Functional Behavioral Assessment, Diagnosis, and Treatment
Ennio Cipani, PhD, is a licensed psychologist in California since 1983. He has been doing in-home and in-school behavioral consultation for children with problem behaviors for four decades. Dr. Cipani has published numerous articles, chapters, books, and software in the areas of child behavior management and parent and teacher behavioral consultation. He coauthored *Behavioral Classification System for Problem Behaviors in Schools: A Diagnostic Manual* (Springer Publishing, 2017).
This is a sample from Functional Behavioral Assessment, Diagnosis, and Treatment: A Complete System for Education and Mental Health Settings, Third Edition

Copyright © 2018 Springer Publishing Company, LLC

All rights reserved.

No part of this publication may be reproduced, stored in a retrieval system, or transmitted in any form or by any means, electronic, mechanical, photocopying, recording, or otherwise, without the prior permission of Springer Publishing Company, LLC, or authorization through payment of the appropriate fees to the Copyright Clearance Center, Inc., 222 Rosewood Drive, Danvers, MA 01923, 978-750-8400, fax 978-646-8600, info@copyright.com or on the Web at www.copyright.com.

Springer Publishing Company, LLC
11 West 42nd Street
New York, NY 10036
www.springerpub.com

Acquisitions Editor: Debra Riegert
Composer: diacriTech


Instructor’s Materials: Qualified instructors may request supplements by emailing textbook@springerpub.com:
Instructor’s Resources ISBN: 978-0-8261-0-6999-0

Student Supplements are available from Springerpub.com/fbadt
Student Resources ISBN: 978-0-8261-6998-3

17 18 19 20 21 / 5 4 3 2 1

The author and the publisher of this Work have made every effort to use sources believed to be reliable to provide information that is accurate and compatible with the standards generally accepted at the time of publication. The author and publisher shall not be liable for any special, consequential, or exemplary damages resulting, in whole or in part, from the readers’ use of, or reliance on, the information contained in this book. The publisher has no responsibility for the persistence or accuracy of URLs for external or third-party Internet websites referred to in this publication and does not guarantee that any content on such websites is, or will remain, accurate or appropriate.

Library of Congress Cataloging-in-Publication Data
Names: Cipani, Ennio, author.
Title: Functional behavioral assessment, diagnosis, and treatment : a
complete system for education and mental health settings / Ennio Cipani.
Description: Third edition. | New York, NY : Springer Publishing Company,
LLC, [2018] | Includes bibliographical references and index.
Subjects: I MESH: Behavior Therapy—methods | Personality Assessment | Mental
Disorders—diagnosis | Mental Disorders—therapy | Clinical Protocols
Classification: LCC LB1060.2 | NLM WM 425 | DDC 370.15/28—dc23 LC record available at https://lccn.loc.gov/2017013589

Contact us to receive discount rates on bulk purchases.
We can also customize our books to meet your needs.
For more information please contact: sales@springerpub.com

Printed in the United States of America by McNaughton & Gunn.
Contents

Directions for Acquiring Online Instructor's Material vii
Preface ix
Acknowledgments xvii
Share Functional Behavioral Assessment, Diagnosis, and Treatment: A Complete System for Education and Mental Health Settings, Third Edition

1. Basic Concepts and Principles 1
2. Functional Behavioral Assessment of Problem Behavior 35
3. The Cipani Behavioral Classification System 91
4. Function-Derived Treatment Options 139
5. Functional Behavioral Treatment Protocols for SMA 2.0: Target Behaviors 185
6. Functional Behavioral Treatment Protocols for SME 4.0: Problem Behaviors 255

Appendix A: Cipani EO School Behavioral Interview Form 311
Appendix B: Why Artie Can't Learn 315
Index 321
Directions for Acquiring Online Instructor’s Material

This online instructor’s manual is available for qualified faculty who use this book as an adopted text for their course. Instructors can send an e-mail to textbook@springerpub.com to request access to these useful materials.

The online instructor’s manual includes the following:

- A pool of chapter test items (multiple-choice and true/false items) that are separated into areas of content within each chapter (e.g., items measuring student’s comprehension of analogue assessment methods)
- Measurement items (short answer) for determining student competency with each chapter objective
- A narrated PowerPoint presentation detailing the supplemental materials and suggestions for use
- “Modularized” chapter PowerPoint slide presentations with group assignments (called active student responses or ASRs) within each module section
- Course Syllabus Builder: provides word files that can be copied and pasted to develop many of the components required in a course syllabus, such as:
  - Brief descriptions of each chapter
  - Chapter topics
  - Chapter objectives and BACB task lists for each chapter
  - Discussion questions
  - A gradebook
  - Assignment details and rubrics for scoring (including signature assignment mentioned in Preface)
- “What to Read if You Used the Second Edition,” a conversion guide that identifies the differences between the second and third editions.
Purpose of This Book

This book provides a comprehensive approach to designing behavioral treatments for children in homes and residential facilities, students in special and general education settings, and adults residing in inpatient units and facilities. Providing effective behavioral treatment strategies in these settings requires an understanding of the problem behavior’s environmental function. A comprehensive approach to a behavior-analytic model involves the following: (a) conducting a functional behavioral assessment (FBA), (b) selecting a function-based hypothesis or classification of the problem, and (c) designing a function-based behavioral intervention or treatment. In regard to the hypothesis or classification activity, the forthcoming content of this text features the Cipani Behavioral Classification System (BCS). The Cipani BCS is a pioneering and groundbreaking taxonomy for classifying the functions of problem behaviors (Cipani & Cipani, 2017; Cipani & Schock, 2007, 2011). Codification of problem behaviors on the basis of the form of behavior or clusters of behaviors is the prevalent model in education and human services. But such a taxonomy is both insufficient and immaterial for a functional behavioral treatment approach. To provide treatment related to the problem behavior’s contextual factors, a classification system must provide a framework for classifying behavioral phenomena that represent the same or similar environmental context factors. The Cipani BCS does so! Additionally, the same pragmatic model needs to be existent for behaviors that should be strengthened in the individual client or student’s repertoire. This text also provides a revolutionary classification system for determining the strength of replacement behaviors and functions: The Cipani Diagnostic Classification System for Replacement Functions.

How is a functional approach different from merely prescribing treatment based on the form of behavior? Let us say we have identified the following target behaviors for a student in a special education class for behavior disorders: aggressive behavior, noncompliance, and tantrum behaviors. Suppose behavioral assessment data reveal that all these behaviors occur when the student is asked to read a passage aloud. The child may initially refuse to read when called upon. The child’s refusal to read is unsuccessful, as the teacher moves closer to the child to “coax” him or her, the child then throws a tantrum. As the child finds the tantrum doesn’t work, he or she does find that the teacher becomes more coercive. Finally, the student gets out of his or her seat and issues profanities about the assignment. By understanding that all these behaviors have the same environmental function, a functional treatment can address them as a response class. Further, one may be able to determine why such a task generates escape behavior with this child.

In the 21st century, selecting effective treatment for specific individual problem behaviors requires a greater understanding of the environmental function of problem behavior. This book addresses that need for a variety of potential users of behavioral technology. At the
heart of this approach there are three sequential phases: (a) an FBA, (b) a function-based
diagnostic classification of problem behavior, that is, Cipani BCS, and (c) a designation of a
functional behavior-analytic treatment with consideration and analysis of the strength of the
designated replacement function.

We take the position that a complete understanding of a behavioral function is necessary
to conduct FBAs, diagnose the putative function via a classification system, and prescribe
a function-based treatment. It is not simply enough for a text to offer boilerplate forms for
use. One must ensure that an underpinning theoretical framework is offered and understood
by the user as a prerequisite for utilizing provided fill-in-the-blank forms. It is to this end
that this text provides a comprehensive discussion of basic concepts of the environmental
function of behavior, prior to the chapters that detail assessment and treatment procedures.

This functional approach is suited for cases in which the problem behaviors are primarily
operant in nature. The rate of operant behaviors is determined by their consequences. In
some cases, referred problems may be respondent in nature (e.g., crying due to extreme
physical pain; see Bailey & Pyles, 1989, for greater delineation of these factors). In these
cases, this classification system is not applicable because the behavior may not be a function
of any desired consequence (on the part of the client). Under these circumstances, it might
be advisable to consult with a professional who may have experience with such problems.

Audience

Textbook Market

This book can serve as a primary text for university graduate training programs in applied
behavior analysis (ABA). Such programs may have a sequence of courses approved as
meeting the Board Certified Behavior Analyst (BCBA) task list requirement by the Behavior
Analysis Certification Board (BACB). This text is of great utility in such ABA programs as
it can be used in several different courses. Several chapters address assessment concerns
that would fit into courses involving behavioral functional assessment. Several of the later
chapters in the text that focus on functional treatment would be appropriate for courses
covering application and intervention. The task lists objectives that are addressed by each
chapter are delineated in the front part of the Chapters 1 through 4.

This third edition has undergone changes and revisions that would make it more
user-friendly for preservice programs that are not necessarily BCBA-approved track
programs. Graduate programs in school psychology and special education can also use
this material as an adopted text requirement for several courses. Again, because of the
nature of this text covering both assessment and intervention, it can be used in multiple
courses in school psychology: behavioral assessment, emotional behavioral assessment, and
school consultation. Special education programs also share courses that deal with school
consultation, as well as courses covering behavior management and methods courses that
deal with behavioral intervention. Both sets of courses would find this text appropriate as a
required text for their course objectives. Chapter 3 of this current text could be supplemented
with several classes covering the diagnostic manual material of the Cipani BCS (Cipani &
Cipani, 2017).

Practitioner Market

This book is also intended for applied personnel who design behavioral programs for persons
with challenging behaviors in a variety of settings, such as individual homes or group
residences; public or private facilities; schools; hospital, community, or clinic settings; and
inpatient settings. This book should be helpful to people who are trained in ABA and are
looking for an additional resource to guide them in their assessment and treatment-design
activities. It is written also to serve personnel who have some familiarity with behavioral
programs but have not discerned how to provide a functional behavioral treatment for
specific functions of target problem behavior. The following clinical and educational practice
areas are particularly pertinent for personnel with some familiarity regarding FBA and positive behavioral intervention.

**School Personnel Working With Special Needs Student.** The use of behavioral technology, involving assessment and treatment activities, has proliferated in school settings in the last several decades. The explosion in utilization was the result of the 1997 Federal Individuals With Disabilities Education Act statute and promulgated regulations. This law required FBAs and positive behavioral interventions for students with challenging behaviors who are served in some capacity in special education via an Individual Education Plan. As a result, school psychologists and others are tasked with conducting an FBA if certain behavioral criteria are met for a given student. Teachers are subsequently tasked with data collection efforts during the assessment phase. They also have a primary responsibility in implementing any prescribed behavioral intervention to address the challenging behaviors in the student's school settings.

**Personnel Who Work in Inpatient Units and Residential Facilities.** The use of behavior-analytic treatments is finding its way into inpatient units, residential facilities, and community settings for persons with severe mental illness, developmental disabilities, and sustained brain injury. Although there is no federal or state imperative requiring an FBA or functional behavioral intervention plan in these settings, simply designing arbitrary contingency interventions can lead to ineffective treatment or worse, disastrous treatment. Mental health providers in these settings who determine what the function of presenting problem behaviors serve will be more capable in ameliorating behavior problems. The client's possible reintegration into mainstream settings will hinge on such progress.

**Personnel Who Provide Parent Training/Consultation.** Parent training and consultation, from a behavioral framework, has been verified as an efficacious treatment for child problems in home settings. Psychologists, psychiatrists, nurses, and other mental health providers should be providing technical behavioral assistance to parents who need specific help for problem behaviors. This book provides such professionals with a resource for designing individualized functional behavioral treatment programs.

**Overview of Material**

This book is now divided into six chapters, which is a change from the prior two editions. Due to the increasing length of material covered in Chapter 5 in previous editions, the material has now been separated into two chapters: Chapter 5 covers access functions and Chapter 6 covers protocols and illustrations of escape functions.

In Chapter 1, material will be presented that will allow the reader to acquire the basics of an ABA approach to understanding human behavior. This edition provides an analysis of the role of establishing operations (EO) and abolishing operations (AO) in the section of the first chapter titled "What Makes a Reinforcer a Reinforcer?" It has added material in this section to enhance a basic understanding of EOs and AOs as the "driving force" of any operant behavioral function. This third edition also has pulled out some of the theoretical material on unconditioned and conditioned EOs and AOs from the written text. Also, a section discussing the nature of contrived contingencies and their relation to behavioral function is presented at the end of Chapter 1. Understanding why contrived contingencies may work is important for behavior analysts who intervene at a group level, not just at an individual case level.

Chapter 2 allows the user to develop skills in collecting the requisite behavioral data needed for an FBA. Each step of data collection is detailed with multiple examples of hypothetical data provided for the reader. The analysis of EO variables in all the assessment methods is delineated in this third edition. All the same methods of functional assessment from the prior edition are clearly delineated in this edition as well. A useful addition for practice in this third edition involving a newly developed methodology for conducting a
behavioral interview is presented: The Cipani EO School Behavioral Interview Form. This interview form will be particularly useful for practitioners as a starting point for discerning the problem areas and their antecedent and consequent factors. A form for ready use can be found in the relevant Appendix, with permission granted contingent on the appropriate reference credit given to this rating system in any report.

While this book provides content on FBA, not all applied problems in clinical settings require only an individual analysis of behavioral function. It can often be the case that problem behaviors are generated by the systemic contingencies that are misdirected. The last part of Chapter 2 involves a presentation of an ecosystemic assessment within classrooms to determine if classroom contingencies might be at the heart of a referred student’s problem behavior. By conducting such an assessment, the behavior analyst might uncover systemic contingencies that do not facilitate student or client performance, which allow other contingencies that detract from such to flourish. For example, in a classroom, one might find that a system that provides powerful reinforcers for academic performance is lacking. The installation of such a class-wide reinforcement system across the group would significantly alter performance problems in the target student and others.

Chapter 3 covers the four major categories of the Cipani Behavioral Classification System, a unique function-based, diagnostic classification system for problem behavior. This system provides a distinctive numbering system for delineating major diagnostic categories as well as subcategories within each major category. There are many illustrative real-life examples from my own experience and the experience of my former coauthor, Keven Schock, as well as hypothetical examples, which are drawn again from our decades of clinical experience.

Chapter 4 covers the identification of the replacement behavior and the delineation of a number of replacement function options for each major function. It provides multiple examples of how each differential reinforcement strategy is used for the particular major function. This edition also introduces the concept of a replacement function. Some of the treatment options cannot be defined as a behavior (e.g., tolerance training). This change in nomenclature allows for a more encompassing term to fit such phenomena.

Chapter 4 also presents a method for evaluating potential extinction bursts and their severity and length via a trigger analysis. The Cipani Diagnostic Classification System of Replacement Function, a unique, three-category classification system for determining the current strength of the replacement behavior(s), is presented at the end of Chapter 4. This section includes a presentation of the behavioral criteria for each classification. It also provides analogue experimental tests to determine whether a misdirected contingency diagnosis or inept repertoire diagnosis best explains why the replacement behavior/function is at low or nonexistent levels. With permission, Appendix B is taken from the book *Triumphs in Early Autism Treatment* (Cipani, 2008). It provides an analysis of persistent error patterns through the findings of basic research in stimulus overselectivity.

Chapters 5 and 6 provide the same compendium of behavioral treatment protocols as the earlier edition. A hypothetical example taken from the previous chapters is used to illustrate how all the phases are linked in designing a functional treatment. Each functional treatment program follows a uniform format in Chapters 5 and 6. First, we present a brief description of the procedures involved, as well as definitions of terms. Next, we delineate the procedures for collecting baseline data, and we present the procedural components of the treatment. Finally, we present a hypothetical example illustrating the application.

**A Note to Instructors: Third Edition Changes**

There are significant pedagogical changes in this edition to the text and supplemental material to make it more amenable for university-training programs in applied behavior analysis, school psychology, and special education teacher training. Here are some of the changes in this third edition that will enhance student learning of applied skills for teaching faculty.
Chapter Objectives and BACB Tasks Addressed

At the beginning of each chapter, the list of objectives addressed in each chapter appears. This should allow the instructor to match these up with the fourth and fifth editions of the BACB (2013, 2017) task lists tasks addressed in the chapter are provided below the chapter objectives) or other such accrediting agencies’ specifications. Word files of this material as well as other information that may be helpful in building a course syllabus is available to qualified adopters in the password protected instructors resources.

Narrated Lectures and Text-Embedded Assignments

References to related online lecture presentations are embedded in the text and highlighted by this icon, placed in the margin of the page. Such lectures are accessed via Springer Publishing’s website (www.springerpub.com/fbadt) with lectures clearly marked with the name delineated in the text under the icon. The content of the lectures covers additional material as well as applied demonstrations of FBA and functional treatment with diverse clinical and school populations in various settings. The specifics of the assignment are demarcated in the text below the special icon signifying narrated material. The criteria for each assignment are delineated and may serve as rubrics for grading purposes. Chapter 1 has one assignment, Chapter 2 contains three assignments, Chapter 3 has two assignments and Chapter 4 contains three assignments.

