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A multi-service centre is a community facility, which provides a variety of special services to citizens. It is intended especially to help solve some of the problems of low-income communities. Experimental multi-service centres have been started in many cities throughout the United States. However, there is not yet any general agreement about the form which multi-service centres should take — either in their human organization, or in their spatial organization. Our report deals chiefly with the spatial organization; but since human and spatial organization cannot properly be separated, many of the specifications

***Note on the title**

At the time we wrote this report five years ago, we were struggling to find a 'language' with the properties that are described in the text. As the reader of the full report will discover for himself, the patterns work, but the so-called 'language' does not: this part has therefore been eliminated in this edited version. We have now finally solved the problem of creating a language which does work, and does allow people to design buildings of all kinds, for themselves. This work will be published by the Oxford University Press at the end of 1973 in three volumes. The volumes will be called:

The Timeless Way of Building
The Pattern Language
Without Plans

We are continuing to publish this report, (with the original title *A Pattern Language Which Generates Multi-Service Centers*) both for the patterns and designs which it contains, and for its theoretical interest, and are delighted to see this shortened version of it in the *Architects Year Book*.

given in this report, go deeply into questions of human organization as well.

We have not designed a prototype in quite the conventional sense, and must begin with a word of explanation about the nature and purpose of prototype buildings.

A prototype design is a generic scheme. It has no special site, no real client, no climate, no particular size. It is a kind of imaginary building, which is meant to convey certain essential ideas to designers of similar buildings. It is usually presented by means of loosely drawn schematic drawings, so that designers who are designing a building of this type, can mould it to fit whatever specific local conditions they are confronted with. It is meant to convey some essential, generic ideas, which can be applied many times over to special cases. It defines a family of buildings; and it is meant to define this family of buildings in such a way that anyone who understands the prototype will be able to design specific members of this family.

The ultimate purpose of a prototype design, then, is to provide guidelines which will generate a large number of specific buildings.

Under close scrutiny, this idea does not stand up very well. The range of variation, which will be required by the different members of any family of buildings, lies well outside the range which can be accurately conveyed by any single drawing — no matter how 'prototypical' it is. This is true for the family of buildings called 'multi-service centres'. Some will be large, some small. Some will have many services, others will have fewer services. Some will be on main streets, others on side streets. Some will be in very dense neighbourhoods, others in neighbourhoods of lower density. Some will be multi-story, other will be single story. Some will be in warm climates, others in cold climates. No one prototype design can do justice to this range of variation. A prototype would tend to standardize the buildings, where standardization is inappropriate; it would tend to overlook the uniqueness of each special case.

Our approach to prototypes is intended to overcome this difficulty. *We have tried to reconcile the uniqueness of each community with the fact that certain organizational principles are valid from one community to another.*

What we have devised then, is a system of generating principles, which can be richly transformed according to local circumstances but which never fail to convey their essentials. This is rather like a grammar. English grammar is a set of generating principles which generate all the possible sentences of English. It

would be preposterous to suppose that one could convey the full richness of the English language by means of a few well chosen 'prototypical' sentences. Our system, then, is more in the spirit of a grammar than the conventional prototype permits. We call our system of generating principles a *pattern language for multi-service centres*. It is a system of patterns — with rules for combining them — which generates multi-service centre buildings.

This version has five parts:

In part I, for the sake of concreteness, we present one-sentence summaries of the 64 patterns in the pattern language.

In part II we discuss the nature of the individual patterns.

In part III 23 patterns are shown in full.

In part IV, we show how these patterns may be combined to form multi-service centres. We give six examples of multi-service centres designed for different communities — all of them generated by the pattern language.

I: Summaries of 64 patterns

19 of the 64 patterns given in this summary are presented in full in Part III. So that the reader can scan the patterns, and get a general sense of their content, we present a one-sentence summary of each of the 64 patterns. In reading these summaries it is important to remember the following points:

Each pattern prescribes some feature of a multi-service centre building. It describes a relationship which is required to solve a problem which will occur in that building. The summary does not describe this problem; it describes only the pattern.



1.* *Small target areas:* The multi-service centre serves a target area with population of $34,000 \pm 20\%$.



2.* *Location:* Service centres are located within two blocks of a major intersection.



3.* *Size based on population:* The total size of an MSC, which services a target area of population N , is $.9N$ square feet.



4.* *Community territory:* The service centre is divided into two zones, services and community territory; community territory includes space for community projects and a public arena.



5.* *Small services without red tape:* No one service has a staff size greater than 12; each service is physically cohesive and autonomous; the services are loosely organized with respect to each other.



6. *Expansion:* The number of services can grow and the size of any one service can grow; but the relationship of all services to community territory does not change.



7. *Entrance locations:* The building's main entrances are immediately visible to a person approaching, on foot or by car, from any direction.



8. *Parking:* Either parking is provided for everyone [this will require .5N square feet for a target population N], or there is emergency parking only; staff-only parking is never provided.



9.* *Arena thoroughfare:* There is a natural pedestrian shortcut through the MSC's community territory.



10. *Open to street:* Major community projects, services and arena activities are plainly visible to passers-by, in the street.



11. *Arena enclosure:* The public arena is as open as possible to the world around it, while still maintaining the required Effective Temperature inside.



12. *Locked and unlocked zones:* The building is zoned according to three different time schedules: with one door closing each zone off from the next: 9am-5pm, 9am-11pm, and 'always open'.



13.* *All services off arena:* All services open off the public arena; their frontages are roughly equal.



14.* *Free waiting:* All services share a common waiting area, which contains a variety of activities; this waiting area is part of the public arena.



15.* *Overview of services:* All the services housed in the MSC are instantly visible to a person entering the centre.



16.* *Necklace of community projects:* Small, store-front type stalls, organized and run by members of the community, ring the multi-service centre.



17. *Community projects two-sided:* Like store fronts, each community project opens onto the street; wherever possible it opens onto the public arena as well.



18.* *Windows overlooking life:* Windows near places where people spend more than a minute or two, all look out on areas of 'life'.



19. *Core service adjacencies:* Personnel in core services are placed according to frequency of interaction; this will typically lead to formation of three cohesive units: administration, community organization and programme-evaluation.



20.* *Activity pockets:* The entire edge of the arena is scalloped with pockets of activity, alternating with points of access.



21.* *Self-service:* The waiting area contains a self-service facility, where job listings, welfare rights information and other do-it-yourself services are open, without restriction, to the public.



22.* *Pedestrian density in public places:* If the estimated mean number of people in the arena at any given moment is P, the size of the arena is 150P to 300P square feet.



23.* *Entrance shape:* Major entrances are either deeply recessed or they stick out from the face of the building, for visibility.



24. *Subcommittee watchdogs:* Subcommittees of community residents have offices in the multi-service centre; they are empowered to represent the community's interests in the centre, and are set up to receive complaints and suggestions.



25.* *Building stepped back from arena:* Buildings around public courts should be raked back at an angle less than 40 degrees.



26. *Vertical circulation in services:* Services requiring space beyond that allocated to them round the arena, are directly connected to upper stories by interior stairs.



27.* *Self-service progression:* Self-service begins on the street, in front of the MSC, with a 'menu', which leads directly to the self-service facility.



28.* *The intake process:* Intake procedures are informally handled by field workers, in a lounge setting, near the major entrance.



29. **Outdoor seats:** Outdoor benches are arranged overlooking activity, in the sun, and protected from wind; and especially suited for old people.



30.* **Ceiling heights:** Ceiling heights of all rooms and spaces are established according to the diameters of the 'social bubbles' appropriate for those spaces.



31.* **Short corridors:** Straight corridors are never longer than 40 or 50 feet.



32. **Child care position:** The child care station is visible along the path from the entrance to the services.



33. **Service layout:** Clients go directly from waiting areas to interview and other service spaces; they do not pass through the secretarial pools that back up the interview staff.



34.* **Street niches:** There are niches along the face of the building and at the entrances, where people can linger and 'window-shop'.



35. **Information-conversation:** There is an information station in the service centre, dispensing coffee and talk.



36.* **Dish-shaped arena:** The arena floor is dished at a slope of 7%.



37. **Director's overview:** The MSC director's office is situated so as to have an inconspicuous overview of the public life of the centre.



38.* **Community wall:** Associated with the MSC there is a section of wall that is given over to the community; it may be used for registering complaints, posting petitions, painting murals, etc.



39. **Arena diameter:** To enhance social cohesion the maximum diameter of the arena is 70-80 feet.



40.* **Office flexibility:** Office space in the service area is a continuous sheet of interconnecting rooms; the rooms are between 8' x 10' and 16' x 20'.



41.* **Town Meeting:** The MSC contains a tiered wrap-around meeting room, which is to be a hub for local political meetings.



42.* **Sleeping OK:** There is a section of the arena set aside, where people can rest and eventually doze off; if the demand exists, this section of the centre may be left open all night.



43. **Waiting diversions:** A number of activities like TV, checkers, pool, are part of the arena life, and they are woven through the waiting areas.



44. **Elevator-ramp:** There is a ramp and/or elevator connecting every change of level between public areas in the MSC.



45.* **Blockworker layout:** There is a hand-full of open, informal booths near the entrance of the MSC where field workers meet their clients when they come to the centre; behind these booths each field worker has a small private work station.



46. **Radio/TV station:** There is a local TV (or radio) station broadcasting out of a community project space just off the public arena; some part of each broadcasting day is spent transmitting 'services' into people's homes (in-home job training, for example).



47. **Meeting rooms clustered:** Meeting rooms and classrooms are clustered near a kitchen, in that part of the building which remains open in the evenings.



48. **Barbershop politics:** There is at least one place where people naturally collect to talk politics and gossip, like a barber-shop or a lunch-counter or a small grocery store or a laundromat, immediately adjacent to the multi-service centre.



49. **Staff lounge:** There is a lounge, near a kitchen, where staff members can take breaks and have their lunch; the lounge is wide open to a heavily travelled staff circulation route.



50.* **Interview booths:** Each interviewer has a private booth, much like the ones found in certain restaurants; the interviewer meets his clients in this booth on a less formal basis than the typical office permits.



51. **Stair seats:** Wherever stairs spill into the arena, they are wide enough for people to use them as seats.



52. **Window signs:** Provision is made for posting signs and leaflets along the windows that front on the street, so that people who stop to read them can look in, beyond the sign, and get a glimpse of MSC life.



53. *Form-filling tables:* There are tables and chairs in the waiting areas where people can sit down to fill out agency forms.



54. *Accessible WCs/cloakrooms:* There is at least one set of cloakrooms off the arena and accessible to the public.



55. *Secretary's workspace:* Each secretary has her own work station, surrounded on three sides by low partitions.



56. *Informal reception:* The receptionist for each service sits on a dais at a combination counter-desk; she meets the client, approaching the reception counter, at his eye level.



57. *Child-care contents:* The MSC child-care station emphasizes those kinds of play experiences that are most missing from the surrounding community; e.g. plants, sand and water, climbing, 'caves'.



58. *Seats outside meeting rooms:* There are small sitting alcoves outside the centre's meeting rooms, so that people can linger after a meeting and turn over their thoughts.



59.* *Square seminar rooms:* This is the best shape for seminars, where full and mutual participation is desired.



60. *Self-service contents:* The self-service facility contains a library, job listings, welfare rights information, research findings on the illegal practices of local landlords, language labs, teaching machines, etc.



61. *Arena storage:* There are storage spaces off the arena, where arena furniture and equipment can be locked away; the storage area is 7% of the arena size.



62. *Window heights in meeting rooms:* Are 40" or higher; this means that people's faces are never silhouetted against windows.



63.* *Pools of light:* Lighting is not uniform throughout the multi-service centre; rather, it is in pools, each pool covering a special and delimited 'social bubble'.



64.* *Warm colours:* The primary sources of illumination throughout the service centre, in combination with the colours of floors, walls, ceilings and furnishings, should be chosen to give warm light.

We wish to draw the reader's attention to three minor peculiarities in the patterns.

First: Some patterns have a wider context than a 'multi-service centre' — community buildings, any building, etc. This is likely to confuse a reader, if he does not realize that the 64 patterns given here are part of a much larger language. It would be arbitrary to restrict the context statements of all the patterns to multi-service centre.

Such patterns as 'short corridors' — Pattern 31 — are very important, and need to be mentioned in this report — they have a reasonable influence on the shape of the multi-service centre — but we cannot pretend, for the sake of this report, that these patterns apply only to MSC's.

Second: Although we believe that the more important patterns for multi-service centres are all here, when it comes to details we have given no more than a sprinkling. Thus, we have stated a pattern which describes the proper window height in meeting rooms (Pattern 62) — but we have not given the number of windows such a room requires; nor have we given the window height for other kinds of rooms; nor have we given a thousand other details.

The reasons for this, again, centre on the fact that the fragment of language presented here is no more than part of a much larger language, and that many of the patterns in this larger language have very general context statements. It would be impossible to state all these patterns in a report which deals with multi-service centres.

Further, many of the patterns, and especially these smaller, rather general ones, are widely known by practising architects — and there is no need to state them.

However, there is no hard and fast line between large, innovative, multi-service centre-only patterns and these other small, familiar, general patterns. One or two patterns, (like 63, Pools of light; and 64, Warm colours) apply to almost any context: but they are very important, and not widely known, so we have included them. We have therefore drawn the line more or less where we wanted to. Most of the patterns deal specifically with multi-service centres, and are of large scale importance: but a few of them dwindle off into matters of great generality, a few into relatively unimportant details.

Third: We have defined 64 patterns. But we are by no means satisfied with all the patterns. Some are highly unreliable, and inelegantly argued; they have been included only for the sake of completeness. In one sense this doesn't matter. *They are all open to criticism* — and it is worth stating them, even if they are wrong or banal, so that they get improved by criticism. We ask that the reader accept the 64 patterns in this spirit.

But since some readers may use this report as a way of understanding the concept of a pattern, not as a source of patterns for multi-service centres, we have marked those patterns which we like best, and which best convey the concept of a pattern, with an asterisk in the preceding summaries.

The asterisked patterns are: 1, 2, 3, 4, 5, 9, 13, 14, 15, 16, 18, 20, 21, 22, 23, 25, 27, 28, 30, 31, 34, 36, 38, 40, 41, 42, 45, 50, 59, 63, 64. Twenty of the above patterns are given in detail in Part III of this article. For a complete understanding of all the patterns we refer to the original report available from: The Center for Environmental Structure, 2701 Shasta Rd, Berkeley, California, USA.

II: The idea of a pattern

If we examine the patterns as they are presented in the following pages we shall see that each pattern has two parts: the PATTERN statement itself, and a PROBLEM statement. The PATTERN statement is itself broken down into two further parts, an IF part, and a THEN part. In full the statement of each pattern reads like this:

IF : X THEN : Z / PROBLEM : Y

X defines a set of conditions. Y defines some problem which is always liable to occur under the conditions X. Z defines some abstract spatial relation which needs to be present under the conditions X, in order to solve the problem Y.

In short, IF the conditions X occur, THEN we should do Z, in order to solve the Problem Y.

No one of the patterns is, in any sense, an absolute statement. Any one of the patterns may be wrong; all of them can be improved. Specifically, there are two ways in which the pattern statement might be wrong. First of all, the problem may not in fact occur as stated under the conditions X, or it may not be as serious as it is claimed to be, or it may only occur under special circumstances, which are far less general than those defined by X. Second, it may not be true that the relationships defined by Z solve the problem Y. We expect both these kinds of criticism to be levelled at the patterns; indeed, it is essential for the life of the patterns that these criticisms be raised.

The system of patterns is meant to define a prototype building. Obviously no one will accept this prototype, or the individual patterns, if he is not free to make up his own mind about the validity of the patterns. To make up his mind, he must be free to criticize the patterns.

We expect the patterns to grow and change under the impact of such criticism. In this sense the prototype which we defined is merely temporary; if we are successful, we hope that it will evolve, as criticisms and improvements accumulate, so that the patterns which define multi-service centres ten years from now, will look very different from the ones which are stated here.

The format of the patterns is designed to make criticism easy. As far as possible, all the tendencies and needs and difficulties in the problem statement are supported by empirical evidence. This evidence makes it easier to challenge the validity of the patterns. Often the form of the evidence which supports a conjecture, itself helps to define the kind of evidence which would be needed to refute the conjecture. Where we have not been able to find any relevant published evidence, and where we have been unable (for want of time or money) to make experiments or observations ourselves, we have tried to state our conjectures as openly and clearly as possible — so that even in these doubtful cases, empirical discussion and observation can begin.

III. The Patterns

Small target areas (1)

Pattern

If:

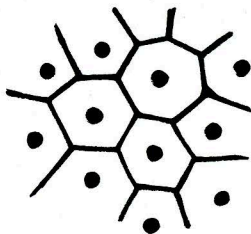
An urban area is to be served by multi-service centres



Then:

All the multi-service centres should be small and the target areas correspondingly small.

The target areas should contain 34,000 persons, $\pm 20\%$ (i.e. 27,000 — 41,000). The corresponding floor areas, as given by Pattern 3, are 25,000 — 37,000 square feet, with a modal figure of 31,000.

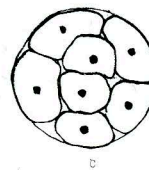
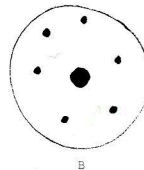
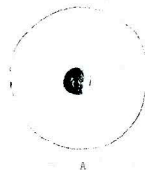


Problem

The task of determining the best size and distribution for multi-service centres is very difficult. There are strong reasons for large centres, and there are strong reasons for small centres.

To examine these reasons, we shall compare three broadly distinct patterns of size and distribution:

- Large centres, serving large target areas.
- Large centres, serving large target areas, supplemented by a series of smaller subcentres, equally spaced throughout the same target area.
- Small centres, each serving small target areas.



The major needs which influence the size of centres are these:

- The need for 'multi-service'. Clients do not want to be referred from one agency in one part of town, to another agency in another part of town. Even more important, experience has shown that many clients' problems, when correctly diagnosed, turn out to require some kind of service different from the service which the client sought (i.e., a client comes in asking for help in housing; after analysis, it turns out that he needs legal aid in fighting his landlord). This is essential to the whole concept of multi-service

centres. (See for instance: 'Criteria for Review of Pilot Neighbourhood Centres', Federal Agency Groups, April 1967; Alfred J Kahn, Grossman et al., *Neighbourhood Information Centers*, Columbia School of Social Work, New York, 1966, pp. 92-95; U.S. Congress, Senate, 89th Congress, 2d Session, S. 3443, *A Bill to Offer Means for Coordinating State Health and Welfare Services at the Community Level by Providing Common Facilities and Encouraging their Administration as Elements of a Comprehensive Whole.*)

- The need to reach the hard-core poor. So far the service centres have a shocking record; although they have reached certain parts of the poor community, they have not succeeded in reaching the very poor. For example, when the four Oakland centres had been in existence nearly two years (1966) only 7% of the poor (income below \$4,000) in the four target areas had visited a centre for any purpose. In the North and West Oakland target areas, only 4% and 3% of the poor had visited a centre. ('Poverty and Poverty Programs in Oakland', Survey Research Center, University of California, Berkeley, 1967, pp. 122-126.)

These two needs are in conflict. The idea of multi-service requires that each service centre have a full complement of services. Each centre must therefore have a large enough target area to support various specialists, and must therefore be large.

On the other hand, the problem of reaching the poor requires that the centres be small, and closely spaced. It requires that they be small for two reasons.

First, we know that many poor people, and especially the hard-core poor, have very limited access to the city. We may describe this by saying that each person has an *orbit* — where orbit is defined as the parts of the city which a person visits at least once a week. A person's orbit usually consists of certain paths, connecting his home with a few special destinations. In the case of a person who is poor or old or unemployed, this orbit may be no more than four or five blocks in diameter. Evidence for this phenomenon can be found in the Kirschner Report (Kirschner Associates, *A Description and Evaluation of Neighbourhood Centers*, 530 Jefferson Street, N.E., Albuquerque, New Mexico, 1966, p. 30).

It is fair to say that such a person will not visit any dubious enterprise, like a multi-service centre, unless it lies directly within his orbit.

Second, we know that people, and especially poor people, are not well served by rule-bound bureaucratic institutions. The functional issues are partly discussed in Pattern 5, where we show that the size of individual services should be small. There are also indications,

that the overall size of the centre as a whole can have a similar effect, and should be kept as small as possible. (See: Kirschner, *op. cit.*, pp. 26, 31, 57; also Kahn, Grossman, et al, *op. cit.*, pp 92-93.)

We may sum up these remarks: As the scale of the operation grows, more and more of the agency's functions are translated into administrative jobs which can be performed by administrators. The result is that the community member is being handled mainly by clerks, rather than by professionals. The symbolic and realistic feeling of harassment resulting from a direct confrontation of the community member with an alienating and impersonal bureaucracy is detrimental to the success of the service centre. Many individuals, especially from poverty areas, are not equipped to handle these impersonal confrontations and would rather not obtain any service than have to place themselves in such an uncomfortable situation.

Before trying to estimate the size implications of these facts, we list a number of minor factors which also have bearing on the size: (Numbers continue from 1 and 2 above.)

3. Scale economies. A large centre may be able to support services which a smaller centre cannot support at all.

4. Scale economies within a single service. If a service serves a large target area, and is therefore itself relatively large, the aggregation of personnel within the service may give rise to increased efficiency through the division of labour among these personnel. Simple tasks, such as typing, mailing, communications, and administrative chores, can be taken away from interviewers and professionals, thus giving them time to operate more intensively in their own special field.

5. The need for growth potential within the centre. The centre is intended to provide a setting in which the community can create new services easily. To create new services, the centre clearly requires as large a base population as possible. For example, it might be easy for a large centre to start a photographic club, but hard for a small centre to do the same.

