

## CHAPTER 14

### A USEFUL PROCESS OF DESIGN

#### 1. The Designer and the Designs

There is nothing in the analysis or the rules of design derived from them that implies that they can be or ought to be used in designing only a whole organization. It has been stated that it might be more efficient to design the substructures separately and then put them together. It is also possible to segment the environment, whenever the separation does not disconnect real and important connections, and to design for each of these segments a structure made up of an operating, an information, and a reward substructure. The process for the design of each segment is also that which designs each substructure separately, and then puts them together. The result may be called a segment structure, which is then put together with other segment structures to get a whole structure. In fact, it is suggested that when faced with the task of designing a large and complex structure, the designer should follow this process. First, the environment is segmented, and for each segment an operating, information, and reward substructure is designed separately, and then all modified and put together into a consistent whole. When such a complete structure is designed for each segment, we have what we might call a set of segment structures which are then adjusted and put together into a whole structure for the whole environment. The rules of design which are derived in the previous chapters are applicable to any organization, with any number of people, decision variables, parameters, and so on. They are applicable to a substructure of a structure, they are applicable to a segment structure, and they are applicable to a whole structure made up of segments.

We may also use the design rules to design any structure, or any substructure, or segment of one for which the levels of only a subset of properties are identified as those that it is to have. That the partial design may not produce a very good design does not mean that it cannot produce a fairly good one. A designer may work only on the operating decision rules and not on anything else. The rest of the

structure may then be created by people in the organization, each working on some small piece. The result may well be a better structure than that which would have emerged without the design of the operating decision rules. It is also clear that the process of design may be partial not only with respect to the structure, but partial also with respect to the performance. All the analysis and all derived rules are clearly defined and separated, and so may be used singly or in varying combinations. If you want to design only for high levels of responsiveness, you will find all the rules you need to do so. This property may have an effect on outcomes that is much larger than that of any other. Designing for it alone gives us a structure that costs less to design than would one with required levels of many properties and produces an outcome level that is higher than we now have, though lower than it would have produced if the other properties had not been ignored.

Not much has been said so far about who the designer might be. It was explicitly stated that unless the designer knew well the technology and the environment of the structure to be designed, the quality of the design is likely to be very low. Besides this requirement, any number of people may be engaged in the design of a structure. Their design work may be done with the conscious recognition that it is design work or is not. Designing an organization structure is nothing more than connecting people by decision rules that govern their behavior so that some change is made in the world they inhabit.

## **2. A Metaphor for the Process**

The last step in the process of design is to choose the elements of the components of the structure. The movement of the process of design is from the required set of levels that a set of performance properties is to have to the set of levels which a set of structure properties is to have. From these, a set of components of a structure is derived and this defines the design of the structure. An original set of required levels of the performance properties of the designed structure is obtained from a process that derives its elements from the environment, technologies, and goals the structures is to seek. For each property of the structure, the level chosen for the structure is that which leads to levels of the properties of the performances that are what the designer wants them to be. These are the levels which, in the context of the technology which the structure uses and the