Simulation Exercises

A format for classroom exercises that simulate some of the assessment methods (e.g., Chapter 2) in the text is delineated. These practice exercises can be performed in class to facilitate students’ acquisition of actual skill in data collection and the conduct of the designated assessment and its procedures. The specific method for providing the classroom simulation is presented under the caption where indicated. There is also a simulation found in Chapter 1; it provides demonstrations of the four major functions. A simulation exercise in Chapter 4 allows students to observe how to “shape” an alternate behavior involving an appropriate request or protest (termed mand).

Chapter 1

- Type of access or escape function

Chapter 2

- Data Recording
- Trigger analysis of access functions
- Trigger analysis of escape functions
- Analogue assessment

Chapter 4

- The “Yes” game

Discussions

Discussions of the presented content are embedded throughout the text in the first four chapters. This inserted material can be used for class discussions (make sure students bring their texts to class to refresh their memory) or as online discussion threads.

- Chapter 1: 1A–1D
- Chapter 2: 2A–2F
- Chapter 3: 3A–3H
- Chapter 4: 4A–4F
Using Chapters 5 and 6; Signature Assignment

The protocol material in Chapters 5 and 6 allows the reader to view the longitudinal conduct of an FBA, diagnostic classification selection and design, and implementation of functional treatment with hypothetical cases. We recommend that faculty using this book save this chapter for the end of the course, and that the material be used to develop case-presentation skills (possibly the signature assignment). Each student can be assigned (or choose) a given protocol for study and prepare a case presentation in front of the class. In these presentations, the student steps into the “role of the teacher or therapist” of the particular hypothetical case and covers the following in a half-hour to one-hour oral presentation:

- Presenting behavior problem
- Analysis of “why”—hypothesized function of problem behavior and relevant classification category
- Data collection from assessment method used and results
- Functional treatment developed and deployed
- Treatment results
- Summary (why did it work)

In many cases, the graduate students in the course do not have access to students with challenging behavior in which to conduct an actual FBA. Or often, privacy and confidentiality issues, as well as legal issues involving the parents and IEP team's school personnel consent to conduct such an assessment, preclude such an assignment to students. Hence, a signature assignment involving real-life data collection is frequently precluded. In those circumstances, the earlier case presentations are an approximation of the genuine longitudinal process of assessment–classification–treatment personnel conduct with actual students requiring an FBA.

Instructor’s Resources

The password protected online instructor’s resources are available to qualified adopters upon request. Instructors will find the following:

- An extensive slide presentation for each chapter is available. It contains “presentation units” within each chapter that cover a section of the chapter's content in the slide presentation. Each presentation unit is followed by slides that pose questions from both the slide material as well as the text. This facilitates “active student engagement and responding.” The questions are generally short answer. Students can convey their responses to such questions in any number of mediums deemed viable by the instructor (dry erase boards, paper, vocal responses, etc.). It is therefore important that students bring their text to class to be able to address such questions that are derived from the text. This format will also facilitate more active student engagement in the instructor lecture with the PowerPoint slides. If you do not desire such slides they can always be hidden using the tool in the main navigation bar.

- A pool of chapter test items (multiple-choice and true/false items) that are separated into areas of content within each chapter (e.g., items measuring student’s comprehension of analogue assessment methods)

- Measurement items (short answer) for determining student competency with each chapter objective

- A narrated presentation detailing the supplemental materials and suggestions for use

- “Modularized” chapter PowerPoint slide presentations with group answer test items (called active student responses or ASRs) within each module section
Course Syllabus Builder: provides Word files that can be copied and pasted to develop many of the components required in a course syllabus, such as:

- Brief descriptions of each chapter
- Chapter topics
- Chapter objectives and BACB task lists for each chapter
- Assignment details and rubrics for scoring (including signature assignments)

"What to Read if You Used the Second Edition," a conversion guide for current adopters highlighting changes between the second and third editions

Student Resources

Supplemental lecture videos and PowerPoints are available to students to help further clarify key concepts reviewed in the text. Students can access the additional material by visiting http://www.springerpub.com/fbadt.

REFERENCES


I want to thank my co-author of the first and second edition of this text, Keven Schock, BCBA, for his contributions to the previous and current material. The actual cases he presents in this 3rd edition will be denoted via his name. The functional behavioral diagnostic system delineated in this text are an outgrowth of our collective experience in clinical and teaching positions over several decades. An earlier version of this system, called the Cipani Behavioral Assessment and Diagnostic (C-BAD) System, provided us with feedback and input from many behavior analysts who utilized that system in the 1990s. Such feedback improved the basic concepts and instructional content presented in the first edition. In particular, the authors would like to recognize Dr. Heidi Toro of the Florida Department of Children and Families, Dr. Merrill Winston of Professional Crisis Management, Dr. Steve Eversol of Behavior Development Solutions, and Mr. Chris Clay of the Community Re-Entry Program for their valuable suggestions over the years. Our association with them has allowed us to improve our analysis and presentation of the conceptual and methodological model that embodies the current form. Finally, I wish to thank Dr. Jose Martinez-Diaz of the Florida Institute of Technology for making the distinction between motivate variables and discriminative stimuli more clear to me.
Functional Behavioral Assessment of Problem Behavior

Objectives

- Students will be able to delineate the procedures for a performance discrepancy analysis
- Students will be able to measure behavior with any one of several methods: frequency, duration, time sampling, and occurrence/nonoccurrence using the trigger analysis methodology
- Students will be able to use behavioral interviewing techniques to ascertain possible functions of problem behavior
- Students will be able to use scatter plot method to isolate high (and low) rates of problem behavior across the day which appear to be reliable across time
- Students will be able to identify trigger analysis test conditions, including the manipulation of the relevant establishing operation (EO) and use a three-column charting form for describing the EO, behavioral descriptions, and abolishing operation (AO) for the various functions
- Students will be able to identify and discuss the four conditions of the Iwata and colleagues’ methodology (i.e., multiple-EO hypothesis comparison)
- Students will be able to generate an analogue assessment which tests a specific hypothesis regarding function, consisting of two test conditions for different functions (i.e., single-EO hypothesis test)
- Students will be able to identify test requirements for an in-situ hypothesis test for different functions

Chapter 2 Behavior Analysis Certification Board (BACB) Task List

<table>
<thead>
<tr>
<th></th>
<th></th>
</tr>
</thead>
<tbody>
<tr>
<td>G-01 Review records and available data at outset of the case</td>
<td>C-1 Establish operational definitions of behavior.</td>
</tr>
<tr>
<td>G-02 Consider biological/medical variables that may affect the client</td>
<td>C-3 Measure occurrence (e.g., count, frequency, rate, percentage).</td>
</tr>
<tr>
<td></td>
<td>C-4 Measure temporal dimensions of behavior (e.g., duration, latency, interresponse time).</td>
</tr>
</tbody>
</table>

(continued)
This chapter delineates procedures, activities, and instruments that can be used for collecting functional assessment data on target problem behaviors. In addition to determining the baseline rate of occurrence for the target problem behavior(s), one must also collect data that provides evidence for the environmental function of the target behavior. A functional behavioral assessment (FBA) can involve multiple methods for assessing the problem behavior's current function under specific antecedent motivating conditions and discriminative stimuli. This information then leads to the generation of a function-based behavioral classification for the problem behavior (Chapter 3).

DETERMINING THE NEED FOR INTERVENTION

As will be evident, conducting an FBA is a time-consuming effort (as well as a monetary expense). Given this substantial effort, you should make an initial tentative determination as to the possible need for a comprehensive FBA. There may be state regulations that dictate when an FBA for a special needs student in a school system is required. Obviously such regulations and statutes, when codified into law, should be adhered to. With respect to other settings (e.g., residential facilities, inpatient units), a decision as to whether such a comprehensive assessment approach is clinically warranted needs to be made.

In emergency medicine, triage is the stage at which the professional makes a determination as to which patients are in need of immediate consideration and the relative needs of the remaining patients. Prior to extensive data collection activities, you should make a brief screening of the individual case. The following questions in Table 2.1 should help guide you in this phase of the assessment process (Barlow & Hersen, 1984; Kazdin, 1982).

Dangerous behaviors, such as aggression, self-injury, and property destruction, certainly warrant immediate clinical consideration because of their potential to impact the client's (and others') welfare and safety. Here is a case in point. I was a behavioral consultant to
TABLE 2.1 ■ SCREENING QUESTIONS

- Does the individual’s behavior pose a danger to self or others?
- Does the behavior pose a health or safety hazard to the individual client or others?
- Does the behavior affect the client’s welfare in the current environment?
- Does the behavior prevent the individual from accessing less restrictive environments in either the school, home, or community settings?

an adult day treatment program for persons with severe developmental disabilities. One of the clients came in one day with her neck raw from scratching. She had engaged in severe, intense, and lengthy self-abuse to her neck the prior afternoon and evening. I called up the residential facility and inquired what was being done to treat her. The response I received was, “We are taking baseline data.” I replied, “Your baseline has just ended and you better be intervening with her tonight!” The seriousness of this client’s behavior problem warranted immediate clinical attention. I suggested that whatever antecedent condition was producing this intense self-abuse should be halted until an effective plan could be designed. In this case, some effort at controlling the behavior must be considered prior to, or concurrent with, behavioral assessment activities.

Aggressive behavior poses the same immediate concern. If a student with severe intellectual disabilities occasionally bites his fellow classmates, such behavior obviously jeopardizes the welfare of other students in the class. Although it may require some time and effort to develop a comprehensive plan to effectively address this client’s behavior, steps should be taken immediately to ensure the safety of others. Closer vigilance of this student is most important; another temporary solution is reducing this student’s time around the other students. Although these strategies may not constitute the definitive manner in dealing with this situation, they do provide a short-term safety net.

The social significance of changing severe problem behaviors such as self-injury and aggression is obvious. However, the need for intervention goes beyond such drastic conditions. Some presenting problem behaviors are important to address because they prohibit a child or client from accessing a less restrictive educational, residential, or community environment or setting. For example, a young child’s inability to use the toilet independently, although certainly not a life-threatening behavior, may impact that child’s ability to attend a regular preschool program. Many would agree that attending preschool is an important step in developing requisite skills for success in early elementary grade levels. In many cases, young children with disabilities are precluded from entering private preschool programs if they have frequent toileting accidents or are not toilet trained at all. This is not to make a value judgment on such criteria, only to realize that many private preschools have such entrance criteria for all children being considered. As is the case with toileting, the presence of aggressive behavior can have the same impeding impact on a child’s ability to be educated in a more mainstream environment.

There are other behaviors that, when present, often result in some form of segregation of the child or client from environments with same-aged peers. A child who constantly gets out of his or her seat while riding the school bus, in spite of verbal admonishments from the bus driver to sit down, may eventually present a situation that calls for expulsion from the regular school bus. Although many children do occasionally get out of their seats, a child who repeatedly fails to heed the driver’s warning to stay in his or her seat creates a significant management problem. The school transportation personnel may press for alternate transportation arrangements to be made for this child, thus removing the child from this experience with same-aged peers.

Adult clients can also exhibit behaviors that result in their removal and segregation from the mainstream. An adult client with a diagnosed mental illness may be more than adequate at performing the requisite tasks in an employment situation with sufficient support from a job coach. However, the client’s behavior during lunch, breaks, or other social activities often can result in eventual termination of employment. For example, if the client bothers people while on break and such behavior reaches the level of what one person considers sexual harassment, then the client’s job is in jeopardy. The following real-life case scenario is evidence of seemingly innocent behaviors producing disastrous results (Cipani, 2004).
THE CASE OF THE INTIMATE DISCLOSURE

In the early 1990s, we (myself and a behavioral specialist) received a referral for a 21-year-old female, Clarine, with a very unique but problematic behavior. Clarine had mild mental retardation and lived with foster parents subsequent to her being taken out of her father's home (the reason will be apparent in a minute). She was a fairly capable and pleasant individual and could engage in a variety of tasks that would allow her to gain paid employment with some help. At the time of the referral, she was working at a convalescent hospital and was being trained by an agency to gain and maintain that place of employment.

Her work at the hospital seemed to meet everyone’s expectations, but she was to be fired from her job for a reason other than her ability to make a bed. Clarine made friends easily, perhaps too easily. She would initiate a conversation with the patients at the hospital in an appropriate manner (this attention is often a welcome event in these patients’ lives). However, without a moment’s notice, she would begin talking with them as if they had been hired as her psychiatrist or social worker. For example, in mid-conversation, Clarine would provide explicit details about her biological father sexually abusing her (in graphic details) as well as a rape that occurred to her when she was in school. The conversation might start with, “Hi, my name is Clarine. What is your name? How are you doing? Do you like it here? Do you want to hear how my father undressed me and _______?”

The staff person who worked with her had tried many strategies to get her to stop disclosing all the intricacies of her unfortunate past, but to no avail. This staff person must have felt like she was swimming upstream in her attempt to get Clarine to desist. Imagine the reaction you would have if you were a patient in this hospital. Here comes a pleasant individual who wants to converse with you. Your agenda is not entirely filled up on this particular day, so you greet her with a smile. The conversation is pleasant and seems to be going along fine, and then you do a double take, discounting the possibility that you heard ______. Nope, there is nothing wrong with your ears. Your smile turns to a look of apprehension and, finally, distaste. As you might guess, Clarine did not pick up on some subtle cues that your interest had turned to aversion to her story. The patient’s attention was all that mattered, and this was being given in abundance because of Clarine’s remarks about her unfortunate past life.

To complicate matters, this probable attention from patients would make it more difficult to eliminate such a behavior. One could not count on this attention to stop in the near future. It would be improbable to get everyone at her worksite, as well as visitors, to agree to ignore this one worker when she revealed her shocking story. I don’t believe the Americans with Disabilities Act would extend that far in terms of a reasonable accommodation. This situation required that we come up with a strategy that would make it more uncomfortable for her to engage in this behavior and override the social attention it received.

The administrators at the hospital were adamant about her leaving, and they fired her. Luckily, another job at a day care center was procured by her social worker. My behavioral specialist and I felt that it was essential to have a plan in place that would be so powerful that it would make Clarine think twice before launching into her sermon. Prior to Clarine showing up at her new position, my behavioral specialist worked with the foster parents to teach them how to use evening privileges as a consequent event. If Clarine had an incident at work that day, all evening privileges were revoked. She would basically become bored until she went to sleep that night. Tomorrow was another day when she could keep or lose that evening’s privileges.

What would she have to do to lose evening privileges? You guessed it. Each day, the supervisor would meet with Clarine’s staff aide to determine if there had been any incidents of inappropriate conversation. If any incident occurred, this was conveyed to her parents, and privileges were revoked that evening. Conversely, if she kept her conversation appropriate, then she did not lose evening privileges. Additionally, any chores at work that were assigned and not completed due to lack of motivation on her part would also result in her evening privileges being revoked.

Apparently, this consequence struck fear into Clarine. Not one single major incident of inappropriate disclosure occurred at the day care center within the first 2 months. This plan
was effective because it provided a powerful consequence for inappropriate disclosure as well as a reinforcing condition if she did not disclose such facts while at work.

This case is instructive for another reason as well. Sometimes, a punishing consequence has to be used to override the effects of a powerful social reinforcer that the behavior automatically produces because people are people! When some people do or say wacky things, other people stand up and take notice, and laugh and attend. Overriding this built-in reinforcement for intimate disclosures required the foster parents to remove preferred events when such occurred. Although other people may have felt that Clarine needed to talk about this earlier trauma in her life, my position was that its indiscriminate occurrence was not healthy for anyone. Subsequent to the success of this program, I do not see that Clarine’s emotional health suffered because we punished such a disclosure. In fact, Clarine was better for it, and I’m sure the day care center was also happy with the result.

Taken with permission from Punishment on Trial, by E. Cipani, pp. 115–117, e-book in its entirety is available as free download at the APA Division 2, Office of Teaching Resources in Psychology, teachpsych.org/Resources/Documents/otrp/resources/cipani09.pdf (or other Internet sites)

Table 2.2 includes some questions to consider when determining if the problem behaviors are jeopardizing current or future mainstream environments in students and clients. In assessing the impact of the problem behaviors of students in educational settings, consider how such behaviors ameliorate or eliminate the potential to be educated in a less restrictive educational placement. In assessing the impact of the problem behavior in clients living in residential settings, examine how the problem behavior affects their ability to live in more mainstream environments. Once the need for an assessment has been established, a number of activities and data collection efforts should be conducted. The steps in Table 2.3 certainly are not presented as an invariant sequence. Very often, several assessment activities may be undertaken concurrently. Reviewing health and medical records and possibly involving a medical consultation can be done concurrently with pinpointing a problem behavior. Use the steps shown in Table 2.3 to ensure that each step is covered during your behavioral assessment. This assessment phase involves the collection of data and information. The selection of a classification depicting the behavioral function for the problem behavior is left for the diagnosis stage, which will be explicated in Chapter 3. Subsequently, a function-based treatment is designed and implemented following the diagnosis stage (see Chapter 4 for details). Hence, the ordering of these chapters is sequential in terms of the process of assessment, classification, and treatment.
BASELINE MEASUREMENT OF OBSERVABLE PROBLEM BEHAVIORS

In an FBA, the critical first step is to define the presenting problem in discrete, observable behaviors. Very often in clinical and educational settings, client problems are phrased in ambiguous terminology. As an example, consider the following referral for behavior problems in a hypothetical school classroom: "John Smith, a third-grade mainstreamed student with anger issues, is reported by his teacher to be uncontrollable and incorrigible!" This lack of specifics on what constitutes "uncontrollable" or "incorrigible" is all too frequent from persons making referrals for a behavioral assessment.

