the measures lack validity. Sociologists, in contrast, have traditionally been interested in the degree to which social institutions and inequalities constrain individual achievement. Imperfect prediction is therefore less vexing, since one can interpret indeterminacy as indicative of individual freedom, or choice, rather than as reflecting systemic factors. As Duncan once observed, "No one would want to live in a world in which one could explain all of the variance."

Personality variables, however, tend to be less amenable to direct observation or measurement than those studied by sociologists; consequently, the theoretical and substantive importance of concepts has been more problematic. Psychometricians have spent decades devising tools for measuring unobserved variables, such as ability or motivation, and applying these tools in carefully controlled experimental situations. Correspondingly, they have been far less interested in specifying the causal relationships linking such attributes to social life or in generalizing beyond the laboratory. In contrast, the study of status attainment is a stepchild of population studies. Demographic variables and concerns have dominated the literature until quite recently. Traditional measures of status—occupational positions or years of schooling, for example—required little theoretical explication; they were assumed to be as concrete as the census categories from which they were derived. Social mobility involved the passage from one set of statuses to another; the most interesting questions concerned the linkages between social categories, rather than the variables themselves. Consequently, sociologists devoted most of their attention to estimating structural parameters, which could capture the processes and mechanisms involved.

These two research traditions have much to offer each other. The sociology of status attainment cannot advance by merely collecting new data sets or replicating findings; the questions of primary interest will increasingly involve concepts and measurement problems beyond the scope of current research. Equally, psychological perspectives will acquire new power if embedded in a more general analytic framework. The strength of both approaches lies in the commitment to rigorous quantitative expressions; their weaknesses are complementary. It is as if behavioral psychology has been building the vocabulary, while sociology has been occupied with developing a grammar.

This volume could represent the be-

ginning of a very fruitful exchange. It is not always clear, however, whether the authors really address each other's concerns. Atkinson *et al.* argue convincingly that the presumption of a "correlative chain" is theoretically invalid for a number of social-psychological variables and that motivation and ability interact in complex ways with the nature of the task. If this is so, it has implications for the theoretical status of models incorporating such variables. The origins of motivation and the degree to which it is de-

veloped or mediated by social institutions are not at issue for the behavioral psychologists, although this is a central question in other papers. I wish this volume contained more critical commentary and discussion. The editors mention lengthy and heated debates, but the book does not capture the excitement of these disputes. Perhaps a dialogue will emerge in future work.

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Cognition and Social Behavior

Attribution theory concerns the process by which individuals attempt to understand and explain the causes of human behavior: the manner in which man, cast as a "naive scientist," attributes the occurrence of events and actions to particular causes and the manner in which he draws inferences concerning the attributes or properties of persons and situations with which he has contact. In this general sense, attribution research focuses on two complementary questions. The first has to do with the determinants of particular attributions—that is, the ways in which an individual's understanding of causal relationship and implicit theories of personality and social control are applied to particular social data sets to produce inferences concerning the appropriate interpretation of events or actions—and the second with the consequences of particular attributions—that is, the ways in which the causal inferences an individual draws will affect his predictions, expectations, and overt behavior in subsequent psychologically related contexts.

Such a model casts a large net. It suggests that the very meaning of a given act, in terms of the information it appears to convey or the expectations to which it gives rise, may differ significantly over time or from individual to individual as a function of the attributions made concerning the causes of the act or the interpretation placed on its occurrence. In this sense, attributional con-

structs have obvious relevance to virtually any sort of social encounter in which there is ambiguity or potential uncertainty.

Indeed, in the decade since the publication of pioneering theoretical papers by Kelley, Jones and Davis, and Bem, attribution research has unquestionably become the dominant theoretical orientation in social psychology, supplanting the cognitive consistency models that dominated the field during the late '50's and early '60's. The present volume provides an opportunity for taking stock of the directions in which attribution research has moved.

At its inception, attribution theory proposed a model of man as an intuitive scientist, a largely rational information-processor attempting to make sense of the myriad complexities of the social environment in which he functions. In his initial formal statement of the model, Kelley suggested an explicit analogy between the processes engaged in by the "man in the street" in his daily interchanges with the social environment and the techniques employed by the social scientist attempting, through the use of systematic experimental procedures and the logic of the analysis of variance, to uncover general laws that govern human social behavior. Interestingly, although such an approach might have led to an extended investigation of these specific logical strategies and their application in the realm of social attributions, it quickly became apparent that the power of the approach lay more in its provision of a framework for considering data from a variety of disparate research areas than it did in the specific formalisms offered by various authors.

The present volume is illustrative of the way in which researchers have been intrigued by the general usefulness of this broad approach in integrating and reinterpreting a wide variety of problems in the field. In essence, the book assumes that the reader will be familiar with the essential points of earlier theoretical treatments and proceeds to provide a representative and wide-ranging assortment of applications of the basic model to different research problems.

