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## SOME NOTES ON "ADAPTABILITY"

General definition: the future cost, discounted to the present, of adapting the spatial system to possible new future functions. In the general form, it is an impossible measure, since we have not specified costs to whom, nor what functions, nor when, nor to what level of performance.

More limited definitions:

1. Adaptability is a measure of the costs to someone at some specific future date, discounted to the present, required to adapt a site to some defined change, at some level of performance, such as: adjusting it to a marked increase or decrease in the intensity of its present use; or converting it to the most likely replacement activity. Where the costs or the actors or the changes are multi-dimensional, there will be multiple indices. Indices might be weighted, or take into account the probability of the future change, or the degree of benefit gained by the adaptation. This measure relies on good prediction.
2. A more restricted measure is manipulability, in which we consider only those changes in the spatial system which can be achieved by individuals or small groups, at low cost, in a short time, with little political leverage. Given specified limits of this kind, the measures would be the degree of change that could be achieved under those limits, i.e., the number of new functions that could or could not be accommodated, the increase in intensity that could be accepted, etc.
3. Another measure is reversibility, or the cost of returning the site to some previous condition ("natural," or "unoccupied," presumably) where it could be held in reserve or developed in a new way. The "natural" condition must be carefully defined, to ensure that it will itself be highly adaptable.
4. Still another measure is resilience, in which a specified severe disruption is imposed on the spatial system (earthquake, fire, attack, plague, abandonment and re-occupation, etc.), and the measure is the speed with which function can be re-established at previous levels of performance without exceeding a given rate of cost, or, vice versa, the cost of restoration within a certain time. Social resources may be more critical here than spatial ones.
5. A final measure is actually quite different: innovativeness, or the ability of a spatial and institutional system to generate, test, and facilitate new environmental and behavioral possibilities. This is much vaguer, perhaps more important, and not further considered here.

Connection to other values: presumably, adaptability is valuable for survival, for control, for maintaining future choice or reducing future cost, and also for increasing present choice. A manipulable place can be conducive to participation and development. It usually conflicts with efficiency of production, and perhaps at times with fit

Costs:

Adaptability usually entails substantial economic costs, which may in part be circumvented by using cheap excess capacity (unserved open space, for example, or reservoirs of waste), or features which are useful for other reasons (good communications, for example). But recycling, growth room, mobile and temporary facilities, and good information, planning and control, all impose present costs. The discount rate is crucial to the evaluation of adaptability (although planners should have a professional bias toward a low discount rate?). Effective adaptability depends on good prediction (of what is likely to change, or of what is likely to be valuable in the future, for example), and on good dissemination of information so that decision-makers can take advantage of the adaptability that in fact exists. I.e., the perception of adaptability is in itself important (and perceived adaptability may have psychological value, even if never used). Prediction and dissemination both entail costs of their own. On the other hand, there are distinct benefits in adapting, or costs in not doing so. The costs and benefits will accrue to different people, of course.

There may also be social, political and psychological costs: apparent waste, disorientation, uncertainty, a characterless or unstimulating environment. An extremely adaptable or responsive environment would probably be intolerable. The stability of the large physical environment may be one of its assets. Design strategies may reduce some of the political and psychological costs of adaptability (the location of permanent symbolic landmarks in a shifting landscape, for example). In some cases, it may be an objective to reduce adaptability, i.e., to impose arbitrary certainty by increasing the cost of future adaptation ("forever wild"), or to reduce future choices to a few manageable possibilities.

Systematic measures of adaptability could be useful in programming, in design, in cost-benefit evaluation, in management, in making decisions. Measures are likely to be used in an incremental way (which alternative has the more adaptability?), or in satisficing (the cost of adaptation must never be higher than some arbitrary figure, or a certain degree of individual manipulation must always be possible). Programs might state the maximum allowable cost for adapting to some likely successor use, or for restoring the site to its previous condition. Or there might be more specific physical rules, i.e., "to every unit of 1000 square feet of floor space, it must be possible to make a 50% addition without disrupting any other area." Random perturbations might be used to test simulated proposals.

Kevin Lynch

May 1978

1) Yes - I wasn't precise about the definition because I felt it works anyway.

