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GROUP PLANNING

I. *Heterogeneous Groups*

WHEN a planning problem comprises a number of buildings, instead of a number of rooms in a building, it may be presumed that there are organic relationships of some kind among them. Such relations are expressible in the grouping. They can only be ignored or denied at the price of inefficiency and extravagance. A meaningless abstract formalism may be imposed, of course, but that is not design in the sense here understood. In that case the form is not discovered, but borrowed from some other solution of some other problem of which it may indeed be a true expression, or else it is brain-spun but unwoven stuff.

The heterogeneous group will be considered first, the problems of the homogeneous group and the mixed group afterwards; and then some thought can be given to the apparently contradictory case of the group of self-contained elements, each comprising a number of rooms, all enveloped within one structural mass. In the problems now under consideration one is no longer dealing with the assemblage of cells within an organism of cells, but with the assemblage of the organisms themselves.

To proceed with the investigation of the heterogeneous group problem for an open site, stress must first be laid on the great importance of a thorough appreciation of the possibilities of the general site in the matter of topography, prospect, and aspect. The prospect for many parts of the scheme may have to be provided out of the solution itself. Group planning is almost wholly a matter of determining the individual sites for the various elements of the scheme in relation to one another and in relation to the general site.

In a heterogeneous group there is usually a dominant element—something to get hold of and to which all other members of the group can be organically subordinated. The dominance may be due to mere size, or to some matter of functional importance. Castles have their keeps, monastic establishments have their abbeys, colleges have their chapels, universities have their con-

vocational halls, and all sorts of institutions have their central administrations.

It frequently happens that large institutions, such as universities, may have several elements, dominant in different ways, each with organic relations—whether wires and pipes or traffic routes makes no difference in principle, as both should be as short as possible.

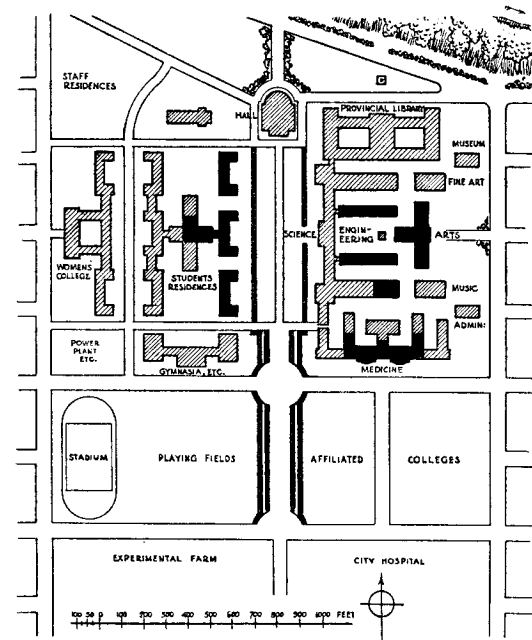


FIG. 129. The general plan for the University of Alberta.

For example, twenty buildings may be symbolically related to a meeting-hall, and practically related to a parent faculty, and intimately related to a general library, and administratively related to a central office, and physically connected with a central heating plant.

It does not follow that the hall, parent faculty, library, office, and heating plant should be packed into one central building. Each may have a far better separate place assignable to it; and keeping these elements apart may be an essential requirement. But in such a case there may be comparative importances of various kinds to take into consideration; these all reduce themselves ultimately to organic relationships. One cannot change the location of one

without affecting, in some measure, the locations of all; but trying out all possible locations is not planning, but gambling on the chance of being wide awake when a promising permutation is attempted. That procedure, perhaps, has limited uses, once the general solution is confined within definite limits. If, having established an order of relative importance and having selected positions accordingly, one has the misfortune to run into a blind alley, or snag of some kind, one should be able to retrace one's steps as far as is necessary, perhaps all the way, without getting lost in a tangle of thorny branches of indecision. There is always an organic solution discoverable by an orderly mental procedure in group planning as in house planning.

Assuming, then, that by the exercise of a selective judgement one has determined on the location of the really dominant element in the case in hand, and has disposed of those other elements, which have general organic dominance of different kinds, in possible locations, it is time to look into the relationships among the twenty-odd buildings in the programme. Some may be found to have specific relations only with certain of the dominant elements provisionally disposed of; others may have close relations to one, or more, of the rest of the twenty. One thus discovers subordinate groups; these subordinate groups may turn out to be important enough for the honour of a 'subordinate dominant'; or they may occur in approximate pairs. If they do, paired sites can probably be found for them and some symmetrical disposition of these groups is organically indicated. If a pair of large subordinate groups emerge, the question of their disposition with respect to the main dominant element may be pursued. Thus one may find the raw material for a grand axial plan. But we must cease to pursue this particular possibility for the present, for we are not yet dealing with composition in the architectural sense.

