

Rule-Governed Behavior

Cognition, Contingencies,
and Instructional Control

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Edited by

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Plenum Press • New York and London

Library of Congress Cataloging in Publication Data

Rule-governed behavior: cognition, contingencies, and instructional control / edited by Steven C. Hayes.

p. cm.

Includes bibliographies and index.

ISBN 978-1-4757-0449-5

ISBN 978-1-4757-0447-1 (eBook)

DOI 10.1007/978-1-4757-0447-1

1. Verbal behavior. 2. Behavioral assessment. I. Hayes, Steven C.

BF455.R844 1989

89-35845

153—dc20

CIP

© 1989 Plenum Press, New York

Softcover reprint of the hardcover 1st edition 1989

A Division of Plenum Publishing Corporation

233 Spring Street, New York, N.Y. 10013

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**To the memory of Aaron J. Brownstein
One of the best we had to offer**

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Preface

Animal learning and human learning traditions have been distinguishable within psychology since the start of the discipline and are to this day. The human learning wing was interested in the development of psychological functions in human organisms and proceeded directly to their examination. The animal learning wing was not distinguished by a corresponding interest in animal behavior *per se*. Rather, the animal learners studied animal behavior in order to identify principles of behavior of relevance to humans as well as other organisms. The two traditions, in other words, did not differ so much on goals as on strategies.

It is not by accident that so many techniques of modern applied psychology have emerged from the animal laboratory. That was one of the ultimate purposes of this work from the very beginning. The envisioned extension to humans was not just technological, however. Many animal researchers, B. F. Skinner most prominently among them, recognized that direct basic research with humans might ultimately be needed in certain areas but that it was wise first to build a strong foundation in the controlled environment of the animal laboratory. In a sense, animal learning was always in part a human research program in development.

Modern-day cognitive psychology is the major current heir to the human learning tradition—a tradition that has grown noticeably in strength over the last two decades. Conversely, animal learning has weakened noticeably and has split into several small groups. Some of these groups really *are* interested primarily in animal behavior, not learning processes that might be relevant to humans. Some are still true to the original vision.

One of the major modern heirs of the animal *learning* tradition is behavior analysis. Applied work with humans was always an emphasis of behavior analysis and is a major source of its current strength but not basic human research. Just within the last decade, however, behavior analysis has apparently reached a point where direct basic research on human action is possible, respectable, and most significantly of all, thought to be of fundamental importance. Over the last decade human experimental research in this group has increased several-fold. Dozens of behavioral laboratories across the country have begun to emphasize basic human research.

The biggest intellectual reason for the change is this: The experimental analysis of verbal functions is now on the agenda. For that topic, direct human work seems needed, and it has proceeded. The work has focused in particular on the impact of verbal stimuli on human reactions to environmental contingencies. It has included basic work on stimulus class formation in human beings: stimulus equivalence, exclusion, and related phenomena.

The rubric for much of this work has been an interest in rule-governed behavior. Rule-governed behavior in this sense does not refer to general strategies of performance that can be stated in rule form. Rather, it is behavior that is directly impacted by verbal formulae. What that means, how to conceptualize it, how to study it, how it fits in with other psychological processes, what it means for clinical interventions with adult humans—these are the topics dealt with in this volume.

1. DESCRIPTION OF THE VOLUME

The present volume spans a wide variety of topics and perspectives. The book starts with Hayne Reese's scholarly analysis of rules as understood by behavioral and cognitive perspectives. Hayne is one of those rare psychologists respected by both groups and with a deep understanding of both perspectives. His chapter places the current volume in the larger intellectual context of contemporary psychology.

A chapter by B. F. Skinner follows. Skinner's distinction between contingency-shaped and rule-governed behavior has vitalized much of the work in this book. His chapter analyzes the effect of verbal stimuli on listeners as a general context for rule-governance.

Margaret Vaughan's chapter summarizes the history of the concept of rule-governance within the behavioral community, both theoretically and empirically. She shows how the contingency-shaped/rule-governed distinction emerged from a historical context and developed in response developments within psychology. She also reviews some of the kinds of research that have emerged in the attempt to analyze rule-governance.

The team of Charles Catania, Eliot Shimoff, and Byron Matthews has done some of the more important work on rule-governed behavior within the behavior analytic community. Their chapter is an excellent example of research strategies being used to assess the nature and impact of rules.

The first four chapters, then, give a view of current behavioral theory and research on rule-governance and place this work into a larger historical and intellectual context. The four chapters that follow are more speculative and theoretical.

The chapter by Linda Hayes and me attempts to relate the literature on stimulus equivalence and related phenomena to the nature and function of ver-

bal stimuli. An analysis is developed of the verbal action of the listener and of rule-governance that leads in turn to a different view of verbal behavior itself.