6. The need for political power. The centre will be unable to initiate new programmes, unless it has political power. A large centre wields more political influence than a small centre.

7. The need for simple comprehensive record keeping. This is another facet of the referral problem. If clients are referred from service to service, it is impossible to keep track of their records,

with the result that they are asked the same stupid questions over and over again.

8. Equilibrium over time. The structure and function of community services does not remain constant over time. Changes in the demand structure for services introduce changes over time into the service system. It may be that in the long run smaller centres of a more modest scale will develop to compete with the larger centre. If more than one centre develops in the community there will be a tendency among these two centres to specialize in particular services. The construction of a large single structure may then prove to have been too large to begin with. A system designed with an eye to the uncertain future should not provide for too large a service centre as a beginning venture. The possibility that the service system will reach a locational equilibrium with more than one facility places a limit on the size of the first facility, even if it is to be a single structure housing all service personnel, in view of the uncertainty of future developments.

9. The need to minimize capital costs, maintenance costs, and salary costs.

We now have 9 factors which influence the size and spatial distribution of multi-service centres, the first two major, and the other 7 relatively minor. Let us now compare the three possible patterns, A, B, C, on the basis of these factors. (9 does not appear in the table, since current data gives no indication about the relative costs of A, B, and C.

	Satisfies	Doesn't Satisfy
A	1 3 4 5 6 7	2 8
B	3 4 5 6 8	1 2 7
C	2 7 8	1 3 4 5 6

This table leaves it unclear which is the best solution. At first sight, A would seem to be the best. A solves more problems than either B or C. B is next best, and C is worst.

However, if we take into account our assumption that items 1 and 2 are of prime importance, and that items 3-9 are of less importance, then B, which solves neither 1 nor 2, is clearly unsatisfactory, while A and C might be equally good.

Since the difference between A and C is merely one of size, we may then ask: what size best resolves the conflict between the positive and negative aspects of size? We incline towards the small centres on the following

grounds. It is fairly easy to modify the organization of a small centre in such a way as to satisfy 1 (i.e. to take advantage of the idea of multi-service); on the other hand, it is extremely difficult to modify the organization of a large centre in such a way as to satisfy 2 (i.e. to be friendly, unbureaucratic, and so distributed that there is at least one in every 'orbit').

Let us ask, then, what is the smallest multi-service centre which can fully satisfy the demands of 'multi-service':

As the basic measure of size for a multi-service centre, we use the number of interviewers and client-contact personnel in the Centre.

Many services may have no more than 1 interviewer. We know from Pattern 5 that no service should have more than 12 staff in all, hence 4 interviewers. We know, also that the services tend to be unequally distributed in size. There are usually many small services, and a few large ones (job-counselling, welfare).

Let us now try to set concrete limits on the size. We begin by assessing the range of problems that a multi-service centre must be equipped to deal with.

From Robert Perlman and David Jones, *Neighborhood Service Centers*, U.S. Department of Health, Education and Welfare, Washington, D.C., 1967, pp. 26-27: *The most extensive study of client problems has been done by ABCD and the Roxbury Center, where a client's statements of his difficulty was recorded as nearly as possible in his own words in order to ascertain the problem or problems to which he gave the highest priority. ABCD's report on the Roxbury Multi-Service Center notes that clients varied greatly in their problem statement, some mentioned two or three problems. If the primary problems are categorized, the percentage distribution is as follows:*

Problem Category	Percent
Employment	25
Family	21
Housing	16
Financial	14
Legal	12
Education	5
Health	4
Seeking Information	3
	100

We can discount Seeking Information for our purposes since it is not a 'service'. That leaves seven broad problem categories. We have found that these seven cate-

gories cover the spectrum of problems in poverty areas fairly well. Thus, in Hunts Point for instance, the problems were identified as:

- Health
- Housing
- Education
- Legal Services
- Social Service (family, financial)
- Manpower (employment)
- Addiction (health)
- Early Childhood (family, education)
- Economic Development (employment, financial)

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It stands to reason then, that every MSC should provide some service in each of these seven categories. If we assume that 1 interviewer is required for the categories of service which are least in demand – i.e. education and health – we may use the Roxbury percentages to estimate the number of interviewers required in the other categories. Thus:

Employment	4
Family	4
Housing	3
Financial	2
Legal	2
Education	1
Health	1
	—
	17
	—

This suggests that in order to provide 'multi-service' an MSC must have about 17 interviewers, and a large enough target area to support them. The arguments in Pattern 3 tell us that a population of N persons require a total of .0005N service interviewers. To support 17 interviewers, a centre must therefore serve 34,000 people. Since it will be impossible to give every target area exactly 34,000 persons, we arbitrarily set upper and lower limits of $\pm 20\%$.

Location (2)

Pattern

If:
 A service centre is to be located in an urban community,
 Then:
 The site should be within two blocks of a major intersection, with at least twenty stores and major pedestrian activity.



Problem

One of the key problems which multi-service centres face is the problem of reaching people in the target area. Many people do not know that multi-service centres exist, or what they do. Even when they do know, they do not always come in and use the services. (Kirschner Associates, *op. cit.*, pp. 24, 27 and 42.) The physical location and design of the multi-service centre can aggravate the problem of outreach. If the centre is hidden, no one gets to know about it by seeing it; and people are not reminded of its

existence. If the centre is out of the way, off the beaten track, then even people who have heard of the centre, and have half made up their minds to go there, do not go, because it is too hard to get there, or too hard to find. In positive terms: The location and design of the centre can help out-reach in two ways. If the centre is conveniently placed it will help to encourage people who have already heard of the centre, but who are still half-hearted about going to use the services. If the centre is prominently placed, it will remind people of its existence, and perhaps even advertise itself to

people who haven't otherwise heard of it. There is strong evidence for the fact that location and openness do play a major part in reaching clients. The Berkeley Multi-service Centre moved its location in the autumn of 1967. Before the move, the Centre was located in a house, standing 100 feet back from the street — a quiet residential street, half a block from a non-commercial, vehicular artery. After the move the Centre was located on a major commercial artery, San Pablo, half a block from the main intersection of University and San Pablo, one of the two main commercial areas in the heart of the poor community. In its first location, the entrance to the Centre was

set back from the street, about 100 feet, the door was not visible from the street, and the windows were so placed that you could not see into the building from the street. In its second location, the Centre occupied a one-time furniture showroom; the whole 90 foot long front of the building was glass, immediately adjacent to the sidewalk; the door was easily visible, in the centre of the facade; there were few partitions inside, so that the inside of the Centre was almost totally visible from the sidewalk. Here are the figures for client business before and after the move:

	Number of people dropping in, per day	Number of people with appointments, per day
Before the move	1-2	15-20
Two months after the move	15-20	about 50
Six months after the move	about 40	about 50

During this period there were no major increases in outreach, and no major changes of programme. It is therefore unlikely that the increases are due to any other factors besides the change in location.

Size based on population (3)

Pattern

If:

There is a multi-service centre serving a population of N persons,

Then:

The multi-service centre contains $.3N$ square feet of service space, $.15N$ square feet of space for core services, and $.45N$ square feet devoted to meeting rooms, circulation, self-service, arena, and other ancillary spaces. The total floor area of the multi-service centre is $.9N$ square feet. All figures to be taken $\pm 20\%$.

Problem

To establish these figures we take the following computational steps:

1. Compute the number of people who might visit the service centre per day.
2. Compute the number of service interviewers who will be required to handle this load.

3. Compute the total backup staff required to help these interviewers.
4. Compute the total square feet of service space required to accommodate this staff.
5. Compute the square footage of ancillary facilities.

It must be made clear from the outset, that the computations are all approximate. We shall therefore round all numbers to the first significant decimal place.

1. To compute the percentage of N people visiting the centre, we must first recognize that the number of people who visit the centre depends on the number of people in the target area who *know* that the centre exists, and that it offers services. In most existing target areas this number is far below N , in many cases as low as $0.2N$.

This problem is well known. Many steps are being taken in the newest centres to overcome it by means of advertising, extended outreach programmes, and more effective house-to-house contact work.

For the purpose of this pattern, we shall make the very strong assumption, that the outreach programme has been completely successful, and that everyone in the target area knows about the centre. *We therefore assume that 100% of the population, i.e. N persons, know about the centre, know where it is, and what it does.*

We may now ask what percentage of these N people will come to visit the centre.

In Oakland 28% of the households who knew about their local centres, visited them during a one year period. (In more detail, 24% of the households with incomes above \$4000/year, and 33% of the households with incomes below \$4000/year — but these differences are small compared with the level of accuracy in this discussion. 'Poverty and Poverty Programs in Oakland', Survey Research Center, University of California Berkeley, 1967, Table 38, p. 121.)

The mean household size in the four Oakland target areas is 2.75 (computed from figures given in 'Profile of Target Areas for Economic Opportunity Program', Department of Human Resources, City of Oakland, Table 1*, 1964).

We may therefore estimate that .28/2.75 or about 10% of the people who know about the centre, will visit it during a given year.

On the basis of our earlier assumption, we may therefore expect that the centre will have $0.1N$ clients per year, or $0.008N$ clients/month.

2. We now try to estimate the number of interviewers require to handle this client load.

The following computation concerns only service interviewers who are working directly with clients, in the service programmes. It does not include field workers, community organizers, administrators of the multi-service centre, or any other members of the core service programme. They will be discussed later as 'ancillary facilities'.

The following table (adapted from Perlman and Jones, *op. cit.*, Appendix A, pp. 81-82) shows the numbers of service interview stall (excluding field workers and core service personnel) and the number of clients they served in a number of East Coast centres.

This table, averaged out, suggests that one service interviewer can take care of about 16 clients per month. (The figure must be interpreted with care.)

It is important to recognize that some of the clients came back many times (figures given by Perlman and Jones, for the Roxbury multi-service centre, *op. cit.*, p. 39, suggest that the mean number of visits, per client, is 4.8). This means that each interviewer is in fact dealing with 75 client *visits* per month, an average of about 4 per day. The rest of his time is taken up by paper work, telephoning, and meetings undertaken on behalf of his clients.

The service centre therefore needs one service interviewer for every 16 clients/month who come in for help. On the basis of the previous assumptions, we may say then, that a centre serving a population of



	MFY	CFO	CPI	Rox	JFK	Shawmut
Service interview staff	12	12	81	10	9	3
Client intake/month	111	359	301	194	173	35
Clients/interviewer/month	9.3	30.0	3.8	19.4	19.2	11.7

N, needs $1/16 (0.008N) = 0.0005N$ service interviewers.

This estimate is supported by figures obtained from existing multi-service centres. The following table

	MFY	CFO	CIP	ABCD
Target population per centre: N	54,000	12,000	13,000	26,000
Number of professional workers/centre	24	7	17	14
Population/professional worker	2,250	1,760	776	1,880

The average of the four figures in the last row is 1670. These centres have .006N professionals to serve populations of N. Since about half of these professionals are field workers, this gives a figure of about .003N in-house service interviewers. The figure is lower than ours; but it applies to a situation where outreach was far from perfect. If outreach were better, the figure would have to be raised. We must remember, also, that the number of professionals available influences the number of persons in the community who can get help; thus the CPI centres, with .013N professionals, have a higher relative rate of intake than the others (*op. cit.*, p. 81).

3. Rough estimates suggest that each interviewer requires two backup staff to help him (assistants, typist, researchers, receptionists, PBX operator, etc.). Thus in East Oakland legal aid, 1-1/2 full-time interviewers require 4 full-time backup; in West Oakland family counselling, 2-1/2 interviewers require 4 full-time backup; in West Oakland legal aid 2 interviewers require 4 full-time backup.

On this basis, we estimate that a centre serving a target population of N persons, will require a total staff of $0.0015N$ persons.

4. Various sources suggest that general purpose office space, requires approximately 200 square feet per person (including all circulation and extras). For instance, one source gives 150 square feet per person as net figure, with another 65% for all circulation and extras — making a total of 250 square feet per person. However, this figure applies to whole buildings — the percentage of circulation within a service unit would probably be rather less. (M V Facey

(adapted from Perlman and Jones, *op. cit.*, Table 1, p. 11) shows the target area populations and the number of professionals serving them for a variety of centres.

and G B Smith, 'Offices in a Regional Centre', Research Paper No. Two, Location of Offices Bureau, London, January 1968, p. 27.)

The best estimate for gross square footage per person seems to be 210 square feet, (though this is still liable to vary according to detailed conditions). (See Ottonar Gottschalk, *Flexible Verwaltungsbauten*, Quickborn bei Hamburg, 1963, pp. 33-35.)

On this basis we may estimate that the multi-service centre will require a total of $.3N$ square feet of service space.

5. Finally, we estimate the square footage required by core services and ancillary facilities. Core services includes all community organizers or block workers, all centre administration, all subcommittees and evaluation personnel. Ancillary facilities includes all community project space, meeting rooms, classrooms, circulation, self-service, arena, child-care, storage, cloakrooms.

Our experience shows that core services require about $.15N$ square feet of space, and that major circulation, arena, meeting rooms, classrooms, child-care and other ancillary spaces require about $.45N$ square feet. We cannot yet support these figures with any detailed item by item account.

Community territory (4)

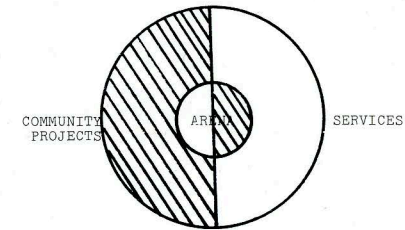
Pattern

If:

There is any multi-service centre

Then:

1. The building should contain a major area which is established as *community territory*.
2. Community territory is distinct from the area devoted to services, but is interlocking with it.
3. Community territory contains two main components: an *arena*, and an area given over to *community projects*.



The *arena* is a public area, open to passers-by (whether or not they are visiting the service centre), shaped in such a way as to encourage public discussions (both formal and informal), equipped with walls for day-to-day notices and posters, microphones, and loudspeakers.

Community project space is defined according to three functions:

- (a) It provides space where any community group can set up an office or workshop oriented towards a specific community problem. (Examples of such projects include a group fighting slumlords, a group concerned with school reform, a couple of women who decide to run a child care centre, typing classes, local tenants seeking action on rat control, a police complaints committee, and so on.) Office equipment and duplicating machinery will be provided in this zone for each community project, as well as for the community at large. Community project spaces will be owned by the community and as free as possible from any administrative strings concerning keys, janitors, permission, etc (See Pattern 17.)
- (b) Community projects also include offices for local political bodies, and for the subcommittees which have control over the service programmes and to whom



clients can make suggestions, and complain about services.

(c) The community project zone also contains small shops, run by local businessmen, perhaps with the help of SBA grants. Examples are coffee shops, barbers, book stores, laundromats, tobacconists, flea markets. These shops should be rent controlled.

Problem

The functional failures of existing multi-service centres. This pattern is the most important of the 64 patterns. In it, we try to revise the overall concept of a multi-service centre, in a way that is radical enough to overcome the massive failures of the present centres. *For, in blunt terms, the multi-service programme has, so far, been a massive failure.* Less than 10% of the poor go to multi-service centres (see Pattern 2). The centres do not help the hard-core rock-bottom poor at all.

To some extent the failure has been caused by inadequacies in the services themselves. The shape of the building will make little difference to that. But to a large extent, the failure has been caused by the *nature* of the existing centres, by the way they have been conceived: In spite of new names and new ideals, multi-service centres do not meet the real needs of the poor; they perpetuate the indignity of 'welfare handouts'. The key to this failure is the syndrome of 'powerlessness'. It has been demonstrated again and again that the poor are effectively trapped in a subculture of poverty, that this trap is a self-perpetuating, vicious circle, and that it precludes effective participation in society's major institutions. Because people are poor, they can get no jobs; because they have no jobs they have neither the money nor the opportunity to move about and use the city; because they cannot travel about the city, they are not well versed in the processes which govern the rest of society, and they are not able to participate in its processes and institutions; because they are effectively shut off from the rest of society, they have no power in the political arena; and they have few local leaders; because they have no power and no voice their needs and complaints and the details of their situation are not widely known to other members of society — certainly they are not represented. Because they have no voice, no power, no process by which they can communicate with centres of action, no jobs and no participation, they do not have the most central freedom that any free man has — the freedom to call their own shots and to determine their own future. And so poor people stay demoralized, and isolated. And above all they stay poor. In short, poverty is a syndrome which hinges principal-

ly on various facets of powerlessness.

(The syndrome of poverty and powerlessness has been well documented in the past few years. See, for instance, Lewis' technical discussion of the 'culture of poverty', Oscar Lewis, *La Vida*, pp. xlii-liii, New York; Michael Harrington, *The Other America*, Baltimore, 1963; Moynihan's infamous report describing the self-perpetuating, identity-killing nature of the conditions under which poor people live, in Lee Rainwater and William L Yancey, *The Moynihan Report and the Politics of Controversy*, MIT Press, 1967; Abram Kardiner and Lionel Ovesey, *The Mark of Oppression — Explorations in the Personality of the American Negro*, Cleveland, 1951.)

Like all syndromes, this syndrome can only be broken if it is attacked on all fronts simultaneously. During the last few years, this has been happening to a *limited* extent:

1. A little more money and much more attention is being given to the poor and their situation.
2. Many forceful and articulate leaders of the poor have gained national stature; many more have emerged as local spokesmen.
3. More and more, poor people are speaking and acting out against the system that is keeping them down (e.g. Poor People's Campaign, various ghetto rebellions).
4. More and more poor people are finding that intense organization and confrontation are the route to political power.
5. More and more young people in poor communities are finding their voice: they are making concrete demands on society and they are finding strong identity in the process (e.g. Black Panther Party, 'Ten Demands', published in newspapers and leaflets around the San Francisco-Oakland Bay Area).
6. People with professional training and technical skills are beginning to put themselves at the disposal of the poor (e.g. Architects' Renewal Committee in Harlem, Medical Committee for Human Rights, Lawyers' Guild).

All these steps are, in some sense, reactions to the central feature of the poverty syndrome: powerlessness. Each one of them attacks some aspects of powerlessness. Where all of these things happen simultaneously, there is some real hope that the poverty syndrome can be broken down.

The multi-service programme is intended by policy makers to play a part in breaking the poverty-powerlessness syndrome. Yet, in fact, as they are presently conceived, multi-service centres do little to counteract the manifestations of powerlessness, and indeed, they often help to perpetuate them.

For example:

1. It is known that the rules of the welfare system force people to tell lies, in order to get their money — thus demeaning them yet again. The message which comes through consistently is that the recipient is, in one sense or another, not what he should be. (See for instance, the following verbatim quotes, from statements by Alameda County welfare recipients, taken from William L Nicholls II, Esther S Hochsheim, and Sheila Babbie, *The Castlemont Survey, A Handbook of Survey Tables*, Survey Research Center, University of California, Berkeley, 1966:

Therefore, it was better for me not to work . . . I couldn't make it otherwise. They seem to do everything they can to discourage you from having any ambitions at all. I went to apply for help when I needed it years ago and they tried to push me off — discourage me. I don't like their attitude. They look down their nose at you. You have no private life. They want you to go out and look for a father for your children and when you do, they act like something is going on. It took a great deal of pride swallowing to go to them in the first place and they didn't try very hard to help and they're still not doing anything. They don't have any respect.

4. Even in those cases where service centres try to initiate community 'action' this idea remains in the heads of the centre staff — it does not communicate itself effectively to the members of the community. Thus Kirschner (*op. cit.*, Appendix III), reports that only 20% of all service center clients recognize the community action function of the service centre, while 80% of the agency staff recognize it.

5. Even when the centre is run by an elected local board, the board members often feel that they are not really in control — they feel that the real decisions are being made by staff members.

*There seems to be a great deal of frustration associated with board membership, especially as compared with being a paid staff member . . . Council members feel that their views are not respected, that they have no control over the centre and/or that they are inadequate to cope with the complexity of affairs confronting them. There are exceptions to this generalization, but they are rare. (Kirschner Associates, *op. cit.*, p. 46.)*

6. In at least one case on record, centre administrators have refused to allow controversial community meetings to take place in the centre — thus driving community organizers out, to hold their meetings somewhere else, and reinforcing the suspicion, already rife in the community, that the centre represents govern-

ment interests, and is not really theirs. (Personal communication from Gene Bernardi.)

7. The established services tend to 'take over' the centre — thus making it foreign territory to the community. It becomes a favour to be there, not a right, for community residents. Interviews with 200 multi-service centre clients showed that in answer to the question: 'Who runs the centre and decides what is to be done?', only 8% said neighbourhood people. The remaining 92% mentioned the centre director, centre staff, social workers, federal government and other assorted agency personnel. (Kirschner Associates, *op. cit.*, Appendix V.) Now the question arises, what should a multi-service centre be like, if it is to be effective in fighting poverty and powerlessness.

The limited though real success of the various measures now being taken against powerlessness (i.e. black power tactics, community organization, welfare rights groups, rent strikes, the mission rebels, ARCH, the emergence of many articulate leaders, etc.) makes it clear that a successful multi-service centre, must, likewise, concentrate on the problem of giving power and self determination to the poor.

They fool around and by the time they investigate if you come down there real nice, you won't get anywhere. If you raise hell with them they'll give you what they think you should have.

When we were getting aid they had my husband and me picked up at my home at 2 a.m. and threw us into jail saying we had received money we weren't entitled to . . . We could have lied in the beginning and said the boys didn't help us at all and gotten full aid, but we tried to be honest and this is what they did to us.

2. In the same vein, the whole idea of coming in to receive 'service' perpetuates acceptance of the fact that people in the community are being told what to do, and are not able to call their own shots.

