LEARNING AND SOCIAL BEHAVIOR

MCLAUGHLIN

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THE FREE PRESS, NEW YORK
Collier-Macmillan Limited, London

The Free Press
A DIVISION OF THE MACMILLAN COMPANY
866 Third Avenue, New York, New York 10022
Collier-Macmillan Canada Ltd., Toronto, Ontario
Library of Congress Catalog Card Number: 74–143176

printing number
1 2 3 4 5 6 7 8 9 10

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Preface

THE PSYCHOLOGICAL study of human social behavior can be approached from many theoretical points of view. A major theoretical perspective—perhaps the dominant point of view among psychologists in this country—is that of learning theory. This book examines efforts by psychologists with a learning-theory orientation to understand the processes involved in man's social behavior. It summarizes, selectively, a great deal of research representing investigations in many areas of empirical study and attempts to evaluate the success of this enterprise.

Learning theory, as here understood, refers to the tradition of behavioral psychology that has come to characterize American experimental psychology. The defining features of such an approach are discussed at length in Chapter Two, but it suffices here to say that the book is concerned principally with stimulus-response (reinforcement) learning theory and related developments. The author does not review the work of Piaget, Bruner, and others, whose theories of learning are more cognitive and who stress the importance of developmental progressions in learning. To do so would require a work of considerably greater length.

The work of theorists and researchers in the learning tradition is presented sympathetically, but not uncritically. Alternatives to a learning-theory point of view are also discussed, although generally not in as much detail. The reader should be forewarned that learning theory is given more treatment in this book, not necessarily because it is thought to be more valuable as an approach to the phenomena discussed, but because the central theme of the book concerns the uses to which learning theory has been put to understand human social behavior.

An additional note of warning is required—one unfortunately frequently omitted in books of this nature. In reviewing the research of other investigators, the author, no matter how careful he has tried to be, may introduce bias. The reader sees the reported research through the author's eyes. Distortion is hopefully held to a minimum, yet the reader should be aware of the need to check the author's interpretation against the original sources. Indeed, the mere fact that the author had to select a limited number of studies from a vast literature introduces some bias. Numerous studies have been omitted or just mentioned in the text. This does not mean that these studies are necessarily inferior to those discussed, but simply that they did not fit in as well to the overall scheme of this book.

The reader will note that the book is not devoted systematically to theories of social learning. These theories—as well as the general learning theories from which they emanate—are discussed in the first chapter and mentioned throughout the book. Nevertheless, researchers have not, for the most part, been guided by theories of

social learning. Instead, research interest has centered on particular substantive areas, and investigators have preferred to use specific, small-scale theories rather than a general, all-encompassing social-learning theory.

For this reason the book is divided into substantive areas. Following the chapter on theory and a chapter devoted to basic issues of an introductory nature, the author reviews research concerned with particular aspects of social behavior: language acquisition, imitative behavior, attitude formation and change, behavior change in psychotherapy, and interpersonal behavior generally. In each of these areas the contribution of learning theory—both theoretical and empirical—is examined and evaluated.

It should be pointed out that a chapter on psychotherapy is included because increasing numbers of psychologists have come to regard therapy as a social-learning process. These psychologists use learning principles to account for the acquisition and maintenance of responses that deviate from social norms and to provide techniques for modifying and eliminating such responses. In no other area in recent years has learning theory been applied with so much energy and enthusiasm.

The book assumes some familiarity with the psychology of learning, although many introductory topics are discussed in Chapter Two, and the book could serve as a self-contained unit for courses in the psychology of human learning. It will most likely be used by advanced undergraduate students and graduate students of psychology and education, although some instructors may find that they can supply enough background material to bring the book within the reach of lower-division students.

The author is indebted to Albert Bandura for a critical reading of earlier versions of parts of the manuscript and for many helpful comments. Carolyn Brown and Monica Bay also assisted in the preparation of the manuscript. In particular, the author wishes to thank his wife, Sigrid, for her encouragement and support throughout the various stages of manuscript preparation. Finally, the author would like to thank The American Psychological Association, McGraw-Hill Book Company, University of Chicago Press, University of California Press, Mouton and Company, John Wiley and Sons, Yale University Press, Stanford University Press, and Academic Press for permission to reprint tables and figures.

LEARNING AND SOCIAL BEHAVIOR

Contents

I

Learning and Social-Learning Theory

IN 1851 Leo Tolstoy wrote, "In all our memories the middle disappears, and only the first and the last impression, especially the last one, remains" (1935, p. 285). For those familiar with the concepts and findings of contemporary psychologists working in the area of learning and memory, the phenomenon Tolstoy described has another name—the serial position effect. In fact, Tolstoy's statement is empirically quite accurate—in free recall situations the last material presented to a learner is best recalled, and the early material is recalled better than what appeared in the middle.