Following an introductory interview with Fritz Heider, the intellectual grandfather of the study of attribution processes, the book is divided into three major sections. The first deals with the role of attribution processes in self-perception—with the manner in which an individual draws inferences concerning his own abilities, attitudes, interests, and other attributes as a function of his perception of the conditions under which he has acted and with the consequences of these self-perceptions as they determine his subsequent behavior. The second section focuses on parallel processes in the perception of other persons.

In both sections, the book presents a panoramic collection of largely self-contained chapters that either describe research programs in progress or review research in a particular area of study. For example, attribution processes are shown to play a role in an individual's perception of his freedom of action and sense of personal control and in his evaluations of his abilities, interests, and attitudes. Related processes also appear to play an important role in the persistence of dysfunctional, anxiety-related behavior patterns and in the relation between an individual's stated attitudes and his overt behavior. On a social level, attribution processes are shown to apply to the understanding of social influence processes, the determinants and consequences of helping behavior, interpersonal conflict in young couples, the maintenance and generation of sex-role stereotypes, the inferences one draws about the attitudes of others, and even the definition of the psychological "units" an individual will use in categorizing an ongoing course of behavior. In like fashion, the relevance of an attributional approach to the clarification of specific theoretical issues raised by cognitive dissonance, psychological reactance, and objective self-awareness models is illustrated in other chapters.

The volume concludes with a third section consisting of two chapters of a more general theoretical nature. Jones and McGillis present a long-due comparison and reappraisal of the relation between Kelley's analysis of variance framework and Jones and Davis's earlier model of correspondent inferences. In presenting an elaborated model, which attempts to integrate these two traditions, Jones and McGillis indicate a number of overlaps and contrasts between the two and suggest a conceptually fertile, though as yet untested, process-level model that postulates a series of stages through which the attribution process proceeds. Fischhoff presents a thoughtful comparison between the attribution literature and the decision-making literature, which is concerned with the processes that determine an individual's judgments and predictions in the face of uncertainty. In an intriguing comparison of the paradigmatic assumptions and presuppositions of these two approaches, Fischhoff challenges attribution researchers to attempt an integration of the attribution approach with other research traditions concerned with cognitive processing of social information.

The more general question the chapters raise, of course, concerns the directions attribution research is likely to take in the future. One major direction, suggested in this volume and evident in current research, seems likely to be a more deliberate attempt to integrate the attribution approach with research in cognitive psychology and human information processing. Attribution theory is, after all, a theory of social information processing, which focuses on the active and constructive role that cognitive processes play in bridging the gap between stimulus and response. If the attribution model is to be successful in providing a general framework, one suspects that the implicit parallels between it and other approaches in cognitive psychology will require further attention.

Although some aspects of the move toward integration seem clear in current attribution research, others are more implicit. Within the last several years, for example, attribution research has begun to consider the role of attentional processes as they determine and are determined by the attributions and inferences an individual draws in social situations. This trend is evident both in recent attempts to specify a set of sequential processes that characterize the attribution process and in direct attempts to vary and measure the focus of subjects' attention in attribution experiments. Further pursuit of this line of investigation, however, will undoubtedly require more sophisticated techniques of measurement and analysis of the sort currently employed primarily in cognitive psychology. Similarly, as attribution theorists begin to move from the sheltered confines of the laboratory to contexts in which the problems faced by our intuitive scientist are both more complex and less well-structured, greater attention will have to be given both to the nature of the information-processing heuristics that individuals employ to deal with data patterns that do not lend themselves to simple attributional rules and to the ways in which subjects will categorize social interactions when categories are not supplied by an experimenter. Indeed, it seems likely that the way in which a problem is structured and the sorts of heuristic cognitive strategies a given context calls to mind may prove central in understanding the significance of attribution processes in a particular setting. Likewise, one sees in current research a growing concern for the role that subjects' attributions, expectations, and more general stereotypes play in subsequent attribution processes. Rather than viewing subjects as impartial, and largely data-driven, information processors, as the initial formulations implied, it seems likely that we will be forced to examine the ways in which our intuitive scientist, probably not unlike his professional counterpart, assesses the relevance, reliability, and representativeness of any given sample of behavior within the framework of a set of hypotheses or implicit theories he brings to the situation. Although current research shows signs of movement in this direction, progress beyond our present level of analysis will likely require greater attention to fundamental questions concerning the nature of the cognitive structures (schemas, scripts, stereotypes) that people employ in representing and storing social information.

For the present, however, it seems clear that attribution theory is alive and well, and that it continues to suggest provocative research in a wide range of contexts. The present volume provides a valuable survey of the field and will undoubtedly prove a rich source of ideas and hypotheses. The book should be of significance to anyone interested in understanding the current state of social psychology. As much through the questions it raises as through the answers it provides, the collection leaves the reader with a sense both of accomplishment and of the potential for progress.

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