What is wrong with this type of information? It requires that you get to the bottom of the child's problem by obtaining specifics of the problem behaviors. Unobservable behaviors, personality characteristics, or traits do not constitute the primary criterion for measurement of behaviors in an FBA, even though they make us sound more "clinical" in our conversation. Your first task is to take the unobservable entities often provided by the referral agent and define them into discrete, observable, and measurable behaviors. This is called pinpointing a target behavior. The pinpointing of observable target behaviors can be obtained by one of two methods: (a) behavioral interviewing and (b) direct observation (by you).

Very often, initial data gathering is gained through a behavioral interview of significant others who are directly involved with the client in everyday life. These relevant individuals can be parents, care providers, teachers, facility staff, siblings, and friends or peers (in some cases), depending on the setting or settings in which the problem behavior is occurring. For the present concern, the purpose of behavioral interviewing is to identify observable behaviors that appear to constitute the reason for the referral. Following is a list of behaviors you would have to pinpoint further in observable, measurable terms:

- Hyperactive
- Oppositional
- Lazy
- Uncaring
- Unappreciative
- Disturbed
- Undersocialized
- Emotionally labile
- Forgetful
- Impulsive
- Spiteful
- Aggressive

TABLE 2.3 ■ FIVE STEPS TO COLLECTING FBA DATA

1. Obtain a baseline measurement of observable problem behaviors.
2. Conduct an FBA.
3. Perform a discrepancy analysis.
4. Review previous treatments.
5. Review health and medical records.

FBA, functional behavioral assessment.
Why is it important to pinpoint such terms? Can one conduct an FBA on a child’s hyperactivity? Absolutely not. Ambiguous terms lead to unreliability in recording the frequency of behavior. If the rate of the target behavior cannot be counted on to be accurate (reliable) from one day to the next, how can any other information that is tied to such data be accurate? It cannot!

What happens if you attempt to conduct an FBA of an unobservable vague entity instead of a pinpointed target problem behavior? You get a bumper sticker slogan: Garbage in, garbage out!

One useful technique to utilize in a behavioral interview to pinpoint specific observable behaviors is called the Incident Method. Using the Incident Method, you try to get the interviewee to specify incidents that represent the referred problem or trait being presented. For example, if the referral source indicated that a child was incorrigible, you would ask the referral source to identify previous events or incidents that were representative of the child’s incorrigibility. This often leads to specific observable behaviors and usually identifies the antecedent conditions for the behavior.

As an example, Table 2.4 shows some questions you might pose to help uncover the observable behaviors that constitute the reason for the referral of the child who was uncontrollable and incorrigible. If the person being interviewed still uses unobservable terms when describing the child or client, stop at that point in the conversation and ask the person to describe specifically what the child did or did not do. I often use the phrase “Tell me what I would have seen the child do if I was there.” Eventually, one can get down to specific observable behaviors using this method.

The Incident Method is very useful from the standpoint of time and efficiency. However, in some cases, the Incident Method may not yield the specific observable behaviors that are deemed problematic. A second effective method to help pinpoint observable behaviors is to schedule time to observe the client when it is highly likely that the client will exhibit the behavior of interest. With the aid of the referral sources indicating times when the behavior problem is most likely, you can directly observe the problem behavior in the setting of interest. Subsequently, you can formulate a definition of the problem behavior in observable terms that matches what you observed. If the behavior problem is highly frequent, so that one can view a number of

**TABLE 2.4 QUESTIONS USED TO “PINPOINT” WITH THE INCIDENT METHOD**

1. Can you remember a time when (the child) was incorrigible? For example, was the child incorrigible anytime today? If so, what happened?
2. Describe to me the circumstances that occurred at this time.
3. What did you consider in this incident to be representative of the child’s incorrigibility?
4. Are there any other circumstances that reflect that same attitude or behavior? If so, describe exactly what happens.
5. Are there any other incidents of behavior that you feel I should be aware of and that possibly shed more light on his or her demeanor? If so, paint me a picture of that (those) incident(s).

**DISCUSSION QUESTION 2A**

1. Hyperactivity is not a pinpointed behavior. Yet, you may receive a referral for a child with hyperactivity listed as the problem. Detail how you would decide what observable behaviors define a particular child’s problem of hyperactivity.
occurrences in a short (30–60 minutes) session, this second method may be preferable to the Incident Method. However, some circumstances may preclude direct observation of the client in natural environments for a long enough period. In these circumstances, an initial definition of the problem behavior may need to be obtained through the Incident Method.

MEASURING OBSERVABLE BEHAVIOR

Once a behavior has been pinpointed, you need to identify and select a method of quantifying the level of the behavior. Methods of measuring and quantifying the level of behavior are presented elsewhere in greater detail (Alberto & Troutman, 2006; Martin & Pear, 2007; Miltenberger, 2004) but basically include the following: frequency of occurrence, duration (or length of time), and percentage of occurrence (interval recording methods). Collecting such data has been termed baseline assessment.

Frequency is the most common measure of behavior because it is the least complex. Frequency counts merely require that someone count (and record) the number of times a behavior occurs. Table 2.5 presents hypothetical data for three target behaviors across a 3-day period for a 5-year-old girl living with her adoptive parents. Note that on 9/21 the girl had three instances of tantrums (defined as yelling, screaming, threats to parent, kicking walls and furniture), five instances of verbal refusal (defined as verbally refusing to follow a parental instruction to complete a task, chore, or assignment), and no instances of hitting either of her two siblings. Data similarly were collected on the same target behaviors for 9/22 and 9/23.

Duration measurement requires that one measure the length of time a behavior occurs. Therefore, such a measurement system requires a timepiece of some kind (e.g., stopwatch, second hand on a watch). For that reason, duration measures are not frequently used in classrooms, residential settings, or community and work environments.

Table 2.6 shows the duration of each episode of target behavior. On 9/2, the client had two verbal outbursts: one of 50 seconds and one of 1 minute and 25 seconds in length. The client also left the area unauthorized three times on 9/2, one time for 3 minutes, one time for 33 minutes, and the last instance for 65 minutes.

Duration measures are preferred when the target behavior occurs across varying time frames. For example, in Table 2.6, the range of leaving area unauthorized on 9/2 is from 3 minutes to 65 minutes. To depict such a phenomenon as occurring only three times is to

<table>
<thead>
<tr>
<th>Date</th>
<th>Frequency of Tantrums</th>
<th>Frequency of Verbal Refusal</th>
<th>Frequency of Hitting Siblings</th>
</tr>
</thead>
<tbody>
<tr>
<td>9/21</td>
<td>xxx</td>
<td>xxx</td>
<td>0</td>
</tr>
<tr>
<td>9/22</td>
<td>0</td>
<td>x</td>
<td>0</td>
</tr>
<tr>
<td>9/23</td>
<td>xxxx</td>
<td>xxxxxxx</td>
<td>x</td>
</tr>
</tbody>
</table>

<table>
<thead>
<tr>
<th>Date</th>
<th>Duration of Verbal Outburst/Tantrum</th>
<th>Duration of Leaving Area Unauthorized</th>
</tr>
</thead>
<tbody>
<tr>
<td>9/1</td>
<td>(25″) (16″)</td>
<td>(21″) (7″) (17″)</td>
</tr>
<tr>
<td>9/2</td>
<td>(50″) (85″)</td>
<td>(3″) (33″) (65″)</td>
</tr>
</tbody>
</table>
miss the fact that two of those episodes were quite lengthy. Although three tantrums on a
given day for this client may seem reasonable, when they last for long periods, a significant
problem exists. To not portray the duration data with a client and target problem such as this
would probably misrepresent the nature and extent of the problem. In these cases, frequency
data alone is insufficient as an accurate method of portraying the extent of the target behavior.

Percentage of occurrence is very popular with test items or situations where a client is given
a certain number of opportunities to do something, and one can therefore measure the number
of times a behavior occurs over the total number of opportunities. Percentage of occurrence
is also utilized in interval-recording systems, but such systems are too labor intensive to be
considered in most applied settings. In most applied settings, frequency data are the most often
collected data due to the impracticality of the other methods and will be primarily addressed
in this section. The following hypothetical example provides another data sheet illustrating the
frequency of two problem behaviors for an adolescent male in a residential treatment center.

The staff at the facility records the number of incidents of the two behaviors in Table 2.7:
(a) verbal abuse to peers and (b) threatening gestures to peers. The data sheet is kept on a
desk or a clipboard. Whenever Lorenzo exhibits either or both behaviors, the staff put one
mark in the appropriate column and row (behavior and date of occurrence). The data sheet in
Table 2.7 indicates that Lorenzo had seven instances of verbal abuse on 3/16 and one incident
of threatening gestures toward a peer. For school personnel, a number of problem behaviors
with definitions from research studies is provided in Table 2.8.

TABLE 2.7 ■ FREQUENCY DATA SHEET FOR TWO PROBLEM BEHAVIORS

<table>
<thead>
<tr>
<th>Child's Name: Lorenzo Vittorio</th>
<th>Problem Behaviors</th>
</tr>
</thead>
<tbody>
<tr>
<td>Baseline Condition Date</td>
<td></td>
</tr>
<tr>
<td>Verbal abuse to peers</td>
<td>Threatening gestures to peers</td>
</tr>
<tr>
<td>3/16</td>
<td>XXXXX xx</td>
</tr>
<tr>
<td>3/17</td>
<td>xx</td>
</tr>
<tr>
<td>3/20</td>
<td>XXX</td>
</tr>
<tr>
<td>XXXX</td>
<td>xxxx</td>
</tr>
<tr>
<td>XXX</td>
<td>xx</td>
</tr>
<tr>
<td>XXXX</td>
<td>XXX</td>
</tr>
</tbody>
</table>

TABLE 2.8 ■ DEFINITIONS OF COMMON CLASSROOM PROBLEM BEHAVIORS

<table>
<thead>
<tr>
<th>Reference</th>
<th>Behavior/Definition</th>
</tr>
</thead>
<tbody>
<tr>
<td>Hall, Lund, and Jackson (1968)</td>
<td>Study behavior</td>
</tr>
<tr>
<td></td>
<td>Orientation toward appropriate person or object</td>
</tr>
<tr>
<td>Thomas, Becker, and Armstrong (1968)</td>
<td>Disruptive behavior:</td>
</tr>
<tr>
<td></td>
<td>Gross motor</td>
</tr>
<tr>
<td></td>
<td>Getting out of seat, running, hopping, rocking, moving chair</td>
</tr>
<tr>
<td></td>
<td>Noise making</td>
</tr>
<tr>
<td></td>
<td>Tapping feet, clapping, rattling, slamming or tapping</td>
</tr>
<tr>
<td></td>
<td>objects on desk</td>
</tr>
<tr>
<td></td>
<td>Orienting</td>
</tr>
<tr>
<td></td>
<td>Turning head or body away from teacher</td>
</tr>
<tr>
<td></td>
<td>Verbalization</td>
</tr>
<tr>
<td></td>
<td>Conversation with other students, calling out the teacher's name, coughing loudly</td>
</tr>
<tr>
<td></td>
<td>Aggression</td>
</tr>
<tr>
<td></td>
<td>Hitting any part of self or another person</td>
</tr>
</tbody>
</table>

(continued)
TABLE 2.8 ■ DEFINITIONS OF COMMON CLASSROOM PROBLEM BEHAVIORS (continued)

<table>
<thead>
<tr>
<th>Reference</th>
<th>Behavior/Definition</th>
</tr>
</thead>
<tbody>
<tr>
<td>Zeilberger, Sampen, and Sloane (1968)</td>
<td><strong>Bossing</strong></td>
</tr>
<tr>
<td></td>
<td>Directing another child or adult to do (or not do) something</td>
</tr>
<tr>
<td>Hart, Reynolds, Baer, Brawley, and Harris (1968)</td>
<td><strong>Cooperative play</strong></td>
</tr>
<tr>
<td></td>
<td>Examples listed in article</td>
</tr>
<tr>
<td>Madsen, Becker, and Thomas (1968)</td>
<td><strong>Inappropriate classroom behavior</strong></td>
</tr>
<tr>
<td></td>
<td>Examples listed in article</td>
</tr>
<tr>
<td></td>
<td><strong>Appropriate behavior</strong></td>
</tr>
<tr>
<td></td>
<td>Time on task</td>
</tr>
<tr>
<td>Phillips (1968)</td>
<td><strong>Aggressive statements</strong></td>
</tr>
<tr>
<td></td>
<td>Examples listed in article</td>
</tr>
<tr>
<td></td>
<td><strong>Punctuality</strong></td>
</tr>
<tr>
<td></td>
<td>Examples listed in article</td>
</tr>
<tr>
<td></td>
<td><strong>Poor grammar</strong></td>
</tr>
<tr>
<td></td>
<td>“ain’t”</td>
</tr>
<tr>
<td>Sailor, Guess, Rutherford, and Baer (1968)</td>
<td><strong>Tantrum behaviors</strong></td>
</tr>
<tr>
<td></td>
<td>See article</td>
</tr>
<tr>
<td>Walker and Buckley (1972)</td>
<td><strong>Attending behavior (on-task)</strong></td>
</tr>
<tr>
<td></td>
<td>Looking at assignment pages, working problems, recording responses</td>
</tr>
<tr>
<td></td>
<td><strong>Nonattending behavior</strong></td>
</tr>
<tr>
<td></td>
<td>Those incompatible with above</td>
</tr>
<tr>
<td>Ward and Baker (1968)</td>
<td><strong>Disruptive behaviors</strong></td>
</tr>
<tr>
<td></td>
<td>See article</td>
</tr>
<tr>
<td></td>
<td><strong>Motor behavior (at seat)</strong></td>
</tr>
<tr>
<td></td>
<td>Gross motor behavior (not at seat)</td>
</tr>
<tr>
<td></td>
<td><strong>Aggression</strong></td>
</tr>
<tr>
<td></td>
<td>Deviant talking</td>
</tr>
<tr>
<td></td>
<td>Nonattending disobedience</td>
</tr>
<tr>
<td></td>
<td>Thumb sucking</td>
</tr>
<tr>
<td></td>
<td>Hand raising</td>
</tr>
<tr>
<td>O’Leary, Becker, Evans, and Saudargas (1969)</td>
<td><strong>Disturbing another’s property</strong></td>
</tr>
<tr>
<td></td>
<td>Tearing up others’ paper(s), grabbing their book(s)</td>
</tr>
<tr>
<td></td>
<td><strong>Inappropriate tasks</strong></td>
</tr>
<tr>
<td></td>
<td>Working on spelling during math, doodling</td>
</tr>
<tr>
<td>Zimmerman, Zimmerman, and Russell (1969)</td>
<td><strong>Instruction-following behaviors</strong></td>
</tr>
<tr>
<td></td>
<td>30 instructions, see article</td>
</tr>
<tr>
<td>Barrish, Saunders, and Wolf (1969)</td>
<td><strong>Talking out, out of seat</strong></td>
</tr>
<tr>
<td>Wahler (1969)</td>
<td><strong>Oppositional behavior</strong></td>
</tr>
<tr>
<td></td>
<td>Failure to follow request of parent</td>
</tr>
<tr>
<td>Schmidt and Ulrich (1969)</td>
<td><strong>Classroom noise</strong></td>
</tr>
<tr>
<td></td>
<td>Sound-level meter 42 dB or higher</td>
</tr>
<tr>
<td>Cantrell, Cantrell, Huddleston, and Woolridge (1969)</td>
<td><strong>Assignment completion</strong></td>
</tr>
<tr>
<td>Schutte and Hopkins (1970)</td>
<td><strong>Instruction following (kindergarten)</strong></td>
</tr>
<tr>
<td></td>
<td>10 common instructions</td>
</tr>
<tr>
<td>Bailey, Phillips, and Wolf (1970)</td>
<td><strong>Rule violations</strong></td>
</tr>
<tr>
<td></td>
<td>6 rules in article</td>
</tr>
</tbody>
</table>
CASE EXAMPLE

Maria, an adult female diagnosed with schizophrenia who resides in an inpatient unit at a mental health facility, is described by Ms. Johnson as decompensating. After several months of case conferences and different milieu treatments, Maria’s condition does not improve. A behavioral consultant, Dr. Kellog, is contacted to consult with staff. The staff report to Dr. Kellog that Maria used to be more responsive to her social environment. Her global assessment of functioning (GAF) scale score on Axis V of the DSM IV-TR (American Psychiatric Publishing, 2000) manual was 65, now it is 30. She has continued to “decompensate.” Staff provide the behavioral consultant nursing progress notes from the last 3 months. These records have various remarks about her eating habits and interactions with staff and other residents. Although there are hints of some problem behaviors in these notes, they are inadequate for Dr. Kellog’s need for specific target behaviors. Further, such notes do not provide a baseline measurement of such behaviors. Social withdrawal appears in several entries. Unfortunately, there are no definable behaviors that delineate what Maria does (or does not do) when she exhibits social withdrawal. Was she curled up in a corner? Was she not getting out of bed? Did she not respond to someone’s verbal initiation to her? The nursing notes do not clearly specify the behavior problems.