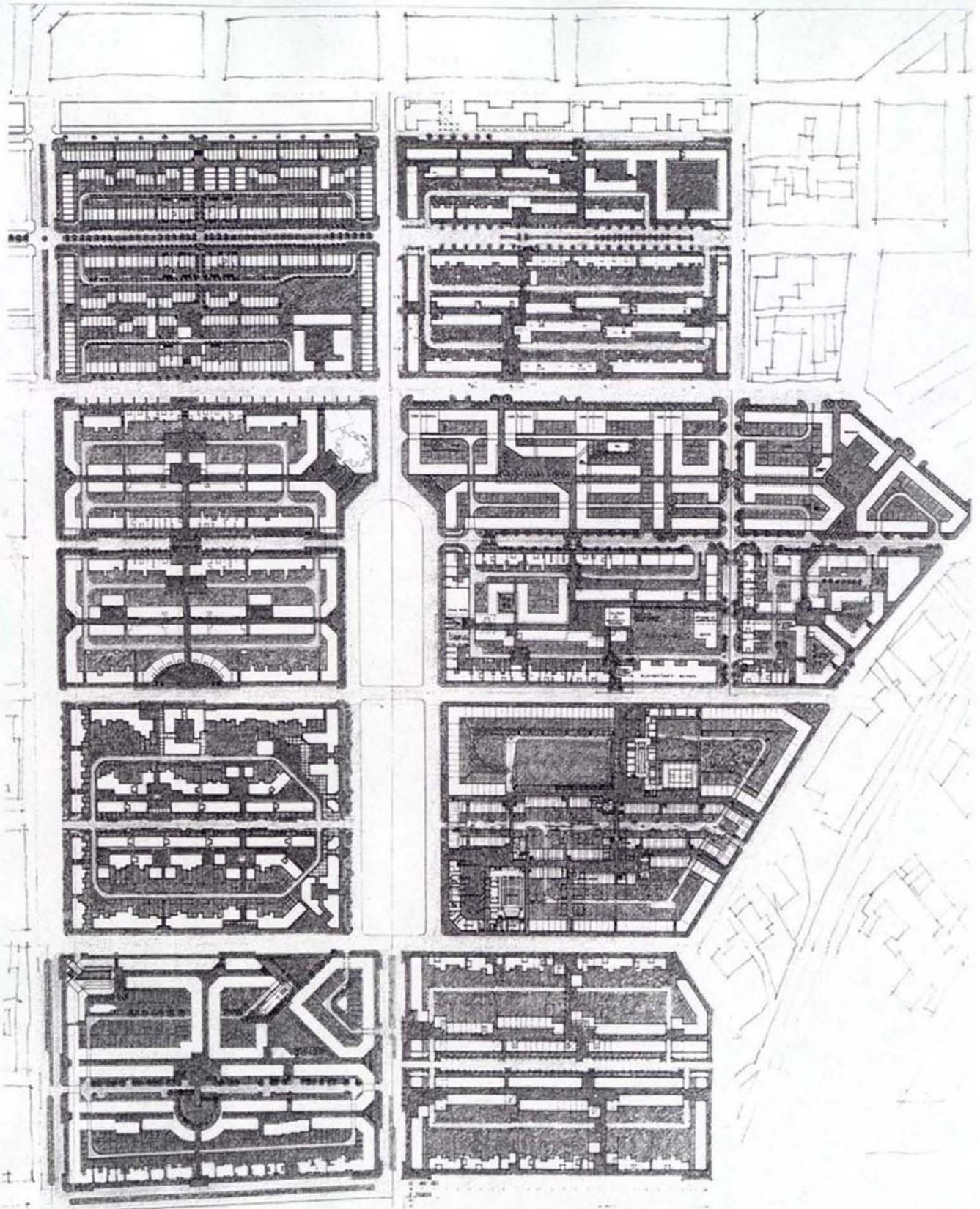
2 & 3) I was discussing adaptation of environment to behavior, rather than vice versa. Clearly, the latter must be accounted for - in any more general assessment, & human beings have great powers of adaptation (which is our evolutionary advantage). The problem in assessing the cost of adapting behavior to environment is that of identifying hidden costs. Moving about to find a better fit, incidentally, only works when the general balance of behavior preferences remains stable.

4) Quite true. The value of environments, once re-adapted depends partly on their good fit to the old circumstances, by which they acquired symbolic value and are more evocative of the past (i.e., have greater temporal legibility, in my terms). These aspects need not necessarily be in

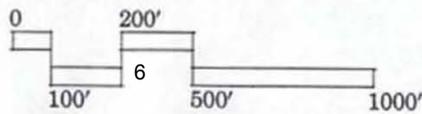
conflict. Never Hall can have more we argue  
well. fitness and also the simple regular  
structure of ample scale that facilitates  
future change. And that might possibly  
have been planned for. Once in a while  
we ~~can~~ can have our cake & eat it too.

5) Yes, I am myself most concerned about the  
possible psychological costs of adaptability.  
Thus it is important to discern the quality  
and to explore its dangers. There is much to  
talk on the subject. Agreed, making some-  
thing countable can give it spurious value.  
We had best keep this an academic dis-  
cussion, at least for a time! In class,  
I think I expressed my own doubts —  
and also proposed that some of the simple  
versions (like manipulability or even  
reversibility) might be better grounds  
for policy.

Many thanks for your good comments



# The Grunsfeld Variations Site Plan



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