*Thus, one can say of the target population that most have not yet been reached in a meaningful way at all; that some have become clients for services and perceive the centers as givers of services and themselves as recipients of services; and that a still smaller number regard themselves as active members of society with the right and ability to influence it. (Kirschner Associates, *op. cit.*)*

More concretely, Scott Briar and others ('Mexican-American Recipients Orientations Towards and Mode of Adaptation to the Welfare System', School of Social Welfare, University of California,

Berkeley, dittoed, June 1966), found that only 33% of Negro recipients, 28% of Mexican-American, and 20% of the white recipients disagreed with the statement 'It's best to do anything they tell you to do'.

3. Although many multi-service programmes have made special efforts to hire staff from the local community, it has been shown that within a few months these staff members lose their ability to perceive issues as the members of the community see them — their perceptions tend to become like the perceptions of other staff members. (Burt Waldrich, 'Indigenous Worker as an Agent to Social Change', Ph.D. Thesis, Department of Social Welfare, University of California, Berkeley, 1968, measured the ability of community workers hired by services to retain their affinity with the clients, by asking community service aides to try to predict client responses to a series of questions. He found that '... length of time on the job is strongly and inversely related to ability to predict clients' responses (Table XI). Aides who have been in the programme less than one month are considerably more accurate than the professionals'.) Apparently there is something about the present organization of multi-service centres that tends to replace the client's point of view, by the staff member's point of view, and that tends, therefore, to prevent the real needs of the poor from coming into sharp focus.

The poor can and will articulate their needs, *if given the proper setting and means*. It cannot be left only to the hiring of indigenous members of the community in programmes and services (although that may help). Board members, if they are to represent the community, must be given the incentive and prestige which should be associated with their positions; everyone must feel that he has control over his own destiny; that he can call his own shots; that he has some power. None of this is possible without community organization. *If the multi-service centre is meant to help the poor, it must help the process of community organization*. This means, essentially, that the multi-service centre should have two features: *First, the whole centre must be built around the process of community organization. Second, the centre must be clearly recognizable as community territory*. In more detail:

1. The community cannot organize itself without professional organizers, acting in concert with the entire community; but the entire community should be encouraged to participate. It must be easy for any member of the community to organize the community

around a given issue. This process requires a physical nerve centre. The multi-service centre should be the nerve centre for ongoing community organization.

2. The service centre cannot be a hub of community organization, unless it is clearly recognized by every member of the community, as community territory. Yet administrators of existing service centres have not succeeded in making places which belong to the community — they are still thought of as 'foreign' territory. The service centre must be clearly recognizable as community territory — a place where everyone has the right to be, day or night; a natural place to go at any time, especially in time of need. When we translate the idea of community organization and community territory into *physical* terms, they yield two components: the arena, and the community projects zone.

1. The most immediate instrument people have for solving a community problem is to rally around the issue at hand and to get other people interested enough to support their point.

Thus the community needs a public forum, equipped with sound system, benches, walls to put up notices, etc., where people are free to gather; a place which belongs to the community where people would naturally come whenever they think something should be done about something. We call this public forum the arena.

2. Once a group is ready to move, it takes typewriters, duplicating machines, telephones, etc., to carry through with a project and develop broad-based community support — whether it involves setting up typing classes, volunteer child care service, writing to central government, or the board of education, demonstrating against the county health service, conducting an investigation into police brutality, building a third party, and so on. (Gene Bernardi interviewed Benny Parrish, Community Organizer, formerly with the California Council of Community Development, and Art Schroeder, Neighborhood Organization Director of the East Oakland Service Center. Both men said that the most common and effective action-oriented projects were those using group appeal, negotiations and demonstrations'. . . an office and equipment, telephones, mimeo machines and paper for leaflets, newsletters and press releases, are all essential for these projects . . . There was hardly ever a demonstration without a leaflet.)

The community needs a place where people can have access to storefronts, work space, meeting rooms, office equipment, etc. The place would inevitably become known as community territory and would serve as an inspiration for the exercise of community

initiative. We call this space the *community projects zone*.

The community projects zone and the arena, together, form a base for community organization. And together they establish in a clear-cut way, the fact that the service centre is community territory. (See also patterns 16.)

A multi-service centre with these physical features, and parallel social innovations, has some chance of breaking down the syndrome of poverty and powerlessness.

Small services without red tape (5)

Pattern

If:

Any community centre in a poor community offers services,

Then:

The services may include any of the following, and any others which the members of the community develop:

Individual rehabilitation for the chronically unemployed	Family counselling
Child welfare	Welfare counselling
Health advice	Parole assistance and liaison
Fair employment practices	Apprenticeship and on the job-training programme
Psychiatric services	Consumer advice
Neighbourhood Youth Corps	Veterans' affairs
Motor vehicles assistance	Building and housing
Legal Aid	Group homes for teenage student mothers
Vision care	Probation rights
Welfare rights	Credit union
Small businesses	Headstart
Police complaints	Parent child centre
Recreation programmes	Planned parenthood
Cancer society aid	Soup kitchen
Nursery	Chest x-ray and vaccinations
Travellers aid	Civil Service test preparation
Farm labour office	Jury service
Real estate counselling	Services for the ageing
Relocation agency	Emergency housing
Emergency financial aid	Tenant rights
Income tax service	Emergency housing repair
Drug addiction	
Job-skills training and placement	



The services should have the following characteristics:

1. No one service should have more than 12 staff members, total.
2. Each service should be autonomous as far as possible: it should be housed in an identifiable, physical autonomous unit, with direct access to a public thoroughfare.
3. The services should be arranged in a loose informal way: so that there is no hard and fast distinction between services provided by agencies, and services which are initiated and run by members of the community.

Problem

Bureaucracy is one of the greatest enemies of effective service programmes in low-income communities. Its essential feature is 'red tape', a middle-class invention. The poor do not know how to deal with red tape; they are overwhelmed by it, and antagonized by it. To overcome red tape, individual service programmes within a community centre must be *small* (12 persons maximum) and *autonomous*; and further, they must be *loosely arranged*, so that new services, created by members of the community, can immediately be housed alongside existing programmes. (Gideon Sjöberg, Richard Brymer, and Buford Farris, 'Bureaucracy and the Lower Class', *Sociology and Social Research*, 50, April, 1966, pp. 325-337.)

Two main features of the red tape syndrome can be identified:

1. Lack of personal relationships, size of organization, and frameworks of rigid rules.
2. Feelings of impotence on the part of the client. These suggest that red tape can be overcome in two ways. First, it can be overcome by making each service programme 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 the service programmes. There is considerable evidence to show that when clients have an active relationship with a social institution, this institution then loses its power to intimidate them.

We conclude, therefore:

1. No service should have more than 12 persons (all staff, including clerks). We base this figure on the fact that 12 is the largest number that can sit down in a

face-to-face discussion. It seems likely that even smaller staff size will work better still.

2. Each service should be autonomous — not subject to regulations from parent organizations outside the centre. This should be emphasized by physical autonomy. In order to be physically autonomous, each service should have an area which is entirely under its own jurisdiction; including access to some public thoroughfare, and complete physical separation from other services.
3. The centre must encourage the community to formulate new service programmes on its own initiative. (The fact that this will require extensive community organization is dealt with in Pattern 4.) To give these new services full support, they must be able to take their place, along with the existing services. This requires a very loose and flexible arrangement of service areas.

These conclusions are reinforced by the very great variety of possible service programmes. As we see from the list given in the pattern statement (above) a centre could theoretically provide as many as twenty or thirty different services. The more of these services the multi-service centre can provide (consistent with the constraints of Pattern 1), the better for its clients. All the services listed above have been proposed, or implemented, in some real multi-service centre, somewhere in the country.

Arena thoroughfare (9)

Pattern

If:

There is any area in a public building where people are meant to feel free to loiter without a 'reason' (like the arena in Pattern 1)

Then:

1. There is a natural pedestrian path through the area (if possible a shortcut, with respect to the bounding sidewalk).
2. There are no steps along this path.
3. The path has the same surface material as the sidewalk it touches: the two are continuous.
4. Entrances along this path (where the path meets the bounding sidewalk) are open, if climate permits it, and at least 15 feet wide.
5. The path is lined with opportunities for involvement like displays, notices, etc.

Problem

When a building is to have a fairly open public area



within it, the following conflict develops:

1. People will not come in and use the public space if they feel they are committing themselves to use the building in some formal or regulated way.
2. People seek public spaces where they feel it is all right to be, without a specific reason.
3. If people are asked to move along or to state their reason for being in a place they will no longer use it freely.
4. Having to enter a public space through doors, corridors, changes of level, and so on, tends to keep away people who are not entering with a specific goal in mind.

The following passage from Erving Goffman, *Behavior in Public Places*, New York, 1963, pp. 56-59, describes the problem perfectly.

... *Being present in a public place without an orientation to apparent goals outside the situation is sometimes called lolling, when position is fixed, and loitering, when some movement is entailed. Either can be deemed sufficiently improper to merit legal action. On many of our city streets, especially at certain hours, the police will question anyone who appears to be doing nothing and ask him to 'move along'. (In London, a recent court ruling established that an individual has a right to walk on the street but no legal right merely to stand on it.) In Chicago, an individual in the uniform of a hobo can loll on 'the stem', but once off this preserve he is required to look as if he were intent on getting to some business destination. Similarly, some mental patients owe their commitment to the fact that the police found them wandering on the streets at off hours without any apparent destination or purpose in mind. Lolling and loitering are often, but not always, prohibited. In societies in which cafe life is institutionalized, much permitted lolling seems to exist. Even in our own society, some toleration is given to 'lolling groups', in which participants open themselves up to any passing momentary focus of attention and decline to maintain a running conversation unless disposed to do so. These clusters of persons passing the time of day may be found on slum corners, outside small-town stores and barber shops, on the streets during clement weather, in some metropolitan wholesale clothing districts, and, paradoxically, on the courthouse lawns of some small towns.*

Here it is useful to reintroduce a consideration of subordinate involvements such as reading newspapers and looking in shop windows. Because these involvements in our society represent legitimate momentary diversions from the legitimate object of going about one's

business, they tend to be employed as covers when one's objective is not legitimate, as the arts of 'tailing' suspects have made famous. When Sam Spade affects to be examining a suit in a store window, his deeper purpose is not to try to suggest that he is interested in suits but that he has the same set of purposes as a person in a public street who diverts himself for a



moment in going about his business to gaze in a window. Similarly, as an ex-bum tells us, when one's appearance and real purpose put one outside of the current behaviour setting, then a pointedly correct subordinate involvement is of the kind that is associated with these subordinate involvements. One idiosyncrasy that he [a friend] has discovered but cannot account for is the attitude of station policemen toward book readers. After seven-thirty in the evening, in order to read a book in Grand Central or Penn Station, a person either has to wear horn-rimmed glasses or look exceptionally prosperous. Anyone else is apt to come under surveillance. On the other hand, newspaper readers never seem to attract attention and even the seediest vagrant can sit in Grand Central all night without being molested if he continues to read a paper.

In order to provide an opportunity for 'lolling', the area which is to be public must be a direct continuation of the public sidewalk. There must be no breaks in continuity which might suggest that this space is



private, regulated territory. Hence, specifically: The surface must be continuous with the sidewalk, made of the same material. There must be no steps from the public sidewalk into this space. If there is any change in level, it should be a continuous ramp. There must be no doors between the public sidewalk and the space. If climate control is essential, this should be provided by air-curtains. The openings must be large enough to create a 'public' space — hence at least 15 feet across.

Further, if the space is a dead end, people may feel inhibited from exploring it, since a venture into it marks them clearly as 'interested persons'. To overcome this difficulty, the space must have at least two openings, one at each end, so that it can be used as a through passage by people who are curious. It will then give them the opportunity to explore it, while seeming to take a walk for some other purpose.

This effect will be enhanced if the area is so placed that it provides people with a natural shortcut. They will then go through it for pure convenience, and will need

no excuse whatever for being there.

Finally, the path must be lined with excuses for involvement. (See the last two paragraphs of the Goffman passage.)

All services off arena (13)

Pattern

If:

There is a multi-service centre, or other public building which contains a number of services, working in parallel,

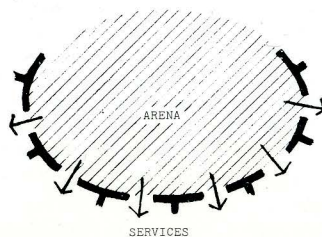
Then:

1. There is a floor clearly identified as the *main floor*.
2. Each service has all its interview space on the main floor (even though back-up personnel may be working on other floors).
3. On the main floor, all the services open off a common waiting area (the arena, if Pattern 4 holds).
4. Each service has approximately equal frontage on this waiting arena, typically 10-20 feet.
5. If the service has a receptionist, she must be directly visible and accessible from the arena.

Problem

This pattern is based on the following demands:

1. The members of the community regard the services themselves as the most important part of the multi-service centre.
2. Since the services are intended to operate in parallel, no one service or group of services should dominate the others.
3. In order to make the referral process successful, it must be very easy to get from one service to another.
4. The success of multi-service requires that people be aware of *all* the services available in the building.
5. Multi-service is improved when the interviewers of one service are in touch with interviewers of other services.



In more detail:

1. Since the members of the community regard the services themselves as the most important part of the service centre, they are not willing to let these services fade into the background.

This sentiment was clearly expressed by members of the Hunts Point community in subcommittee meetings during 1967-68.

The services must therefore occupy the main floor of the centre.

2. The problem of one or several services dominating the others is based on the following observations:

- (a) People using the public building tend to associate it with the kinds of activity they see as they enter.
- (b) Those activities taking up the most space on the ground floor tend to catch a user's eye first.

Once one service dominates others, the principle of multi-service becomes diluted; the centre appears more like a two-service or three-service centre; weak services get shuffled to the back, and they become weaker.

These observations suggest that, each service should be on the main floor, and that no one service should have more public frontage than another.

3. The whole idea of multi-service hinges on the possibility of referrals from one service to another. This is simple in theory. In practice, unfortunately, many clients who are referred from one service to another, do not follow through on the referral.

In a follow-up study of referrals in Oakland, Gene Bernardi found that 55.6% of all persons referred did not go to the place they were referred to. (Gene Bernardi, 'Preliminary Evaluation of Neighborhood Organization Programs — Individual Contact and Referral Activity', Department of Human Resources, City of Oakland, California, 1967, Table V.)

This probably happens because it seems like too much trouble, the service is far away, hard to reach, the client does not want to go through the whole thing over again, etc. He will be much more likely to follow through on the referral if the service in question is right there, on the same floor; the person referring him can point directly at it, or take him over and introduce him.

Again, that part of the services where the interviewers work, should be on the main floor; and all the services should be visible from any one of the services.

4. The concept of multi-service must come to have meaning in the mind's eye of the client. There is some evidence to indicate that this rarely happens in service centres today. Gene Bernardi interviewed clients waiting for service at the East Oakland MSC.

Four of the five persons interviewed could not name any services the centre offered other than the one they were waiting for; the fifth person was a 'veteran' at the centre, having been there many times, and could name all the services offered. (The East Oakland Centre offers four services, none of which are clearly marked and visible to the client as he enters and as he waits.)

(The Kirschner study, *op. cit.*, pp. 25 and 45, also illustrates this point.) To help solve this problem there should be a common waiting room for all services; all service programmes should open off this waiting area; and the essential activities of information giving, reception, interviewing, etc., for each service, should be immediately visible. There is then some hope that clients will get to know the other services.

5. Inter-service communication between staff interviewers must be fluid. Clients get better help with their problems when staff members from various agencies are able to coordinate their efforts, and deal with the problem on a 'case' basis. In theory this is obvious, but in practice it has been a very difficult relationship to achieve. (Kirschner *op. cit.*, p. 34, p. 44 and Perlman and Jones, *op. cit.*, p. 34.) Good integration of services thus seems to depend to some extent on open and informal lines of communication among staff interviewers throughout the centre.

It is hard to know why this kind of communication has been so difficult to achieve in practice, and how physical organization might help. It seems clear that convenient places for informal contact among staff members would help. But here we are looking more for sources of on-the-job coordination. Intuition tells us that a staff member is most likely to be in touch with other staff members who work near him, and on the same floor.

Thus all interviewers should be located on one floor off a common space. (The earlier part of this pattern says this floor should be the ground floor and that the common space is the waiting area.) If any service needs more space than it can have on the main floor, the clerical staff should move onto another floor, with some convenient vertical connection between them and their ground floor counterpart.

This pattern enhances inter-service communication among interviewers, at the expense of intra-service communication between interviewers and clerical staff. It is true that this is an unusual step, and that the individual services may try to resist it. In defence, we must point out that the communication

between services is, from the point of view of multi-service, more important functionally than the communication between interviewers and clerical staff within a given service.

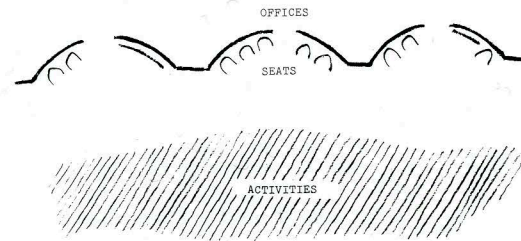
Free waiting (14)

Pattern

If:

There is any large institution where clients have to wait for appointments and interviews (this includes hospitals, medical centres, multi-purpose centres, offices of various types, government agencies, the faculty areas of university departments, etc.).

Then:



Designate each of the rooms where an interview is to take place, as an 'office'.

We require the following:

1. Immediately outside every office, within sight of its door, there are seats. The exact number of seats depends on the average number of people waiting at any one time, plus a safety factor. The safety factor must reflect the idiosyncracies of waiting fluctuation for the particular institution.
2. Within view of these seats, there are exhibits of material relevant to the subjects which are most usually discussed in the office interviews.
3. The exhibit and seating areas are directly connected to a larger open area called the waiting activities area. The activities in this area will vary from institution to institution. In a multi-service centre they might include a public discussion arena, and pool tables. In a medical centre they might include a swimming pool, a coffee counter, and exercising equipment. This area is not exclusively for use of people waiting for appointments. *Though its use may be restricted, it is also open to people not waiting for appointments.*

4. The waiting activities areas are equipped with a public address system, so that a person waiting can be paged when the interviewer is ready.
5. Each interviewer can speak directly into the public address system through his own telephone.

Problem

All large institutions with busy professionals subject their clients to endless waiting. The client is usually forced to sit in some waiting room, reading old copies of *Reader's Digest* and *Life*. From the client's point of view this waiting is almost always unpleasant. This problem arises in the following way:

The interviewers have to squeeze as many interviews as possible into a busy schedule, and cannot afford to be kept waiting between interviews. For this reason interviews are always scheduled very tightly.

At the same time, some interviews take longer than others, and the exact length of any one interview is unpredictable.

This means that clients will inevitably be kept waiting. There is no way of making appointments which can overcome this difficulty.

Further, since people never know exactly when their turn will come, but must be on hand at the very second the previous interview is finished, they cannot even take a stroll or sit outside. They are forced to sit in the narrow confine of the waiting room, waiting their turn.

Yet, people get bored and tense sitting and waiting with nothing to do. If they are nervous about the problem to be discussed in the interview, the longer they wait, the more nervous they are apt to become. Psychologically, waiting is also demoralizing. Nobody wants to wait at somebody else's beck and call.

Evidence for the deadening effect of waiting comes from Scott Briar's study, 'Welfare From Below': Recipients' Views of the Public Welfare System', in Jacobus Tenbroek, (Ed.), *The Law and the Poor*, p. 52, San Francisco, 1966. 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 always thought they had been waiting for longer than they really had. Some of them overestimated their waiting time as much as four times. Although 'applicants rarely have to wait more than thirty to forty-five minutes to see the intake social worker', they perceived the wait to have been anywhere from forty-five minutes to two hours. For most people the best possible antidote for the waiting feeling is to get involved in something interesting which has nothing to do with waiting. *For this reason, there must be waiting areas within*

which various activities are available. The activities will vary from institution to institution. In a multi-service centre, the public arena, the child care centre, the pool tables, the TV and checkers lounge, are all examples of activities which qualify as waiting area activities. Displays relevant to the subject of the forthcoming interview also provide clients with something to do while they are waiting.

People feel less bored waiting, when they are able to watch other people doing things. They spend hours watching a skating rink, watching people going by on a busy street, watching children playing, watching a construction site. Even if the people waiting do not participate in the activities described above, these activities will still provide them with something to watch.

In order to boost the number of people taking part in these activities, the activity area should be open to other people, besides those who are waiting.

It is clear from the above, that the activity area will be useless unless people feel free to go there without worrying about the possibility of missing their turn or losing their place in line. *There must therefore be a public address system in the activity area.* Since the activity area will be fairly noisy, the public address will not disturb its atmosphere.

The interviewer cannot afford to waste time finding clients who are not waiting at his door. Each interviewer must therefore have direct access to the PA system (preferably through his own phone).

There will always be some clients who are especially anxious about missing their turn or being forgotten. These clients usually want to keep watch over the door of the interviewer, both so that they can see when he is ready, and also to make sure that they are seen by him. *There must therefore be seats immediately outside each interviewer's door, each seat visible from the door.* For these clients, the problem of boredom and confinement cannot be solved by going out into the activity area. *However, since watching people helps, each seat must command a view of the activity area.* Above all, the seats must not be enclosed in 'blind' areas typical of waiting rooms today.

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, without having to fear that they are losing their place in line, they can.

Overview of services (15)

Pattern

If:

There is any public building with various departments which service the public

Then:

1. All departments open off a common space, and all entrances into this common space have sight lines to each of the departments.
2. Each department should have its name written near its entrance in large letters.
3. The departments should be located below the level of the building entrances, so that the sight lines from the eye of a person entering to the signs carrying the names of the departments, are ten degrees below the horizontal.



