate toward the chairs when they get into the mood to sit. Place the chairs and cushions loosely in the circle, and have a few too many.



BUILDINGS



Use a fire, and columns, and half-open walls to form the shape of the circle—THE FIRE (181), THE SHAPE OF INDOOR SPACE (191), HALF-OPEN WALL (193); but do not make it too formal or too enclosed—COMMON AREAS AT THE HEART (129), SEQUENCE OF SITTING SPACES (142). Use DIFFERENT CHAIRS (251), big ones, small ones, cushions, and a few too many, so that they are never too perfectly arranged, but always in a bit of a jumble. Make a POOL OF LIGHT (252) to mark the sitting circle, and perhaps a WINDOW PLACE (180). . . .

186 COMMUNAL SLEEPING

. . . by this time the sleeping areas have been defined—COUPLE'S REALM (136), CHILDREN'S REALM (137), SLEEPING TO THE EAST (138), BED CLUSTER (143). It remains only to build in the actual detailed space which forms the beds themselves—MARRIAGE BED (187), BED ALCOVE (188). However, before we consider these patterns, we wish to draw attention to a slightly more general pattern which may affect their detailed positions.



In many traditional and primitive cultures, sleep is a communal activity without the sexual overtones it has in the West today. We believe that it may be a vital social function, which plays a role as fundamental and as necessary to people as communal eating.

For instance, in Indian villages during the dry season the men pull their beds into the compound at sundown and talk and smoke together, then drift off to sleep. It is a vital part of the social life of the community. The experience of the campfire is the closest western equivalent: people's love of camping suggests that the urge is still a common one.

It is possible that sleep as a communal activity may be a vital part of healthy social life, not only for children, but for all adults. How might we harmonize this need with the obvious facts of privacy and sexuality that are linked with sleeping?

Of course, it is a beautifully intimate thing—the moment in the morning and at night when a couple are together, in private, falling asleep or waking up together. But we believe that it is also possible to create a situation where, occasionally, people can sleep together in big, family-size groups.

In particular, we can imagine a special version of this activity for metropolitan culture, where so often friends live many miles

away from each other. How many times have you experienced this situation: You have been out for the night with your friends and end up back at their house for drinks, to talk, to build a fire. Finally, late into the night, it is time to leave. Often they will say, "Please, spend the night"—but this rarely happens. You decline, and make the weary, half-drunken drive home to "your own bed."

It seems to us that under these conditions especially, communal sleeping makes sense. It would help to intensify the social occasions when we do see our friends who live far away.

But the environment must invite it, or we shall never overcome our reluctance. People are uneasy about spending the night because it usually means having to make up a guest bed, or sleeping on the rug, or cramped on the sofa. Think how much more inviting it would be if, at the end of the night, people simply dozed off, in ones and twos, in alcoves, and on mats with quilts, around the main sleeping area of the house, or around the commons.

From a practical point of view, there are two alternative positions for the alcoves:

1. There might be a place in the commons—not in any one person's private space—a place where late at night after people have been together for the evening and the fire is dying out, it is simple to draw together and sleep—a place where children and parents can sleep together on special nights. It could be very simple: one large mat and some blankets.

2. The other solution is a more deliberate version of the pattern: the couple's realm in a family house could be slightly larger than normal, with one or two alcoves or window seats that could double as beds. A built-in seat, for example, that is wide enough and long enough to lay down on, with a thin mat spread across it, becomes a bed. A few places like this, and, at a moment's notice the couple's bedroom becomes a setting for communal sleeping.

In either case, the solution must be simple and must involve nothing more than reaching for a blanket and a mat. If special beds must be made and the room rearranged, it will never happen. And, of course, the space for guest's beds must be made so that it is not dead when it is not used for sleeping. It needs a com-

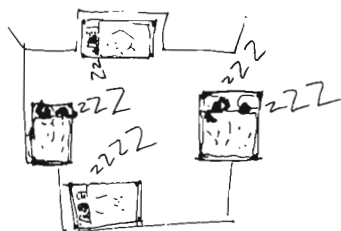
patible double function—a place to put a crib, a seat, a place to lay out clothes—ALCOVE (179), WINDOW PLACE (180), DRESSING ROOM (189).