The chapter by Robert Zettle, Irwin Rosenfarb, and me extends the issue of rule understanding to rule-following. In particular, it focuses on the listener's motivation to follow a rule and develops a contingency analysis of rule-following.

The chapter by Philip Hines and Barbara Wanchisen deals in detail with cognitivist and behaviorist interpretations of rules. Not simply a summary of differences, the chapter identifies areas of contemporary cognitive psychology of relevance to rule-governance and areas of overlap between behavioral and cognitive accounts.

Richard Malott analyzes the relevance of rule-governance to behavior with delayed or improbable consequences. His account relies heavily on principles of self-control to explain the effects of rules.

The final two chapters deal with the implications of rule-governance for applied psychology. Roger Poppen shows how the concept can help make sense of existing research in cognitive therapy and the theories that underlie it. A final chapter by Barbara Kohlenberg, Susan Melancon, and me shows how research on rule-governance and stimulus equivalence can be the basis for a variety of new clinical procedures that have as their basis avoiding or altering rule-control. The chapter also argues that contemporary behavior therapy does not always fit very well with much of what we have learned about verbal control in humans.

2. THE ROAD AHEAD

The book does not so much present answers as show a wing of psychology in the middle of an attempt to properly frame the question. The attempt involves difficulties and challenges: philosophical, conceptual, methodological, and empirical. Work on all of these areas is proceeding simultaneously but at times unevenly. There is a sense of vigor and excitement to the area, but there is also much to be humble about. Many of the analyses are tentative and uncertain. Human research in behavior analysis is walking a fine line between a complete break with its past on the one side or a collapse into conventionality on the other.

The former result would be of no use to anyone. There are many other honorable legacies at work in psychology. Whatever value they bring to the field is already there. The animal learning tradition must maintain a contact with its past as it confronts human learning issues to have anything unique to contribute. The work in this volume reveals that contact in the embrace of functionalistic, monistic, contextualistic, and pragmatic analyses of human organisms. Although it is difficult at times to connect across the chasm of re-

search paradigms, the qualities reflected in the work in this volume could be of value to cognitive psychologists and others interested in a basic analysis of human functioning—precisely because it is a bit different.

The latter reaction is also unhelpful. The very reason for the growth of human research in behavior analysis is that researchers have come to the conclusion that there may be something of fundamental importance—something new—to be found there. A reversion to conventionality is a direct challenge to this perception and literally cuts the heart out of the work. Basic research on human functioning cannot be driven by an attempt to show that human learning is no different than animal learning. Given such a belief, there is no *basic* need to study humans at all. Human research would then be only of applied interest.

But a basic analysis *is* needed. We have a great deal to learn about human functioning. Particularly when it comes to verbal interactions, additional psychological processes seem to be involved. It is the task of psychology to determine if that is the case, and if so, to understand those processes. Doing so does not require that we abandon hard-won knowledge—but it does require that we be open to what we may find.

Steven C. Hayes

Lake Tahoe, Nevada

Contents

I. THE NATURE AND PLACE OF BEHAVIORAL ANALYSES OF RULE-GOVERNED BEHAVIOR

1. Rules and Rule-Governance: Cognitive and Behavioristic Views

HAYNE W. REESE

1. Introduction	3
2. Why Study Rules?	4
3. The Information-Processing Approach to Rules	4
3.1. Essence of the Approach	5
3.2. "Levels" of Cognitive Models	10
3.3. Productions and Production Systems	13
3.4. Evaluation of Cognitive Theories	22
4. Meanings of "Rule"	27
4.1. Forms of Rules	27
4.2. Knowing Rules	32
5. Rules as Causes	34
5.1. Why Obey Rules?	35
5.2. What Is Controlled?	36
5.3. Are Rule-Governance and Contingency Shaping Different?	38
6. Inferring Rule Use	41
6.1. Inferences and Observations	42
6.2. Criteria for Inferring Rule Use	50
6.3. Spontaneously Learned Rules	66
7. Summary	73
8. References	74

2. The Behavior of the Listener

B. F. SKINNER

1. Introduction	85
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- 2. The Verbal Operant 86
- 3. Effects on the Listener 87
 - 3.1. The Listener Is Told 87
 - 3.2. The Listener Is Taught 89
 - 3.3. The Listener Is Advised 89
 - 3.4. The Listener Is Rule-Directed 90
 - 3.5. The Listener Is Law Governed 92
 - 3.6. The Listener Is Governed by the Laws of Science 92
 - 3.7. The Listener as Reader 93
 - 3.8. The Listener Agrees 94
 - 3.9. The Listener and Speaker Think 95
- 4. References 96