Problem

A public building deals to a large extent with people who do not know the exact relative locations and internal contents of its various departments. *It must be very easy for each person coming into the building to become immediately oriented in it.*

Further, the person who is coming to the building may not know the way in which the departments are categorized, or even if he knew what service he needed, he may not know the name given to the service in this particular building. (Thus, what is called 'Job Counseling' in one multi-service centre, may be called 'Urban League' in another, and 'Manpower' in yet another.) *It must be easy for someone to find what he needs, even if he doesn't know the exact name.*

Sometimes, a person is unaware of the existence of a certain service — a service that would be useful to him if he knew about it. Further, even though he will not usually want to use all the available services, he should know them all so that he is confident he is not missing anything he might need. *It must be clear to people what all the services available in the building are.*



It is possible that these problems might be solved by a directory of the kind found in the lobby of many public buildings and office buildings. However, directories often leave unclear what each service is, and just where in the building it is, even after it has been clearly identified.

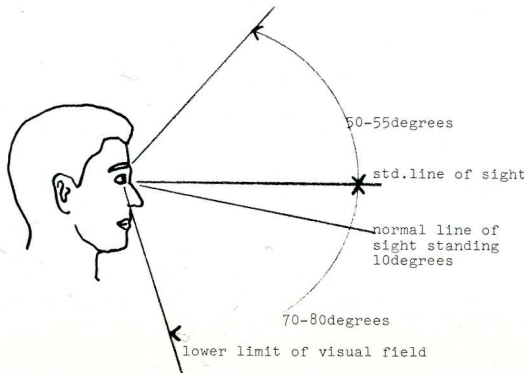
In order to solve these problems properly, the person who comes into the building, must immediately be confronted by all the departments — this means actually seeing the entrances to all the services, together with a clear and simple sign identifying them.

This makes it clear that the services should be fanned out in such a way that all of them are directly visible from the main entrances.

This specifies the arrangement in plan. To guarantee effective visibility, the arrangement in section also needs to be carefully specified.

It is well known, informally, that we see an array of buildings better if we approach them slightly from above. People get a better view of something when looking down at it, than when they are looking at it on the level or looking up at it. There are two reasons.

1. The normal line of sight for a person standing on a horizontal plane, is 10 degrees below the horizontal. (Henry Dreyfuss, *The Measure of Man*, Chart F, New York, 1959.) It is also known that looking up at things is tiring. This has been measured only in the extreme case (Kinzey and Sharp state that looking up at an angle greater than 20° above the horizontal is tiring, *Environmental Technologies in Architecture*, p.354, New York, 1963.), but it seems likely that any deviation from the line 10 degrees below the horizontal is relatively uncomfortable according to its magnitude.
2. When a person looks straight ahead, fixating on the horizontal, his field of vision extends about twice as



far *below* the horizontal as it does *above* the horizontal. This supplements the first effect. It is shown on the diagram below. (The source again is Dreyfuss, Chart F.)

Both these effects make it clear that a person entering a building, will be able to see the various services and their signs most easily, *if they are more than 10 degrees below the horizon for him*. Of course the person has to see over the heads of others, so that the signs must be at least 6 feet from the floor in front of it.

Necklace of community projects (16)

Pattern

If:

A multi-service centre has any street frontage which is not either entrance space, public open space, or transparent glass showing interior public space

Then:

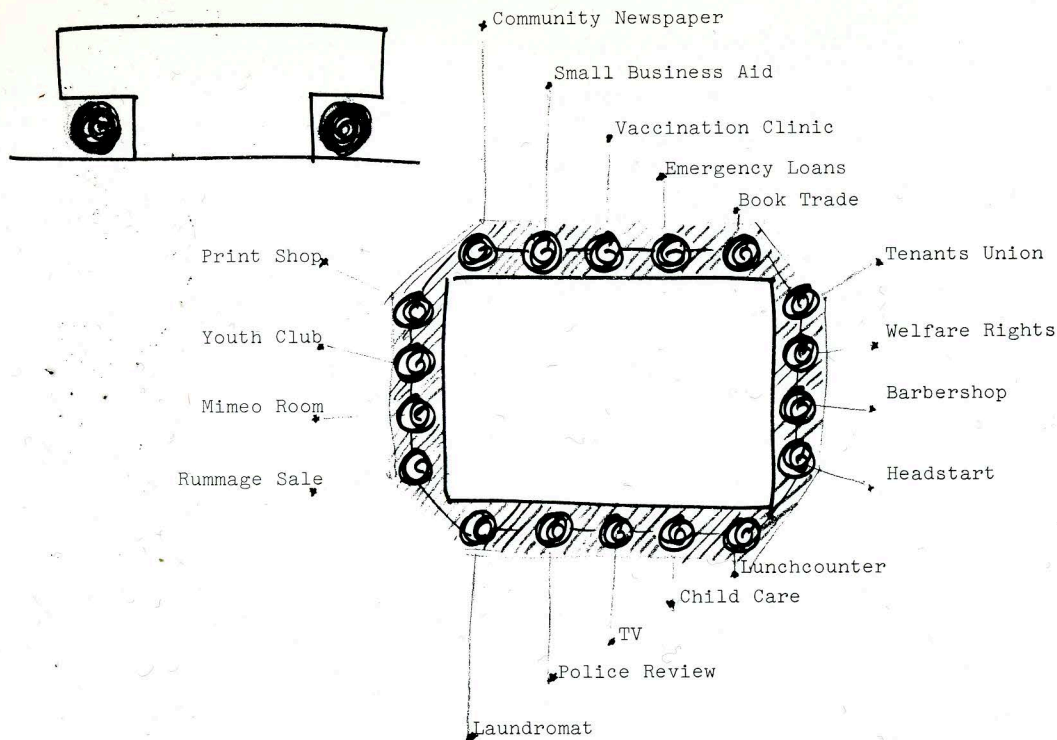
1. With the exceptions stated, the building should be surrounded, at ground level, by a necklace of community projects.
2. These community projects should be individually built, and built after the superstructure of the multi-service centre itself.
3. The ground floor frontage zone committed to these projects, should be given a roof, a floor slab, and conduit boxes in the rear wall, at the time the superstructure of the multi-service centre is built; so that when the time comes to build the individual community projects, they can make use of these elements.

Problem

The physical outside of an MSC makes a strong impression in the community.

If it is recognizable as standard office space, it will convey the message of administration and red tape. Various experiences lead us to believe that any office building which looks like an office building (i.e. equally spaced standard windows; concrete, steel, and glass exterior, etc.) placed among residential buildings in a community creates the impression of disrespect for the community. (See, for instance, recent statements by Harlem inhabitants, as reported in Blyden Jackson, 'Building Harlem Down', *The Guardian*, March, 1968), and many committee members of the Hunts Point Multi-service Centre made similar comments. On the positive side: Art Schroeder, Neighborhood Organization Director in the East Oakland Service Center says:





In order to attract people who might be potential community organization members, the Center should be spacious, with outdoor waiting space, with trees, garden, grass, and a proper combination of sunning and shade places.

Benny Parrish, Community Organizer, formerly with the California Committee for Community Development, says:

Our office was like a house — the thing I liked — it was like a living room.

The Kirschner Report (*op. cit.*, p. 31) says:

The casual, informal atmosphere of small neighbourhood centres can be disarming and hence appealing to poor people who are uncomfortable in formally organized settings. This is why large, bureaucratically organized centres tend to be self-defeating in terms of outreach. The forbidding appearance of such centres makes them little different from the central offices of traditional service agencies.

How can the building be made less bureaucratic, less oppressive, less disrespectful to the community?

To begin with, the internal operations of the centre must, itself, have these qualities. If not, any such appearance would be fake. Assuming that the internal operations of the multi-service centre *is* in fact personal, respectful of the community, non-bureaucratic, and non-oppressive, then how can the building be organized so that these qualities are visible from the outside.

One clue may be this: Red tape is seen as the opposite of *small informal* organization, *private* ownership, *simple direct* relationships. (Alvin W Gouldner, 'Red Tape as a Social Problem' in Robert K Merton's *Reader in Bureaucracy*, pp. 410-418, 1952.)

In order to make it clear to people outside the building that the multi-service centre is not subject to red tape nonsense, the outside of the building, at ground floor, should be entirely made of community owned projects, which are small in scale, *privately* built, *individually* accessed, *not* under the aegis of *formal* receptionists.

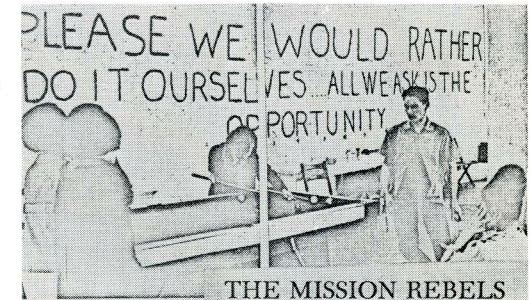
It is especially important that they be privately built; if they are not, they will seem standardized, and impersonal. But this is clearly difficult. The individuals and groups in the community who try to build community projects will be very short of funds. In order to make it as easy as possible for them to build space, the most expensive elements should be provided in advance. These are foundation, floor, roof and services. It therefore makes sense to create an overhang, with roof and floor slab complete, and with electric conduit boxes in the wall.

Self-service (21)

Pattern

If:

There is any multi-service centre



Then

1. The multi-service centre contains a *self-service area*.
2. The self-service area contains all the basic information required by people who need help. It includes information about currently available jobs, information about the legality of eviction, the procedures to be followed in divorce cases, the location of currently available apartments, citizen rights under welfare law, schedules for training classes, teaching machines for skills like typing and shorthand, etc. This information may be in the form of card catalogues, books, pamphlets, displays, etc., according to its nature.
3. Where the centre is used by people from two language groups, as at Hunts Point, all information is in both languages.
4. The self-service area is at the centre of gravity of the waiting area, and transparent so that its inside is visible from all points in the waiting area.
5. The self-service area is continuous with at least

part of the service area.

6. There are no receptionists or intake workers located at the entrance to the self-service area. A person can enter the self-service area and browse there for as long as he wants, without having to explain himself to any receptionist or intake worker.

7. Within the self-service area, there is an advice area. This advice area contains at least one easily accessible assistant, visible from the self-service area, and obviously on hand to help people find the information they want, or to answer questions about it.

Problem

Most service programmes today effectively perpetuate the structural asymmetry of the dole — the great bureaucratic hand reaching down and dropping a few crumbs into the pockets of the poor. If service programmes ever hope to break the chains of poverty, this structural asymmetry, with all its psychological implications, must be destroyed. ('The welfare system . . . imposes restrictions that encourage continued dependency on welfare and undermine self-respect . . . Drastic reforms are required if it is to help people free themselves from poverty.' Report of the *National Advisory Commission on Civil Disorders*, p. 457, 1968.)

One way to help break down the traditional service posture is to offer as much service as is practically possible on a self-service basis, with the centre seen as a resource to aid people making their way through the self-service process. Consider the following analogy: In a supermarket we walk around and select the goods we need, and if we have any questions we ask the grocer; it would be offensive for a grocer to say to a man entering the market, 'Sit down, tell me a bit about yourself and your family, and I'll make out your grocery list.'

Of course this analogy does not hold completely. Many services require technical insights that only trained personnel can be expected to master. But more often than not the service process is made more complicated than in truth it needs to be. We are all familiar with the way large bureaucracies tend to over-handle information, shuffling endless papers, filing endless forms.

This red tape process must be limited to its barest essentials; the key image of the service centre must be as a community self-service institution. Insistence on the self-service ideal means that the actual services that agency renders be made perfectly clear to the community; what an agency can and cannot do, and under what conditions, must become per-

fectly explicit.

Much of the information relevant to problems — phone numbers about jobs, time and place of job training classes, legal questions concerning eviction, location of apartment rentals — can quite easily be made available to the public in the form of written information and signs. When an agency worker holds this information, it contributes to the illusion that the client is a lowly person not capable of understanding the world, while the agency worker is a superior person who knows what is best for the client. This is precisely the kind of experience a poor person needs least; rather, he is looking for the kind of experience that tells him that initiative, when forcefully exercised, *pays off*. This experience, and not the bureaucratic dole, must be available at every chance, throughout the centre.

When the centre opens it is likely that only a few services will be able to adopt the self-service format. However, it must be made clear that a major responsibility for the staff will be to put ever more services into the self-service format; this thought must be expressed and encouraged by the organization of the building.

What evidence is there that a self-service programme can help solve the problem of the bureaucratic dole? Some people argue that even the most enlightened self-service programme will fail when it is offered to the poor; these people argue that the poor have been on the bottom for so long, their initiative so often unrewarded, that a self-service programme could never really get started, it is an unworkable ideal. And it follows quite logically from this position that the job of the staff, no matter how liberal, is to take the poor by the hand and lead them through the service centre paces — like the grocer presuming to write up a shopping list for each of his customers. No matter that this attitude begins as good faith; it always ends with the petty bureaucrat who believes that the function of poverty is to test his generosity. Sartre has expressed this mentality perfectly: 'They are the uncomplaining poor; they hug the walls. I spring forward, I slip a small coin into their hand, and, most important, I present them with a fine egalitarian smile.'

There is some evidence to suggest that in fact the best way to extend service to the poor is simply to make the service openly available, in a setting where people can discuss their needs and the usefulness of certain services with members of their community; and then ask questions and guidance from a resource group of competent technocrats:

A. *The Mission Rebels*, a group organized to support

the needs and solve the problems of young people in San Francisco's poverty-stricken Mission District, is notoriously successful; it is based completely on the self-service principle; the Rebels have turned down help which had the flavour of the bureaucratic dole associated with it; they demand that help be given on their own terms, when and where they need it; their motto is, 'We can do it ourselves'. ('Kids say it isn't as important to come here every night as to know something is here — that it isn't an agency but that Mission Rebels is *theirs*,' Rev. James contends.)

B. In his definitive paper, 'The Power of the Poor', Warren C Haggstrom, shows that it is the *lack* of self-service type programmes, with their associated attitudes and institutional structures, that keep the poor psychologically powerless, their needs consistently unmet. (See Ferman, Kornbluh, and Hober, [Eds.], *Poverty in America*, p. 315, Michigan, 1965.)

C. In 1964, Students for a Democratic Society began a number of projects aimed at organizing low-income people. Two kinds of project philosophy emerged: There were those who assumed they knew exactly what the poor needed, and tried to organize around these assumed needs — such a project was JOIN, Jobs Or Income Now; secondly, there were those who assumed that the process of defining a community's needs and the programmes required to solve them could only come from a community-instigated process of self-service — this was the philosophy of NCUP, Newark Community Union Project. Of the two approaches the NCUP approach was by far the most successful; and it turned out that the kinds of services that the community selected were quite different from what the organizers had expected. NCUP and similar projects have become institutions in a handful of poor communities across the United States; the JOIN approach has never established itself so strongly. (See Tod Gitlin, 'The Radical Potential of the Poor', *International Socialist Journal*, pp. 861-886, December 1967.)

Also, the fact that NCUP has, in recent months, outlived its usefulness is a tribute to its success. It put people into the mood of doing things for themselves, and once this mood found its indigenous expression there was no need for the NCUP staff to hang around.

D. The 'Kerner Report' on civil disorder calls for a thorough overhaul of service programmes. As a basic strategy the report calls for the elimination of 'features that cause dependency'. If taken seriously, this would mean the dissolution of special service programmes altogether, replaced by pure self-service

operations, like the income supplementation plan. (See Report of the *National Advisory Commission on Civil Disorder*, *op. cit.*, p. 462.)

One piece of evidence comes from a statement written by two doctors; it refers to the Peckham Health Centre, a community health centre which they ran for many years:

The 'self-service' aimed at throughout the buildings is a primary need of the biologist. A healthy individual does not like to be waited on; he prefers the freedom of independent action which accompanies circumstances so arranged that he can do for himself what he wants to do as and when he wants to do it. The popularity in tube stations of the moving-staircase compared with the lifts attests to this. It is not merely speed, but the possibility the moving-staircase gives for independent individual action as opposed to collective action dependent upon an attendant, that is significant. Servants tend to bind and circumscribe action, for their presence makes inevitable the establishment of a routine that only too often rebounds upon their employers.

Self-service has the merit of engendering responsibility and of enhancing awareness as well as of increasing freedom of action. As unhampered in the Centre as in their own houses, the members are free to improvise to suit all occasions as they arise. As the embryo newly lodged in the womb begins to build its cells into the substance of the uterine wall, so each new family emboldened to strike out for itself in this living social medium can add its own quota of 'organization' to the Centre — the outstanding characteristic of which is the abiding fluidity of its constitution, permitting continuous growth and the functional evolution of its society from day to day and from year to year.

*So in the Centre there are no attendants, no waitresses. This means that where possible all equipment has had to be designed to be handled by the members themselves. In the main the furnishings are light stackable tables and chairs which can be moved from place to place as occasion demands; the cafeteria utensils also are stackable and devised to be taken and replaced by the members. These are seeming trifles, but they have their far-reaching significance in the type of social organization that is growing up in the building. (Innes H Pearse and Lucy H Crocker, *The Peckham Experiment*, pp. 74-75, New Haven, 1946.)*

Having established a functional case for the self-service concept, we now argue that the self-service facility should be part of the waiting area, and continuous with some part of the service area.

1. People will not come to the centre expecting to use the self-service facility; it is a new concept in service centre programmes and people will not be familiar with it.

2. When people have to wait for an appointment they usually try to find something to do to pass time. (See Pattern 14.)

3. People waiting will not leave the waiting area for more than a minute or two for fear that they will miss their call.

Taken together, these three facts suggest that self-service should be a part of waiting. In the beginning, people will come to the centre primarily to use the agencies; inevitably they will have to wait for their appointments. If the self-service facility is in the waiting area and recognizably open to casual use, people will use it to pass time, and hence become familiar with the self-service system. Finally, the success of self-service is unpredictable. If it is highly successful, one would hope that the whole centre might become more and more oriented towards self-service. If this happens the service will need to expand.

If self-service doesn't work, or if it turns out that people in self-service need more help and advice from staff members — then the self-service area will need to be more nearly a part of other services.

In both cases, it should be continuous with at least one service area.

Pedestrian density in public places (22)

Pattern

If:

There is a public place which is intended to be 'full of life', and the estimated mean number of people in the place at any given moment is P,

Then:

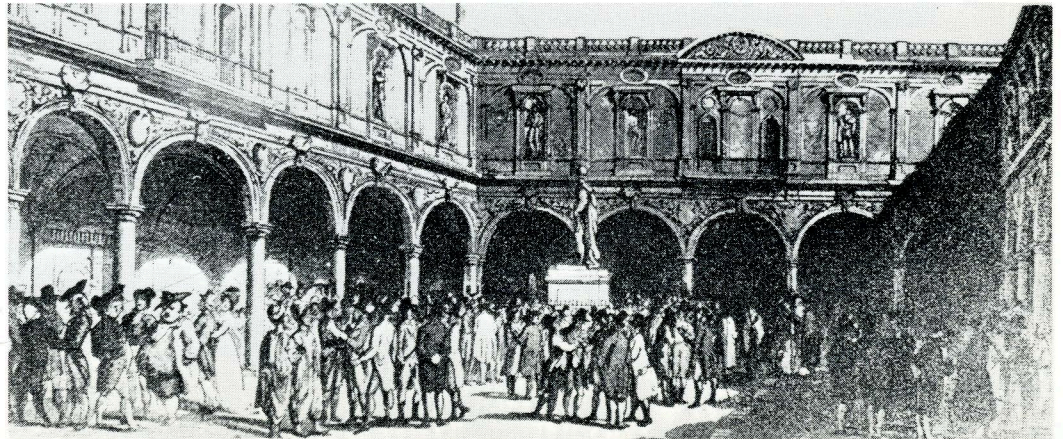
The area of this place should be between 150P and 300P square feet.

Problem

Many of the public places built by architects and planners in recent years, though intended as lively piazzas, are in fact deserted and dead.

Of course one cannot say categorically, that the number of people per square foot *controls* the apparent liveliness of the place — other factors, including the nature of the land use round the edge, contribute to it.

Another issue is the grouping of the people and what they are doing. Moving people, especially if they are making noise adds to the liveliness. A small group, attracted to a couple of folk singers in a plaza at the University of California, gave much more life to the plaza than a similar number, sunning on the grass. However, the number of square feet per person does give a reasonably crude estimate of the liveliness.



Informal observation shows the following figures for various public places in and around San Francisco:

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

One observer's subjective estimates of the liveliness of these places, are given in the right hand column. Although the subjective estimates are clearly open to question, they suggest the following rule of thumb: if there are more than 300 square feet per person, the area begins to be dead. If there are 150 square feet per person, the area is very lively.

Appendix:

Since this pattern applies to multi-service centre arenas, we now give the upper limit on the arena size, as a function of N , the total population in the target area served by the multi-service centre. We know from the arguments presented in Pattern 3, that a centre serving a population of N persons, will require about $.0005N$ service interviewers. Since each interviewer sees about 4 people per day, and a typical interview lasts about 30 minutes, the number of people being interviewed at any given moment is about $.00012N$, and the number of people waiting for interviews will be about the same. Besides the services, other MSC activities draw people into the arena. They include people coming to classes and meetings; people using self-service; people coming in to see the director and community organizers; people being interviewed for jobs in the multi-service centre; people using community projects; people using recreational facilities, etc. In fact people coming in for these ancillary activities most likely equal those coming into the MSC for services. We guess that the people in the arena at any given moment may be twice the number of people waiting, thus $P = .00025N$. This gives an arena size of $300P$ or $.07N$ square feet.