After interviewing staff and utilizing the Incident Method, Dr. Kellog surmises that three behaviors may be at the heart of Maria’s problem, which was described by staff as “decompensating.” The target behaviors that were deemed to be problematic are the following: (a) physical aggression, (b) making hallucinatory statements, and (c) failure to engage in and sustain social conversations with staff or peers. Physical aggression was defined as striking or pushing another person. Hallucinatory statements were defined as verbal statements referencing auditory events that were not observed by others who were in the area. Sustaining conversations was defined as any time that the client initiated and sustained an appropriate conversation with a staff person or other client on the unit. With this information, the following data were collected across the period of 4/13 through 4/21 (see Table 2.9).

In viewing the data, one can see that there are days when physical aggression is high, as is the frequency of hallucinatory statements. It is quite possible that the increase in these two behaviors combined with a low frequency of initiating and sustaining appropriate conversations is leading to the judgment by professional staff that Maria is decompensating. However, now it is clearer what target behaviors need to be addressed with a behavioral intervention plan. Defining the behavior of interest is very important!

<table>
<thead>
<tr>
<th>Date</th>
<th>Sustained Physical Aggression</th>
<th>Hallucinatory Statements</th>
<th>Conversations</th>
</tr>
</thead>
<tbody>
<tr>
<td>4/13</td>
<td>10</td>
<td>6</td>
<td>2</td>
</tr>
<tr>
<td>4/14</td>
<td>5</td>
<td>3</td>
<td>3</td>
</tr>
<tr>
<td>4/15</td>
<td>5</td>
<td>3</td>
<td>1</td>
</tr>
<tr>
<td>4/16</td>
<td>2</td>
<td>9</td>
<td>0</td>
</tr>
<tr>
<td>4/17</td>
<td>3</td>
<td>12</td>
<td>0</td>
</tr>
<tr>
<td>4/18</td>
<td>9</td>
<td>16</td>
<td>2</td>
</tr>
<tr>
<td>4/19</td>
<td>1</td>
<td>0</td>
<td>0</td>
</tr>
<tr>
<td>4/20</td>
<td>0</td>
<td>1</td>
<td>3</td>
</tr>
<tr>
<td>4/21</td>
<td>2</td>
<td>11</td>
<td>0</td>
</tr>
</tbody>
</table>

© Springer Publishing Company
It is helpful to provide the person(s) at the sites with the tools to collect the baseline observation data of the client. The following is a list of tools that facilitate the collection of baseline data:

1. Wrist counters (for frequency measures)
2. Data sheets
3. Stopwatches (for duration measures)
4. Tape recorders (for frequency measures)
5. Laptop computer or PDA
6. iPhone or Blackberry

Is behavioral data collection just as important in psychiatric and mental health facilities? Of course. Such data collection is just as crucial to the understanding of the client’s problems. Examine the following scenario of a hypothetical client in an inpatient unit whose social worker reports that she is “decompensating.” If the professional staff do not get more explicit, intervention will be difficult. Unless specific observable measures of actual behaviors are being measured, one does not have the slightest idea of what problems need to be addressed.

It is important to collect the rate of occurrence of a problem behavior in the baseline assessment period. However, schools and agencies have found that it often is not perceived as important by personnel who are asked to collect such data in addition to their other duties (whether this perception is valid or not). As a result, data collection may not be conducted in a timely fashion, if at all. To make everyone’s life simpler in these circumstances, let us look at some possible solutions to this dilemma.

Rather than having the teacher, staff person, or parent collect continuous data (observing for the behavior all the time), you might consider a time-sampling data collection method. In some cases, the behavior being targeted is so infrequent and distinct that one can easily measure its occurrence whenever it happens, for example, loud tantrums in the classroom. In these situations, asking for each occurrence may not be perceived as a difficult or unreasonable request. However, in some cases where the behavior occurs more than several times an hour (an estimate can be provided by the interviewee), asking personnel to collect data for each occurrence may give them the impression that you are demanding and unaware of their other responsibilities. In these circumstances, you can have the person collect data on a limited sample of the total length of time.

For example, if you were interested in collecting data on a child’s rate of disruptive behaviors during class time, you would sample possibly three to five, 15- to 20-minute time periods across a 1- or 2-week period. Note that you can be flexible here. It doesn’t have to be exactly three or five sampling periods, nor does it have to be 20 minutes each time, and you can extend the length of time needed to collect the data from 1 to 2 weeks (for that matter, if need be, 3 weeks). Flexibility is appreciated in applied settings, and inflexibility is often punished by personnel failing to follow through on your requests and avoiding you in future circumstances.

A second possibility to collect baseline data when a continuous measure may not be feasible is to conduct a trigger analysis (A. Rolider, 2003; A. Rolider & Axelrod, 2000). In this method, you present the antecedent motivating condition that you suspect “triggers” the problem behavior (i.e., hypothesized deprivation or aversive EO). The data collected during each trial is the following: Did the behavior occur (occurrence), or not (nonoccurrence)? If you present this “trigger” 10 times over a 1-week period, you can determine what percentage of times the problem behavior occurs to the trigger. Of course, you should have a reasonable suspicion that such an EO creates either a sufficient state of deprivation or a relative aversive state. But sometimes, contriving a motivational condition is not feasible, or you may not receive authorization to conduct such (via informed consent). When the EO is predictable in the real-life context, the behavior analyst might just study and describe the behaviors under these natural routine conditions.1

The clinician can induce the EO condition in the real-life context with the existent personnel (with written informed consent). With deprivation EOs, the motivational condition can be created by interrupting/halting a preferred activity or taking away a desired item. When the circumstance arises, another approach to creating an EO is to not honor a request for a specific item or activity, thus creating an EO at that point in time. In the
case of aversive EOs, the stimulus condition is presented by the staff person at the request of the clinician. All of these methods of creating an EO involve active manipulation of an environmental variable; hence, such constitute an experimental analysis.

Here is a hypothetical example of contriving an EO for a trigger analysis assessment. Let us say you are referred an adult male with developmental disabilities in a community-based program. The case manager reports that the client does not cooperate with coworkers when asked. You spend several hours over two afternoons watching him. Disappointingly, these direct observations do not provide sufficient opportunities to view his uncooperative behavior in the natural context. As a result of the client's lack of cooperation, such opportunities are rarely presented by staff (because they predict the outcome of such encounters and "don't bother").

You determine that contriving a situation may provide the needed information on this client's problem in a more timely fashion. To assess the client's ability to cooperate, as well as the presence of possible unacceptable behaviors, you set up the following situation with help from the client's coworkers. They will present the client with the opportunity to cooperate with them in a task, such as helping them pick up the tools at their workstation. You would make sure that tools were left out to set up the condition for social interaction. Further, you coach the other workers to make a request of the client to help them pick up the tools. It then becomes easier to determine if cooperation occurs (or not) in these contrived conditions. These tests can be designed over several different situations (helping at the lunch table, helping with other work tasks, etc.) until you feel you have a handle on this client's rate of cooperative behavior.

A trigger analysis is particularly suited in examining the rate of relatively infrequent problem behaviors. With low-rate behaviors, it may take weeks (or months) to observe a single instance of target behavior. However, if you are reasonably certain that such a low-rate behavior is triggered by a relatively infrequent event in the environment, then a trigger analysis is a great method to study such a behavior. In order to conduct the trigger analysis of low-rate problem behaviors, you may have to expose the client or child to the motivating

---

**TABLE 2.10 — PRESENTING SUSPECTED “TRIGGERS” FOR TARGET PROBLEM BEHAVIOR**

| Child | Suspected EO | Presented Stimulus Condition | Across Different Settings and/or Persons | Ratio of Occurrence of Target Behavior
|-------|-------------|------------------------------|----------------------------------------|----------------------------------|
| 8-year-old girl who infrequently screams violently at adults (form makes it a problem) | Interrupting child during preferred event | When child is engaged in favored activity, interrupt her with a question or request | School, home, park, mom, dad, teacher | 6/8 times with mom, 3/4 times with teacher
| 5-year-old girl who bangs her head on floor once every few months | Withholding desired item, child required to wait | Ask child to wait contingent upon a request for a favored item | Mom, dad, older sibling | 5/5 with older sibling, 1/3 times with dad
| 11-year-old boy with developmental disabilities who destroys personal property three times a year in tantrum episodes | Giving child nonpreferred event | When child asks for an item, give him a less preferred item instead | At school across different teachers and aides | 1/5 with aide, 2/7 times with teacher, 4/4 times with substitute teacher

*Number of times problem behavior occurs to the EO/total number of times the trigger was presented.
condition (present aversive stimulus or sufficiently deprive access to reinforcer) prior to the presentation of the trigger. This is termed presession exposure to the EO or AO (N. U. Rolider, Iwata, & Camp, 2006) and allows for more probable conditions for target behavior to occur.

Table 2.10 presents a chart illustrating how one would conduct a trigger analysis for three suspected EOs for three different children across a 1-week period. You will note that in the first two hypothetical examples, the data indicate that the behavior analyst has identified the antecedent condition that acts as an EO (see ratio of occurrence in last column). In the third example, it would seem something else is triggering (another EO or discriminative stimulus) the behavior. A variation of this technique will be presented again later in this chapter as it relates to uncovering possible functions of problem behavior and the relevant EOs underpinning a suspected function.

WHAT IS BASELINE DATA?

The result of this first step in the behavioral assessment is the production of the baseline rate of occurrence for the problem behavior. Baseline data is the measurement of the target behavior in its current natural state prior to the proposed intervention (Alberto & Troutman, 2006; Martin & Pear, 2007; Miltenberger, 2004). Baseline data presents the level of the target behavior prior to the intervention and reflects the level of behavior under the current conditions, whereby such a level of behavior would be predicted in the future should the baseline conditions remain in effect.

How long should one collect baseline data? There is no set definitive answer. Rather, baseline data should be collected for as long as necessary for a reliable pattern to emerge. If the data are trending up or down, it is essential to continue collecting baseline data until some stability is achieved.

A sample summary data sheet for a hypothetical 6-year-old child across 8 days of baseline data collection for three different behaviors is presented in Table 2.11. This data sheet indicates

---

Simulation Exercise: Data Recording

Select several target behaviors that are easy to perform, for example, scratching your ear, writing on paper, and so on. For those that are suitable for frequency measures, perform such (along with other behaviors) in a 3-minute period. Observers record the frequency of target behaviors selected and then compare their results at the end of the session. Conduct several such mini-sessions to allow a practice effect, as well as the calculation of interobserver agreement, if desired.

---

**TABLE 2.11 • SAMPLE FREQUENCY DATA SHEET FOR PROBLEM BEHAVIORS IN HOME**

<table>
<thead>
<tr>
<th>Date</th>
<th>Tantrum Behavior</th>
<th>Leaving the House</th>
<th>Noncompliance</th>
</tr>
</thead>
<tbody>
<tr>
<td>4/13</td>
<td>10</td>
<td>6</td>
<td>9</td>
</tr>
<tr>
<td>4/14</td>
<td>5</td>
<td>3</td>
<td>5</td>
</tr>
<tr>
<td>4/17</td>
<td>3</td>
<td>0</td>
<td>2</td>
</tr>
<tr>
<td>4/18</td>
<td>9</td>
<td>1</td>
<td>3</td>
</tr>
<tr>
<td>4/20</td>
<td>6</td>
<td>4</td>
<td>4</td>
</tr>
<tr>
<td>4/21</td>
<td>5</td>
<td>5</td>
<td>7</td>
</tr>
<tr>
<td>4/22</td>
<td>6</td>
<td>4</td>
<td>5</td>
</tr>
<tr>
<td>4/25</td>
<td>7</td>
<td>5</td>
<td>7</td>
</tr>
</tbody>
</table>

© Springer Publishing Company
the rate of tantrum behavior on 4/13 was 10 occurrences. The rate of leaving the house on the same day was six times, whereas the rate of noncompliance was nine times.

Baseline data have several purposes. First, baseline data give you a quantitative view of the level of the target behavior at the current level. In contrast to someone saying “it happens a lot” when questioned how much a behavior occurs, one can quantitatively represent the level of the behavior. Second, it provides you with a basis for comparison when deploying a treatment. If the rate of the target behavior of toileting accidents is between 1 and 4 per day (mean of 2), a comparison between the problem behavior before treatment and after is possible. One can see that a treatment to address toileting accidents that results in one to two per week produced substantial improvement. Such a treatment is well worth maintaining until the behavior can be under control over naturally occurring contingencies. Finally, it often is used in designing the initial behavioral criterion for reinforcement for both the target problem behavior as well as the replacement behavior.

CONDUCTING AN FBA

With the first step, you have now identified how frequently the problem behavior is occurring. You have collected the baseline level of target problem behavior. However, so much more needs to be understood before you are ready to develop a hypothesis about the reason for the client’s behavior and, further, what functional behavior analytic treatments are best suited for these circumstances. For example, knowing that a child is noncompliant to parental requests from 30% to 60% of the time across five baseline sessions does not provide any information on why he is noncompliant. It merely tells us that his level may be unacceptable (depending on his age). What is also needed is information that reveals the purpose or function this behavior serves in the client’s current environment. Determining the environmental purpose a problem behavior serves cannot be gleaned from data presenting its rate of occurrence only. One needs to collect additional information that provides clues as to the environmental events responsible for the maintenance of the problem behavior. The FBA process of determining the function or purpose of a problem behavior is a requisite for functional treatment.

You generate a hypothesis about the reason for the maintenance of problem behavior prior to prescribing a treatment. This hypothesis is generated when certain questions are answered (tentatively, of course) through one or several behavioral assessment methods that are designed to uncover a problem behavior’s current function (i.e., maintaining contingency). Based on your hypothesis about the function of the behavior, you then can select a treatment strategy for the problem behavior that addresses the functional characteristics of the problem situation.

Table 2.12 illustrates the role of hypothesis generation in a case of noncompliance. The selected hypothesis leads in selecting a designated treatment that will be unique to

DISCUSSION QUESTION 2B

Explain how the aggressive behavior of a hypothetical 12-year-old child can require two different behavioral treatments. Why would different treatments be needed for the same target behavior?

<table>
<thead>
<tr>
<th>Hypothesis</th>
<th>Functional Treatment</th>
</tr>
</thead>
<tbody>
<tr>
<td>Noncompliance maintained by function A</td>
<td>Specific treatment for problems maintained by A</td>
</tr>
<tr>
<td>Noncompliance maintained by function B</td>
<td>Specific treatment for problems maintained by B (different from above)</td>
</tr>
</tbody>
</table>
that hypothesis regarding the current environmental function or purpose of the target behavior.

One caveat needs to be made in determining the function(s) of the problem behavior. Selecting a hypothesis regarding the maintenance of the behavior does not mean that you have identified the original factor in the genesis of the behavior. The reason for the current maintenance of a behavior could be quite different from its original cause. Your focus is on the current maintaining contingencies. You examine the existing conditions of the problem behavior and determine that the recorded level of the problem behavior is being maintained as a result of its current purpose or function.

There are at least five common methods, varying in form and reliability, for collecting evidence via an FBA: (a) behavioral interviewing, (b) A-B-C descriptive analysis method, (c) scatter plot data, (d) analogue assessment, and (e) in-situ hypothesis test. An additional sixth method that is not popular yet, but can be of great utility, is the trigger analysis with behavioral description.

**Behavioral Interviewing**

Directly observing the referred child or client in the natural setting is always the most preferable approach to collecting data. However, very often you may find yourself relying, to some extent, on a behavioral interview in an attempt to analyze a problem behavior's function, particularly in the initial stages of a referral. Behavioral interviews can be useful in uncovering the problem behavior(s) maintaining contingencies, given the right questions. Additionally, they can provide information that enlightens your selection about what other FBA methods to use to complement the interview. For example, hypothesized functions derived from behavioral interviewing can be readily followed up with a trigger analysis in the natural context.

In conducting a behavioral interview, the people primarily involved with the child or client in the specific setting or settings (e.g., parents, teachers, therapists, staff) are interviewed. In collecting interview information on why a problem behavior is occurring, you examine the relationship between the behavior and some consequent event. Your use of specific questions can help you discern possible functional relationships between the problem behavior and the current maintaining contingencies. Table 2.13 presents general questions aimed at discerning if the problem behavior serves an access function, whereas Table 2.14 presents questions for an escape function.

