

APPLIED CLINICAL PSYCHOLOGY

Series Editors: Alan S. Bellack and Michel Hersen

*Handbook of  
Behavior  
Modification  
with the  
Mentally  
Retarded*

*Edited by Johnny L. Matson  
and John R. McCartney*



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Mentally Retarded*

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Series Editors: Alan S. Bellack and Michel Hersen

*University of Pittsburgh, Pittsburgh, Pennsylvania*

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To our wives and children  
Deann and Meggan Matson  
Barbara and Andy McCartney



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# Foreword

Mental retardation has probably existed for as long as mankind has inhabited the earth. References to seemingly retarded persons appear in Greek and Roman literature. Examination of Egyptian mummies suggests that some may have suffered from diseases associated with mental retardation. Mohammed advocated feeding and housing those without reason. There is other evidence for favorable attitudes toward the retarded in early history, but attitudes varied from age to age and from country to country.

The concept of remediation did not emerge until the nineteenth century. Earlier, in 1798, Itard published an account of his attempt to train the "wild boy of Aveyron." A rash of efforts to habilitate retarded persons followed. Training schools were developed in Europe and the United States in the 1800s; however, these early schools did not fulfill their promise, and by the end of the nineteenth century large, inhumane warehouses for retarded persons existed. The notion of habilitation through training had largely been abandoned and was not to reappear until after World War II.

Seminal behavioral research beginning in the 1950s ushered in a new age in the care and treatment of the retarded. Laboratory studies of learning and operant conditioning demonstrated a potential for learning even in the most severely mentally retarded. Skinnerian psychology, in particular, offered new approaches to communicating with, and changing the behavior of, nonverbal, "vegetative" human beings. The untrainable could be trained! Even the definition of mental retardation was changed; no longer was it defined as an "incurable" condition. The attitudes of society became more sanguine, the stigma of mental retardation weakened. Much of the hopelessness associated with the condition disappeared.

From modest beginnings in the 1950s, behavioral science efforts in the field increased and gained sophistication and respectability. Academicians became interested in the analysis and remediation of retarded behavior, and



graduate students prepared for professional/scientific careers in the field. Research laboratories developed in residential institutions for the retarded. Research reports made their way into respectable journals.

Operant conditioning was an approach that could be applied directly to training problems, and it, therefore, attracted most interest. In the main, the techniques had been developed in research with animals. Verbal instructions were not required; behavior could be changed through seemingly simple principles of reinforcement. New behaviors such as self-help skills could be "shaped" in persons who formerly possessed none. Undesirable behaviors such as self-injury or aggressiveness could be eliminated by the withdrawal of reinforcers or the use of aversive contingencies. The approach was a natural for the residential institution.

The applied aspect of operant conditioning became "behavior modification," and a fairly large literature reports numerous studies in this field. Indeed, a number of new journals have appeared to accommodate the flow of research reports. Since most residential institutions use mainly behavior modification training methods, the bulk of research derives from this source. The present book reviews, analyzes, and interprets this research. It is about training the retarded with behavior modification techniques. In practice, behavior modification is an amalgam of principles from a number of sources including the ingenuity and common sense of the person using the approach. It is a pragmatic approach: "Whatever works is correct!" The behavior modifier does not question whether or not the organism possesses the necessary mental processes to perform a certain skill. Instead, various techniques are tried until one is successful. If none is found, the behavior modifier concludes, safely, that the correct approach has not yet been discovered or that an effective reinforcer has not been found. To be sure, behavior modification, as much of this book will show, can be a very powerful training method. It is most effective in dealing with the person with minimal, or no, verbal skills and in teaching self-help habits. But, contrary to common understanding, it is not an easy method to use. Direct translations of techniques from the pigeon or rat box to human training situations will rarely succeed. Moreover, one must thoroughly understand the training principles in order to use them to advantage. The trainer with a superficial knowledge of the principles cannot expect to succeed with a mechanistic application.

This research, as this volume reveals, has many shortcomings. Some of the reported studies are well conceived and executed. Others provide little useful or reliable information. Most are commendable in that they represent sincere efforts to improve the lot of the retarded. In perspective, we should not be



too critical of any of them. Few have had adequate financial support. Most are the products of clinical staff pursuing research interests in their spare time and are conducted in the buzzing confusion of an institutional ward under the most trying of conditions.

Behavior modification efforts are not always successful. Many of the reports cited here yield results that leave much to be desired. But this may not always be the fault of the method or of the investigator. Sometimes, accident, disease, or inheritance reduces behavioral potential to extreme levels. It seems likely that even these powerful methods, under ideal conditions, cannot restore adaptive behaviors to any meaningful extent in some persons.

