PROBLEMS OF VALUE MEASUREMENT FOR A THEORY OF INDUCTION AND DECISIONS

C. WEST CHURCHMAN
CASE INSTITUTE OF TECHNOLOGY

1. Introduction

This paper is a philosophical evaluation of current "decision theory" and the pragmatic theory of induction. Its main argument is that there can be no theory without measurement, and that we have no method as yet of performing measurements relative to decisions. Statements made about "rationality" and "optimality" of decisions are premature. In order to perform measurements of values (or preferences) we will have to precommit ourselves to a general decision theory, because measurement is the most intricate and complex of all human decision processes. Indeed, we will be fortunate if we find one decision theory adequate to the task of generating controlled value measurements. Attempts to develop a minimum decision theory on the basis of "reasonably clear" assumptions are criticized on philosophical grounds; such attempts should be regarded as prolegomena to measurement, not as valid statements about rationality. Likewise, the paper criticizes the notion of factual indeterminacy arising out of the necessity to assume some statements about a priori probability distributions. In sum, we cannot expect that data about values will ultimately be "inserted" in a decision theory, simply because we require the strongest possible decision theory to generate the data.

2. The problem of pragmatic induction

The concern of this paper is with the pragmatic theory of truth. Roughly—very roughly—speaking, the pragmatic theory of truth states that truth is a property of actions that work out satisfactorily for the person or persons concerned. More specifically, the pragmatic problem of induction is to ground the justification of induction in terms of effectiveness of actions for objectives. Pragmatic "reconstructionism" is the reconstruction of science within a conceptual framework of decisions and their consequences [2].

The term "pragmatism" has a wide variety of meanings. The philosophical attitude of this paper is that philosophy must use present and future experimental sciences as sources of information and guidance in reflection on its problems. Perhaps the term "experimental" more closely reflects the intent of the writer, as a means of differentiating the present approach from that of pragmatists who have found their sources elsewhere than in the sciences.

The problem of the experimental theory of induction seems no different from the current problem of decision theory. Indeed, decision theory and experimental pragmatism are only two examples of a convergence of scientific interest in actions and goals: add to these operations research, social psychology, consumer research, psychoanalysis, law, to