**TABLE 2.13 QUESTIONS FOR ASCERTAINING AN ACCESS FUNCTION**

1. Is the problem behavior maintained by accessing some event, or set of events, directly or through social mediation? Does such behavior serve to access that event every time or intermittently? Is there a reliable relation between the problem behavior and the presentation of this event? What is the specific object, activity, or event that the client is attempting to access through this behavior?

2. Are there other behaviors in the client's repertoire that also can produce this desired event or set of events? Are they as efficient at producing the specific positive reinforcer as the problem behavior (see Horner & Day, 1991)? Is the problem behavior more likely to produce the desired event than these other behaviors? Which behavior produces the greatest density of specific reinforcement in terms of the event?

3. Does the problem behavior produce more than one positive reinforcer? What are the conditions under which it produces one reinforcer in contrast to another reinforcer? In other words, what are the different antecedent conditions in which the behavior may serve different purposes?
The first question assesses the possibility that the behavior is maintained by access to a specific item or event, either directly or indirectly. In reviewing the information obtained, ask the following questions: What environmental changes occur as a result of the person’s behavior? Does the behavior serve to get something that was not available before the behavior occurred? Is it possible that the problem behavior has to occur for some duration, or at some level of occurrence, before it accesses the desired event or item?

The second question asks, Why does the client resort to this behavior over other behaviors to get the desired item/activity? Suppose the answer to Question 1 reveals that a child’s tantrum behavior of several minutes duration is effective in getting dad to let the child go outside after dinner. If tantrum behavior is adaptive, other behaviors are apparently less functional in that regard. Perhaps asking nicely to go outside is ignored or responded to in the following manner: “Not until you finish all your chores and homework.” Hence, the utility of an appropriate verbal request in getting outside in a short time frame is “zero.” Given that scenario, tantrum behavior may be a quicker manner of getting outside to play with friends than finishing all of one’s homework.

You should consider that some problem behaviors may produce different reinforcers under different conditions. Question 3 makes such inquiries during the interview process. For example, a baby cries when it wants to be picked up, get fed, get clothes changed, be coddled, and a host of other events. To assume that crying always means a food request from the baby would be a gross mistake and would result in many vain attempts to feed the infant when not hungry.

The three questions in Table 2.14 aim to uncover possible escape functions of problem behaviors. The questions are similar to the questions in Table 2.13, except the focus here is determining if the function of the problem behavior is primarily escape (or avoidance) of an aversive event. Negative reinforcement is probably inherent when the problem behavior reliably results in withdrawal or termination of the undesired event or activity. The target behavior should also be more successful in terminating that activity than other behaviors. Lastly, the target behavior occurs in the presence of an aversive event (or one that is about to be presented).

The questions from Tables 2.13 and 2.14 are aimed at uncovering the event or events responsible for the maintenance of the problem behavior. Please do not always assume that the behavior is maintained by the first event or “thing” one sees after the behavior occurs. Very often, it is not. You have to examine all the events that reliably occur after the behavior as well as all the events that are abruptly stopped or withdrawn. It is a lot like playing detective, and your hypothesis is a hunch about the factors responsible for the problem behavior.

A hypothetical example can aid in your understanding of the importance of good leading questions during a behavioral interview. Let us take the case of the 4-year-old boy who throws

---

**TABLE 2.14 QUESTIONS FOR ASCERTAINING AN ESCAPE FUNCTION**

1. Is the problem behavior maintained by escaping (or in some cases completely avoiding) some event, directly or through social mediation? Does such behavior serve to escape that event every time, or on some intermittent schedule? Is there a reliable relation between the problem behavior and the termination or postponement of the aversive event(s)? What is the specific object, activity, or event that the client is attempting to escape through this behavior?

2. Are there other behaviors in the client’s repertoire that also can escape (or avoid) such aversive conditions and events? Are they as efficient at escaping the aversive conditions as the problem behavior (see Horner & Day, 1991)? Which behavior produces the greatest density of reinforcement upon its occurrence, given the presence of the aversive event (or its impending presentation)?

3. Does the problem behavior successfully escape most aversive conditions? Is the behavior successful at escaping many instructional conditions or requests? What are the presenting aversive conditions when such a behavior serves an escape function or purpose? Is there more than one event or activity in which the client uses these behaviors to escape?
Dr. Cipani: Mrs. M., I would like to find out more about the circumstances when John throws his toys, so I will better understand this behavior problem. When John throws his toys, what do you do? What do you say to him?

Mom: I tell him he won't get any more toys if he mistreats them. I sometimes put him in time out, but that does not seem to work.

Dr. Cipani: (I am not sure if either of those consequences, that is, warning him and time out, are followed through reliably enough for me to consider their possible role in toy throwing.) Mrs. M., do you pick him up when he throws his toys, possibly in an effort to redirect him?

Mom: Well, sometimes I do, but very often I have his almost 2-year-old sister in my arms. When I go to pick him up, and put her down, then she starts crying. It seems like I do not have enough arms.
Dr. Cipani: *(Aha! Maybe we are getting somewhere now. Possibly this child becomes jealous when his sister is getting attention and physical contact from his mother, thus setting up the motivational context for him to engage in behavior that results in mom picking him up. Let me follow that up with an analysis of the strength of more appropriate behaviors in getting mom's arms.) Yes, Mrs. M., you do seem to have your hands full. Does John ever ask to be picked up when he is playing with his toys? Especially at times that it would be difficult because you have his sister in your arms?*

Mom: Well sometimes he does, but you know I cannot oblige him when I have his sister in my arms. I am just not strong enough to hold both of them. He also whines sometimes when I do not pick him up. But I was told by experts on TV to ignore "whiny-type" behavior.

Dr. Cipani: *(OK, it appears that John does resort to other behaviors to get picked up, but such are not as successful as toy throwing in getting his mom to pick him up. Let me test out the possibility of toy throwing serving a socially mediated escape function from a demand to put away his toys.) Does John throw his toys when he is asked to put them away?*

Mom: Not usually. In some cases, I don't even ask him to pick up his toys, if we need to go somewhere, I will do it with him later. However, he is often pretty good about putting away his toys, especially when I help him and we make it a fun activity, with his sister getting in the act, too.

Dr. Cipani: *(It does not appear that such a demand is driving the toy throwing. In her answer, I keep seeing John's desire for her attention when his sister is around, and the sister competing for it as well. Let me make sure that leaving the play time period is not a condition that sets off toy throwing.) Does John object to leaving the play area to go to another activity?*

Mom: Sometimes, like when it is time to take a bath in the evening. He will cry and scream and throw a tantrum on the floor, particularly if the play period was kind of short. I think he hates to take a bath.

Dr. Cipani: Any toy throwing occurring before bath time, say over the last 2 weeks?

Mom: No, just tantrum behavior usually.

Dr. Cipani: *(Well, it looks like toy throwing serves to get mom to pick him up on some intermittent basis. Other behaviors are not as reliable in getting mom to pick him up when his sibling is competing for the same thing. However, tantrum behaviors appear to be the optimal selection when John wants to avoid taking a bath. Perhaps the A-B-C chart should be set up for recording behavior when he is playing with toys and to determine whether toy throwing is correlated with his sister being held and receiving attention from his mom at the time.) Thank you. You have been most helpful. I would like to suggest that we start examining John's toy-throwing behavior by collecting what we call "baseline data" [explanation of such is offered].*

Interview questions might also address the possible antecedent conditions that can act as EOs, as an alternative or supplement to the above strategy. Instead of focusing on what outcomes the defined target behavior produces, the interviewer would attempt to identify the EOs that would be relevant for access and/or escape functions. Functions exist only under specific EOs; hence, the discovery of EOs that reportedly create problems in behavior management with the client are of significant investigative utility. EOs that indicate significant problems can then promote further inquiry into what undesirable behaviors are effective in producing the desired outcome. This may also help to identify operant response classes in which a number of topographically dissimilar behaviors all produce the same or similar environmental outcomes (i.e., functions).

The Cipani School Behavioral Interview Form focuses interview questions on potential antecedent EOs that may produce sufficient states of deprivation or aversion that make
problem behaviors more likely. This Form is divided into two major parts: deprivation EOs (for access functions) and aversive EOs (for escape functions).

**Deprivation EOs.** Questions delineated in the top part of Table 2.16 would determine the individual’s ability (or lack thereof) to delay/postpone gratification of desired items, activities, or events (age-appropriate ability). There are two categories involved in this section: (a) attention functions (i.e., state of deprivation exists for attention) and (b) tangible reinforcers (i.e., state of deprivation exists with respect to certain items or activities and events). The interviewee would identify what antecedent circumstances result in undesirable responses or reactions from the individual.

<table>
<thead>
<tr>
<th>TABLE 2.16</th>
<th>THE CIPANI EO SCHOOL BEHAVIORAL INTERVIEW FORM</th>
</tr>
</thead>
<tbody>
<tr>
<td><strong>Deprivation EOs</strong></td>
<td></td>
</tr>
<tr>
<td>Questions for attention function: Does the student have extreme difficulty (rating of 6 or better on 10-point scale) ______ and if so, does such a circumstance (EO) occur either hourly (designate H next to item), daily (D), or weekly (W)?</td>
<td></td>
</tr>
<tr>
<td>• When the student requests or demands adult (i.e., instructional staff) attention and is told to wait?</td>
<td></td>
</tr>
<tr>
<td>• When the student desires attention and the adult is unavailable for such?</td>
<td></td>
</tr>
<tr>
<td>• When an adult withdraws attention from the student and/or attends to others (classmates, peers)?</td>
<td></td>
</tr>
<tr>
<td>• When peers or certain classmates are present (versus the absence of such behaviors when they are not present)?</td>
<td></td>
</tr>
<tr>
<td>Questions for tangible reinforcer function—consumable items (involving eating or drinking something): Does the student have extreme difficulty (rating of 6 or better on 10-point scale) ______ and if so, does such a circumstance (EO) occur either hourly (designate H next to item), daily (D), or weekly (W)?</td>
<td></td>
</tr>
<tr>
<td>• When the student requests or demands a desired consumable item and is told to wait?</td>
<td></td>
</tr>
<tr>
<td>• When the student desires a preferred consumable item and the item is temporarily unavailable (and/or is told “No”)?</td>
<td></td>
</tr>
<tr>
<td>• When the student desires a preferred consumable item and is given a different item (e.g., redirected)?</td>
<td></td>
</tr>
<tr>
<td>• When others (classmates, peers) get the consumable item and this student does not?</td>
<td></td>
</tr>
<tr>
<td>• When the student does not get enough of the consumable item (e.g., wanted two cookies and got only one, finished item and wanted more)?</td>
<td></td>
</tr>
<tr>
<td>Questions for tangible reinforcer function—preferred activities or events: Does the student have extreme difficulty (rating of 6 or better on 10-point scale) ______ and if so, does such a circumstance (EO) occur either hourly (designate H next to item), daily (D), or weekly (W)?</td>
<td></td>
</tr>
<tr>
<td>• When the student requests or demands a desired event or activity and is told to wait?</td>
<td></td>
</tr>
<tr>
<td>• When the student desires a preferred event or activity and such is temporarily unavailable (and/or is told “No”)?</td>
<td></td>
</tr>
<tr>
<td>• When the student desires a preferred activity or event and is directed to an alternate activity (redirected)?</td>
<td></td>
</tr>
<tr>
<td>• What others (peers) get the desired activity or event and this student does not?</td>
<td></td>
</tr>
<tr>
<td>• When the student does not get a sufficient amount of time with the desired activity (e.g., wanted a half hour of computer time and got only 10 minutes, activity ended and student told to transition to a less desired activity)?</td>
<td></td>
</tr>
</tbody>
</table>
### TABLE 2.16 | THE CIPANI EO SCHOOL BEHAVIORAL INTERVIEW FORM (continued)

#### Aversive EOs

Questions for unpleasant social situations function: Does the student have extreme difficulty (rating of 6 or better on 10-point scale) ______ and if so, does such a circumstance (EO) occur either hourly (designate H next to item), daily (D), or weekly (W)?

- When the student is presented with any social or task demand (i.e., problems in compliance to simple adult/teacher instructions)?
- When the student is in circumstances that involve following the rules of a game or play activity?
- When the student is criticized or corrected during instructional task or chore?
- When the student receives social disapproval from an instructional staff person or peer (for behavior, manner of dress, way of talking, etc.)?
- When the student receives a negative consequence for behavior or is threatened/warned with one (e.g., is told he or she will lose some free time after lunch for some behavior)?
- When the student is interacting with certain peers or instructional staff members?
- When the student is in social situations with too many people?
- When the student is in social situations with novel people?
- When the student is in social situations with a member(s) of the opposite gender?
- When the student is in an argument with a peer/friend/other?
- When the student is in novel social situations or settings?

Questions for relatively lengthy tasks, instructional sessions, or chores function: Does the student have extreme difficulty (rating of 6 or better on 10-point scale) ______ and if so, does such a circumstance (EO) occur either hourly (designate H next to item), daily (D), or weekly (W)?

- When the student is presented with instruction, seatwork, or an instructional activity that is relatively lengthy (e.g., 1 hour in length when the current duration for active engagement is 10 minutes) for that student?
- When the student is presented with a nonacademic task that is relatively lengthy (e.g., 1 hour in length when the current duration for active engagement is 10 minutes) for that student?

Questions for relatively difficult tasks, instructions, chores function: Does the student have extreme difficulty (rating of 6 or better on 10-point scale) ______ and if so, does such a circumstance (EO) occur either hourly (designate H next to item), daily (D), or weekly (W)?

- When the student is presented with instruction, seatwork, or an instructional activity that is relatively difficult (lacks prerequisites or skill in its entirety) for that student?
- When the student is presented with a nonacademic task that is relatively difficult (lacks prerequisites or skill in its entirety) for that student?

EO, establishing operation.

Source: Taken with permission from Cipani EO School Behavioral Interview Form; see Appendix A.

*Circumstance refers to the particular EO, i.e., how often would this student encounter the presenting condition.

---

With each question, the interviewer would identify the degree to which the designated antecedent condition creates an EO involving undesirable behaviors becoming functional. I recommend the use of a rating scale of 1 (no difficulty handling the circumstance representing the specific EO) to 10 (major problems with undesirable severe problem behaviors when this EO is present) for each question. If the deprivation state EO is rated at or above a 6 score, the interviewee could inquire if such a circumstance occurs either hourly (designate H), daily (D), or weekly (W) on the data sheet.
The behavioral interview proceeds by posing each question to a significant person in the student's life and asking if such a circumstance creates difficulty for the student. If the answer is in the affirmative, the significant other is asked to rate the degree of difficulty. Ratings above 6 might be indicative of an EO for problem behavior. The interviewer can ask the significant other to describe the forms of undesirable behaviors that occur to such a deprivation EO in detail. Such information can guide further inquiry and possibly experimental test methods for such a function under the deprivation EO. For example, using one of the items below, the interviewer would ask the person the following: Does the client have significant difficulty when requesting or demanding a desired consumable item and is told to wait? If the answer is “yes,” the person would then be asked to rate the level of difficulty. If it is rated above a score of 6, the person could then ask to describe what the person does in response to being asked to wait (i.e., delineate the unacceptable behaviors that occur in that context). Finally, to get an idea of the level of the problem behavior, the person would be asked if such a condition occurs hourly, daily, or weekly.

To obtain further interview information if the problem behaviors identified as occurring in the target context are functional under an identified EO, ask, What do you have to do to get the student to stop that behavior? The production of the desired reinforcer in sufficient magnitude should serve as an AO, making the problem behavior and its hypothesized function of little utility, when the EO is weak to nonexistent. This information provides more evidence of the probable function of the problem behavior(s).

**Aversive EOs.** The same information is desired in the bottom part of Table 2.16 for escape functions except the focus is on circumstances that assess whether the individual tolerates aversive events and stimuli (age-appropriate ability). Escape functions examine three areas of possible aversive states that might constitute an EO: (a) relatively unpleasant social situations, (b) relatively lengthy tasks, instructional sessions, or chores, and (c) relatively difficulty tasks, instructional sessions, or chores. If such conditions produce a sufficient aversive condition for the student, probe further to discern what behavior(s) are probable under such EOs. As with access functions you would also ask, “What do you have to do to get the student to stop that behavior(s)?” If you are going to use the following information from Table 2.16 in a report, with our permission, please reference this text as a citation (i.e., The Cipani EO School Behavioral Interview Form taken with permission from Cipani, 2018, Functional Behavioral Assessment, Diagnosis, and Treatment: A Complete System for Education and Mental Health Settings, pp. 311–313). Appendix A provides the data sheets, with permission to the owner of this text to copy and use.
attempts to determine if a reliable contingency exists between the problem behavior and the hypothesized maintaining contingency. In ascertaining this, one needs to concurrently address whether such a behavior is more efficient and effective at getting the desired event (or escaping the aversive event) than other behaviors (see Question 2). If a client is allowed to get food from the refrigerator when he or she wants, then other problem behaviors become less probable when food access is the EO. Therefore, diagnosing the problem behavior in terms of such a contingency would not make sense. In contrast, when other behaviors, such as getting your own food or asking nicely, are effectively impeded, and therefore not reinforced, then the conditions are ripe for problem behavior to become instrumental in getting food when relatively hungry.