Entrance shape (23)

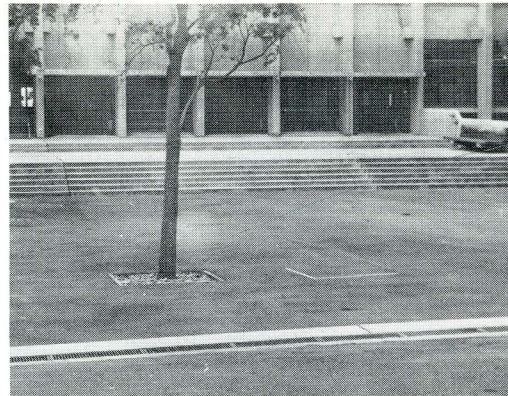
Pattern

If:

There is any main entrance to a public building

Then:

Either, the entrance projects strongly beyond the building front. *Or*, the entrance is set into a deep, flared, recess. *Or*, some combination of the above. Although the heart of the pattern lies in these relation-



ships there are many important refinements which are, for the moment, too hard to pin down. The relative colour of the entrance, the light and shade immediately around it, the presence of mouldings and ornaments, may all play a part. Above all, it is important that the entrance be strongly differentiated from its immediate surroundings.

Problem

A person approaching the building must be able to see the entrance clearly. Yet, many of the people approaching the building are walking along the front of the building, and parallel to it. Their angle of approach is acute. From this angle, many entrances are hardly visible.

An entrance will be visible from an acute angled approach if:

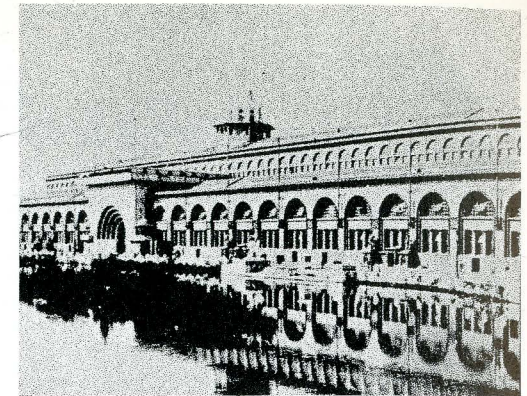
1. The entrance sticks out beyond the building line.
2. The entrance is so deeply recessed, that the void is visible from this angle. In this case, it will help further, if the recess is flared, so that the far side of the recess shows up as a source of differentiation.
3. The building front flares back gently, and the entrance sticks out into the recess so created. This will be useful, if the building is built all the way forward to the building line.

Building stepped back from arena (25)

Pattern

If:

There is a public courtyard where people congregate,



Then:

The buildings around the courtyard are raked back at angles of less than 40 degrees:

Problem

If the buildings around an open court are too close around it, then people do not feel comfortable in the middle of the space; they will not stop there, sitting or standing, but will move to the edge instead. This makes the space useless as a meeting place — no one will use it.

This much corresponds to common experience and intuition. But in order to solve the problem, we must be able precisely to specify under *which* circumstances people feel oppressed by buildings around them, and under *which* circumstances they do not, and to do this, we must know *why* people feel oppressed. We conjecture that people feel uneasy when high buildings surround them, essentially because, consciously or unconsciously, they are afraid things will fall on them or be thrown down, afraid because they are threatened by the possibility of something hovering above them, and self-conscious about people looking down on them.

If this conjecture were true, we should expect that the feeling that a building is threatening should come into play most forcibly when there are parts of the building too high to be seen clearly, but placed so that their 'presence' is felt, towering above. This will happen if the building rises above the field of clear vision.

It is known that a man normally fixates about 10° below the horizon, and that his visual field extends about 50° above his line of sight. (Henry Dreyfuss, *op. cit.*, Chart F.) His clear vision therefore extends

about 40° above the horizontal. Anything more than 40° above the horizontal, from where he stands, will be out of view — but 'felt'. It therefore seems reasonable to expect that buildings become oppressive if they subtend more than 40° to the horizontal, in an open court.

There is a second argument which suggests that a stepped-back court may help to solve the problem, irrespective of its angle.

If the conjecture stated is correct, then the feeling of oppression and threat is probably caused, at least in part, by the fact that things can fall down out of windows and off roofs. (This might explain why a deep canyon in the mountains, though sombre, is not nearly as threatening as a deep well-like court in the heart of a building, lined with windows.) If the building is stepped back, then things cannot fall out of windows or off the roof, and people who lean out of windows will not be able to look down *onto* the people below. The threatening feeling should vanish almost entirely.

Since so little is known about the phenomenon, we

shall for the time being assume that our conjecture is correct. The pattern is based on the conclusions which follow from the conjecture. *It must be emphasized, though, that there are no sound theoretical or empirical grounds for the conjecture.* It may well turn out that the phenomenon of oppression is caused in some entirely different manner.

Short corridors (31)

Pattern

If:

There is any building with rooms opening off corridors

Then:

No straight stretch or corridor has more than 5 or 6 doors opening off it along one side, and its length is no more than about 5 times its width.

For most buildings this means, in effect, no straight stretch of corridor more than about 50 feet long.



Problem

This problem is based on the following conflict:

1. In buildings where a number of rooms are to share a circulation path, it is common practice to string the rooms along a straight corridor. This is deemed the technically efficient solution, since it minimizes circulation space and reduces the construction costs of 'turning corners'.

2. However, the intuition persists that, from a human point of view, long corridors with many rooms off them are dys-functional. People dislike them; they represent bureaucracy and monotony.

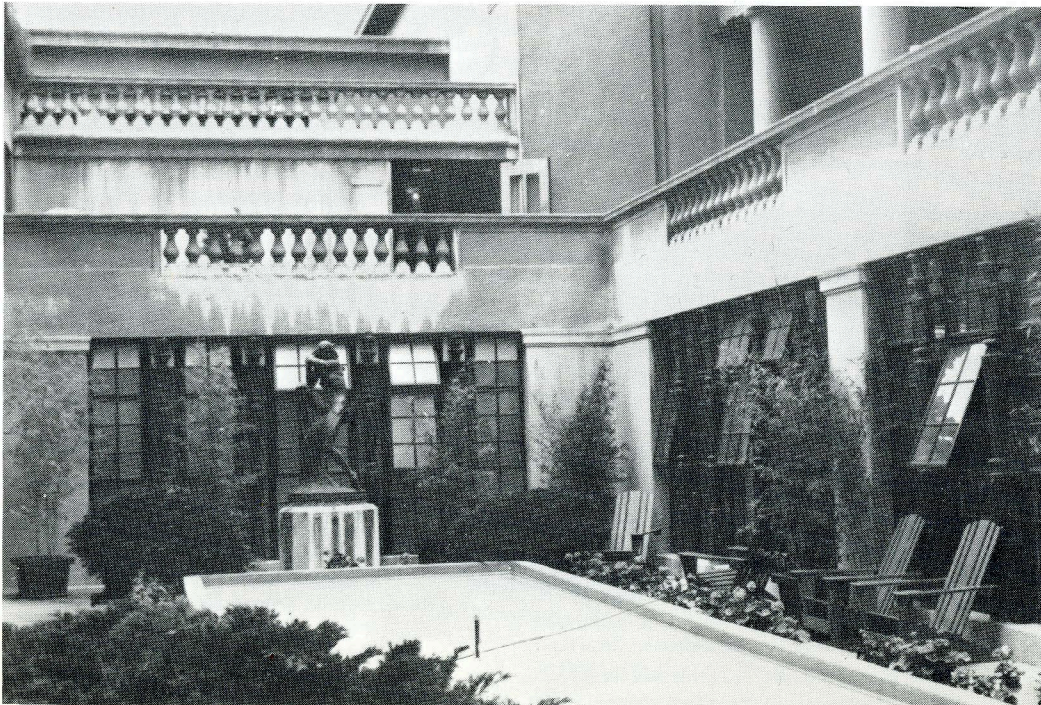
Let us try to make this intuition more specific. What evidence is there that long corridors contribute to human uneasiness?

We refer first to a questionnaire distributed by Murray Silverstein in 1965. The sample was small (12) and limited to college graduates, so the results are, at best, provocative. The questionnaire asked people to describe those elements in buildings that contributed most to impersonal and institutional feelings. Subjects reported experiences with many different building types: army barracks, dormitories, office buildings, government agencies, and so forth. The most recurring theme in their remarks was the unpleasantness associated with long corridors. One person wrote, '... long corridors set the scene for everything bad about modern architecture.' (This material is unpublished. For a more detailed discussion see Sim Van der Ryn and Murray Silverstein, *Dorms at Berkeley: An Environmental Analysis*, Centre for Planning and Development Research, Berkeley, 1967, pp. 23-24, 62-63.)

Similarly, Russell Barton asserts that the long corridor condition contributes to 'institutional neurosis' — a condition wherein building inhabitants become less lively, unmotivated, and their concentration span limited. (Russell Barton, *Institutional Neurosis*, New York, 1959.)

Finally, we refer to a study by M Spiavack on the non-conscious effects of long hospital corridors on perception, communication and behaviour:

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 behaviour 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.)

All of this evidence is speculative; none of it proves the intuition. However, it is extremely suggestive. If we assume the intuition is correct, then the question arises: *how can we establish an upper limit on corridor length?* Evidence suggests that there is a definite cognitive breakpoint between things seen as 'reasonable' circulation spaces, and things seen as 'long corridors'. We shall try to define the point where this change in perception occurs.

The following two results are highly suggestive: It is known that when a person sees four or five regularly spaced objects of the same kind, he perceives them as a *unit*. He can judge their number without counting them. When the number of objects goes above these numbers, he no longer sees them as forming a unit. He now sees them as a *collection*. If he wants to estimate their number, he has to count them, one by one, in sequence. At this stage, it seems likely that the feeling of monotony and repetition sets in. In its most extreme form, we might say that the perceiver, faced with a 'collection', sees the objects as digits. If the objects were offices along a corridor, then the perceiver would begin to see the offices, and their inhabitants, as digits. (G Miller, 'The Magical Number Seven, Plus or Minus Two: Some Limits on Our Capacity for Processing Information', in D Beardslee, and M Wertheimer [Eds.], *Readings in Perception*, p. 103, New York, 1958; also E L Kaufman, M W Lord, T W Reese and J Volkman, 'The Discrimination of Visual Number', *American Journal of Psychology*, 62, pp. 498-525, 1949.)

Another experiment, done by the authors, is also relevant. It was found that, in the perception of rectangles, there is a definite cognitive break between that class of rectangles with ratio 5 : 1 or less, and that class of rectangles with ratio greater than 5 : 1. Rectangles from the first class are seen as *rectangles* with a specific proportion. Rectangles from the second class are seen merely as 'long thin things'. The first of these results suggest that there may be a clear cognitive distinction between corridors which have five or less equally spaced doors, and those which have more than five.

The second result suggests that there may be a clear cognitive distinction between rectangles (and hence, perhaps, corridors) which have a ratio of less

than 5 : 1, and those which have a ratio greater than 5 : 1.

(As it happens, both of these breakpoints coincide approximately: given standard corridor widths, and standard office sizes, they both make a distinction between corridors less than 40-50 feet long and those more than 40-50 feet long.) Since common sense indicates that a corridor becomes unpleasant when it has five or more equally spaced doors down one side, and when it is more than five times as long as its width, it is very likely that this breakpoint is the one we are looking for.

The assertions upon which this pattern rests await experimental investigation. However, we wish to note here that even if research corroborates the assertions, the original conflict still remains unsolved. Part of the reason that buildings are now built with long corridors, is because it is cheaper. Even if we can establish the unpleasantness of long corridors on a sound empirical basis, it still remains to find a cheap way of making buildings with short corridors.

Street niches (34)

Pattern

If:

There is any building, open to the public along a pedestrian path, where it is hoped people will stop, linger and become familiar with the building's services, before they actually enter,

Then:

Along the building's frontage, where it meets the pedestrian path, should be a series of niches with the following characteristics:

1. The niches are set just off the sidewalk; in effect they are extensions of the sidewalk.
2. The niches display the service that the building offers; they contain display windows and/or panels for posting displays.
3. The niches provide relief from the pedestrian path: thus they may have seats, radiant heat, a different surface texture; anything that seems appropriate to the immediate neighbourhood.
4. The niches are at least 5 feet deep.

The exact number and size of the niches will vary according to the amount and nature of the building's display needs.

Problem

A public building has a curious relationship to the land around it, quite different from the relationship

between a private building and the land which surrounds it. A private building is distinct and separate from the land around it; the building is private and the land is public. But a public building is public; it belongs to the community, just as the land around it also belongs to the community. The wall which connects it to the land outside, instead of being a barrier, should be more like a seam; its form should unite the two, so that they become clearly visible as interlocking parts of a single extended community domain.

Though there is almost certainly psychological truth in this idea, it is not in itself a sufficient basis for a pattern. We now present a rather more detailed analysis, based on the insight just stated, yet expressed in detailed functional terms.

We know that people like to 'window shop' as they walk along the street. When given the chance, *people will spend a long time exploring a building's merchandise before they decide whether or not to enter*. But as long as it is done from the sidewalk, window shopping is rarely more than a short glance: *There is a countervailing tendency for people not to linger while they are moving along a city path*.

The conflict between these two tendencies may be resolved by deep niches, set into the building, along the pedestrian path. Because they are both inside the building, and outside it, people feel freer to linger in them.

The picture shows a deep display niche off a San Francisco sidewalk. This kind of form truly gives people a chance to get out of the stream of movement, and look over merchandise. It was informally observed by the authors that people who enter this niche spend on the average one minute and ten seconds exploring the display before either going in or returning to the sidewalk. On the same block, where display cases front immediately on the sidewalk, people spend on the average fifteen seconds window shopping. That is, given the opportunity created by the niche, people spent almost five times more time window shopping.

There is also some evidence to show that such forms actually do help people become familiar with merchandise before they enter a building. A men's clothing shop across from Union Square in San Francisco has a T-shaped niche, like the one in the picture. This niche lets people step off the sidewalk, into a carpeted foyer, and inspect the clothing before they enter the front door. A salesman in this store compared his experience there with his experience at another store, with a more conventional display case



(one facing directly onto the sidewalk). He said the difference was dramatic: merchandise put into the T-niche display was usually sold out in a week, compared with much longer time periods for similar goods displayed at the other store.

Dish-shaped arena (36)

Pattern

If:

There is any large public space used for informal social gatherings as well as public meetings

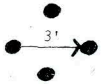
Then:

The space should be a shallow half dish with a slope of about 7%.

Problem

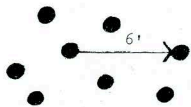
Public gathering places function better if people are able to see each other across the crowd. It is difficult to achieve this in an area completely flat; but a very slight slope helps tremendously. The main square in Sienna provides a classic example:

In a dense crowd of people who are all the same height, the required slope to see what is going on in front of the crowd is about 14%. This figure is arrived at by assuming that a person's eye is roughly 5 in below the top of his head, and that people in a dense crowd are close packed, 3 feet apart, thus:



However, such tight crowds are unlikely. Usually people place themselves in ways that are more random and unregimented.

We guess that a person of average height will usually be able to place himself at least 6 feet from the next person of similar height. This means that the more common instance would be:



It gives a lower limit of 7% on the slopes.

Since other needs (i.e. everyday comfort, the possibility



of bazaars or dances) require that the arena be as near to level as possible, the slope should certainly be no greater than 7%.

In conclusion, we show that the 7% figure is well below the limits of safety and convenience.

1. At what slope does a surface become uncomfortable to walk on, and dangerous for a crowd? Preferred slopes for crowded ramps given by various sources are as follows:

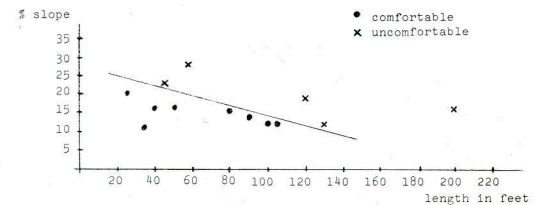
Henry Dreyfuss, *Measure of Man*, Whitney Library of Design, New York: 10%.

Time Saver Standards, p. 1289: 12.5%

California Building School Code: 12%

National Safety Council: 10% for wheelchairs

David Arbogast ('Steps, Ramps and Inclines', Master's Thesis, Department of Landscape Architecture, University of California, Berkeley, 1951) states that the comfort of slopes depends on the ramp's length. He measured 12 ramps of various lengths and slopes for comfort. His findings are shown on the following graph:



From the above graph, we see that for 100 feet lengths (the maximum likely dimension of the arena), the maximum comfortable slope is 15%.

However, David Arbogast further states (*Ibid.*, p. 51.):

Through the survey it was found that ramps give a greater sense of security if partially enclosed or contained, by walls, plant materials, etc.

Since the arena is a wide space surrounded by more space, its slope should be well below the 15%.

2. At what slope does it become uncomfortable to

stand, or sit in an ordinary chair, for long periods? Informal experiments on streets of various slopes, suggest that the upper limit for comfort is about 10%. Thus, both figures are greater than the 7% we specify.

Community wall (38)

Pattern

If:

There is any community space functioning as a centre or rallying point for the community

Then:

Along a major path within this community space, there is a Community Wall; this wall is characterized as follows:

1. It can be seen by the public, walking or driving through the public space.
2. It is at least the size of a standard billboard and may be as large as the entire side of one block.
3. It is surfaced with concrete or wood panels; or any other material that can take periodic repainting.
4. Parts of it are within reach of pedestrians; these parts are available for ever-changing community messages and information.

Problem

One of the most characteristic things about the bureaucratic society, is the fact that no man feels his complaints are legitimate concerns of society, except in those rare cases where they can be expressed in terms of law infractions.

This is especially true of poor people. Since no one listens to their complaints, they don't bother to express them, and nothing happens.

The civil rights movement has recently made it clear that when a determined, massive effort is made, to express dissatisfaction, this dissatisfaction gets results. The simplest way of stating this fact is this: pure information about dissatisfaction is a first step toward getting action. It is therefore crucially important that complaints be made public, be put on the public record. If the facts show that thousands of people are dissatisfied because some need is not being met, and these facts can be made public and self-evident, the public officials cannot *ignore* the problem for long. (See for example, 'The Roles of Intelligence Systems in Urban Systems Planning', *Journal of American Institute of Planners*, 31, No. 4, pp. 289-296, November 1965.)

But information alone will not bring action. It must be coupled with constant pressure by the public, on the

institution in question.

This of course is a political task; it is a job for a staff of community organizers. The question here, however, is whether or not the physical surroundings can help this process.

In low income communities there is no device for making the volume of felt complaints public and visible, other than demonstrations by the people themselves. It is suggested here that a central and highly visible community complaint wall would help keep the mass of complaints visible; and would help the people who are struggling to rectify these conditions to maintain solidarity.

However, it seems clear that a complaint wall would have a very difficult time getting off the ground and becoming a rallying point in this country. The idea of using public buildings and billboards as 'walls' on which to state grievances is not generally acceptable: the walls are usually private property and

people write on them at risk of jail sentences. Thus, if we want a community wall to take hold, we will have to find a legitimate way of getting it off the ground.

The Wall of Respect in Chicago is one such project that has already proven itself; and we shall look to it for clues.

The Wall is the side of a typical slum building; it was turned into a mural, communicating black dignity, by local artists. The establishment and maintenance of the Wall became a source of neighbourhood solidarity. Two facts about this situation seem to be important. First, the Wall was commissioned: a small group took the initiative to begin it and see it through. Second, the complaints on the Wall were woven into a more general, artistic message.

Thus, it seems essential that, if a community wall is to become a focus for complaints and a community rallying spot, it must be initiated and maintained,



in the beginning, by a small group, and be part of a more dramatic community mural.

This suggests that the community wall be central and highly visible to the community; that it be of a material that allows constant re-painting; and that it be large enough (at least the size of a billboard) to weave notices and complaints across a 'commissioned' mural.

Pools of light (63)

Pattern

If:

There is any area which requires artificial illumination, and in which people are to be stationary — i.e., sitting, working, talking, resting — and where the average diameter of social group in the space is D feet



Then:

The light level should vary in such a way that there are discernible 'pools' of light.

These pools should have the following characteristics:

1. The perceived diameter of any given pool should be of the order of D feet.
2. The pools should be spaced at distances at least equal to the diameter of the pools.
3. The brightness ratio of pools/background should not exceed 40 : 1.

There is an unfortunate, but for the moment necessary, vagueness in these definitions. We do not know what stimulus properties correspond to the perceived 'boundary' of a pool of light. It must depend both on absolute brightness, and on the brightness gradient. Until this is determined, the definitions cannot help being vague.

Problem

Evenly distributed light fails to support the characteristics of a space as 'social' space.

In any given space, at a given moment, there are social groups of well established dimension and definite social activity. These groups may involve 1, 2, 3, 5, 10, or 100 persons — according to the occasion.

We conjecture the following:

1. If such a group is within a 'pool' of light, whose size and boundaries correspond to those of the group, this will enhance the definition, cohesiveness, and even the phenomenological existence of the group.
2. If such a group is in an area of uniform illumination, so that there are no light gradients corresponding to the boundary of the group, then the definition, cohesiveness, and 'existence' of the group will be weakened.

We know of no experimental evidence which supports this conjecture directly. However, everyday experience bears it out in hundreds of ways.

Every good restaurant keeps each table as a separate pool of light, knowing that this contributes to its private and intimate ambience. In a house where family members live, a truly comfortable old chair, 'yours', has its own light, in dimmer surroundings — so that you retreat from the bustle of the family to read the paper in peace. Again, house dining tables often have a single lamp, suspended over the table — the light seems almost to act like glue for all the people sitting round the table. In larger situations the same thing seems to be true. Think of the park bench, under a solitary light, and the privacy of the world which it creates for a pair of lovers. Or, in a trucking depot, the solidarity of the group of men sipping coffee around a brightly lit coffee stand.