This pattern may seem strange at first, but when our typist, read it, she was fascinated and decided to try it one Saturday night with her family. They spread a big mat across the living room. They all got up together and helped the youngest son on his paper route; then they had some breakfast. Ed: Are they still doing it? ? Au: No, after 2 weeks they were arrested.

Seriously though:

Arrange the sleeping area so that there is the possibility for children and adults to sleep in the same space, in sight and sound of one another, at least as an occasional alternative to their more usual sleeping habits.

This can be done in the common area near the fireplace, where the entire household and guests can sleep together—one large mat and some blankets in an alcove. It is also possible to build bed alcoves for overnight guests, in an extended couple's realm.

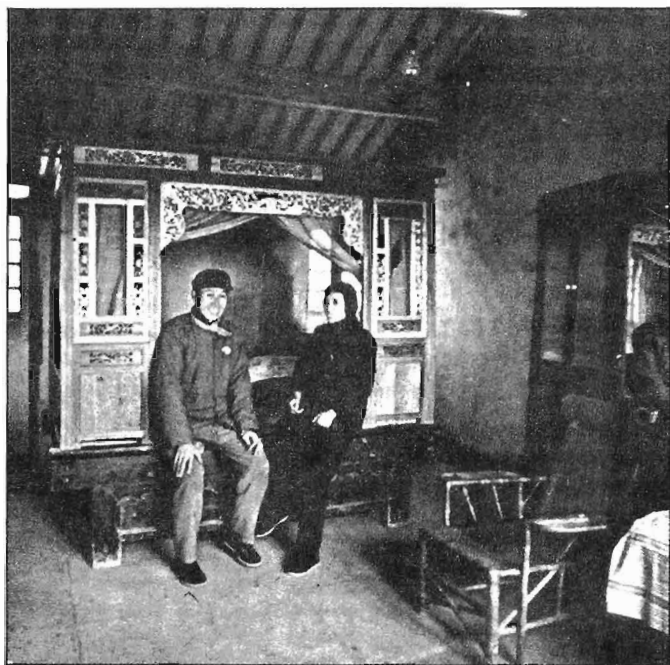


beds within sight and sound of other beds



Place the ALCOVES (179) and MARRIAGE BED (187) and the BED ALCOVES (188) and DRESSING ROOMS (189) accordingly. The children have this pattern for themselves already—if bed alcoves are placed in a cluster—BED CLUSTER (143). . . .

187 MARRIAGE BED



. . . the pattern COUPLE'S REALM (136) gives emphasis to the importance of the couple's private life together within a household. Within that couple's realm, the placing and nature of the bed is naturally the most important thing.



The bed is the center of a couple's life together: the place where they lie together, talk, make love, sleep, sleep late, take care of each other during illness. But beds and bedrooms are not often made in ways which intensify their meaning, and these experiences cannot take hold.

It is true that there are extra wide beds, special bedspreads and frames, water beds, soft lighting, and all kinds of accessories on the night table. But these are all essentially gadgets. They still don't make a bed which nourishes intimacy and love.

There are three far more basic points which go to establish the marriage bed.

1. The space around the bed is *shaped* around the bed. There is a low ceiling, or a partial ceiling, over the bed. The walls and windows are made to contain the bed. See BED ALCOVE (188).

2. It is crucial that the couple choose the right time to build the bed, and not buy one at the drop of the hat. It is unlikely that the bed can come to have the right feeling until a couple has weathered some hard times together and there is some depth to their experience.

3. Find a way of adding to the bed and the space around it, so that it will become more personal and unique over the years; for example, a headboard that can be carved, painted, repainted, or a cloth ceiling that can be changed, embroidered.

The importance of the bed as an anchor point in a couple's life is brought home in this passage from Homer. Odysseus is home after 20 years of wandering and misadventure. His wife, Penelope, does not recognize him—there have been so many imposters, and he has been away so long. He pleads with her to believe it is him, but she is unsure. Frustrated, Odysseus turns away from her. Penelope speaks:

"Strange man, I am not proud, or contemptuous, or offended, but I know what manner of man you were when you sailed away from Ithaca. Come Eurycleia, make the bed outside the room which he built himself; put the fine bedstead outside, and lay out the rugs and blankets and fleeces."