Questions 3 and 4 address the operative motivating condition (EO), given the hypothesized maintaining contingency. For example, if a behavior is functional in getting food, then its occurrence would be in the absence of having food, or possibly as the individual has finished all the food (and wants more). In other words, in order for a behavior to be maintained because it produces a specific reinforcer, such an event must be in a relative deprivation at the time of the response occurrence. Concurrently, once food is accessed, does the problem behavior desist once access to the supposed reinforcer took place? Let us say that being picked up by a child’s parents is hypothesized as the factor maintaining his or her crying. If the child is picked up and continues to cry, does it make sense that the child cried to get picked up? It would appear that crying had a different function at that time.

Question 4 addresses the same issue as Question 3 except that with escape functions, the behavior occurs when the aversive event is present (or advent) of the aversive, undesired event or object (aversive EO)? Does the behavior stop once the desired outcome is procured?

TABLE 2.17 QUESTIONS TO ZERO IN ON FUNCTION

1. Does the problem behavior appear to reliably produce the hypothesized contingency?
2. Is the problem behavior more efficient and effective at producing such a contingency, in contrast to other behaviors that may (or may not) produce the same contingency?
3. In the case of an access function, does the behavior usually occur in the absence of the desired event or object (deprivation EO)? Does the behavior stop once the desired outcome is procured?
4. In the case of an escape function, does the behavior usually occur in the presence (or advent) of the aversive, undesired event or object (aversive EO)? Does the behavior stop once the desired outcome is procured?

DISCUSSION QUESTION 2C

Explain how a client’s spitting behavior can be maintained by two different reinforcement contingencies. (Hint: think of people who chew tobacco for one function.)

A-B-C Descriptive Analysis

Professionals are at a loss when treating children or clients with problem behavior. Professional involvement in the child’s daily life is minimal, if at all. Rather, teachers, parents, staff persons in facilities, and care providers are people who can be intimately familiar with the circumstances involving the client and problem behavior. In a perfect world, such direct line personnel would be sufficiently trained in applied behavior analysis to be able to analyze behavioral function and the antecedent conditions. They would simply come to the professional in the end and say,
Bobby's spitting behavior on the playground is significantly more likely when he is asked to share the tetherball or it is time for another child to have the tetherball. Further, it appears that such behavior seems to be reinforced by the playground aide. This aide will make the other children wait longer for their turn when he spits on them. She tells them they must be patient because Bobby is emotionally immature. We believe this is a mistake and that such a contingency is actually exacerbating the probability of Bobby spitting on other children when it is time for him to give up the tetherball. As a result, we think the following treatment program addresses this function by removing the tetherball for at least a 4-minute period when he spits. In addition, if he waits at least 2 minutes without spitting, he will then be allowed to play. This interval will then be progressively altered until it reaches the average wait time for tetherball. If you write up that plan we feel it could probably work.

Sound nice? Yes! However, in the real world you are more likely to get the following analysis of Bobby's behavior from direct line personnel and parents: “Bobby does it because he is ADHD.” However, such direct line personnel can be very helpful if they are taught to collect data on behavior in real time.

Having personnel describe the conditions surrounding the behavior has been termed the A-B-C descriptive analysis method (Bijou, Peterson, & Ault, 1968; Lalli, Browder, Mace, & Brown, 1993). In an A-B-C descriptive analysis system, direct line personnel observe the client. There are usually three columns for the data collection: the first column is reserved for a description of the antecedent conditions, the client's behavior is delineated in the middle column, and the final column provides a description of the consequences of the behavior.

In the hypothetical example shown in Table 2.18, the targeted behavior for observation is a particular child's aggression (i.e., hitting another child in the elementary kindergarten class). The teacher identifies the antecedent context as story time. After the first hitting incident occurred, the teacher noted that the child was removed from the story group (consequence column). Note that the termination of some group activity seems to be the commonality between these two descriptive analyses of the incidents. If this result “holds-up” with other recorded incidents, then a socially mediated escape function might be entertained for the function of this behavior, given certain group activities.

The A-B-C method differs from behavioral interviewing in that it requires teachers, facility staff, or parents to collect data in real time rather than recollecting past events. It may be more indicative (reliable) of actual events in that it is being collected right at the time when the behavior occurs.

How does one utilize such data? You will want to review all the incidents of the target problem behavior and look for reliable relations between behavior and its consequences. Commonalties may show patterns across time between the problem behavior and certain consequences. For example, with the child in Table 2.18, the removal almost always occurs when the child hits another child. Further, this behavior is more common during story time (when the child gets bored with the story and wants to escape) or during group time (probably wishing to terminate participation). If other behaviors are not successful in producing escape

<table>
<thead>
<tr>
<th>Antecedent (A)</th>
<th>Behavior (B)</th>
<th>Consequences (C) of Behavior</th>
</tr>
</thead>
<tbody>
<tr>
<td>9:20; During story time, 15 minutes into the story</td>
<td>Hit peer</td>
<td>Removed him from story time</td>
</tr>
<tr>
<td>10:30; During group music time</td>
<td>Hit another peer</td>
<td>Told to stop, peer hit back, removed both of them</td>
</tr>
</tbody>
</table>
or avoidance of the undesired activity, then hitting another child to escape or avoid these activities becomes a more plausible function.

Problems With Descriptive A-B-C Charting Methods

Unfortunately, there are many problems with A-B-C data collection methods as they have been traditionally used, which we believe preclude their use to derive the function(s) of behavior. Perhaps two of the biggest problems in determining function from such methods are: (a) the insufficient description of the antecedent condition (A column) by the user and (b) the tendency to view almost all behaviors as the result of social attention (D. Wilder, personal communication, September 1, 2009). An analysis of each of these problems follows.

Insufficient Description of Antecedent Variables. The antecedent condition contains two variables: EOs and discriminative stimuli. Unfortunately, behavioral descriptions of the antecedent condition often lack a depiction of the EO. Here is why. When a behavior serves an escape function, the presence (or presentation) of the aversive condition (i.e., the aversive EO) is somewhat easy to spot. With aversive EOs, the person who is filling out the A-B-C chart describes what someone is doing or saying to the client in column A (preceding the behavior description). By specifying this observable phenomenon, the antecedent condition can potentially identify the specific aversive event being presented. Hence, the analysis of this hypothesized aversive event’s value-altering effect on the reinforcer might be gleaned from the written record. Also if the user specified the person (or persons) involved in the presentation of these events, discriminative stimuli can be identified.

However, with problem behaviors serving an access function, a relative state of deprivation will produce the value-altering effect on the potential reinforcer. Unlike the presentation of a task or social situation that serves an aversive EO function, one cannot usually see a state of deprivation. Therefore, to record what is observable prior to the behavior may be tangential and/or irrelevant to the “true” operating EO. Hence, a naïve user does not usually delineate the deprivation condition in an A-B-C chart because this would require an adequate knowledge of the role of motivational variables. Further, they would note the absence of an item or activity (i.e., not in client’s possession at that time).

Subsequently, the information provided on the A-B-C charting form can lead to a false interpretation about the “true” motivating condition. For example, a young boy skips lunch and later that day attends his brother’s baseball game. He starts whining about wanting a hot dog and engages in a number of undesirable behaviors. Of course the presence of his parents is discriminative for such behaviors, but neither they nor the baseball context serve as the EO. The EO condition was dictated by what happened earlier, that is, he skipped lunch. It was the food deprivation that produced the value-altering effect of the potential reinforcer and the functional relationship between behavior and a specific reinforcer. The value of food was established by being deprived of food (EO); the availability of food (SD) was indicated by the parents being present and food being available at the ball park.

All too often, written FBAs present interpretations about a problems behavior’s function that designate the antecedent to be some aspect of the context when the behavior occurs. You may see reports that indicate that the behavior is highly likely under a variety of context conditions, for example, when there are bright lights in the classroom, when there are too many chairs, not enough chairs, and so forth. But such events may correlate only with a given behavioral incident. It is a mistake to assume that such constitute aversive EOs (which drive a function) simply because they were present at the time of the problem incident. These interpretations are the unfortunate consequence of the data system missing the analysis of the EO for all access functions as one of relative state of deprivation. The next preferred FBA method, trigger analysis with behavioral description, corrects that omission.

A related issue with the lack of specifying an EO is that the individual entries often contain different EOs. For example, the hypothetical chart below shows three different entries (Table 2.19).

In the first entry, a problem behavior occurred in response to a teacher request (aversive EO). Note that the consequence that is entered really has nothing to do with abolishing the
EO. So while it certainly follows the behavior, it does not entail the “maintaining contingency.” Also note that there are no further entries on this existing aversive EO. What happened to that condition? Did the student open his book to page 62 and go about doing his work? Or did something else happen that provided the escape from such a request? Was there eventual compliance, or not? That would have been useful information.

The second entry appears to have nothing to do with the original EO. Rather it appears to present an additional, new EO into the environment. This unpleasant situation is an example of another aversive EO, but different from the teacher demand in that it originates from a peer. Again, the C column does not adequately follow this up. Jose's response to the peer occurs to this new EO, and the critical information is the effect it had on the peer who originated the “disrespectful look,” and possibly the reaction of the fellow classmates to this encounter. Reporting what the teacher said is irrelevant in terms of this function. Finally, the third entry is unrelated to the above two; one could surmise that such a behavior is intended to effect the timing of being excused for lunch recess. Again, there is no follow-up to the presence of this presumed EO and the ineffectiveness of the listed behavior to abolish that. Perhaps, a minute later, another pleading by this child resulted in his or her being dismissed for the cafeteria early. Only if this information is captured would the “true” function of the verbal behavior possibly be revealed.

Unfortunately, this diverse set of behavioral descriptions is often synthesized by users into one function. A naïve professional would attempt to integrate the three entries in Table 2.19 into one function. Yet it is more plausible that each of the three entries involves a different EO; hence, a different function. For this reason, we are recommending that the trigger analysis with behavioral description charting system be utilized (presented in following section of this chapter).

<table>
<thead>
<tr>
<th>TABLE 2.19</th>
<th>A-B-C CHART</th>
</tr>
</thead>
<tbody>
<tr>
<td><strong>Antecedent</strong></td>
<td><strong>Behavior</strong></td>
</tr>
<tr>
<td>10:10 Teacher said, “Take out your book and work on page 62.”</td>
<td>“I don’t want to!”</td>
</tr>
<tr>
<td>10:12 Another student looks at José (in a disparaging manner).</td>
<td>“Hey quit looking at me that way!” (with facial grimace).</td>
</tr>
<tr>
<td>11:15 Before lunch</td>
<td>“I am hungry. I want to eat right now!”</td>
</tr>
</tbody>
</table>

EO. So while it certainly follows the behavior, it does not entail the “maintaining contingency.” Also note that there are no further entries on this existing aversive EO. What happened to that condition? Did the student open his book to page 62 and go about doing his work? Or did something else happen that provided the escape from such a request? Was there eventual compliance, or not? That would have been useful information.

The second entry appears to have nothing to do with the original EO. Rather it appears to present an additional, new EO into the environment. This unpleasant situation is an example of another aversive EO, but different from the teacher demand in that it originates from a peer. Again, the C column does not adequately follow this up. Jose's response to the peer occurs to this new EO, and the critical information is the effect it had on the peer who originated the “disrespectful look,” and possibly the reaction of the fellow classmates to this encounter. Reporting what the teacher said is irrelevant in terms of this function. Finally, the third entry is unrelated to the above two; one could surmise that such a behavior is intended to effect the timing of being excused for lunch recess. Again, there is no follow-up to the presence of this presumed EO and the ineffectiveness of the listed behavior to abolish that. Perhaps, a minute later, another pleading by this child resulted in his or her being dismissed for the cafeteria early. Only if this information is captured would the “true” function of the verbal behavior possibly be revealed.

Unfortunately, this diverse set of behavioral descriptions is often synthesized by users into one function. A naïve professional would attempt to integrate the three entries in Table 2.19 into one function. Yet it is more plausible that each of the three entries involves a different EO; hence, a different function. For this reason, we are recommending that the trigger analysis with behavioral description charting system be utilized (presented in following section of this chapter).

**Over-Selection of Adult Attention as Function.** Another problem with the traditional A-B-C descriptive analysis is the over-selection of social attention as the maintaining contingency. Very often you hear personnel indicate that the behavior is maintained by attention, and they point to the A-B-C record to show that attention (in some form) always follows the behavior. This interpretation regarding behavioral function is again an unfortunate outcome of the manner in which descriptive analyses collect information. While attention, either in the form of a verbal statement, physical proximity, or physical contact, will often follow the problem behavior, it may be tangential to the behavioral function that is operable under a specific EO. The charting in Table 2.19 illustrates such a problem. The reviewer of this data would probably conclude that the teacher's attention is the function of problem behavior (incorrectly).

It is more often the case that someone's attention may be coincidental to the actual function, which may be access to a tangible reinforcer, escape from an unpleasant social situation, escape from task demands, and so forth. However, because the adult mediates such access or escape from the aversive stimuli, his or her attention/proximity
is inherently involved, but is misconstrued as having a primary causative role! In many cases, the role of an adult’s presence in socially mediated behavior is one of the delivery of the desired event, and one’s attention is a necessary condition but not the maintaining contingency. Only for problem behaviors that produce their effects directly (i.e., direct access and direct escape problems), would people often not be involved subsequent to the behavior! Otherwise, an adult’s presence, attention, or proximity is endemic to functions involving social mediation. Again, an understanding of the EO and its influence in establishing the value of a particular outcome in access and escape functions is missing in these analyses.

The upshot: one cannot simply examine the social event that occurs right after the problem behavior and infer that such an event serves as the maintaining contingency. If one does, the hypothesis about the possible function of behavior will often be attention (verbal and/or physical), which will often be an inaccurate conjecture.

**Trigger Analysis With Behavioral Description**

The utility of a trigger analysis (A. Rolider, 2003; A. Rolider & Axelrod, 2000) as a behavioral assessment method is the ability to collect data on infrequent target problem behaviors. It requires the presentation of the hypothesized EO and S^0 in the real-life context, with the person(s) who normally are involved with the client. The occurrence (or absence) of the target problem behavior is then noted (if a dangerous or extremely disruptive behavior is the target problem, use a precursor behavior to end the trial, instead of the dangerous target behavior). As delineated in a prior section of this chapter, you can then compute the percentage of times the target behavior occurs. These quantitative data are derived with the ratio of occurrences of target behavior over the total number of times the EO/S^0 condition was presented. For further information on the specific procedural requirements for conducting a trigger analysis with a variety of access and escape functions, the reader is enjoined to consult Cipani and Cipani’s (2017) *Diagnostic Manual*.

But if we add a slight variation to the data collection, a trigger analysis can also provide qualitative information about behavioral function. The procedural requirements for conducting this method remain the same as previously described. With the behavioral description component added to the trigger analysis, a running description of behaviors that occur subsequent to the EO presentation is delineated by the user. Once a behavior produces the abolishment of the EO, the trial ends. Within a given discrete trial (begins with EO and ends with AO), information regarding the effectiveness of various behaviors that occurred can be gleaned, including the behavior that eventually produced the functional reinforcer.

This is how the data will be collected on a charting system with three columns. The A column would be a delineation of both the EO condition and the discriminative stimuli (people) for the behaviors. This EO entry in the first column **would remain the same** for the descriptive record of the various behaviors that occur subsequent to the EO presentation. Behavioral descriptions are written in the second column and continue until the EO condition is abolished (AO), which is delineated in the third column. All behavioral entries in column B would be described and possibly “time-stamped.” For example, descriptions of what the client does are listed vertically in chronological order. Information that indicates whether the EO condition was abolished (or not) is entered in the third column (i.e., maintaining contingency that is related to the EO for that trial). One can then examine the various behaviors that occur under the delineated EO and their effectiveness (or lack thereof) in attaining the functional reinforcer. The third column requires only that the user provide an entry indicating whether the hypothesized functional reinforcer is delivered. Note that there are major differences in how the user fills out the first and third columns in comparison to the A-B-C descriptive chart mentioned earlier in this chapter. These changes correct some of the faults of such a descriptive data collection method.

Here is an example of the data collection for a given trial. Let us say we have a young girl in a mainstream class who does not like to read aloud when it is her turn. Therefore, the value of terminating the oral reading task is initially established whenever her oral reading
group comes up to the teacher’s desk. The value of escape is subsequently increased when it
gets closer to her turn to read. The teacher normally avoids having this student read aloud, so
the consultant asks if the teacher can induce such a condition, to determine if such requests
to “read aloud” are the “driving force” for the problem behavior. With consent obtained from
school personnel and parents, the teacher agrees.

The teacher would present the group oral reading format as usual. Instead of avoiding this
student, the teacher now calls on her to read aloud. The data collection ensues at that point.
The teacher might also capriciously request oral reading from this student at other
unpredictable times to determine if the behavior can be “provoked” by this potential aversive
EO. A simple analysis of whether the behavior occurred or not would reveal the number of
times the problem behavior occurred over the number of opportunities. For example, over
a 2-week period, the number of times the student engages in the identified target behavior
(some form of nonresponsiveness when called upon) was 8/9.