2. Homogeneous Groups

The search for dominant elements in heterogeneous groups is generally only a matter of deciding as between rival claims. The absence of such claims is one of the difficulties of the homogeneous group, as found exemplified in so many housing schemes. The problem may involve the location of from a dozen to a thousand habitations with no very marked diversities in the scale of their accommodation, and all greatly restricted as to type. In such a

case it is idle to look within the requirements of the buildings for dominant elements. They all have the same relation to one another and that relation is one of mutual exclusiveness, except in so far as there may be community of interest in common land (set aside for the recreational requirements of children and adults), common

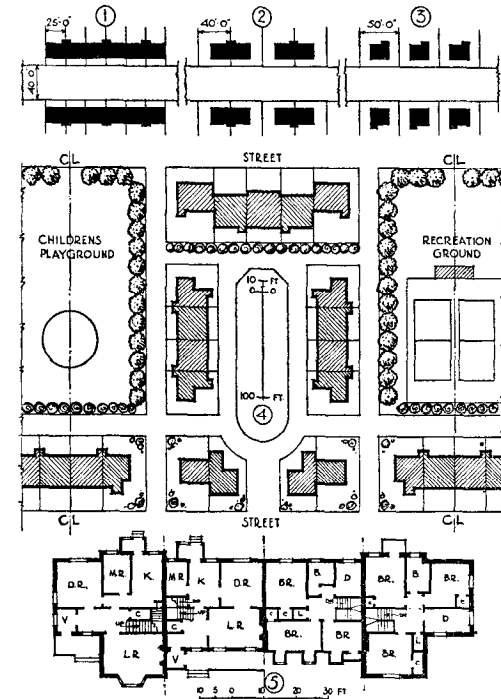


FIG. 130. Community planning.

roadways, and perhaps a common garage. In cold climates there may also be a central-heating plant serving in some measure as an altar on which to sacrifice some of the individualism of hearth and home; but a tall chimney is not a very promising centre of interest for a group of cottages. Of course, if the scheme be large, there may be the question of churches and schools and a community hall and so on, but in that case it is no longer a homogeneous group problem that we are dealing with, for it would partake of the nature of the heterogeneous group, or be a mixed problem.

To proceed then, there are to be, say a hundred or more very similar elements in the group. The plan will not be organically

sound if it result in a development that does not have this homogeneity written all over it, so to speak. But this does not mean that the houses must be in close rows, each row, precisely of a kind, on parallel streets. The objection to that arrangement is that it takes no account of aspect or of the diversified traffic needs of the inhabitants, or of recreational facilities. A gridiron street plan and a tooth-comb subdivision of property into lots is not, humanly speaking, economic. The kind of pattern—and pattern is a good word here, for there is bound to be a good deal of repetition in the plan—will depend largely on the number of persons per acre to be accommodated, and that is probably not within the designer's control, depending as it does on land values, cost of construction, taxation, rental value, and so on. These and such-like considerations are among the basic factors of the design.

How does one proceed? The land may be as flat as a pancake and featureless, or there may be slopes and streams to help one. Arterial traffic to and from and, perhaps, through the land in question is almost certainly involved. Traffic of strictly local significance, for the service of the inhabitants of this, or that, part of the scheme is a distinct element, to be related to arterial traffic in a strictly limited way. The valley and the stream, if such there be, may determine the traffic routes of both kinds and, in conjunction with these features, may offer suitable areas for recreational purposes. Now the thing begins to take shape. The nearest shopping street, the nearest railway station, the nearest school, church, and cinema, all have a further bearing on the direction of the roadways, or, at least, on the direction of their ends. It is now time to see how much building land one has to divide among the houses; and whether the roads are so spaced as to admit of strips of land of suitable width between them, and so placed also as to provide a maximum of frontage—not necessarily road frontage—to the east, south, and west, and a minimum to the bleak north, if the place is in the northern hemisphere at a latitude where indoor sunshine is a thing to court, not to avoid.