This was a little trap for her husband. He burst into a rage:

"Wife, that has cut me to the heart! Who has moved my bed? That would be a difficult job for the best workman, unless God himself should come down and move it. It would be easy for God, but no man could easily prize it up, not the strongest man living! There is a great secret in that bed. I made it myself, and no one else touched it. There was a strong young olive tree in full leaf growing in an enclosure, the trunk as thick as a pillar. Round this I built our bridal chamber; I did the whole thing myself, laid the stones and built a good roof over it, jointed the doors and fitted them in their places. After that I cut off the branches and trimmed the trunk from the root up, smoothed it carefully with the adze and made it straight to the line. This tree I made the bedpost. That was the beginning of my bed; I bored holes through it, and fitted the other posts about it, and inlaid the framework with gold and silver and ivory, and I ran through it leather straps coloured purple. Now I have told you my secret. And I don't know if it is still there, wife, or if some one has cut the olive at the root and moved my bed!"

She was conquered, she could hold out no longer when Odysseus told the secret she knew so well. She burst into tears and ran straight to him, throwing her arms about his neck. She kissed his head, and cried:

"Don't be cross with me, my husband, you were always a most understanding man! The gods brought affliction upon us because they grudged us the joy of being young and growing old together! Don't be angry, don't be hurt because I did not take you in my arms as soon as I saw you! My heart has been frozen all this time with a fear that some one would come and deceive me with a false tale; there were so many imposters! But now you have told me the secret of our bed, that settles it." (From *The Odyssey*, translated by W. H. D. Rouse. Reprinted by arrangement with The New American Library, Inc., New York, New York.)

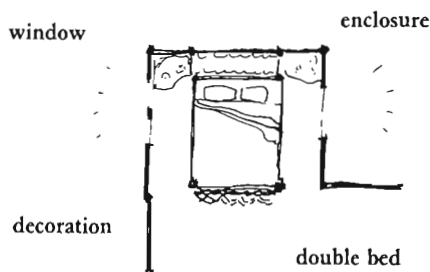
The translator footnotes this incident as follows: "This is the first time in all the eventful tale when Odysseus speaks on impulse; he has been prepared for everything, but this unexpected trifle unlocks his heart."

Quite honestly, we are not certain whether or not this pattern makes sense. On the one hand, it does: it is a beautiful idea; idyllic almost. Yet, face to face with cold hard fact and with the

dissolution and struggles in the marriages around us, it seems hard to hope that it could ever be quite real. We have decided to leave it in, just because it is a beautiful idea. But we ask you to treat it like Oblomov's dream, a picture more real than reality, an impossible dream of perfect and idyllic circumstances, which may help perhaps, to make a little more sense of our muddled everyday reality—but only if we take it with a pinch of salt.

Therefore:

At the right moment in a couple's life, it is important that they make for themselves a special bed—an intimate anchor point for their lives; slightly enclosed, with a low ceiling or a canopy, with the room shaped to it; perhaps a tiny room built around the bed with many windows. Give the bed some shape of its own, perhaps as a four-poster with head board that can be hand carved or painted over the years.



Make two separate dressing rooms or alcoves near the bed—DRESSING ROOMS (189); for more details on the space around the bed, see BED ALCOVE (188); lower the ceiling over the bed—CEILING HEIGHT VARIETY (190), and provide some way of creating special ornament all around it—ORNAMENT (249). For the detailed shape of the space around the bed, see THE SHAPE OF INDOOR SPACE (191). . . .

203 CHILD CAVES

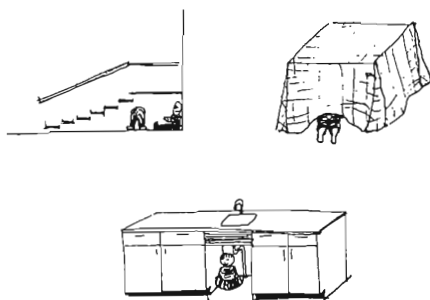


. . . the places specially devoted to children's play—ADVENTURE PLAYGROUND (73), CHILDREN'S HOME (86), CHILDREN'S REALM (137)—and THICK WALLS (197)—can be embellished with a special detail.