Table 2.20 illustrates a hypothetical data collection of a trigger analysis with behavioral
description and the information it would provide. Note in column B, there are several
behavioral descriptions, along with the time the episode occurred. What is fruitful with this
method of charting is each behavioral episode (description) can now be evaluated against
its ability to alter the individual’s antecedent motivating condition, by examining the third
column. With the behavioral description at 8:56 a.m., one can see that the aversive condition,
having to read aloud, is avoided effectively. If future data collection using this charting shows
that such similar nonresponsive and inappropriate behaviors are effective in terminating or
avoiding reading aloud, one has better evidence about the function of these types of behaviors.

The argument regarding the hypothesized function is strengthened by the use of the
descriptive qualitative data with the trigger analysis. One can observe the differential
effectiveness of varied behaviors under column B on the relevant function. When determining
function it is important to note two phenomena. First, one should find that there is a reliable
relation under an EO between the problem behavior(s) and a maintaining contingency.
Second, the inefficiency of other behaviors to produce the desired outcome relative to
the target behavior would also be apparent. Following is a real-life case that illustrates the
analysis of behavioral function of aggression with respect to the initial EO involving the value
of riding on tricycles during free play activities.

**Head Start and the Tricycles**

I was a behavioral consultant to Head Start in the early 1990s. I provided specific strategies
to deal with problem behaviors of the children attending the particular site. Often the
referral was for a child who was aggressive (overwhelmingly boys). One of the referrals for
aggression was a boy who exhibited such behavior during outside playtime. The catalyst for
such behavior revolved around the desire of many children to ride one of the three tricycles.
If six children want three tricycles, all at once, a conflict arises. The children argued and
pushed each other away from the bikes in order to establish themselves as the bike riders.
Once a child landed in the seat, she or he usually went unchallenged (kind of like *King of the
Mountain*). As you could guess, my client was quite good at getting the bike and keeping it.
As is evident, aggression in this context is a behavior that produces access to the tricycle and maintains such engagement with the tricycle. In comparison to other behaviors, aggression, when performed adeptly, is far more effective and efficient than other behaviors, such as pleading, whining, or crying. But what was very telling was how the teachers reacted to aggression. When a child complained about being “bullied” by another child, they did not resolve such disputes. Instead, the petitioner (child) was told to go back and work things out for him- or herself. I asked one of the teachers why none of the staff mediated the disputes with the bike (until someone was hit). She remarked, "Our philosophy here is that we want the children to learn to work out their problems on their own. If we solve their interpersonal squabbles and problems, they will never learn to develop self-control and personal responsibility to themselves and their fellow human beings." As you can see, such a policy would make verbal threats and stealth incidents of aggression become functional in getting the trike. An analysis of the contextual factors point to aggressive behavior serving a socially mediated access (SMA) function; getting the trike (see Table 2.21).

What would a trigger analysis with descriptive assessment chart look like? While this was not done, the hypothetical illustration in Table 2.22 would be plausible given the

<table>
<thead>
<tr>
<th>TABLE 2.21 ■ QUESTIONS TO CONSIDER</th>
</tr>
</thead>
<tbody>
<tr>
<td>1. Is the existing motivational condition for that child one of relative deprivation of that item or activity?</td>
</tr>
<tr>
<td>Answer: Yes. Three tricycles and many children desiring such sets up the EO for such an activity. In point of fact, if there were 10 tricycles, with no need to wait for a tricycle to become available, the EO would be low because the desired event would be freely available.</td>
</tr>
<tr>
<td>2. Is there a reliable, somewhat frequent relation, between the child's problem behavior and accessing certain items or activities? What is the form of the behavior and what items or activities are produced?</td>
</tr>
<tr>
<td>Answer: Yes. Aggression against other children in a profound manner resulted in this child getting the tricycle on a regular basis (or any other item/toy he or she wanted).</td>
</tr>
<tr>
<td>3. Is the problem behavior more likely to produce the tangible reinforcer than acceptable appropriate behaviors?</td>
</tr>
<tr>
<td>Answer: Yes. Particularly in light of the failure of the social environment to selectively reinforce a more appropriate behavior by controlling who initially get the tricycles and for how long they have access to the tricycles.</td>
</tr>
</tbody>
</table>

EO, establishing operation.

<table>
<thead>
<tr>
<th>TABLE 2.22 ■ TRIGGER ANALYSIS WITH BEHAVIORAL DESCRIPTION</th>
</tr>
</thead>
<tbody>
<tr>
<td>Antecedent (EO)</td>
</tr>
<tr>
<td>Desire to ride one of three tricycles; during outside play time commenced</td>
</tr>
<tr>
<td>Says he is going to tell the teacher</td>
</tr>
<tr>
<td>Pushes peer off tricycle, peer who was pushed off cries and goes to another area of the play area</td>
</tr>
</tbody>
</table>

AO, abolishing operation; EO, establishing operation.

© Springer Publishing Company
information from Table 2.21. In this case, the failure of the social environment to mediate other “more appropriate” behaviors to procure one of the tricycles was a major factor in the continued utility of aggressive behavior. Intervention would have to significantly alter the manner in which the teachers intervened in this context (i.e., a failure to intervene). Aggression had to be made less functional, while more appropriate behavior had to become functional in getting the tricycle. This was accomplished by designating the following contingency for aggression: removal from the play area for a brief time and loss of any tricycle time that recess period. But an additional component is needed to strengthen a more acceptable way of getting a tricycle. I decided to make complaining to the teacher and making the children involved in the squabble accept a “plea deal from the teacher” produce a functional result. The plea deal meant the parties involved in the complaint would all get a shorter allotment of time on the tricycle, but they would each be allotted some time. The teacher would announce the following: “You get the tricycle for 3 minutes, then she gets it for 3 minutes,” and so forth.

With this approach, aggressive behavior dropped dramatically, including the aggressive behavior of the child referred to me. The removal of the opportunity to ride the tricycle whenever a child aggressed made such a behavior unproductive in this context. The teachers remarked that the children were now bringing their complaints surrounding toys and bikes to them frequently. These functional treatment contingencies produced a more acceptable way for children to work out their “impulsive” behavior. What was also an interesting finding in this program was that many of the children who needed the tricycle right away learned one of two things: how to wait, or how to find something else interesting to play with that was not in as great a demand as the bikes. Can children actually learn to refrain from aggression? This finding does not settle with the old adage, "boys will be boys." Perhaps, we adults have a lot more to do with aggression than scholars portend.

A Better A-B-C Descriptive Chart

To reiterate what was stated previously in this chapter, contriving a motivational condition may not be feasible, or you may not receive authorization to conduct such (via informed consent). You can use the above method of charting behavior without the EO inducement, by noting a naturally occurring deprivation or aversive EO for the particular client or student. It would be necessary to gather some interview information via the Cipani EO Behavioral Interview Form (see Appendix A) to deduce potential deprivation and/or aversive EOs before collecting data.

For aversive EOs, their presentation would be apparent and you delineate such an aversive EO in column A. You would write down each behavioral episode (descriptions) following the presentation of the aversive event, and whether such a behavioral episode was effective (or not) in abolishing the EO in the last column. Continue the data recording until the hypothesized EO is abolished. With respect to deprivation EOs, you may have to watch for initial attempts to access some item, activity, via some request, which is subsequently denied. For example, you observe the target student ask for computer time and the request is denied. You would begin data collection with this deprivation EO and observe if this person’s behavior escalates to levels of disruption that seem to characterize the problem referred. Of course begin charting the behavioral descriptions immediately after observing the denial of access to the activity.

The following hypothetical example illustrates the A-B-C data collection and analysis, with the self-injurious behavior (SIB) of a hypothetical child with disabilities during speech therapy. In this hypothetical assessment, it was not necessary to contrive the EO; all that was necessary was to study the behavior under this naturally occurring context in the speech therapy sessions.

In Table 2.23, the presentation of a language task that requires speaking in sentences creates the aversive condition for this hypothetical child with severe developmental disabilities. The therapist becomes a discriminative stimulus for certain behaviors that are more efficient than others, at least temporarily removing or postponing this activity. Note that the first behavior occurring at 9:28 a.m., one of saying "I, not," did not produce escape. Neither did exhibiting the target appropriate language skill (see third row) result
Simulation Exercise: Trigger Analysis of SMA Functions

With another person (role respondent), identify some item that person possesses and indicate to the class that such is a desired item (one whose loss is stipulated as creating an EO). Prior to the actual display of the interaction, decide which one of several behaviors will result in giving the item back to the role respondent (unknown to class-observers). The observers should develop the data sheet to reflect the three columns (the EO or Antecedent column), the behavioral description column, and the AO (or maintaining contingency in the third column), as depicted in this text. You and the role-play respondent then perform the simulation. You remove the item and the role respondent engages in a number of behaviors (include appropriate and inappropriate), with one of them resulting in his or her getting the item back. Make sure you provide enough time between each behavior so that the observers can write each behavioral episode on their data sheet (5–10 seconds should be sufficient). When the functional reinforcer is delivered, the observers indicate such on their data sheets in the third column. Then compare what behaviors were observed that did not result in access to the item versus the one that did (last entry). Make sure that you provide the item across a diverse type of behaviors, including vocal (e.g., “give that back or I will scream”) and nonvocal (e.g., volunteer stomps on floor) across multiple demonstrations. Repeat the simulation demonstrations multiple times to obtain practice effect.

### TABLE 2.23 ■ ANALYSIS OF LANGUAGE TASK

<table>
<thead>
<tr>
<th>Antecedent (EO)</th>
<th>Behavior (B)</th>
<th>Contingency (AO)</th>
</tr>
</thead>
<tbody>
<tr>
<td>Presentation of language task with speech pathologist, requiring full sentences</td>
<td>“I, not” and turning her head away from person (9:28 a.m.)</td>
<td>Not effective (speech pathologist chides her to try, re-presents task)</td>
</tr>
<tr>
<td>Cries (9:30)</td>
<td>Not effective, continues with task</td>
<td></td>
</tr>
<tr>
<td>Said a full sentence, “I see a dog.” to picture card (9:32)</td>
<td>Not effective, praised for full sentence and next item presented (i.e., requiring a full sentence)</td>
<td></td>
</tr>
<tr>
<td>Slaps self (9:35)</td>
<td>Effective immediately, therapist says “let’s try something else” and goes outside to play with the girl</td>
<td></td>
</tr>
</tbody>
</table>

AO, abolishing operation; EO, establishing operation.

in the termination of the task! As a result of not allowing such a vocal performance to terminate this aversive instructional activity, shortly thereafter, she slaps herself. Note that this incident occurs 7 minutes into the session when the aversive nature of the context has increased. Contingent upon this slap to the face, the therapist changes the instructional format. The therapist indicates that the child can just say one-word responses, if she will not hit herself. With such a change in response requirements, the aversive EO is abated, and self-injury stops. But if the full sentence requirement is reinstated again, the same aversive EO conditions are operable. If the same function exists for slapping oneself, relative to other behaviors, this behavior is likely.

Let us take the same instructional context and present a trigger analysis for another student whose self-injury is hypothesized to function as access to a tangible reinforcer. A hypothetical 6-year-old student with autism goes to speech class two times a week and...
Simulation Exercise: Trigger Analysis of SME Functions

With another person, identify some action that would create a state of aversion for that person (one whose presence is stipulated as creating an EO for such). For example, you can grab an arm/hand, begin chattering, stand close, or present the person with an assumed difficult academic task (just make sure such behavior does not create a “real” aversive event to the person—no lawsuits wanted). Prior to the actual display of the interaction, decide which one of several behaviors will result in you terminating the “aversive” action (without the class observers being aware of the selection, only the role respondent). The observers should develop the data sheets to reflect the three columns: (a) the EO or antecedent column, (b) the behavioral description or B column, and (c) the C column containing the AO or maintaining contingency (as depicted in text). You and the role-play respondent then perform the simulation, allowing enough time between behaviors for the observers to write down their descriptions. When the functional reinforcer is delivered (i.e., your aversive action is terminated), the observers indicate such on their data sheets. Then compare what behaviors were observed that did not result in access to the item versus the one that did (last entry). Make sure that you provide escape from the aversive event across a diverse type of behaviors, including vocal (e.g., “give that back or I will scream”) and nonvocal (e.g., kicking floor) across the multiple demonstrations. Repeat the simulation demonstrations several times to obtain practice effect.

at varying times is given a favored toy. Sometimes the student is given the toy right at the outset of the session, sometimes only after the session has ensued. In this case, it may be necessary to induce the EO. Hence, instead of giving this student the toy right away, the speech therapist will hide the toy for a period of time and begin the session. This hypothesized deprivation EO could then be induced several times in the therapy session by taking the favored toy away after short periods of access. The running description of this hypothesized function is given in Table 2.24.

In summary, a trigger analysis with behavioral description allows for an analysis of the effect of many problem behaviors displayed on the diminution of the operable EO (see Cipani & Cipani, 2017 for more examples of the above charting system). In the case of access behaviors, a behavioral description of various incidents when deprivation is in place identifies the efficiency and effectiveness (or lack thereof) of displayed behaviors to abate the EO. In the case of escape behaviors, each behavior’s ability to terminate the aversive event can be evaluated.

<table>
<thead>
<tr>
<th>Antecedent (EO)</th>
<th>Behavior (B)</th>
<th>Contingency (AO)</th>
</tr>
</thead>
<tbody>
<tr>
<td>Access to favored toy blocked temporarily</td>
<td>“I want”</td>
<td>Therapist says “good asking” but not effective in getting the toy</td>
</tr>
<tr>
<td>Cries</td>
<td>Not effective, continues with task and is told to wait for the toy until some work is done</td>
<td></td>
</tr>
<tr>
<td>Said a full sentence, “I see a dog” to picture card</td>
<td>Not effective, praised for full sentence and next item presented</td>
<td></td>
</tr>
<tr>
<td>Slaps self (four times)</td>
<td>Effective after fourth slap, “OK, you can have the toy to hold if you will work as well.”</td>
<td></td>
</tr>
</tbody>
</table>

AO, abolishing operation; EO, establishing operation.
You receive a referral for a client who runs out of the residential unit once a day, pretty much every day. You ask the staff (mistakenly), “Why do you think he does that?” The reply provides little information (and verifies why you should never ask that question first): “He’s just being Bobby. You know he is autistic!”

Like me, you are probably still wondering why Bobby does this only one time each day. Is there a particular time this daily event happens? If the recording of this behavior specified the time it occurred, such information might be available. Suppose you see that this behavior occurs around 2:30 p.m. every day. Now your interest is really peaked! What happens at 2:30 that sets the occasion for Bobby to run out of the unit? The answer: shift change. With shift change comes new people coming in from the parking lot. But why does Bobby run out of the parking lot during shift change? The answer: to see one car in particular. You now know the function of this behavior.

Not all referrals will be as simple as this illustration. Often the behavior occurs several times across the day, and it is not easy to pick out what “trigger event” seems to occasion the exhibition of the problem behavior. The scatter plot (Touchette, MacDonald, & Langer, 1985) is an important tool to determine if certain times and events seem to occasion higher levels of problem behavior across time. It provides general information on possible time periods across the day that seem to promote higher rates of behavior than other time periods.

In the study by Touchette et al. (1985), a scatter plot was used to gain information on the antecedent conditions for the assaultive behavior of a 14-year-old female. She had a history of such behavior from the age of 4. In her current placement, she would assault both peers and staff at the residential school for students with autism. Staff plotted assaults as a function of 30-minute intervals. These data were transformed to a new grid, which made it easier to view patterns of target behavior. If a given 30-minute block of time had only one assault, an open circle was placed on the new grid for that time period. More than one assault during a 30-minute block of time required a filled-in circle to be placed on the new grid. Blocks of time during which no assaults occurred had no circle. This new grid would reveal longitudinal patterns of behavior.

By examining this grid for filled-in circles, these researchers identified specific time periods between 1:00 and 4:00 p.m. during which multiple assaults were occurring. From

ASSIGNMENT: CONSTRUCT A TRIGGER ANALYSIS WITH BEHAVIORAL DESCRIPTION

Using a hypothetical client who engages in property destruction, delineate the procedures to be used for a trigger analysis with behavioral description if the suspected EO is escaped from difficult class assignments.

- Describe the contrived EO condition for this hypothesized function.
- Present a three-column sheet illustrating hypothetical data for one contrived EO trial.
- Assuming that your hypothesis is correct, explain what happens when the student engages in property destruction in the natural context; that is, what is the maintaining contingency?
- Explain how you might select a precursor behavior on some trials; that is, how would the information obtained from the test trial above be helpful in selecting a precursor behavior to provide escape from the difficult assignment?
Monday through Thursday during this time period, the student was in group prevocational and community living classes. In contrast, Fridays, Saturdays, and Sundays rarely contained assaults, and she did not attend these classes on those days. With this information, they redesigned her schedule. Her new schedule removed the afternoon classes that occasioned high rates of assaultive behavior. In their place, the activities she engaged in on Friday through Sunday, that seemed to not provoke assaultive behavior, were substituted. With this programmatic change, assaults immediately dropped to zero levels on multiple days. This was maintained over the next phase where the prevocational classes were progressively introduced back into her schedule. This progressive alteration of the amount of time she would spend in these classes occurred over a 1-year period. Data at the end of that 1 year was quite impressive. She was participating in three of the four class hours with only one assault occurring during a 14-day period.