In many instances the findings of experimental research in the psychology of learning echo traditional wisdom and the insights of great writers and thinkers. To take another example, when an experimental psychologist concludes that more meaningful materials are better recalled than less meaningful materials (e.g., Lindley, 1963), he is simply reiterating what Spinoza had pointed out long before—that "the more intelligible a thing is, the more easily it is retained in memory, and contrariwise, the less intelligible it is, the more easily we forget it" (1677, XI, 81). Many of the "laws" of learning established through experimental techniques in recent decades appear to teach us little more about the nature of man than can be learned from a reading of Aristotle, Descartes, Locke, and other great philosophers. Indeed, the findings of elaborate empirical investigations in the psychology of learning often seem to be restatements of conventional wisdom.

And if the findings of psychological research are not obvious, they frequently appear to be esoteric, with little relevance to human experience. The white rat is a convenient subject for research on learning, but many psychologists have grown skeptical of deriving basic laws of human behavior from the performance of rats in mazes. Increasingly, psychologists have turned to human subjects and have employed sophisticated and complex research designs to study paradigmatic one-person learning situations. A highly specialized and rigorous experimental discipline has evolved that applies to miniature, restricted forms of human learning. Yet the rigor and degree of control achieved in one-person learning situations is not without its disadvantages. In their search for quantitative precision, experimentalists tend to study artificial situations removed from the experiences of man in normal social life.

In recent years some psychologists have become convinced that the best way to obtain information about human social learning is not via the indirect approach of animal research, nor via the study of one-

person human learning, but rather by studying human behavior directly in all its complexity. Man, after all, learns in social situations and has needs that require the mediation of other people for their satisfaction. Rather than focusing on simple, one-person situations, these investigators have applied their methodological and conceptual tools directly to social phenomena. They have sought to escape from what they feel to be the artificiality of the one-person learning situation by studying behavior in dyadic or group settings. They have directed their attention to specifically social forms of learning—to how children learn a language, how neurotic behavior is learned and can be unlearned, or how patterns of interpersonal behavior are developed.

The increasing interest of psychologists in social phenomena represents an attempt to work out a science of behavior that will be more meaningful and nontrivial. It is a reaction to the movement toward specialization that exists in experimental psychology and threatens to make the discipline sterile and scholastic. Of course, traditional experimental research in the laboratory setting is needed and must continue. Many psychologists, however, feel that the time has come to apply the principles of behavior derived in tightly-controlled laboratory experiments to complex social situations. Parsimony is a desideratum, and hopefully learning principles derived from one-person situations will be shown to hold for interpersonal situations as well. If these principles apply, so much the better. If not, research must be directed at specifying new principles of learning that do apply to man's social behavior.

Determined effort in this direction is relatively recent, yet attempts to extend the principles of learning to social behavior date back to the beginning of the psychology of learning in this country. The early theorists were concerned with explaining human behavior in its entirety. Behaviorism was not just a way of looking at the activity of a single person in an experimental laboratory; its significance lay in the fact that it was capable, its advocates argued, of explaining the most complicated and intricate aspects of man's social behavior. Watson, for example, felt that all emotional behavior could be explained on the basis of conditioned and unconditioned responses; and Clark Hull, the most eminent of the behavior theorists, planned a major work that would be explicitly concerned with the extension of learning principles to social interactions. Hull died before he could accomplish this project, but a number of his followers have advanced learning-theory explanations of various types of social phenomena. Other theorists, working from different theoretical perspectives, have also proposed social-learning theories. Discussion of these theories will be the concern of this chapter.

Before turning to specifically socially-oriented theories, however,

it may be helpful to discuss briefly the various general learning theories from which they developed. Throughout this discussion emphasis will be placed on those aspects of the theory that anticipated and influenced subsequent theory and research on the learning of social behavior. More comprehensive discussions of the general theories of learning are available elsewhere and the interested reader is referred to these sources—especially Hilgard and Bower (1966) and Hill (1963).

LEARNING THEORY

"The most incomprehensible thing about the world," Albert Einstein once said, "is that it is comprehensible." Like all theory, learning theory is directed at making the world more comprehensible. It is intended to clarify, to enrich our understanding of man's nature and his behavior. But theory does more than this. It structures the way we perceive the world. It puts what is known about a domain into systematic form. Theories program information for storage and retrieval. A theory of learning summarizes a mass of data in a way that makes sense to a researcher. It tells him what aspects of learning are most worthy of attention and what language should be used to describe the research findings. Theories of learning are thus intended to make sense of what would otherwise be inscrutable. They tie together and order an otherwise disparate conglomeration of empirical findings.

If a theory is to succeed, it must be falsifiable. It must predict objective events that can be empirically tested. To a certain extent, then, theory leads to testable guesses as to how the variables in a system under study are related to each other. As research progresses and predictions from the theory are investigated, extensive revisions will be necessary. Some theoretical concepts will be found to be redundant, and new concepts will have to be invented to keep pace with empirical findings. A good theory is, in a sense, self-destructive.