Children love to be in tiny, cave-like places.

In the course of their play, young children seek out cave-like spaces to get into and under—old crates, under tables, in tents, etc. (For evidence see L. E. White, "The Outdoor Play of Children Living in Flats," *Living in Towns*, Leo Kuper, ed., London, 1953, pp. 235-64.)

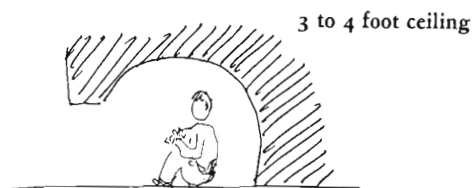


They try to make special places for themselves and for their friends—most of the world about them is "adult space" and they are trying to carve out a place that is kid size.

When children are playing in such a "cave"—each child takes up about 5 square feet; furthermore, children like to do this in groups, so the caves should be large enough to accommodate this: these sorts of groups range in size from three to five—so 15 to 25 square feet, plus about 15 square feet for games and circulation, gives a rough maximum size for caves.

Therefore:

Wherever children play, around the house, in the neighborhood, in schools, make small "caves" for them. Tuck these caves away in natural left over spaces, under stairs, under kitchen counters. Keep the ceiling heights low—2 feet 6 inches to 4 feet—and the entrance tiny.



Build the caves right into the fabric of the walls—THICKENING THE OUTER WALLS (211). Make the doors very tiny to match the caves—an extreme version of LOW DOORWAY (224). . . .

204 SECRET PLACE

. . . and here is a finishing touch to the thick walls, perhaps even to the low ceilings—THICK WALLS (197), CEILING HEIGHT VARIETY (190).



Where can the need for concealment be expressed; the need to hide; the need for something precious to be lost, and then revealed?

We believe that there is a need in people to live with a secret place in their homes: a place that is used in special ways, and revealed only at very special moments.

To live in a home where there is such a place alters your experience. It invites you to put something precious there, to conceal, to let only some in on the secret and not others. It allows you to keep something that is precious in an entirely personal way, so that no one may ever find it, until the moment you say to your friend, "Now I am going to show you something special"—and tell the story behind it.

There is strong support for the reality of this need in Gaston Bachelard's *The Poetics of Space* (New York: The Omen Press, 1964). We quote from Chapter 3:

With the theme of drawers, chests, locks and wardrobes, we shall resume contact with the unfathomable store of daydreams of intimacy.

Wardrobes with their shelves, desks with their drawers, and chests with their false bottoms are veritable organs of the secret psychological life. Indeed, without these "objects" and a few others in equally high favor, our intimate life would lack a model of intimacy. They are hybrid objects, subject objects. Like us, through us and for us, they have a quality of intimacy. . . .

If we give objects the friendship they should have, we do not open a wardrobe without a slight start. Beneath its russet wood, a wardrobe is a very white almond. To open it, is to experience an event of whiteness.

An anthology devoted to small boxes, such as chests and caskets, would constitute an important chapter in psychology. These complex pieces that a craftsman creates are very evident witnesses of the need for secrecy, of an intuitive sense of hiding places. It is not merely a matter of keeping a possession well guarded. The lock doesn't exist that could resist absolute violence, and all locks are an invitation to thieves. A lock is a psychological threshold. . . .