One on-the-spot observation supports this conjecture: at the International House, University of California, Berkeley, there is a large, dark room which is a general waiting and sitting lounge for guests and residents. During winter, at a time when the room was half dark, just dark enough for the lamps to be lit, we counted the people who sat near lamps.

There are 42 seats in the room, 12 of them are next to lamps. At the two times of observation we counted a total of 21 people sitting in the room; 13 of them chose to sit next to lamps.

These figures show that people prefer sitting near lights ($X^2 = 11.4$, significant at the 0.1% level). Yet the overall light level in the room was high enough for reading. We conclude that people do seek 'pools of light'.

One possible explanation for the phenomenon, is suggested by the experiments of Hopkinson and Longmore, who showed that small bright light sources distract the attention less than large areas which are less bright. These authors conclude that local lighting over a work table, allows the worker to pay more attention to his work than uniform background lighting does. It seems reasonable to infer that the high degree of person-to-person attention required to maintain the cohesiveness of a social group is more likely to be sustained if the group has local lighting, than if it has uniform background lighting. (See R G Hopkinson and J Longmore, 'Attention and Distraction in the Lighting of Workplaces', *Ergonomics*, 2, p.321 ff, 1959. Also reprinted in R G Hopkinson, *Lighting*, pp. 261-268, HMSO, 1963.)

It is also known that uniform lighting tends to obscure texture gradients and other visual cues, and may in this way also act against group members efforts to communicate with one another. (See for instance, *Elektisk Lys Klasserum*, Copenhagen, 1958; H L Logan, *Lighting and Wellbeing*, Holophane Company, New York, 1961; H L Logan and E Berger, 'Measurement of Visual Information Cues', *Illuminating Engineering*, 56, pp. 393-403, 1961.) One word of caution. It might be possible to object to this pattern, on the ground that pools of light, and the consequent brightness gradients, will create glare. The subject of glare is complex; since glare depends on many factors, including not only the ratio of source brightness to background brightness, but also on their absolute brightnesses, the size of the source, the angle subtended at the perceiver's eye, and the angle of viewing.

Warm colours (64)

Pattern

If:

There is any space where people spend more than a few minutes at a time

Then:

The primary sources of illumination, in combination with the colours of floors, walls, ceilings, and furnishings, should be chosen to give a *warm light*, throughout the space. Essentially, this must be achieved by the dominant use of floors, walls and ceilings, in the red-brown range.

In detail, suppose we choose an arbitrary small surface with arbitrary position and orientation at any point in this space.

Under fixed illumination conditions, the light incident on this surface has a fixed spectral energy distribution. (We may obtain this spectral energy distribution either by direct measurement with a spectro-radiometer, or by calculation based on the known energy distribution of the primary light sources, and the reflectance characteristics of the surrounding surfaces.)

Define this spectral energy distribution as $p(\lambda)$. Now any given $p(\lambda)$ may be plotted on the two-dimensional chromaticity diagram, for the 1931 CIE standard observer, by means of the standard colour matching functions given in Gunter Wyszecki and W S Stiles, *Colour Science*, pp. 228-317, New York, 1967. The coordinates of a plot in this colour space define the *chromaticity* of any given energy distribution.

We may now identify a region on the chromaticity diagram, which we shall call the warm region. It is shown hatched on the drawing.

We require that the light incident on any plane surface, at any point within 5 feet of the floor, in the space defined, have chromaticity within the warm region.

In order to meet this requirement, it will be necessary for the floor, and most of the walls, to be in the red-brown range. Detailed computations on any given surface to estimate the chromaticity of the light in the room, as a function of the spectral distribution of the primary sources, and the reflection characteristics of floor, walls, and ceiling, may be made according to the methods described in P Moon and D E Spencer, *Lighting Design*, Cambridge, 1948, and summarized in Warren B Boast, *Illumination Engineering*, pp. 197-221, New York, 1953.

Problem

Typically, people like the inside of redwood houses, wood-panelling, the interior of a sunlit courtyard,

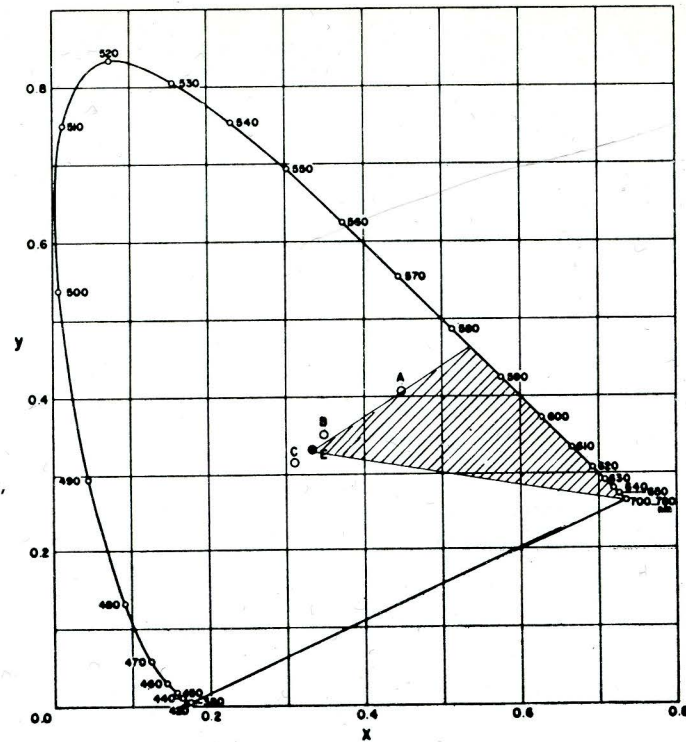


Fig. 3.10. 1931 CIE (x, y)-chromaticity diagram with spectrum locus, purple line, the chromaticity points of CIE standard sources A, B, C, and the equal-energy stimulus E.

especially towards evening.

Typically, they dislike the interior of offices equipped with fluorescent lighting and standard steel furniture.

We know that people have a clear subjective impression of the relative warmth, or coldness, of different spaces. See, for instance, Committee on Colorimetry of the Optical Society of America, *The Science of Colour*, p. 168, New York, 1953.

Individual observer stability in such judgements is high. Thus, one study gives reliability coefficients of 0.95 for warmth and 0.82 for coolness — N Collins, 'The Appropriateness of Certain Colour Combinations in Advertising', Master's Thesis, Columbia University, New York, 1924.

The most obvious origin of 'warmth' is in the spectral characteristics of the light sources. There has been considerable study of the spectral characteristics of different light sources — and it is now accepted that these light sources should have fairly 'warm' spectra.

However, even when 'warm' light bulbs and tubes are used in offices and factories, subjective judgements of coldness seems to persist. Apparently, the warmth of a space depends on other characteristics of the space beyond the light sources. (See F J Langdon 'The Design of Mechanised Offices, *Architects Journal*, May 1 and May 22, 1963. Amos Rapoport, 'Some Consumer Comments on a Designed Environment', *Arena*, January, 1967, pp. 176-178. Pilkington Research Unit, *Office Design: A Study of Environment*, Department of Building Science, University of Liverpool, 1965, p. 51 and 89. Peter Manning and Brian Wells, 'CIS: Re-Appraisal of an Environment', *Interior Design*, May-June, 1964.)

We make two conjectures:

1. The perceived 'warmth' of a room depends directly on the spectral distribution of the light incident on various things in the room (particularly faces, hands, clothes, work surfaces, etc.). The perceived colour of each of these things, regardless of its own reflectance,

tance characteristics, is transformed by the spectral characteristics of the incident light. Since the various things in a room are all subject to these transformations equally, it is reasonable to suppose that the perceived warmth or coldness of a room depends on the nature of this transformation, i.e. on the spectral characteristics of the light in the room, as reflected from the walls and other surfaces.

2. Human comfort requires that the perceived chromaticity of the incident light, fall within the region shown on the diagram above.

Since the region shown as warm on the diagram, has been defined by guesswork, it is certain that it will need to be modified. The crucial part of this conjecture states that there *exists* such a region (whether or not it is the exact region defined above).

One study which attempts to identify the objective correlates of perceived 'warmth' is S M Newhall, 'Warmth and Coolness of Colours', *Psychological Record*, 4, pp. 198-212, 1941. This study revealed a maximum for 'warmest' judgements at dominant wavelength 610 millimicrons, which is in the middle of the orange range. However, the study concerned coloured chips; we cannot be certain that the result would be the same for light.

IV Buildings generated by the pattern language

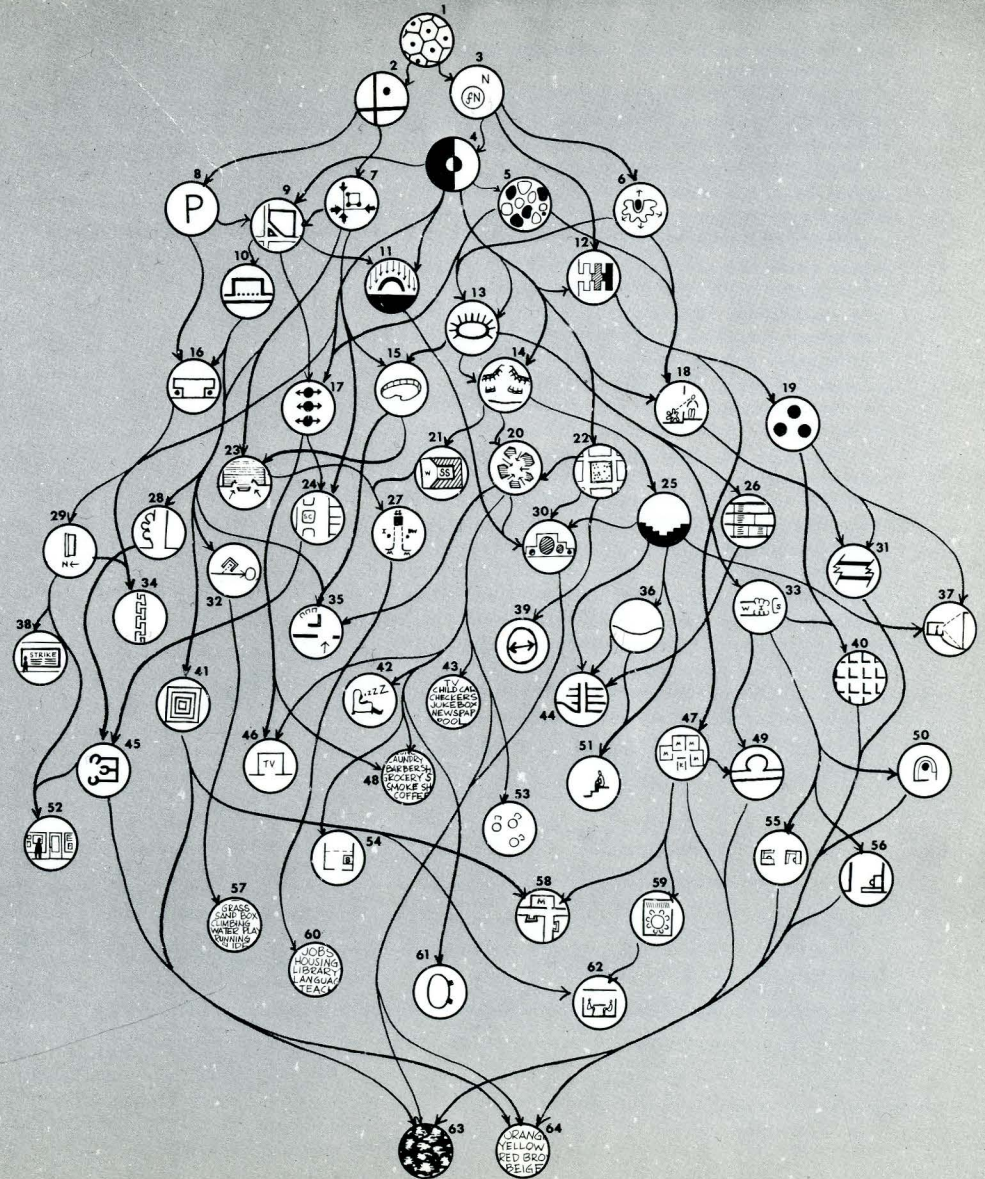
We now describe the way that a designer might use the patterns to design a building.

A quick look though the list of patterns makes it clear that there are too many to grasp all at once. A designer who wants to make a building out of them, will not simply be able to read them through, and then design the building. They are too confusing.

To make a whole out of these many patterns, the designer needs to understand how they fit together. The pattern language, is a system which shows how the patterns fit together, and helps the designer make a whole of them. The cascade of drawings on the next page is a rudimentary picture of the language for the 64 multi-service centre patterns.

The language is intended to give the designer three specific kinds of help:

1. It gives him the opportunity to use the patterns in a way which pays full respect to the unique features of each special building: the local peculiarities of the community, its special needs, the particular service programmes the community intends to have, the particular administrative organization of the service centre itself, local peculiarities of location, site, and climate.



2. It tells him which patterns to consider first, and which ones to consider later. Obviously he wants to consider the biggest ones, the ones which have the most profound influence on the building, before he considers the details.

3. It tells him which patterns 'go together' — that is, which patterns refer to similar parts of the building, so that he knows which ones to think about at the same time, and which ones separately.

Before we try to explain exactly what this cascade of drawings means, we shall present eight worked examples which show it in use.

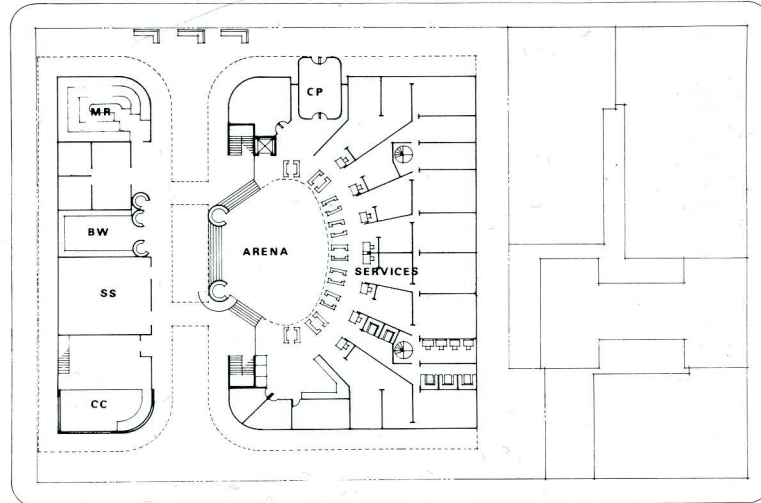
In each example we describe a hypothetical community, which needs a multi-service centre. We show a design for a multi-service centre building, appropriate for that community, which has been generated by the language. And we show, step by step, how the language helped to generate this design.

For each example, the steps are presented in sequence (A, B, C, D, . . .). Each step introduces new patterns into the design. At every step we mention the new patterns which have come into play and their interaction with local conditions, *in words*; we show the form of the building, as it has been formed up to that step, *diagrammatically*; and we show a miniature drawing of the *language cascade* so that we can see which part of the cascade is responsible for this step, and where this part sits in the cascade as a whole.

(One point must be heavily underlined. Although the evolution of these designs is presented in a step-by-step sequential manner, this is merely for convenience of presentation. It does not imply that the design process generated by the language, is, in any but the most general sense, itself sequential.)

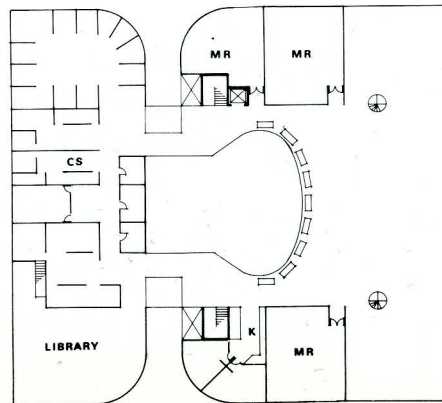
HUNTS POINT

40,000 PEOPLE - STRONG COMMUNITY CORPORATION -
 LARGE BLOCK WORKER PROGRAM - 9 TO 12 SERVICES -
 SITE OPEN TO THREE SIDES - NEAR MAJOR INTER-
 SECTION AND TRANSIT STATION.

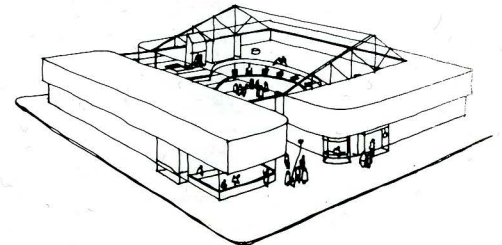


FL 1

1" : 60'



FL 2



A. This multi-service centre is to service 40,000 people. According to Pattern 1 (Small Target Areas), this population is too large, but for political reasons, the decision stands and is irrevocable. First a triangle site was selected, right on a major intersection (Pattern 2: Location). However other requirements made it clear that this site was too small (Pattern 3), and a larger, rectangular site was chosen, one-half block from the original site (thus still conforming to Pattern 2).

On this site there was room only for emergency parking, and so Pattern 8 (Parking) does not play a major role. Nor does 5, which had not been formulated prior to the Hunts Point design.

B. Pattern 16 (Necklace) calls for provisions for community projects around the 'live' edge of the building; hence we confine services to the 'dead' edge of the building, against other buildings.

C. Climate considerations made it clear that the arena could not be open (11: Enclosure), and so it was developed as an interior street. Orientation of this 'street' is given by local conditions in accordance with Pattern 7 (Entrance Location).

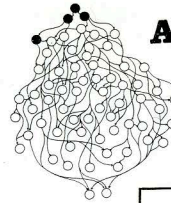
D. The size of the arena and its relationship to waiting and services is established by Patterns 13 (Services Off Arena), 14 (Waiting) and 15 (Overview); and the arena is shaped accordingly.

E. The arena is thus buried in the heart of the building, off the interior street. Since its ceiling had to be high (30), and since it was to be one of the things visible from outside (10), we gave it a huge, high truss. To enhance visibility further, and in accord with Patterns 23 (Entrance Shape) and 34 (Street Niche), the entrances were cut back, deep into the building.

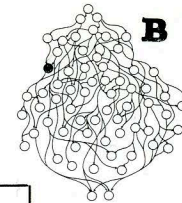
F. With services taking up the north half of the building, the south was given over to core services and those things that need to be placed along the line of entry (Patterns 21: Self-service, 27: Self-service Progression, 28: Block Workers, 32: Child-Care).

Next, service layout is established (33 and 40); and the arena is raked back with a gallery at the second floor (25).

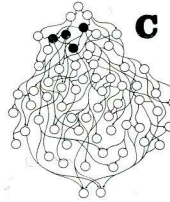
G. Finally 'pockets' in the arena are shaped and filled according to Patterns 20 (Activity Pockets), 35 (Information-Conversation), 43 (Waiting Diversions), and 42 (Sleeping).



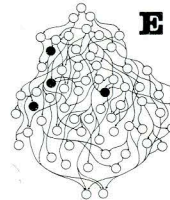
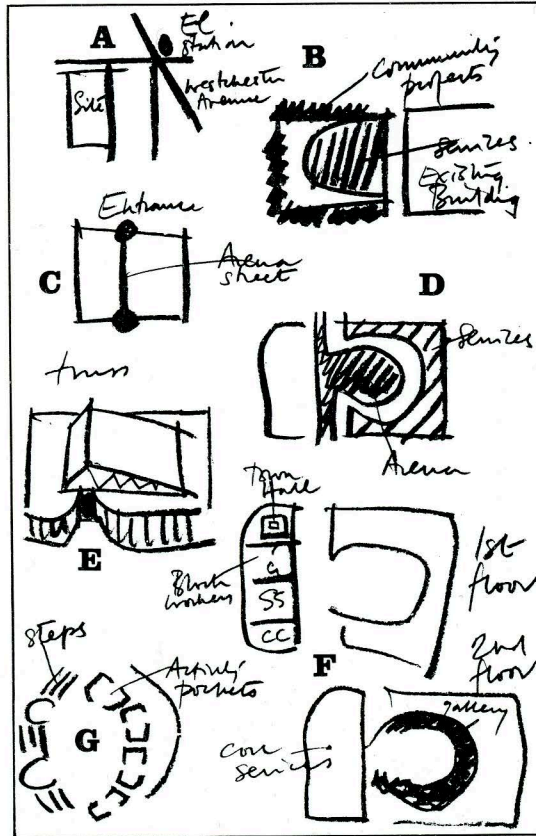
1. Small Target Areas
2. Location
3. Size Based on Population



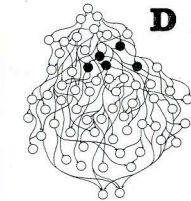
16. Necklace



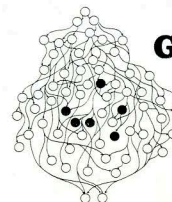
4. Community Territory
7. Entrance Location
9. Arena Thoroughfare
11. Arena Enclosure



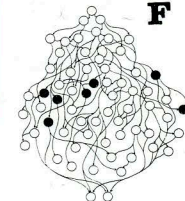
10. Open to Street
23. Entrance Shape
30. Ceiling Heights
34. Street Niches



12. Locked and Unlocked
13. All Services off Arena
14. Free Waiting
15. Overview of Services
18. Windows Overlooking



20. Activity Pockets
35. Information-Conversation
36. Dish-Shaped Arena
42. Sleeping OK
43. Waiting Diversions
51. Stair Seats

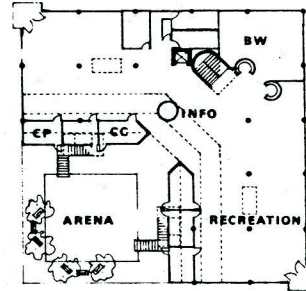


19. Core Service Adjacencies
21. Self-Service
27. Self-Service Progression
28. The Intake Process
32. Child-Care Position
27. Director's Overview

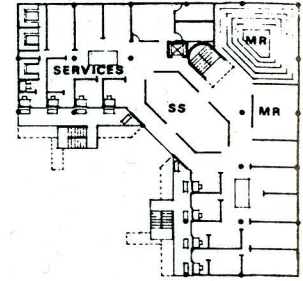
SAN FRANCISCO

COMBINATION SERVICE AND RECREATION CENTER - MILD CLIMATE - OUTDOOR ARENA - STRONG COMMUNITY ORGANIZATION - CORNER SITE - OFF SITE PARKING PROVIDED.

