

Dimensions of Performance

Performance characteristics will be more general, and the easier to use, to the degree that performance can be measured solely by reference to the spatial form of the city. But we know that the quality of a place is due to the joint effect of the place and the society which occupies it. I can imagine three tactics for avoiding the necessity of taking the entire universe into account in this attempt to measure city performance. First, we can elaborate those linkages between form and purpose which exist because of certain species-wide or human settlement-wide regularities: the climatic tolerances of human beings, for example, or the importance of the small social group, or the very general function of any city as a network of access. Second, we can add to the description of the spatial form of a place those particular social institutions and mental attitudes which are directly linked to that form and repeatedly critical to its quality, as I have already done at the end of chapter 2. Both of these tactics will be employed below.

Third and last, however, we must realize that it would be foolish to set performance *standards* for cities, if we mean to generalize. To assert that the ideal density is twelve families to the acre, or the ideal daytime temperature is 68°F., or that all good cities are organized into residential neighborhoods of 3000 persons each, are statements too easily discredited. Situations and values differ. What we might hope to generalize about are performance *dimensions*, that is, certain identifiable characteristics of the performance of cities which are due primarily to their spatial qualities and which are measurable scales, along which different groups will prefer to achieve different positions. It should then be possible to analyze any city form or proposal, and to indicate its location on the dimension, whether by a number or just by "more or less." To be general, the dimensions should be important qualities for most, if not all, persons and cultures. Ideally, the dimensions should also include all the

point. Subsequent chapters will discuss each dimension in detail.

There are five basic dimensions:

1. *Vitality*: the degree to which the form of the settlement supports the vital functions, the biological requirements and capabilities of human beings—above all, how it protects the survival of the species. This is an anthropocentric criterion, although we may some day consider the way in which the environment supports the life of other species, even where that does not contribute to our own survival.

2. *Sense*: the degree to which the settlement can be clearly perceived and mentally differentiated and structured in time and space by its residents and the degree to which that mental structure connects with their values and concepts—the match between environment, our sensory and mental capabilities, and our cultural constructs.

3. *Fit*: the degree to which the form and capacity of spaces, channels, and equipment in a settlement match the pattern and quantity of actions that people customarily engage in, or want to engage in—that is, the adequacy of the behavior settings, including their adaptability to future action.

4. *Access*: the ability to reach other persons, activities, resources, services, information, or places, including the quantity and diversity of the elements which can be reached.

5. *Control*: the degree to which the use and access to spaces and activities, and their creation, repair, modification, and management are controlled by those who use, work, or reside in them.

If these five dimensions comprise all the principal dimensions of settlement quality, I must of course add two meta-criteria, which are always appended to any list of good things:

6. *Efficiency*: the cost, in terms of other valued things, of creating and maintaining the settlement, for any given level of attainment of the environmental dimensions listed above.

7. *Justice*: the way in which environmental benefits and costs are distributed among persons, according to some particular principle such as eq-

uity, need, intrinsic worth, ability to pay, effort expended, potential contribution, or power. Justice is the criterion which balances the gains among persons, while efficiency balances the gains among different values.

These meta-criteria are distinct from the five criteria that precede them. First, they are meaningless until costs and benefits have been defined by specifying the prior basic values. Second, the two meta-criteria are involved in each one of the basic dimensions, and thus they are by no means independent of them. They are repetitive subdivisions of each of the five. In each case, one asks: (1) What is the cost (in terms of anything else we choose to value) of achieving this degree of vitality, sense, fit, access, or control? and (2) Who is getting how much of it?

I propose that these five dimensions and two meta-criteria are the inclusive measures of settlement quality. Groups and persons will value different aspects of them and assign different priorities to them. But, having measured them, a particular group in a real situation would be able to judge the relative goodness of their place, and would have the clues necessary to improve or maintain that goodness. All five can be defined, identified, and applied to some degree, and this application can be improved.

Now, is this really so? Do the dimensions really meet all the criteria which were given at the beginning of this section? Do they in fact illuminate the "goodness" of a city, or are they only a verbal checklist? Can locations on these dimensions be identified and measured in a concrete way? Are they useful guidelines for research? Do they apply to varied cultures and in varied situations? Can general propositions be made about how optima vary according to variations in resource, power, or values? Can degrees of achievement on these dimensions be related to particular spatial patterns, so that the benefits of proposed solutions can be predicted? Do our preferences about places indeed vary significantly as performance changes? All that remains to be seen.

First, it is necessary to elaborate on each dimension, in order to expand its various sub-