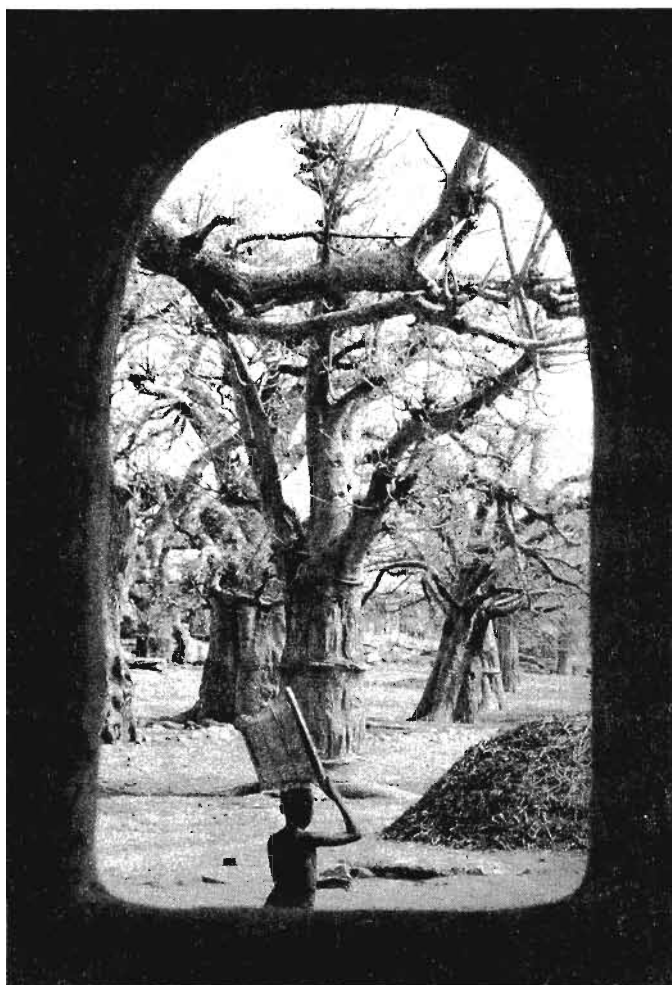
Therefore:

Make a place in the house, perhaps only a few feet square, which is kept locked and secret; a place which is virtually impossible to discover—until you have been shown where it is; a place where the archives of the house, or other more potent secrets, might be kept.



Classic types of secret places are the panel that slides back, revealing the cavity in the wall, the loose board beneath the rug, the trap door—CLOSETS BETWEEN ROOMS (198), THICKENING THE OUTER WALLS (211), FLOOR-CEILING VAULTS (219). . . .

221 NATURAL DOORS
AND WINDOWS**



. . . imagine that you are now standing in the built-up frame of a partly constructed building, with the columns and beams in place—BOX COLUMNS (216), PERIMETER BEAMS (217). You know roughly where you want doors and windows from ZEN VIEW (134), STREET WINDOWS (164), WINDOW PLACE (180), WINDOWS OVERLOOKING LIFE (192), CORNER DOORS (196). Now you can settle on the exact positions of the frames.



Finding the right position for a window or a door is a subtle matter. But there are very few ways of building which take this into consideration.

In our current ways of building, the delicacy of placing a window or a door has nearly vanished. But it is just this refinement, down to the last foot, even to the last inch or two, which makes an immense difference. Windows and doors which are just right are always like this. Find a beautiful window. Study it. See how different it would be if its dimensions varied a few inches in either direction.

Now look at the windows and doors in most buildings made during the last 20 years. Assume that these openings are in roughly the right place, but notice how they could be improved if they were free to shift around, a few inches here and there, each one taking advantage of its own special circumstances—the space immediately inside and the view outside.

It is almost always a rigid construction system, combined with a formal aesthetic, which holds these windows in such a death grip. There is nothing else to this regularity, for it is possible to relax the regularity without losing structural integrity.

It is also important to realize that this final placing of windows and doors can only be done on site, with the rough frame of the building in position. It is impossible to do it on paper. But on the site it is quite straightforward and natural: mock up the openings with scraps of lumber or string and move them around until they feel right; pay careful attention to the organization of the view and the kind of space that is created inside.



Getting it just right.

As we shall see in a later pattern—SMALL PANES (239), it is not necessary to make the windows any special dimensions, or to try and make them multiples of any standard pane size. Whatever dimensions this pattern gives each window, it will then be possible to divide it up, to form small panes, which will be different in their exact shape and size, according to the window they are in.

However, although there is no constraint on the exact dimension of the windows, there is a general rule of thumb, which will make window sizes vary: Windows, as a rule, should become smaller as you get higher up in the building.

1. The area of windows needed for light and ventilation depends on the size of rooms, and rooms are generally smaller on upper stories of the building—the communal rooms are generally on the ground floor and more private rooms upstairs.