It was said above that the houses need not be in close street-long rows. Nor need they all be detached. They are presumed to be small—otherwise they would hardly be likely to be homogeneous in type—and small houses can be well lighted from two opposite sides: say anything up to six-room houses from two sides and seven- and eight-room houses from three. Now it is an extra-

vagance in any climate to build four outside walls where two such walls will serve, and in cold climates this extravagance is aggravated by heat losses. Semi-detached pairs of houses are no solution. When such pairs face one another prospect is apt to run counter to aspect for 75 per cent. of them. If one of them is well disposed as to interior planning with respect to aspect (and the two pairs are alike, each pair containing reverse plans) then with respect to aspect the reverse of the well-planned house will be ill disposed, the obverse and the inverse plans will be the one little better, and the other considerably worse than the ill-disposed one. Unsymmetrical pairs can, of course, be adroitly planned so that neither is very bad with respect to aspect, but in that case neither is likely to be very good.

By far the most convenient system is what may be called 'short-row' or 'small-group' planning—three, four, or five houses in a row, the end houses being lit from three sides. This leads to great elasticity in arrangement; especially when the minor or subordinate grouping is so thought out that there need be little if anything to choose between fronts and backs. The prospect for each house should be created by the group plan itself. The aspectual advantage of not having to face houses rigidly front to front and back to back is, of course, enormous. It should be possible (occasionally with the help of a bay-window perhaps) to get some winter sunshine into nearly every dining-room in the morning; and into nearly every living-room in the afternoon; and to get all bedrooms sunswept at some time of the day.

The problem is no longer how to find individual sites, but how to find minor group sites for our houses. That is to say, the blocks of buildings will be from 75 ft. to 120 ft. long, more or less, and these blocks can be grouped about minor open spaces big enough for tennis-courts or children's playgrounds. The pattern is not made up of polka dots of single houses, but of groups of short strips enclosing relatively wide common recreational spaces. The houses, if so arranged, are much pleasanter and more healthy to live in than if facing one another, cheek by jowl, in streets with backyards behind. The private front gardens and private back-yards will probably have to be quite small in such a scheme, to allow for the community recreational space, but they are all the more likely to be kept tidy on that account.

The traffic plan within the minor groups presents several

difficulties. Access for wheeled vehicles to both sides of a house is a convenience, but it is not a necessity. For example, where a road passes along the slope of a steep hill-side, both the kitchen or 'back' door and the main or 'front' door are of necessity on the road, for the houses below the road, and what can be planned in this respect for rich men's houses on a sloping site can be planned for poor men's houses on a level one. But with small houses the difficulty of doing this increases; and access from both sides of the small blocks under consideration is highly desirable. The roads need not, of course, be of equal importance on both sides, and garbage removal may be the sole function of one, all more exalted purposes being served by the other. The minor road may well be a one-way lane in this case.

In community planning the recreational open spaces are not, as already observed, the only matters in which joint action makes for amenity. Nowadays in many suburban areas a large majority of small householders own a motor-car. Great economy in construction costs and private road-making and maintenance can be effected by grouping the garage accommodation. Twenty or thirty cars kept at one fairly secluded point, in a tidy way, cause less noise and nuisance, for the twenty or thirty householders concerned, than a like number of cars housed separately. Economy apart, the accommodation can be better; and the disturbance of a neighbour's car returning late at night, with the consequent noise of slamming garage doors and stopping and starting of the engine for the turn-in, is completely avoided. In exchange for this it is no great hardship to have to walk a hundred yards to fetch one's car.

3. Mixed Groups

Such then are some of the main factors to be taken into account in group planning where the elements are homogeneous, as in a housing or garden-city residential scheme. In most cases where group planning is called for, parts of the scheme partake of the nature of the heterogeneous problem, first reviewed, and parts the nature of the homogeneous problem. This frequently opens the way to the expressive use of contrasting subordinate groups. For example, in the case of an industry situated far from a centre of population but in the vicinity of mineral or forest products or of water power, the mine, log boom, or power-house may form one element, the mill another, the offices a third, the railhead or dock

a fourth, the residential quarters of the managing staff a fifth, the housing for the workmen and their families a sixth; and, duly related to these, there may be a school, a church, a hall, a club, places of amusement, and recreational grounds. A problem of this kind may almost be classed as one of town planning. We are supposing, however, that the whole place is owned by the company operating the plant, and that makes a great difference. The real town-planning problem, of which there will be more to say, begins when there are several separate owners, each with a say in the affairs of the community. The control is then quite different and the technique of progressive design infinitely more complex.