- 3. Rule-Governed Behavior in Behavior Analysis: A Theoretical and Experimental History
MARGARET VAUGHAN
 - 1. Introduction 97
 - 2. A Theoretical History of Rule-Governed Behavior 100
 - 2.1. Rule-Governed Behavior: Its Roots in the Analysis of Verbal Behavior 100
 - 2.2. Rule-Governed Behavior: An Elaboration of Its Practical Significance 103
 - 2.3. Rule-Governed Behavior: A Further Elaboration in Light of the Emerging Psychology of Cognition. 104
 - 3. An Experimental History of Rule-Governed Behavior 107
 - 3.1. Rule-Governed Behavior: Schedule-Sensitivity Research ... 108
 - 3.2. Rule-Governed Behavior: Developmental Research 111
 - 3.3. Rule-Governed Behavior: Stimulus-Equivalence Research .. 112
 - 4. Conclusion 114
 - 5. References 115

- 4. An Experimental Analysis of Rule-Governed Behavior
A. CHARLES CATANIA, ELIOT SHIMOFF, AND BYRON A. MATTHEWS
 - 1. Introduction 119
 - 2. Contingencies and Rules 120
 - 2.1. Descriptions of Performances and of Contingencies 122
 - 3. Experiment 1: Sampling Performance Hypotheses 124
 - 3.1. Method 125
 - 3.2. Results 127
 - 3.3. Discussion 130

4. Experiment 2: Instructing Accurate Performance Hypotheses	130
4.1. Method	131
4.2. Results	132
4.3. Discussion	135
5. Experiment 3: Instructing Inaccurate Performance Hypotheses . .	135
5.1. Method	135
5.2. Results	136
5.3. Discussion	137
6. Experiment 4: Instructing Schedule Discriminations	138
6.1. Method	138
6.2. Results	140
6.3. Discussion	142
7. Experiment 5: Assessing Sensitivity to Contingencies	143
7.1. Method	143
7.2. Results	144
8. General Discussion	146
9. References	149

II. THE NEW DIRECTIONS IN THE ANALYSIS OF RULE-GOVERNED BEHAVIOR

5. The Verbal Action of the Listener as a Basis for Rule-Governance

STEVEN C. HAYES AND LINDA J. HAYES

1. Introduction	153
2. Experimental Problems Caused by the Deemphasis of the Listener	154
2.1. Is the Analysis of the Listener More Difficult?	155
3. The Listener at the Back Door	158
4. What Is a Verbal Stimulus?	160
4.1. Verbal Stimuli as Products of Verbal Behavior	160
4.2. Verbal Stimulus Functions	161
4.3. Explanations for Stimulus Equivalence	164
4.4. A Relational Account of Verbal Stimulation	166
5. Meaning and Rule-Governance	177
5.1. Speaking with Meaning	177
5.2. Listening with Understanding	178
5.3. Understanding a Rule	179
5.4. Following a Rule	180
6. Verbal Behavior	182
6.1. Why Would Verbal Stimulation Make a Difference?	183

7. Conclusion	187
8. References	188
6. Rule-Following	
STEVEN C. HAYES, ROBERT D. ZETTLER, AND IRWIN ROSENFARB	
1. Introduction	191
2. The Impact of Rule-Following on Other Psychological Processes.	191
2.1. The Early Period	192
2.2. The Period of Stagnation	194
2.3. The Modern Era of Human Operant Research	195
2.4. Theoretical Analysis of Verbal Control	197
3. Understanding	198
3.1. How Can We Assess Understanding?	199
4. Rule-Following	202
4.1. Functional Units of Rule-Following	203
4.2. Rules as Rules for the Listener	208
4.3. Evidence for the Pliance-Tracking Distinction	209
5. Dangers Ahead in the Analysis of Rule-Governed Behavior	215
5.1. Insensitivity	215
5.2. Object-Oriented Accounts	216
6. Future Directions	217
7. Conclusion	217
8. References	218
7. Correlated Hypothesizing and the Distinction between Contingency-Shaped and Rule-Governed Behavior	
PHILIP N. HINELINE AND BARBARA A. WANCHISEN	
1. Introduction	221
2. Nonmediational versus Meditational, rather than Behaviorist versus Cognitivist	222
2.1. Preliminary Sketch of Behaviorist Positions	222
2.2. Preliminary Sketch of Cognitivist Positions	225
3. Selected Concepts from Behavior-Analytic Theory	226
3.1. Open-Loop Relations	227
3.2. Closed-Loop Relations	228
3.3. Paths Not Taken Here	232
3.4. Elaborated Discriminative Relations	233
3.5. The Origins of Awareness in Behavior-Analytic Terms	235
3.6. Rules and Rule-Governed Behavior	237
3.7. Rules as Defined by Dual, Converging Sets of Contingencies	238