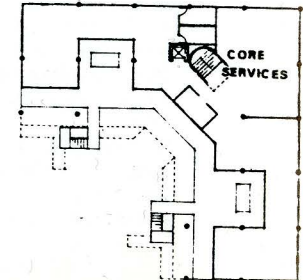
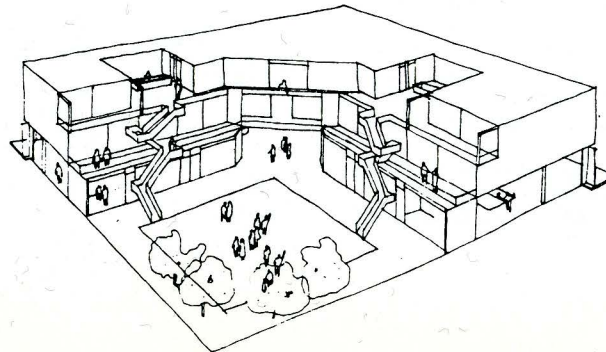
170



FL 1



FL 2



FL 3

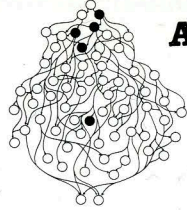
A. To make the recreation part of the building highly accessible, the whole ground floor is devoted to recreation activity — this area will be open late, according to Pattern 12; also it is highly visible from the street (10), and provides a thoroughfare (Pattern 9). In this climate, the arena, which can be open to the sky (11) takes on an unusual character — it becomes a park. The whole ground floor becomes community territory (4).

B. The recreation area, which will become a hang-out for many members of the community, gives the building a natural base for community organization. It is therefore essential to put information, and community organizers and community projects at ground level. Patterns 17 (Community Projects Two-sided), 28 (Intake), 35 (Information-Conservation), and 16 (Necklace of Community Projects) put them in the positions shown.

C. If the recreation area is to occupy about one-third of the building and is to be at ground level, there will be two other stories for services. Since the services are not at ground floor, they cannot open directly off the arena. The next best thing, feasible in a mild climate, is to have them opening off a gallery which surrounds the arena. Self-service is placed in the centre of this gallery (21). The gallery steps back from the arena (Pattern 25). There are no corridors.

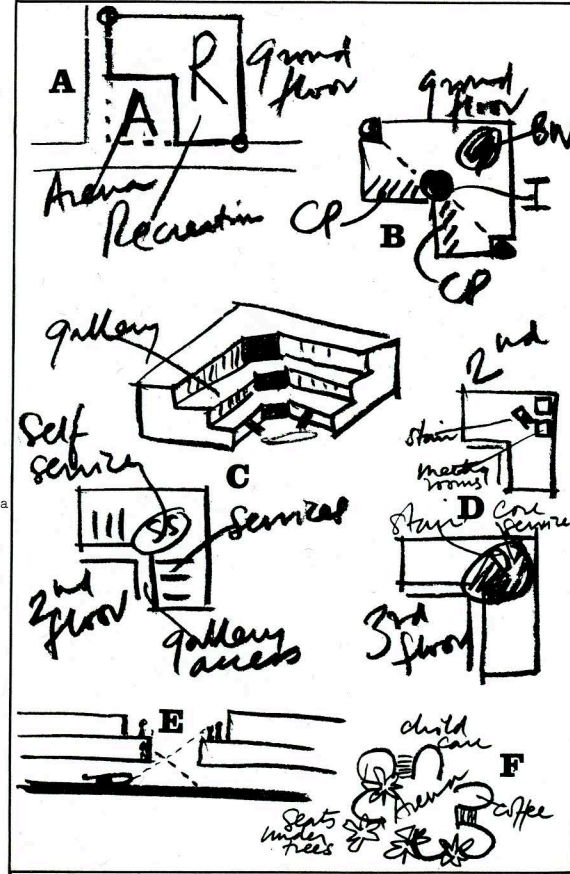
D. Since core service adjacencies (19) requires that community organizers be reasonably accessible to the rest of core services, there must be a stair inside the building; core services naturally go to the third floor, giving the director an overview (37). Since this stair opens from a 'late zone' downstairs, it is a natural path to meeting rooms; these rooms, clustered round a kitchen, are near the staff lounge, itself on the path to core services, and in easy reach of other services (Patterns 47 and 49).

E. To get windows overlooking life (18) for the interior spaces, there are holes from the second and third story, looking down into the recreation floor.



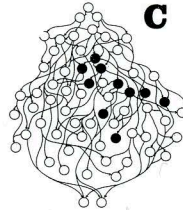
A

- 3. Size Based on Population
- 4. Community Territory
- 7. Entrance Location
- 11. Arena Enclosure
- 43. Waiting Diversions



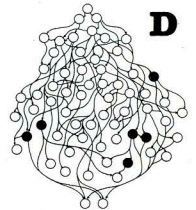
B

- 9. Arena Thoroughfare
- 10. Open to Street
- 16. Necklace
- 17. Community Projects
- 23. Entrance Shape
- 24. Subcommittee Watchdogs
- 28. The Intake Process
- 29. Outdoor Seats
- 35. Information



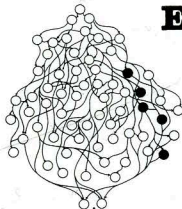
C

- 13. All Services off Arena
- 14. Free Waiting
- 15. Overview of Services
- 21. Self-Service
- 22. Pedestrian Density
- 25. Building Stepped Back
- 26. Vertical Circulation
- 31. Short Corridors
- 39. Arena Diameter
- 51. Stair Seats



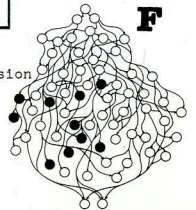
D

- 19. Core Service
- 41. Town Meeting
- 45. Block Worker Layout
- 47. Meeting Rooms
- 49. Staff Lounge
- 59. Square Seminar Rooms



E

- 18. Windows Overlooking Life
- 26. Vertical Circulation in Services
- 33. Service Layout
- 40. Office Flexibility
- 56. Informal Reception



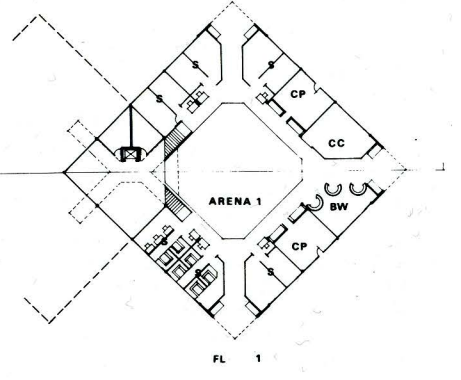
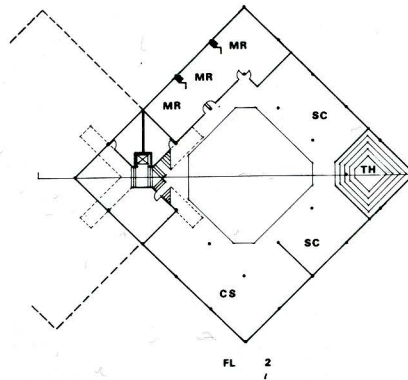
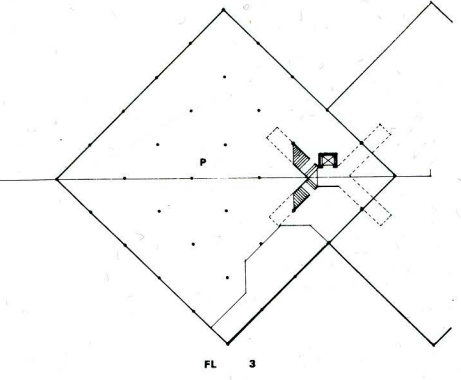
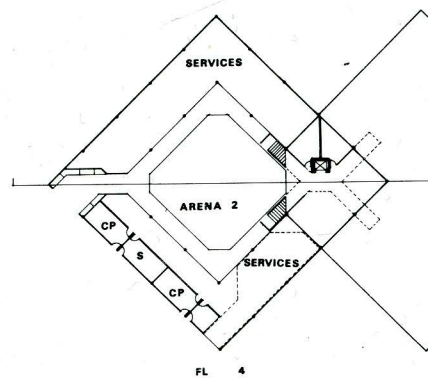
F

- 20. Activity Pockets
- 27. Self-Service Progression
- 29. Outdoor Seats
- 32. Child-Care Position
- 38. Community Wall
- 42. Sleeping OK
- 46. Barbershop Politics
- 53. Form-Filling Tables
- 54. Accessible Bathrooms
- 57. Child-Care Contents

BROOKLYN

12,000 PERSONS - EXPANSION KEY ISSUE - STEEP SITE - PARKING MUST BE PROVIDED - LAUNDROMAT AND NEWS STAND ON SITE TO BE SAVED.

172



1" : 60'



A. The community has acquired a corner lot, 12,000 square feet, at a major intersection (Pattern 2). In anticipation of expansion, the community has also purchased the lot in back (6: Expansion).

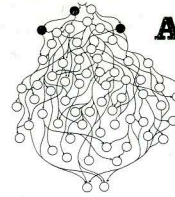
(The most striking feature of this building is that it has two arenas on two different levels. The need for expansion and the steep site, together with the square shapes of the lots and their relative positions, are the conditions which suggest this solution. The drawings show the entire development after expansion. At the first stage, only the lower lot is developed and the upper lot is used for parking.)

B. The most natural shortcut across the site (Pattern 9) cuts across the corner of the lower lot; another shortcut goes from the NE corner of the upper lot to the SW corner of the lower lot (in the first stage, this would be through the parking lot, into the building, down some stairs, through the first arena, out the main corner door).

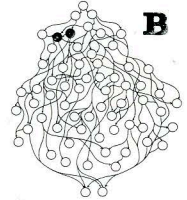
C. The change of level from the NE corner of the upper lot to the SW corner of the lower lot, is approximately 40 feet. This suggests that the building when fully developed, should be stepped down four stories: the lower lot having two stories and the upper lot one story, with a basement for parking, and a core of four stories. In order to keep the shortcut through the two lots, the stairs connecting the two arenas will have to be very direct, with no backtracking. Thus, the stairs are in one long line.

D. Working toward the centre, from the two extreme entrances, first comes community projects, then the two arenas, and then the services; all functions which serve both arenas — the stair and elevator (44), core services (19), director's overview (37), and self-service (20) — are at the junction of the two arenas.

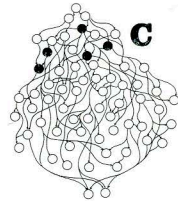
E. In order to keep the MSC as open as possible (10), and still protect it from New York weather (11: Arena Enclosure), the necklace of community projects (15) is broken at intervals with glass doors which can be demounted during the summer. An existing laundromat and newspaper stand are left intact on the site, but made 'two-sided' (17). In addition, some of the 'store-front' spaces are services, some are community projects (5). Finally, block workers (28 and 45), and child-care (32) are arranged with respect to the shortcut path and the main entrance.



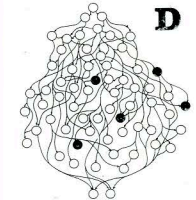
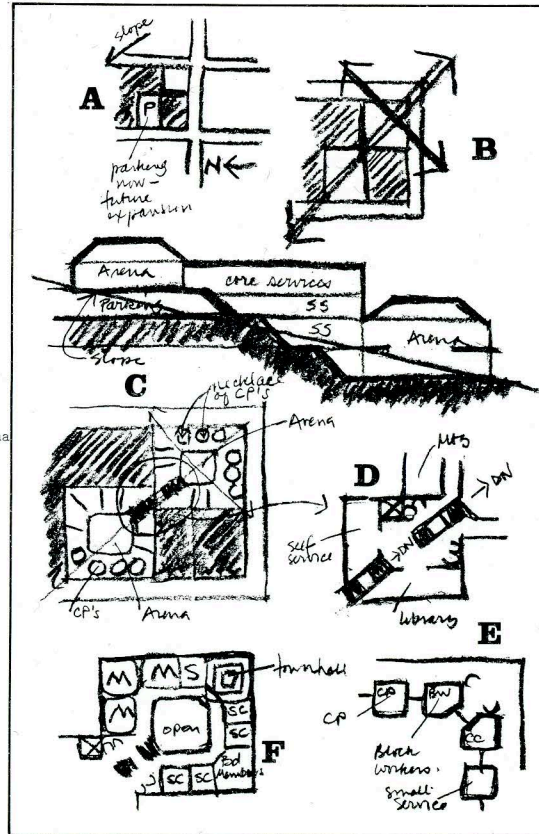
2. Location
6. Expansion
8. Parking



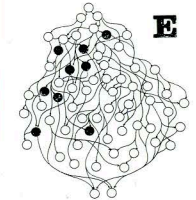
7. Entrance Location
9. Arena Thoroughfare



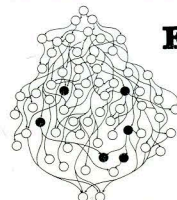
4. Community Territory
10. Open to Street
12. Locked and Unlocked
13. All Services off Arena
16. Necklace



19. Core Service
21. Self-Service
37. Director's Overview
44. Elevator-Ramp
54. Accessible Bathrooms



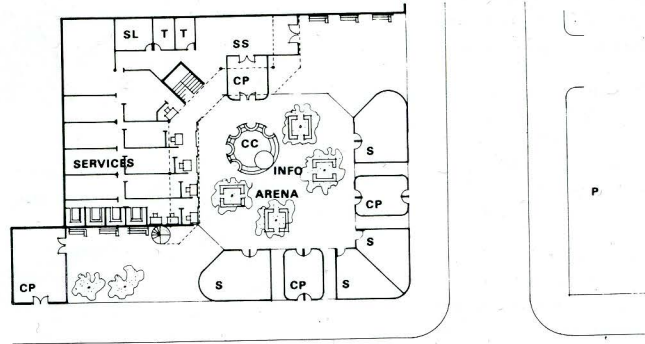
5. Small Services
10. Open to Street
11. Arena Enclosure
15. Overview of Services
17. Community Projects
28. The Intake Process
32. Child-Care Position
45. Block Worker Layout
48. Barbershop Politics



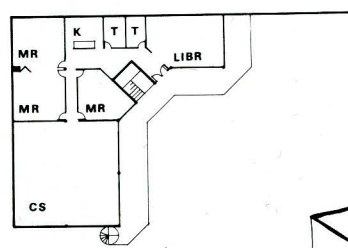
24. Subcommittee Watchdogs
25. Building Stepped Back
41. Town Meeting
47. Meeting Rooms Clustered
58. Seats Outside Meeting Rooms
59. Square Seminar Rooms

PHOENIX

25,000 PERSONS - OPEN PARK ARENA - INTENSE
COMMUNITY ORGANIZATION PROGRAM - POSSIBLE
EXPANSION OVER THE YEARS - CORNER SITE -
LARGE CHILDCARE STATION.

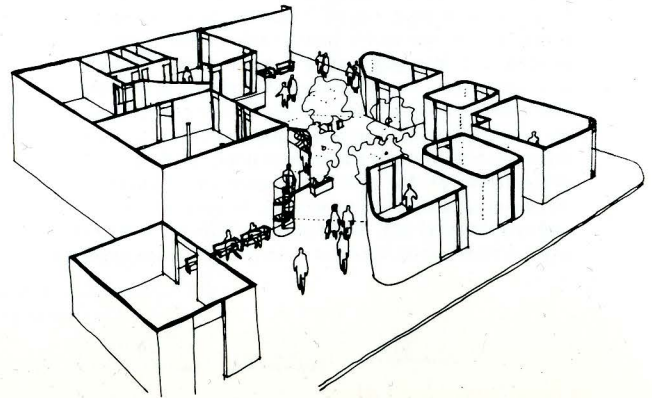


FL 1



FL 2

1"=60'



A. The Phoenix MSC is being built to serve 25,000 people. The programme is considered experimental, and so the Centre is being kept small, with the potential to expand. In the first phase the Centre will contain 18,000 square feet. The programme calls for parking, although this is not included in the 18,000 figure (there is a lot across the street from the site that the city is hoping to acquire).

The site is at the intersection of a main avenue and a slow residential street. Therefore the size, location and parking patterns (1, 2, 3, 8) are all appropriate.

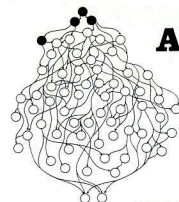
B. First, the site is zoned according to Pattern 4 (Community Territory) and a thoroughfare is cut across the corner, the most natural shortcut (9: Arena Thoroughfare). Since this thoroughfare is meant to cut across community territory, the services are allocated to the back corner section of the site. The climate allows community territory to be almost totally open (11: Arena Enclosure).

C. The community is unorganized; there are no subcommittees. However, the Centre intends to launch a community organization effort. Consequently Patterns 16 (Necklace of Community Projects) and 24 (Subcommittee Watchdogs), while they will not be used immediately, will eventually come into play. Thus we surround the open arena with small spaces, for services and as a home base for organizers; and over time these spaces are turned into various community projects. (Pattern 5, No Red Tape, is thus partially solved.)

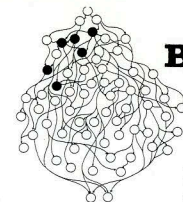
Expansion, if the programme is successful, will be toward the Northeast; Pattern 6 (Expansion) thus controls immediate considerations on the Northeast edge of the site: Arena and services must expand together. D. Service-arena relationships are now generated by 13 (Services off Arena), 14 (Waiting), 15 (Overview) and 22 (Arena Density): The services get equal frontage on the arena, and the arena dips down a few feet, upon entry, to facilitate overview.

E. In the absence of block workers, intake is taken up by an enlarged information station (28 and 35), and is placed as shown. Child care (32) and self-service (21) are then placed near the information-intake hub.

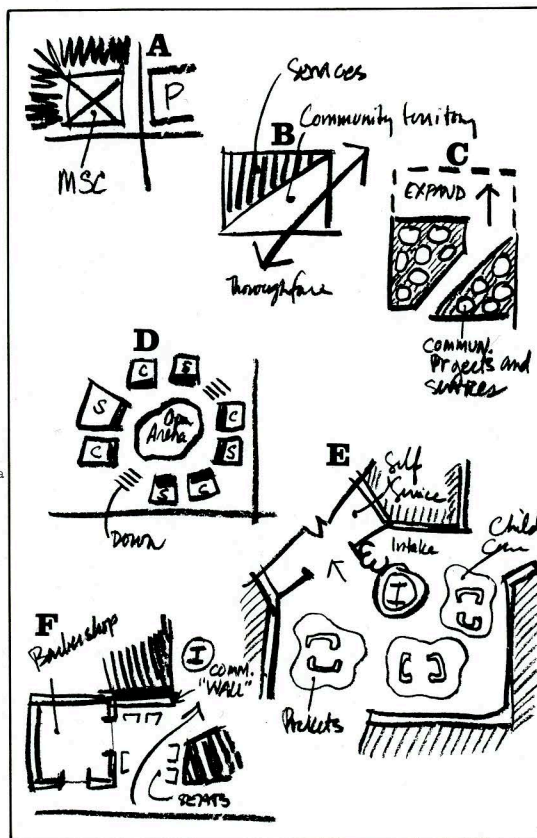
F. An adjacent barbershop is open to the side of the arena, forming a natural alcove for outdoor seats and the community wall (29, 38, 48).