The owned mill town, or village, finds a counterpart in many government establishments, either of a temporary nature in connexion with great public works, or of a permanent character connected with such matters as dockyards and the like undertakings. This kind of problem is really as old as civilization. The Egyptians had to deal with it in connexion with the building of the pyramids, and every military camp, however temporary, has been a case in point. Genghis Khan and Cardinal Richelieu knew all about it. The exercise of control is at the root of the matter.

It should now be clear that the process of planning a great institution, or a speculative real estate development, or an industrial community, differs only in degree from that of planning a little house. There is the enumeration of the elements, the apportionment of their dimensions, the investigation of their mutual relations and connexions, their division into minor groupings, the appraisal of the relative importance of the groupings, and then the study of the site, leading to decision as to the location of certain elements in view of their functional character, and of the rest in view of their subordinate relations to these.

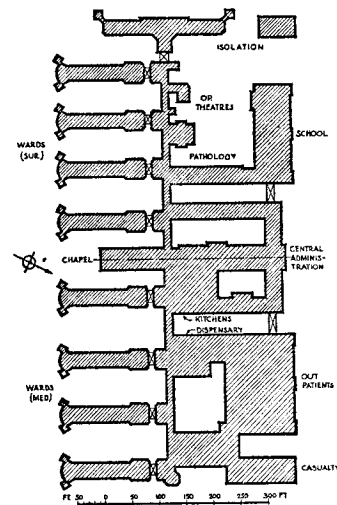


FIG. 131. King's College Hospital, Denmark Hill, London (W.A. Pite).

4. Vertical Grouping

Most of what has been said of group planning with respect to problems involving only moderate heights, but wide extension over the ground, is equally applicable to those problems of group planning where the horizontal extension is restricted and the vertical extension compensatingly extended. The tall apartment house, the great hotel, and the sky-scraping office building are cases in

point. In such cases the apartment, flat, floor of bedrooms, or suite of offices takes the place of the departmental building or of the residential unit in the examples just considered. The traffic lines, which are an expression of certain functional relations of part to part, are solved by somewhat different means. Vehicular traffic is reserved for vertical travel and internal passages take the place of paths and lanes.

This does not mean that a planner accustomed to deal with institutions, or model villages, or industrial plants is equipped with

the technology to enable him to deal also with an office building or hotel problem. He will need a very different technology for that. But it is so easy in design to mistake technology for mental process. The designer who knows in what order to do his thinking—who is skilled in finding solutions—who understands how to set about the discovery of form—need have no qualms as to any special building technology. Of course, the acquisition of every particle of available knowledge having a bearing on the problem in hand is a very necessary part of a designer's duty to himself and to those he serves. Technology is not, however, the subject of this treatise, and is only mentioned now to make the point clear. It is on the principles and processes of design, as applicable to all and any sorts of things constituting the apparatus of life, that I am writing.

When dealing with a grouping problem the minor subdivisions of space must at the outset be taken for granted. One is not then

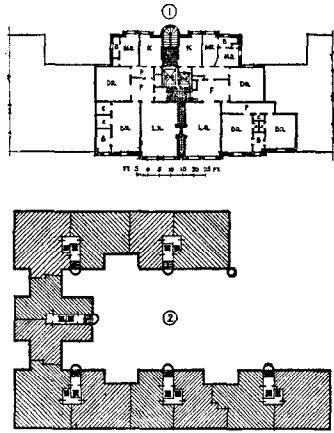


FIG. 132. Chateau Apartments, Montreal (Ross and McDonald).

devising the tactical scheme for a section making a trench raid, but an operation involving large formations, in which it is right to assume that every one in the sections knows his job and will do it. In this sense a group plan—involving heterogeneous or homogeneous elements, or both—remains fundamentally the same kind of problem, whether the site allows of a wide horizontal distribution, or compels a vertical superposition of the elements.

One might find alternative solutions for the requirements of a university on a 'campus' site and on a city block so restricted as to compel the top stories to reach the lower clouds. In either case the technology of the subject would remain the same, except in so far as vertical circulation was concerned; but the technology of the construction would be very different.

What all this amounts to is that the site for a building, or for a group of buildings, is really a part of the material. No matter how complex the problem, the resultant form is a mental boiling together of purpose, material, and technique. As in the making of a broth, the order in which the elements are put in the pot (or the brain-pan) has a great deal to do with the result. For a broth, the meat stock must be made first, the barley added at a later stage, the vegetables dealt with according to their kind, and the herbs put in last; but they all unite in the end. In these chapters on planning there is advice on the procedure most likely to lead to clarity of expression. One must avoid getting the barley reduced to a sour pulp, and the vegetables boiled out of recognition. The only way is by a disciplined procedure.