Hopefully, future research in the field will be more systematic. Adequate funding is a necessity; otherwise, we will continue to see piecemeal, brief, and inconclusive studies. In the past this approach has led to the selection of subjects who exhibited a specific problem, with no attempt to select *representative* samples for study. Consequently, we know little about the training potential of classes or subgroups of retarded persons. For example, we know that some profoundly retarded can be taught certain skills using behavior modification methods, but we cannot generalize from these to the *class* "profoundly retarded." This research has not established the generality of behavior change. Will behavior learned in one setting occur in another? The durability of training has rarely been assessed. The typical study focuses on behavior change over a few weeks; there have been few long-term follow-ups. New research is needed to refine the methods. Vestiges of animal techniques remain that may not be effective with human beings in the complex environments in which the research must be conducted.

These criticisms, fully recognized by the authors in this volume, should not obscure the overall value of this research nor of the significance of applied behavior modification. The present volume brings together the best and a little of the worst of it. These writers are perceptive and they bring out the most useful aspects of this research. They are all scholars, and most are well-known researchers, or shortly will be, in this field. Through efforts such as these interpretive reviews, the foibles of this research will be eliminated, and behavior modification will become an even more effective method in attempts to alleviate the burden of mental retardation. Certainly, as many of the present writers imply, more rigorous research is needed in this field. But the practitioner can learn much from this volume. It is a handy source of information for the clinician confronted with a seemingly intractable behavior problem, and it will have immense heuristic value for researchers as well.

Most retarded persons, even many of the profoundly handicapped, can be

improved through training. Our failures with a few should not detract from the overall success of this enterprise. Behavior modification is a training approach that holds promise for the lowest among us.

NORMAN R. ELLIS

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# *Preface*

The emphasis on habilitation of the mentally retarded in the last few years had led to a substantial increase in the amount of research devoted to training adaptive skills and reducing inappropriate behavior in this population. Behavior modification procedures have been the primary basis for these attempts to improve the independence and quality of life of the mentally retarded. These procedures have been successful in achieving behavioral changes when applied appropriately for a broad range of skills, including such diverse behaviors as toilet training and interpersonal behavior.

As in many other areas of scientific endeavor, there has been an information explosion in this field, making it difficult for the practitioner to stay abreast of the literature. The goal of this volume is to provide reviews of the major topics addressed in behavior modification research with the mentally retarded to date. Chapters are based on specific types of behavior that have been treated. They are presented in a roughly developmental sequence to give a more systematic presentation.

Chapter authors have considerable clinical and research experience with the mentally retarded. As a result, they are fully cognizant of the problems facing the practitioner in this area. We feel that the analysis of what treatments work best under different conditions is aptly made by the various authors. Also, and perhaps more important, they have pointed out the limitations of the procedures currently available. Certainly behavior modification is not a panacea for the habilitation of the mentally retarded. However, these methods have proven utility. Thus, it is hoped that this book will be of value to those who are currently involved in research, treatment, and administration at some level of applied work.

No attempt is made to resolve broad general issues regarding the degree of trainability of the severely retarded, the viability of the concept of normalization, or our interpretation of it. These concepts are certainly important and

impact strongly on the behavior modification treatments that are used. It is our position that these and related questions are subject to empirical and legal resolutions that fall outside the purview of a discussion of behavior modification technology. Rather, it is our hope that the reader will benefit from the technical information presented in this volume with respect to the current state of behavior modification procedures for treating the mentally retarded.

JOHNNY L. MATSON  
JOHN R. MCCARTNEY



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# 1 Behavior Modification Research with the Mentally Retarded Treatment and Research Perspectives

THOMAS L. WHITMAN AND JOHN W. SCIBAK

## INTRODUCTION

Within modern times, there has been considerable variation in society's attitudes toward mentally retarded individuals, particularly with reference to their educability and curability. At one extreme mentally retarded persons have been viewed as having an incurable condition, and at the other extreme they have been seen as possessing a normal learning potential capable of realization in a proper educational environment. In general, those emphasizing an organic condition have been more pessimistic concerning its remediation, and those who have maintained that mental retardation is caused by environmental factors have been proponents of active habilitation programs.

Historically, these contrasting positions were documented by Jena Itard in his extensive case history, *The Wild Boy of Aveyron*. According to Itard, the wild boy, about 11 or 12 years old, had for a number of years been seen wandering about in the countryside in France. At the time of his capture in 1799, his behavior was more animal-like than human. He neither spoke nor responded to verbal inquiry or instruction, showed no ability to function in a social environment, was alternately shy and aggressive in his behavior, and was seen as "indifferent to everything and attentive to nothing" (p.4). After his capture the boy was seen by Philippe Pinel, often referred to as the father of modern psychiatry, who declared him to be incurably affected with

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