The Development of Theories of Learning

The development of theory typically goes hand in hand with the development of a discipline. Since theory exerts a directive influence on research, empirical inquiry is usually guided by theoretical developments and innovations. Empirical advances are rarely made independent of theory. The psychology of learning is no exception to this general rule. Theory has led the way, and research has followed.

Theory, however, has to begin somewhere; there must be data from which the theory can be constructed. For learning theory the

basic data derived from two sources in particular: from Pavlov's work on classical conditioning and from Thorndike's work on instrumental (trial-and-error) learning. The empirical work of these two men and the techniques they employed provided the point of departure not just for theory but for much of the research that has been conducted in the psychology of learning during this century.

PAVLOV. Ivan Pavlov gave psychology the notion of the conditioned reflex, a notion that was to play a central role in all major associationistic theories of learning. But Pavlov's contribution was not just that he discovered the conditioned reflex. What makes his work particularly important for later theoretical developments was that he defined an area of study and gave psychology a terminology with which to deal with the phenomena discovered in that area. Pavlov was the first to explore systematically experimental extinction and spontaneous recovery. He showed that a response conditioned to one stimulus can generalize to other stimuli and that this generalization can be overcome if the stimuli are differentiated from each other. And he conducted this research with a thoroughness and care that stand as models for those who would follow after him.

Pavlov was primarily a physiologist and secondarily a psychologist. As a physiologist, he was very much concerned with internal, neurophysiological events. He hypothesized two processes, excitation and inhibition, as fundamental to the activity of the nervous system. Their interaction accounted for the acquisition of a conditioned response, its extinction, generalization, and differentiation.

American psychologists, however, generally have not shared Pavlov's interest in physiological events. Learning theorists in this country have been much more cautious about making speculations concerning the physiological processes that underlie behavioral phenomena. Some theorists, like Tolman, avoided physiological terms entirely and dealt exclusively with "psychological" concepts. Other theorists, such as Hull, made occasional hypotheses about physiological events, but did so tentatively.

Another of Pavlov's basic orientations that was a point of controversy among subsequent theorists was his belief in the *associationistic* nature of learning. Learning occurs, according to Pavlov, when an association is formed between a conditioned stimulus and a neural center aroused by the unconditioned stimulus. Such an association was thought to be a universal phenomenon, common to both animals and men. What is learned is a specific response connected to a specific stimulus. The stimulus-response, connectionistic, associationistic approach actually dates back to the British empiricists: Locke, Hume, Hartley, and the Mills. But Pavlov showed experimentally how associations are formed.

It was the extension of S-R, associationistic principles to all human

learning that especially bothered some later theorists. These theorists, many of whom were influenced by Gestalt psychology, felt that man's intellectual processes are far too complicated to be reduced to connections between stimuli and responses. Associationistic principles may be sufficient for explaining how animals acquire a conditioned reflex, but they are not very helpful in accounting for behavior in complex problem-solving situations. These theorists argued that problems are solved by testing hypotheses, by seeing relationships, and by various information-processing techniques. What is needed, these theorists maintained, is a cognitive interpretation that allows for the flexibility shown in problem-solving situations, rather than an associationistic interpretation that is far too mechanistic to account for the data.

Regardless of how closely subsequent theorists followed Pavlov in his basic orientations—and most American psychologists were quite willing to accept his S-R, associationistic view of the learning process—all theorists were indebted to him for clarifying basic issues and introducing a terminology and methodology that allowed for scientific investigation. The early American learning theorists were, for the most part, direct descendants of Pavlov. In fact, what distinguishes Russian psychology from American is not so much the basic associationistic interpretation of the learning process—although the cognitive school won many adherents in this country—but the proclivity of Russian psychologists to resort to physiological concepts and processes in explaining behavior. American psychologists, generally speaking, feel more comfortable holding physiological speculation in abeyance and settling for distinctly "psychological" modes of explanation.

THORNDIKE. Edward L. Thorndike's early work actually preceded Pavlov's. In 1898 Thorndike published his monograph, "Animal intelligence," whereas it was only in 1899 that Pavlov began his research on the conditioned reflex and not until 1927 that Pavlov's book, *Conditioned reflexes,* was published in the United States. Thorndike, like Pavlov, saw learning to be based upon the formation of associations. These associations are established between sensory impressions and impulses to action. Habits are developed or eliminated by strengthening or weakening these associative bonds or, as Thorndike often referred to them, these "connections" between stimuli and responses.

Thorndike experimented with hungry cats confined in a cage from which they could escape and reach a reward by pulling a loop of string. This research convinced him that learning took place slowly, through the gradual "stamping in" of an S-R connection between seeing the string (sensory impression) and pulling it (impulse to action). The cats did not learn the solution to the problem all at once. There was no "intelligent" comprehension of the relationship between the string and the door's opening. Instead, animals went