2. The amount of daylight coming through a window depends on the area of open sky visible through the window. The higher the window, the more open sky is visible (because nearby trees and buildings obscure less)—so less window area is needed to get sufficient daylight in.

3. To feel safe on the upper stories of a building, one wants more enclosure, smaller windows, higher sills—and the higher off the ground one is, the more one needs these psychological protections.

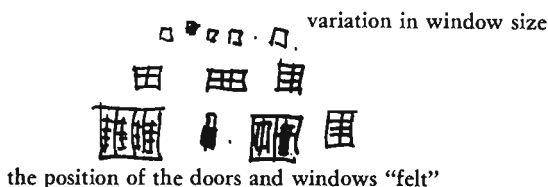
Therefore:

On no account use standard doors or windows. Make each window a different size, according to its place.

Do not fix the exact position or size of the door and win-

dow frames until the rough framing of the room has actually been built, and you can really stand inside the room and judge, by eye, exactly where you want to put them, and how big you want them. When you decide, mark the openings with strings.

Make the windows smaller and smaller, as you go higher in the building.



Fine tune the exact position of each edge, and mullion, and sill, according to your comfort in the room, and the view that the window looks onto—LOW SILL (222), DEEP REVEALS (223). As a result, each window will have a different size and shape, according to its position in the building. This means that it is obviously impossible to use standard windows and even impossible to make each window a simple multiple of standard panes. But it will still be possible to glaze each window, since the procedure for building the panes makes them divisions of the whole, instead of making up the whole as a multiple of standard panes—SMALL PANES (239). . . .

253 THINGS FROM
YOUR LIFE*



. . . lastly, when you have taken care of everything, and you start living in the places you have made, you may wonder what kinds of things to pin up on the walls.



“Decor” and the conception of “interior design” have spread so widely, that very often people forget their instinct for the things they really want to keep around them.

There are two ways of looking at this simple fact. We may look at it from the point of view of the person who owns the space, and from the point of view of the people who come to it. From the owner's point of view, it is obvious that the things around you should be the things which mean most to you, which have the power to play a part in the continuous process of self-transformation, which is your life. That much is clear.

But this function has been eroded, gradually, in modern times because people have begun to look outward, to others, and over their shoulders, at the people who are coming to visit them, and have replaced their natural instinctive decorations with the things which they believe will please and impress their visitors. This is the motive behind all the interior design and decor in the women's magazines. And designers play on these anxieties by making total designs, telling people they have no right to move anything, paint the walls, or add a plant, because they are not party to the mysteries of Good Design.

But the irony is, that the visitors who come into a room don't want this nonsense any more than the people who live there. It is far more fascinating to come into a room which is the living expression of a person, or a group of people, so that you can see their lives, their histories, their inclinations, displayed in manifest form around the walls, in the furniture, on the shelves. Beside such experience—and it is as ordinary as the grass—the artificial scene-making of “modern decor” is totally bankrupt.

Jung describes the room that was his study, how he filled the stone walls with paintings that he made each day directly on

CONSTRUCTION

the stones—mandalas, dream images, preoccupations—and he tells us that the room came gradually to be a living thing to him—the outward counterpart to his unconscious.

Examples we know: A motel run by a Frenchman, mementos of the Resistance all around the lounge, the letter from Charles de Gaulle. An outdoor market on the highway, where the proprietor has mounted his collection of old bottles all over the walls; hundreds of bottles, all shapes and colors; some of them are down for cleaning; there is an especially beautiful one up at the counter by the cash register. An anarchist runs the hot dog stand, he plasters the walls with literature, proclamations, manifestoes against the State.

A hunting glove, a blind man's cane, the collar of a favorite dog, a panel of pressed flowers from the time when we were children, oval pictures of grandma, a candlestick, the dust from a volcano carefully kept in a bottle, a picture from the news of prison convicts at Attica in charge of the prison, not knowing that they were about to die, an old photo, the wind blowing in the grass and a church steeple in the distance, spiked sea shells with the hum of the sea still in them.

Therefore:

Do not be tricked into believing that modern decor must be slick or psychedelic, or "natural" or "modern art," or "plants" or anything else that current taste-makers claim. It is most beautiful when it comes straight from your life—the things you care for, the things that tell your story.