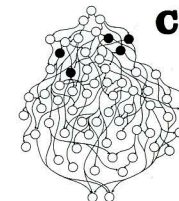
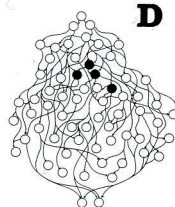
1. Small Target Areas
2. Location
3. Size Based on Population
6. Parking



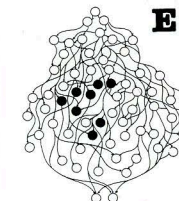
4. Community Territory
7. Entrance Location
9. Arena Thoroughfare
11. Arena Enclosure
16. Necklace
23. Entrance Shape



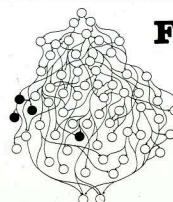
13. All Services off Arena
14. Free Waiting
15. Overview of Services
22. Pedestrian Density



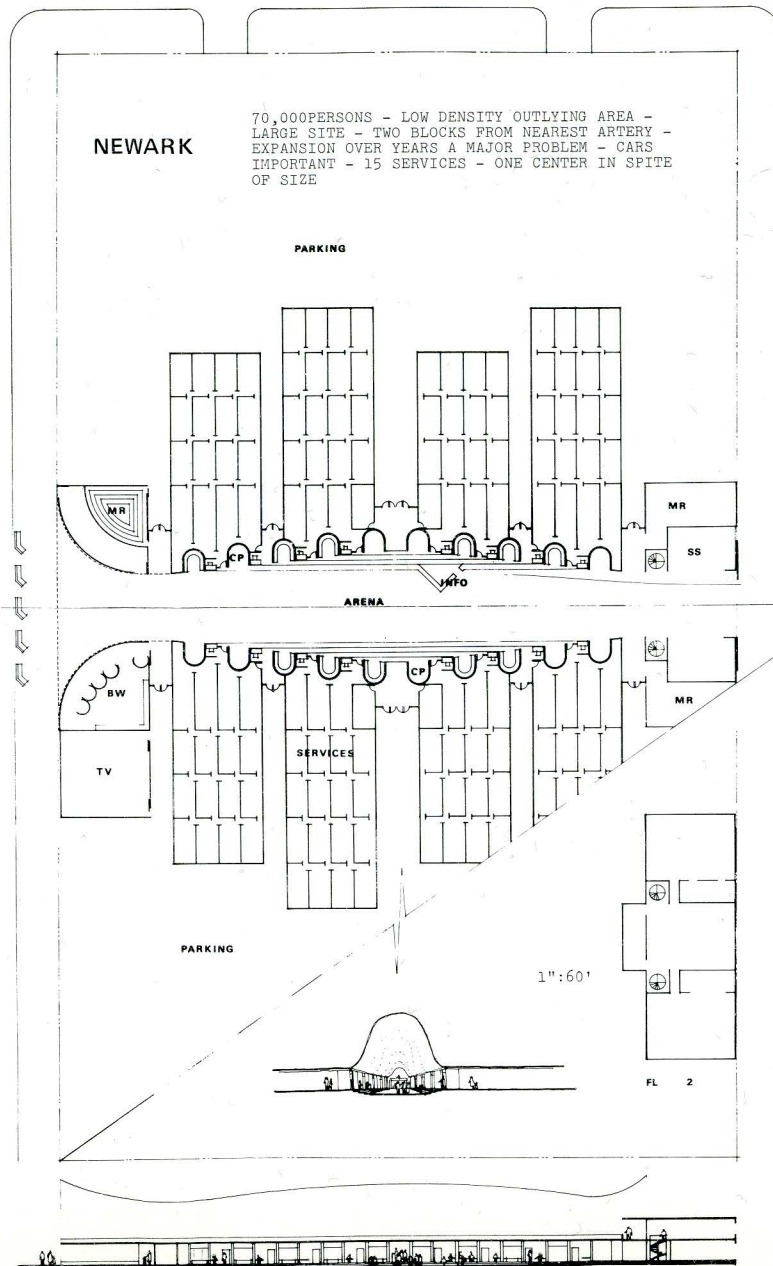
5. Small Services
6. Expansion
10. Open to Street
12. Locked and Unlocked
17. Community Projects



20. Activity Pockets
21. Self-Service
24. Subcommittee
27. Self-Service
32. Child-Care Position
35. Information
43. Waiting Diversions
48. Barbershop Politics



29. Outdoor Seats
34. Street Niches
38. Community Wall
48. Barbershop Politics



NEWARK

A. Small target areas (Pattern 1) is violated. To serve 70,000 people, the building will need 63,000 square feet (Pattern 3); since cars are a problem here, parking must be provided requiring another 35,000 square feet (Pattern 8). Land and construction costs dictate a one-storey building. For a one-storey building, the site needs to be 98,000 square feet — the chosen site is ample.

The form of this building is governed largely by the extreme importance of expansion (Pattern 6), and by the very large number of services required, calling for extra frontage in the arena (13: Services off Arena).

These patterns combine to give a spine-like arena, with services branching off it. Small services (Pattern 5) and windows overlooking life (Pattern 18) split the services into a series of branches, with paths from the parking lot coming in between them (Pattern 8).

B. Since parking is clearly on the outer part of the site, necklace of community projects (Pattern 16) suggests that the community projects grow round the edge of the site, in the direction shown by the arrows. As the community projects grow, the parking lot becomes internal and hidden. Access to parking lot is in the corners; the main entrance is placed centrally as shown (7).

C. In order to interrelate community projects and services (5), the community projects continue round the entrance (23) as shown, so they line the arena. Access to the services, is through the community projects, which alternate with services along the frontage.

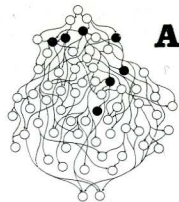
D. To make the inside visible, the mouth of the arena is very wide and high, and the arena itself is high, to make it thoroughly accessible. There are no doors. It is an internal street. The close proximity of community projects and services, makes Pattern 24 (Subcommittee Watchdogs) easy to do.

E. Since waiting needs warmth, it cannot be out in the middle of the arena. Waiting must therefore be recessed in pockets (as defined by 20) — these can be formed naturally by the relation between community projects and services already indicated.

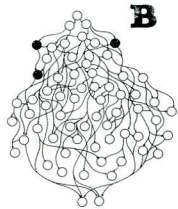
F. According to Pattern 36 (Dish-Shaped Arena) the arena has a gentle slope towards the centre giving at least a partial overview of services. If arena is deeper in the middle, steps from the parking lot will be longer — thus giving the arena elliptical form.

G. The self-service area must be placed smack bang in the middle of the street-arena — this puts it in the middle of waiting (21), and dead centre for people

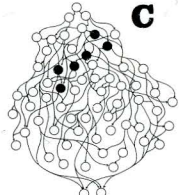
entering. The entrance (23) is the obvious place for the self-service menu. As a result, block workers and information get placed to either side.



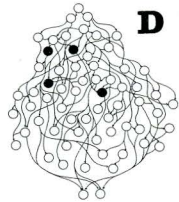
- 4. Community Territory
- 6. Expansion
- 7. Entrance Location
- 9. Arena Thoroughfare
- 18. Windows Overlooking Life
- 22. Pedestrian Density
- 39. Arena Diameter



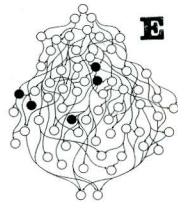
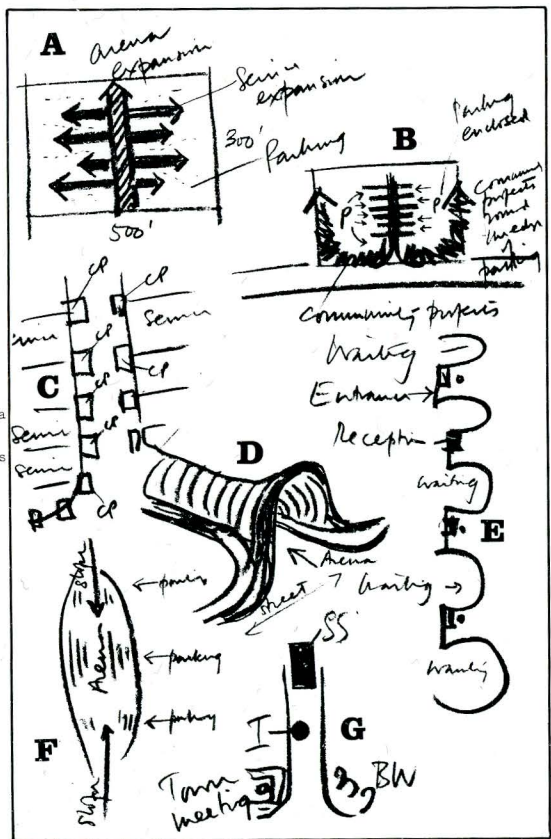
- 6. Expansion
- 8. Parking
- 16. Necklace



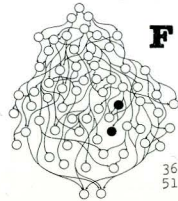
- 5. Small Services
- 12. Locked and Unlocked
- 13. All Services off Arena
- 15. Overview of Services
- 17. Community Projects
- 24. Subcommittee Watchdogs



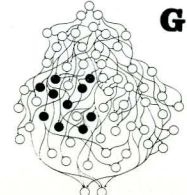
- 10. Open to Street
- 11. Arena Enclosure
- 23. Entrance Shape
- 30. Ceiling Heights



- 14. Free Waiting
- 20. Activity Pockets
- 29. Outdoor Seats
- 34. Street Niches
- 42. Sleeping OK



- 36. Dish-Shaped Arena
- 51. Stair Seats



- 21. Self-Service
- 23. Entrance Shape
- 27. Self-Service Progression
- 28. The Intake Process
- 32. Child-Care Position
- 35. Information-Conversation
- 41. Town Meeting
- 43. Waiting Diversions
- 46. Radio/TV Station
- 48. Barbershop Politics

A. Since this building is in the middle of the block, the most difficult problem is that posed by the arena thoroughfare. The arena is made to include the sidewalk, and thus becomes T-shaped. Size (3) tells us that at any given moment, there might be .0005N equals 4 interviews going on, and about the same number of people waiting. Pattern 22 then tells us that the arena should be on the order of 1200 square feet. The sidewalk must be open to through pedestrians. To shield it from the cold as much as possible, it can be roofed, and given a wall on the street side (10) — thus forming the community wall (38).

B. In this building, there is no distinction between community projects and services. The services are placed towards the back, to allow child-care (57), block workers (45), self-service (21), and a meeting room (47) to be in the unlocked (late) zone (12), which has to be in the front half of the building.

C. With this decision made, the problem now is to make the building community territory (4). A series of circular spaces are provided, which surround the arena and create places for people to sit down, even if they are only walking through. Some of these rooms might be used for non-service community projects.

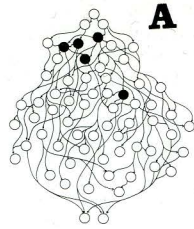
D. We place the community organizers, meeting room, self-service and child-care behind these circular alcoves; and the information conversation station in one of the alcoves.

V: The language

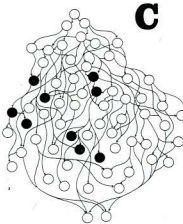
We shall now discuss the nature of the pattern language, and the way in which it may be used to generate buildings. We wish to present it in such a way that anybody who wants to, can become a 'speaker' of the language — that is, he can use it, in his own way, to design multi-service centres in the various special circumstances which he faces.

Let us establish one thing from the outset. The language, and the cascade, are two different things. The language contains far more structure than is captured in the cascade; the cascade is merely a partial representation of the language. However, we shall not discuss the additional structure in this report. Here, we confine ourselves, entirely, to those features of the language which are captured by the cascade.

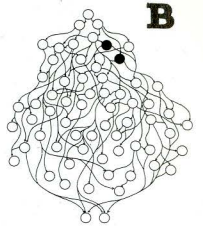
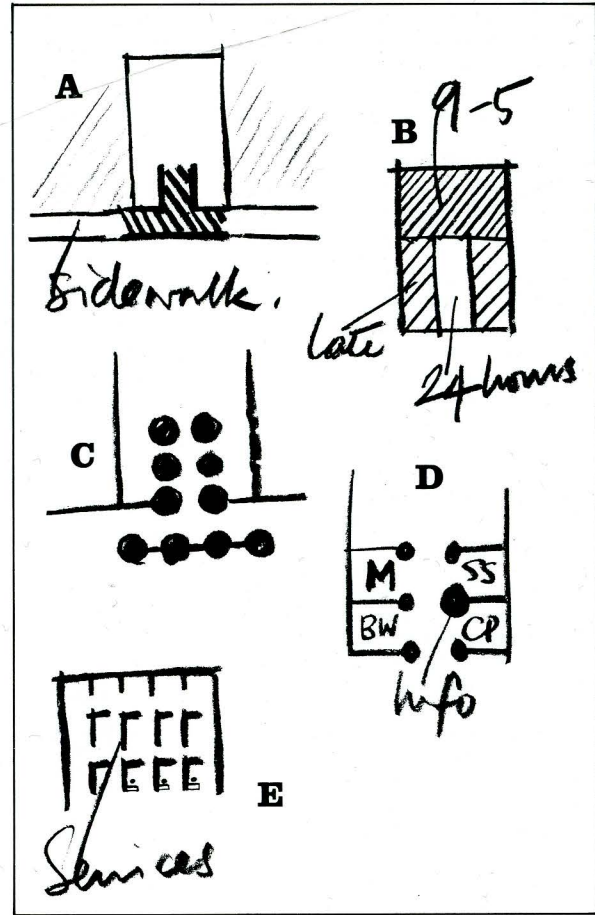
Now we establish a second point. Although the cascade is a partial representation of the language, it is not intended that a person use this cascade



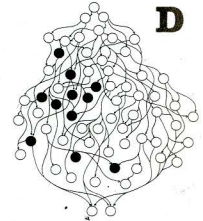
- 4. Community Territory
- 7. Entrance Location
- 9. Arena Thoroughfare
- 11. Arena Enclosure
- 22. Pedestrian Density



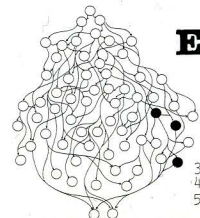
- 14. Free Waiting
- 16. Necklace of
- 20. Activity Pockets
- 23. Entrance Shape
- 29. Outdoor Seats
- 34. Street Niches
- 42. Sleeping OK
- 48. Barbershop Politics
- 53. Form-Filling Tables



- 5. Small Services
- 12. Locked and Unlocked



- 10. Open to Street
- 17. Community Projects
- 21. Self-Service
- 24. Subcommittee Watchdogs
- 27. Self-Service Prog
- 28. The Intake Process
- 32. Child-Care Position
- 35. Information
- 45. Block Worker Layout
- 54. Accessible Bathrooms
- 58. Seats Outside Meeting



- 33. Service Layout
- 40. Office Flexibility
- 56. Informal Reception

as a flow chart during the actual design process.

You cannot speak French by painstakingly following an open grammar book; in order to speak French, you must internalize the French grammar; when you have it in your head, and it has become automatic, then you can speak French.

Just so with the pattern language, You cannot design multi-service centres by painstakingly following the cascade with your finger; nor by following any other form of representation. In order to design with the language, you must internalize the structure of the language; once you have it in your head, and it has become automatic, then you can use it to design.

We must try to present the language in such a way, then, that the reader can internalize it, and make it his own. How is this to be done?

Let us imagine a large three-dimensional block of transparent space, which represents the building and its surroundings. Now imagine that the patterns are represented by transparent coloured clouds, floating within this block of space, interpenetrating and overlapping one another. The overall size and shape of each coloured cloud, corresponds to the 'domain of influence' of the pattern in question. Thus, Pattern 4 influences the whole building: it therefore has a very large cloud. The clouds for small services (5), office flexibility (40) activity pockets (20), and necklace of community projects (16) and others, are floating within this larger cloud. Then again, arena diameter (39) is floating within activity pockets (20); service layout (35) is floating within office flexibility (40). Some of the clouds have specific shapes, and specific geometrical relationships to one another. Thus, necklace of community projects (16) is a long necklace like cloud curled around the perimeter of community territory (4); activity pockets (20) is inside the circle defined by this cloud, but does not penetrate it at all.

Some clouds overlap; that is, a part of one cloud is identified exactly with a part of another cloud. Thus self-service progression (27) and intake (28) both contain 'entrance' and they both contain 'block workers' — to this extent they overlap. Since the entrance is detailed by entrance shape (23), and the block workers area is detailed by block workers layout (45), the clouds for 23 and 45 both fall within the overlap of 27 and 28.

Some clouds appear many times. Thus service layout (35) appears many times within small services (5); and interview booths (50) appears many times within the service layout cloud (35), and a few times within

block worker layout (45).

Although inclusion, and overlap, and some of the other geometrical relationships between clouds are clearly defined, we must be careful not to let our conception of these clouds become too rigid. It may be tempting to say that these clouds are no more than components of the building, nested inside one another. *But they are clouds, not components.* It is essential that we visualize them as loose, cloudy, and only partly formed; since it is just this fact which lets our picture stand for *all* multi-service centres, not for any single one of them.

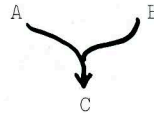
We now make the following assertion:

A person understands the pattern language for multi-service centres, when he can completely visualize this system of clouds in three dimensions.

The two dimensional cascade of patterns, shown here, is a way of explaining this three dimensional system of clouds. An arrow drawn between two patterns, like this:



means that the cloud for pattern B falls within the cloud for pattern A. Slightly more complicated, an arrow with multiple tails, like this:



means that the cloud for pattern C falls inside the union of the clouds for patterns A and B.

If we followed these definitions strictly, we should have to draw a very large number of arrows — so many, that the drawing would become utterly obscure. We have therefore chosen to draw some of the arrows, which seem to be particularly helpful; but have left many others out. And, of course, the cascade is drawn in such a way as to make the arrangement of the arrows as simple as possible. Two properties of the cascade follow at once:

1. The higher a pattern is, in the cascade, the 'larger' it is. Thus, Pattern 1, which refers to the city-wide

organization of target areas, is the largest pattern, and heads the cascade.

2. If two patterns have parts in common, they will be near each other horizontally — since there will be arrows going from both of them, to other 'smaller' patterns which detail this part.

Thus, it turns out that the cascade is an abstract two-dimensional picture of the system of clouds described above. The vertical dimension in the cascade represents the size of the clouds; and the horizontal dimension represents the distance between clouds, and the extent of their overlap.

It is now clear that the cascade may be used to help us visualize the abstract structure of multi-service centres. Now we see how the cascade may be used to help us design multi-service centres. Every designer knows that the most important feature of any form is the covariation among relationships. As we make minor changes in one relationship, other relationships have to change along with it. If we make the arena slightly larger, then it needs to be slightly higher, and there are more services around it; but there is less room for back-up services — which in turn have to be squeezed in behind the services, instead of opening directly off the arena as before.

To handle this kind of covariation, the designer strives constantly, to preserve a holistic, systemic, attitude towards the building; he is occupied with simultaneous interconnectedness. The pattern-language helps the designer to focus on more simultaneous interconnectedness than he could normally handle.

It does so by building on two simple rules of thumb:

1. He must work his way down the cascade, starting with the largest, most global, relationships, and moving gradually towards the details.
2. He must focus on clusters of patterns which are near one another in the cascade; since patterns which are near one another have parts in common, these clusters represent bundles of simultaneous relationships.

Both these rules of thumb are clearly visible in the examples in Chapter 3.

We finish by discussing the variety of buildings which the language can produce. The language is intended to generate an infinite variety of different buildings, each one properly adapted to the unique local characteristics of any given community. Since the patterns define generic relationships, based on shared, recurrent problems, and are therefore, in a sense, standardized, we must ask how these standardized patterns can combine to give a unique local solution to an individual design problem.

First, not all the patterns are relevant to any given

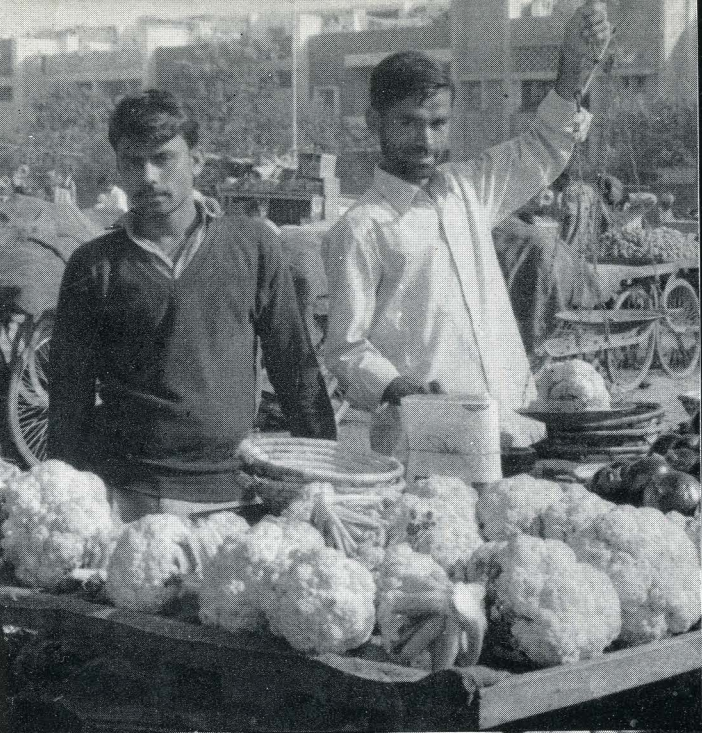
building. Thus community territory (4) is not relevant in the Bowery building — old people need comfort, they do not need to be organized politically. Any given multi-service centre may use only forty or fifty of the sixty-four patterns. Since there are many, many ways of choosing fifty patterns from sixty-four, this creates a rich variety of combinations.

Second, each pattern allows all kinds of voluntary variation, over and above the relationships which it specifies. Thus activity pockets (20) says the arena must be surrounded by pockets of activity, alternating with points of access. It says nothing about the size of these pockets, nor their exact number, nor the exact geometry of their relationship to the arena. All these features may vary freely from building to building.

Third, many patterns are explicitly defined to vary according to specified conditions in the context. Thus, the size of the multi-service centre (3) varies according to the population of the target area. In cases like this, where the final specification of the patterns depends on the local context, each building gets different treatment from the pattern language.

In conclusion, we wish to emphasize the tentative character of the multi-service centre pattern language. We have already said that the individual patterns are tentative, that they are based on much conjecture, and that they need criticism and improvement. Here we underscore what the reader, no doubt, has already gathered:

The theory of the language is itself incomplete. The difficulty is largely one of representation; although we know a great deal about the structure of the language, and the varieties of connection between patterns, it is extremely hard to find a simple way of communicating this structure — the cascade, used in this report, is helpful, but it falls far short of what we need.



the inner city

edited by Declan and Margrit Kennedy