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Methodological Premises of Social Forecasting[1]

Even if we agree about what ought to be done by way of planning, we are no further advanced with respect to knowing how to detect social developments several decades ahead or knowing what developments we should actually plan for. We need to examine some of the concepts and methods which might help us to determine the shape of the future.

The Perspective of Futurology

A prediction of the future can always be challenged by the argument that we can only know what we have experienced or are experiencing—that is, the future does not yet exist and hence cannot be experienced, cannot be known. This skepticism reduces itself to the position that we can know only what is presently experienced because the past is also nonexistent and we have no way of experiencing it and hence knowing that what we think was experienced was actually experienced. These objections cannot be allowed to rest there. To be consistent one has to define the present. If one insists that past and future do not exist and hence cannot be known, then the present becomes the split second of immediate experience and knowledge; knowers and knowables disappear.

This attitude to prediction is no more useful to understanding what we actually do than is the other Laplacean extreme which suggests that the past and the future are completely given in the present array of matter and energy. Our own experience of successful and unsuccessful prediction is a far better guide to what we might be able to achieve in trying to assess the future requirements for the social sciences. Granting the compelling point that we cannot experience that which does not exist, we are still prepared to agree that we know something scientifically if we know we could, given present conditions, create the relevant experiences—by experiment, test or observation. This copes not only with why we believe that we know something of the past, but also with why we believe we know something about the future. For example, we can experimentally demonstrate that exposure to present conditions will lead to a

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particular set of events at some point in the future. At a trivial level, we can say that, given the numbers taking up sunbathing today, there will probably be many more with sunburn tomorrow.

These latter considerations give us good reason for rejecting a skeptical viewpoint about prediction and accepting the question, more usually asked by Everyman, "how do you know that?" However, we have in our riposte implicitly defined the notion of the present. The present within which we can potentially carry out a confirmatory experiment or collect the ingredients of sunburn is not the immediate conscious present of the skeptic. Is this simply a sleight of hand or are there other grounds for redefining the notion of present, apart from the fact that the immediate present is an impossible, useless concept?

This problem was brought to a head in psychology with Lewin's (1935) concept of contemporaneous causation as applied to the life space of an individual. Subsequently, Chein (1948) suggested that just as much of the present is organized into spatial *gestalten*, so this present is embedded in "overlapping temporal *gestalten*."

Temporal Gestalten

The experience of a melody presupposes experience of a temporal *gestalten*. A sneeze can be part of the present, but so is middle age part of the present of a middle-aged person and the 1970s part of the present of a railway organization. Any person or group is at any instant in many presents, each corresponding to what is a phase of the temporal *gestalten* in which he, she or it is embedded. In dealing with living systems—whether species, population groups or individuals—we have been led to the viewpoint that there are laws corresponding to the whole course of a living process. This is so because we have identified in these processes parts which coexist throughout the duration of the process and, in their mutual interaction and interdependence, generate the causal relations characteristic of that process.

Certain, not all, of the characteristics of events arising within a process or the emergence of phases of a process will be determined—and hence can be predicted—by the laws governing that process. However, by the same reasoning, the phases will possess certain characteristics of their own—hence laws of their own—arising from the mutual determination of their subparts. These characteristics will not be determined by the characteristics of the preceding phases unless these arise from laws of the total process and except insofar as the preceding phases determine the starting point of the phase in question.

Sommerhoff (1950) has stated these propositions in a more rigorous and exact way in his concepts of long-, medium- and short-term directive correlations—corresponding to phylogenetic adaptive learning and behavioral re-

sponses—and of the hierarchies which can arise between them. For our purposes, it is enough to note that it is consistent with the principle of contemporaneous causation to regard certain types of past and present events as causally related to, and predictive of, events which have yet to occur or to be experienced. These are events which arise in the course of the process and which are mutually determined by the laws governing that process. In psychology, for example, the facts of maturation and learning are of this type. The prerequisite for prediction is a knowledge of the developmental laws. In the absence of this knowledge even the meaning of the immediately present facts cannot be understood. The gaining of this understanding through knowledge of every immediately present fact can even be regarded as theoretically impossible. This is the problem of Laplace's super-mathematician and the illusion of some supercomputer schemes for integrated data systems. In addition to a knowledge of the laws governing different classes of living processes, we need a knowledge of earlier facts if we are to know how those laws are operating in a specific individual process and what the effects on later phases are going to be.

So far, I have considered only the case of a single process—temporal *gestalt*, system or directive correlation—and its parts and have implied that the whole burden of causation is within a process. This is, of course, a travesty of reality. Many of the phenomena we observe arise from the interaction of processes that we are unable to treat as if they were parts of a more inclusive process. When such independent processes overlap, a new process emerges and a class of events is generated which has no history prior to that at the beginning of the interaction. There are clearly degrees of independence. The interpersonal life which will emerge in the marriage of a man and a woman from the same culture is probably more predictable than that which would emerge if they came from different cultures. In any case, these hybrid processes seem to entail a special degree of unpredictability. The sufficient conditions for these newly emerged classes of events cannot be found in the prior history of the individual processes.

The main suggestions about the theoretical possibilities and limits for prediction can be spelled out more clearly with reference to simple diagrams. Throughout, I will be concerned with predicting the future of concrete individual processes—for example, that of the United Kingdom or of John Smith. I will not be considering how one builds up predictive knowledge for a class of repeated or repeatable processes, nor will I consider forecasting techniques for processes which display only quantitative change.

Let us assume that the letters *A*, *B* and *C* in Figure 1 represent the scope and temporal extension of three living processes—which could, for instance, be ecological, social or psychological. Let $t\,0$ represent the present and $t--$, $t-$, $t+$ and $t++$ represent the past and future points in time.