- 4. Characteristics of Cognitivist Interpretation 238
 - 4.1. Basic Assumptions of Cognitivist Theory 239
 - 4.2. Some Major Distinctions within Cognitivist Theory 239
 - 4.3. Unconscious Functioning, According to Cognitivist Theory 241
 - 4.4. Rules in Cognitivist Theory 242
 - 4.5. Cognitivist Assumptions in Criticisms of Behaviorist Accounts 243
- 5. Conflicting Interpretations of Conditioning Experiments 246
 - 5.1. A Cognitivist Proposal: Awareness through Correlated Hypothesizing 246
 - 5.2. Behavioral Experiments Minimizing the Role of Awareness 248
 - 5.3. The Continuing Dispute about Awareness 250
- 6. Correlated Hypotheses as Functional Operants? 251
 - 6.1. Multiple Scales of Analysis 253
 - 6.2. Multiple Converging Relationships: Verbal Behavior, Including Rules 255
- 7. Detailed Comparison of These Cognitivist and Behaviorist Accounts 257
 - 7.1. Summary of the Cognitivist Account 257
 - 7.2. Summary of the Behaviorist Account 258
 - 7.3. Intersection of the Two Accounts 259
- 8. Additional Experimental Techniques Addressing Hypotheses and Rules 260
- 9. Converging but Distinct Interpretations 262
- 10. References 263

8. The Achievement of Evasive Goals: Control by Rules Describing Contingencies That Are Not Direct Acting

RICHARD W. MALOTT

- 1. Introduction 269
- 2. Contingencies That Are Not Direct Acting 270
- 3. Delayed Outcomes 270
 - 3.1. Human Behavior 271
 - 3.2. Basic Research 276
 - 3.3. The Natural Environment 279
 - 3.4. Rule-Control 282
- 4. Improbable Outcomes 283
 - 4.1. Basic Research 283
 - 4.2. The Natural Environment 284

- 4.3. Human Behavior 285
- 4.4. Rule-Control 285
- 5. Cumulating Outcomes 286
 - 5.1. Human Behavior 286
 - 5.2. Basic Research 287
 - 5.3. The Natural Environment 288
 - 5.4. Rule-Control 289
- 6. Rules Specifying Contingencies That Are Not Direct Acting 289
 - 6.1. How Do Rules Control Behavior? 289
 - 6.2. Prerequisites for Control by Rules Specifying Contingencies That Are Not Direct Acting 302
 - 6.3. How Do Contingencies That Are Not Direct Acting Control Behavior? 307
- 7. Other Approaches to Self-Management and Rule-Governed Behavior 315
 - 7.1. Environmental Restructuring 315
 - 7.2. Human Operant Research 316
 - 7.3. Animal Operant Research 316
 - 7.4. Public Goal Setting 317
- 8. Concluding Remarks 318
- 9. References 319

III. APPLIED IMPLICATIONS OF RULE-GOVERNANCE

9. Some Clinical Implications of Rule-Governed Behavior

ROGER L. POPPEN

- 1. Introduction 325
- 2. The Problem of History 327
- 3. A Behavioral Taxonomy 330
 - 3.1. Four Modalities of Behavior 331
 - 3.2. Causality 332
 - 3.3. Summary 333
- 4. Rule-Governed Behavior 335
 - 4.1. Some Examples of Rules 337
 - 4.2. Self-Rule-Governed Behavior 339
- 5. Rational-Emotive Therapy 341
 - 5.1. Irrational Beliefs as Rules 343
 - 5.2. Changing Rules 344
 - 5.3. Changing Behavior 345
- 6. Self-Efficacy Theory 347
 - 6.1. A Behavior Chain 347

6.2. Behavior Change	350
6.3. Discussion	353
7. Conclusions	354
8. References	355
10. Avoiding and Altering Rule-Control as a Strategy of Clinical Intervention	
STEVEN C. HAYES, BARBARA S. KOHLENBERG, AND SUSAN M. MELANCON	
1. Introduction	359
1.1. Types of Problems in Rule-Control	359
2. Avoiding Rule-Control: The Strategy of Direct Shaping	362
2.1. Social Skills Training	362
2.2. Functional Analytic Psychotherapy	366
3. Alteration of Rule-Control: The Strategy of Recontextualization .	372
3.1. Behavior–Behavior Relations	372
3.2. Contexts Relevant to Pathological Self-Rule Control	373
3.3. The Problem and the Solution	374
3.4. Evidence of Efficacy	383
4. Conclusion	384
5. References	384
Index	387