To use the scatter plot as a mechanism for revealing patterns of behavior across the week, staff record occurrence of target behavior as a function of time of day. This is accomplished in time blocks, for example, 9:00 to 10:00 a.m., 10:00 to 11:00 a.m., and so on. You then examine the data across multiple days, looking for patterns of high rates and low rates of target behavior across the same time of the day. Table 2.25 is a hypothetical illustration of a scatter plot to identify patterns of “refusal to comply” behavior of an 8-year-old child with attention-deficit hyperactivity disorder (ADHD) in a third-grade elementary school classroom.

Table 2.25 plots the frequency of the target behavior, that is, refusal to comply, across 5 days of the week in terms of half-hour time segments for each day. One can then examine the data for patterns of behavior across certain time patterns or activities. For example, between 10:00 and 10:30 on Monday, the child refused to comply with a teacher request five times. Refusal behavior is highly likely during this period as evident by the data for the remainder of the week. In examining the scatter plot, two time periods (i.e., 8:30–9:00 and 10:00–10:30) account for the overwhelming majority of instances of refusal behavior during this 1-week period. One can then begin to examine more closely the antecedent conditions that are present in those time periods where higher rates of problem behavior exist. Once identified, these risk conditions for target behavior can then be used in designing an effective treatment. It is also important to note from the scatter plot data that there are certain time periods when refusal behavior was unlikely. This information is also valuable in ascertaining what contexts are “safe” conditions for target problem behavior. Collecting scatter plot data can aid in identifying risk and safe conditions for the target problem behavior.

**TABLE 2.25** ■ SCATTER PLOT ILLUSTRATION: OCCURRENCE OF REFUSAL TO COMPLY WITH TEACHER/STAFF INSTRUCTION

<table>
<thead>
<tr>
<th>Time of Day (a.m.)</th>
<th>M</th>
<th>T</th>
<th>W</th>
<th>Th</th>
<th>F</th>
</tr>
</thead>
<tbody>
<tr>
<td>8:00–8:30</td>
<td></td>
<td>x</td>
<td></td>
<td>x</td>
<td></td>
</tr>
<tr>
<td>8:30–9:00</td>
<td>xxx</td>
<td>xx</td>
<td>xxxx</td>
<td>xx</td>
<td>xxx</td>
</tr>
<tr>
<td>9:00–9:30</td>
<td>x</td>
<td></td>
<td></td>
<td>x</td>
<td></td>
</tr>
<tr>
<td>9:30–10:00</td>
<td>x</td>
<td></td>
<td></td>
<td></td>
<td></td>
</tr>
<tr>
<td>10:00–10:30</td>
<td>xxxx</td>
<td>xxxx</td>
<td>xxxx</td>
<td>xxxx</td>
<td>xx</td>
</tr>
<tr>
<td>10:30–11:00</td>
<td>x</td>
<td></td>
<td>xxxx</td>
<td></td>
<td></td>
</tr>
<tr>
<td>11:00–11:30</td>
<td>x</td>
<td>x</td>
<td></td>
<td></td>
<td></td>
</tr>
</tbody>
</table>

© Springer Publishing Company
If you are attempting to monitor multiple behaviors with a scatter plot grid, you might want to code each target behavior at the top of each data sheet. For example, physical aggressiveness could be coded "PA," and a "T" could represent tantrums incidents. Try to limit yourself to collecting scatter plot data on only two or three target behaviors at a time. The day should be divided into time periods that reflect natural divisions in regularly scheduled activities. For example, a scatter plot for a client attending a worksite might be designed to reflect the natural activities and breaks during the workday (see Table 2.26).

Table 2.27 is a scatter plot of this client's tantrum behaviors according to the general activity and time period delineated in Table 2.26. The time period of 8:15 to 8:30 indicates a high rate of tantrums. Apparently, cleaning bathrooms does not generate many tantrums (see 8:30–10:00 time period). However, cleaning the cafeteria is another condition that results in high rates of tantrums (see 10:10–11:30).

In this hypothetical example, why would the client have minimal problems with cleaning the bathroom, but then have problems cleaning the cafeteria? Should we conclude that it is the nature of the specific tasks that generates tantrums? Although this is certainly possible, it may not be the primary factor. Perhaps it is the requirement to work with other coworkers when cleaning the cafeteria. If cleaning the bathrooms is done in solitude, while cleaning the cafeteria is done as a group, perhaps that is the problem. This client may not like to work with other people. If this client was required to join several people doing bathroom custodial duties, the client may exhibit some of the same problem behaviors. We don't know which of these two possibilities creates an aversive EO for tantrums. However, the scatter plot data give you a place to start looking. It requires additional investigation.

### TABLE 2.26 SAMPLE TIME PERIODS FOR SCATTER PLOT DATA

<table>
<thead>
<tr>
<th>Time Period</th>
<th>Event</th>
</tr>
</thead>
<tbody>
<tr>
<td>8:00–8:15</td>
<td>arrived at worksite</td>
</tr>
<tr>
<td>8:15–8:30</td>
<td>morning staff meetings</td>
</tr>
<tr>
<td>8:30–10:00</td>
<td>cleans bathrooms in building</td>
</tr>
<tr>
<td>10:00–10:10</td>
<td>break</td>
</tr>
<tr>
<td>10:10–11:30</td>
<td>sweeps out and cleans cafeteria, mops up floor</td>
</tr>
<tr>
<td>11:30–12:00</td>
<td>lunch</td>
</tr>
</tbody>
</table>

### TABLE 2.27 SCATTER PLOT ILLUSTRATION

<table>
<thead>
<tr>
<th>Date: 3/9/05</th>
<th>Target Behavior: Tantrum Behavior at Worksite</th>
</tr>
</thead>
<tbody>
<tr>
<td>Time of Workday</td>
<td>M</td>
</tr>
<tr>
<td>8:00–8:15</td>
<td></td>
</tr>
<tr>
<td>8:15–8:30</td>
<td>xxx</td>
</tr>
<tr>
<td>8:30–10:00</td>
<td>x</td>
</tr>
<tr>
<td>10:00–10:10</td>
<td></td>
</tr>
<tr>
<td>10:10–11:30</td>
<td>xxxx</td>
</tr>
<tr>
<td>11:30–12:00</td>
<td>x</td>
</tr>
</tbody>
</table>
DISCUSSION QUESTION 2D

Suppose you have collected scatter plot information on a student's rate of leaving the classroom unauthorized. What information would the scatter plot data provide? What do you look for? What would the absence of the target behavior tell you?

Analogue Assessment

Analogue assessment (also known as a functional analysis of behavior) involves an experimental analysis of the function of the behavior under contrived test conditions (Iwata, Vollmer, & Zarcone, 1990). These contrived test conditions attempt to simulate or mimic the variables hypothesized to be operating in the child's classroom or school environment (Iwata, Dorsey, Slifer, Bauman, & Richman, 1982; Steege, Wacker, Berg, Cigrand, & Cooper, 1989). Analogue assessment utilizes a quick switching of hypothesized variables to determine the effect on the child's behavior, comparable to conducting a scientific experiment. If the rate of behavior is reliably higher in one condition relative to other test conditions, then a hypothesis about a behavior's function has further solid empirical evidence.

Analogue assessment is a more labor-intensive method that allows you to "test" potential hypotheses regarding why the behavior is occurring, in terms of controlling variables (Iwata et al., 1982, 1990; Lerman & Iwata, 1993). It has received extensive validation (Day, Rea, Schussler, Larsen, & Johnson, 1988) and is superior to other assessment methods described previously (Lerman & Iwata, 1993).
Multiple EO-Function Comparison Tests. Analogue assessment methods were developed and empirically validated in a clinic for SIB and other problems at the Johns Hopkins School of Medicine (Iwata et al., 1982). The children referred to Dr. Iwata at the clinic came from various distances and locations, which probably precluded an analysis of their behavior in real-life (in-situ) environments. These researchers ingeniously developed an assessment protocol that allowed them to experimentally analyze the potential function of self-injury in a short period of time. In order to verify hypotheses about the problem behaviors’ functions, Iwata et al. (1982) attempted to mimic possible controlling environmental variables in the clinic setting. They developed four test conditions under which self-injury rates would be evaluated: (a) attention, (b) demand, (c) alone, and (d) play (enriched environment).

In the attention condition, the therapist’s attention was contingent on SIB, in the form of a disapproval statement such as “don’t do that” and touching the child lightly on the arm or shoulder. What would such a simulation demonstrate? If behavior rates increase during this condition, relative to the other conditions, one has strong evidence that attention is the maintaining variable. In the demand condition, escape-motivated functions were tested. The therapist would present task demands to the subject in the form of self-care or educational tasks every 30 seconds. The task would be removed for a 30-second period contingent on SIB. If the rate of problem behavior is heightened in this condition relative to the other conditions, then evidence of escape-motivated behavior exists for this aversive EO. In the alone condition, the client was placed alone in the therapy room, with no toys or other

CASE EXAMPLE 1

After reviewing information obtained via scatter plot and interview of school staff, you hypothesize that the referred child with ADHD has more frequent behavior problems when the seatwork is relatively difficult for him. This second grade student’s referred problem behavior consists of not finishing assignments coupled with frequent verbal complaints about the assignments. You suspect that such behavior serves an escape function and appears to be very likely with difficult seatwork. The socially mediated escape function would involve the teacher temporarily halting the task when the student begins or continues to complain.

To test this, it is essential to set up a two test conditions. Since difficulty of the material seems to be the factor in the problem behavior’s function, the presence and absence of difficult material would provide the needed comparison. Therefore, in some sessions you present easy assignments, while in other sessions you present the hypothesized difficult assignments. If the degree of difficulty is not the variable, you could also conduct some sessions with no assignment. Therefore, in brief sessions, difficult tasks are going to be interspersed with separate sessions where easier tasks are presented. You will record the frequency or rate of problem behaviors under each of these two conditions. As the consultant, you will implement the analogue assessment in a separate room.

Further, to mimic the hypothesized classroom conditions, the occurrence of verbal complaining will be reinforced by your temporary removal of the task (in either the difficult or easy conditions). For example, if this student proclaims, “This is stupid, I don’t need to know who Captain Cook is!” you would comment, “OK, why don’t you take a break for a while. I will call you back when you are rested.” After 30 seconds of allowing him or her to get out of the seat, you call the student back again. However, contingent upon any verbal complaining, you allow the student another 30-second break. Therefore, in this analogue test, the occurrence of the problem behavior in either of the task conditions (easy vs. hard) is allowed to serve an escape function (i.e., negatively reinforced with the brief removal of the task).

If there is differential responding in problem behavior, in favor of higher rates during difficult tasks, one can surmise the conditions under which such escape problem behaviors become more probable. Therefore, the hypothesis of escape from instruction-task difficulty seems to be more plausible.
CASE EXAMPLE 2

A female client has been referred to you who lives in an institutional setting. She engages in severe property destruction. After reviewing information obtained via behavioral interviewing, you hypothesize that her property destruction seems to occur in the context of requests or demands made of her by staff. You will test this out by alternating 10-minute sessions of simple requests with sessions having no task demands. In one condition, you present the types of task demands made by staff (e.g., “Come here and put on your sweater.” “Pick up this towel.”). In the other condition, no requests or demands are made of her. Therefore, in short alternating 10-minute sessions, imposing demands of this client are interspersed with no task demands (alone condition), while the frequency of tantrums and property destruction is recorded under each of these conditions.

Further, to mimic the hypothesized classroom conditions, the occurrence of problem behaviors (tantrum or property destruction) results in you (the behavioral specialist) leaving her alone for a while (e.g., 30 seconds). In other words, the demand situation is removed contingent upon the target behavior, thus simulating what the natural environment would do if such a behavior is truly serving an escape function. If there is differential responding in problem behavior between the demand condition and the no-demand condition, in favor of higher rates during demands, you can surmise the conditions under which such escape behaviors become more probable. Therefore, the hypothesis of escape from task demands and chores seems to be more plausible.

It may also be the case that it is the manner in which the demands are presented that makes a demand an aversive EO. The analogue assessment can be constructed to address such a possibility. The two conditions that would be tested might then be the following. In one condition, the demand is made in a harsh tone. In the other condition, the demand is made in a conversational manner, with the word “please” included in the request. If the manner in which the demand is made makes it an aversive condition (or not), the results would show a differential rate of problem behavior. If the rate of the problem behavior is about the same in either condition, then the manner of presentation is not a factor.
Quick switching between two conditions: (a) sessions involving a short assignment and (b) sessions involving a lengthy assignment(s). Get the same (or similar) materials that are used in class (since length of assignment is the EO and not difficulty).

For four sessions, present assignments that last an entire 50 minutes (full = F), that is, student keeps working continuously for 50 minutes, with one instructor in one test area. If the individual finishes the assigned material, provide another assignment (i.e., finishing work should not escape assignments, mimicking hypothesized natural classroom conditions).

For four sessions, present short assignments that last only 10 to 15 minutes (short = S). Once the assignment is finished, end the session, and go to an entertaining activity. Provide a cue that the condition involves a short amount of work, for example, “Let’s do just this one task before we take a break.”

Brief removal of task assignment is contingent on the problem behavior in both short- and full-length conditions (e.g., “why don’t you take a short break?”).

On-task behavior should be measured across both conditions.

Comparison of rates of problem behavior and on-task behavior between these two conditions is used to verify the hypothesis.

A possible hypothetical sample of an analogue assessment, with resulting data for several 50-minute sessions (F) versus several short sessions (S), is presented in Table 2.29 (frequency of behaviors and on-task rate in rows two and three). In examining these data, the rates of problem behavior are higher in the 50-minute sessions (frequencies of 8, 7, 12, and 6) than in the short sessions (frequencies of 1, 4, 1, and 0). There also exists a significant discrepancy in the on-task rate between full instructional sessions versus short sessions. It is obvious that the child has more frequent problem behaviors during longer assignments, as well as reduced time on-task.

**Simulation Exercise: Analogue Assessment**

This simulation can be done with a comparison of two conditions in evaluating putative access functions: EO present (i.e., desired item removed) versus absent (i.e., desired item not removed). Stipulate to the observers what the target behavior consists of. In a 5-minute session, for access functions, you would remove the desired item (or attention) and then provide it back for just a few seconds contingent upon the target behavior. The volunteer is asked to demonstrate several behaviors, but in the EO present condition, the target behavior should be frequent (and conversely low in the EO absent condition). The observers record the frequency of the target behavior in both conditions. Compare the data after the session and repeat to obtain a practice effect.

<table>
<thead>
<tr>
<th>Session</th>
<th>1</th>
<th>2</th>
<th>3</th>
<th>4</th>
<th>5</th>
<th>6</th>
<th>7</th>
<th>8</th>
</tr>
</thead>
<tbody>
<tr>
<td>Full or short</td>
<td>F</td>
<td>F</td>
<td>S</td>
<td>F</td>
<td>S</td>
<td>S</td>
<td>F</td>
<td>S</td>
</tr>
<tr>
<td>No. of behaviors</td>
<td>8</td>
<td>7</td>
<td>1</td>
<td>12</td>
<td>4</td>
<td>1</td>
<td>6</td>
<td>0</td>
</tr>
<tr>
<td>On-task %</td>
<td>40</td>
<td>30</td>
<td>70</td>
<td>25</td>
<td>60</td>
<td>75</td>
<td>45</td>
<td>65</td>
</tr>
</tbody>
</table>
DISCUSSION QUESTION 2E

In an analogue assessment, why does the therapist/teacher/staff person provide specific reinforcement when the client engages in the target behavior? Why would you want to reinforce the target behavior?

In many educational and mental health settings, extensive use of analogue assessment will probably be prohibitive due to time and fiscal constraints. So when would its use be most appropriate? There are three compelling reasons for utilizing this strategy: (a) when several prior behavioral programs have not succeeded in reducing the problem behavior, (b) before a student loses his or her current educational or residential placement, and (c) when there is a huge time and resource investment in training a large number of staff to implement a plan.

ASSIGNMENT: SINGLE EO-FUNCTION HYPOTHESIS TESTS

Using a hypothetical client who frequently leaves the classroom, delineate the procedures to be used for an analogue assessment single EO-function hypothesis test, if the suspected EO is the presentation of difficult class assignments. Address each of the points below.

- Describe the contrived EO condition for this hypothesized function.
- How is this hypothesis used to construct the two different conditions of this analogue test?
- How is this method different from the original functional analysis of behavior methodology in the 1982 Iwata and colleagues study?
- What happens when the target behavior occurs (in either condition)?
- Present a graph or table of data that illustrates that such an EO is actually the motivational condition for this student’s leaving the classroom.

### TABLE 2.30 DATA ON EASY VERSUS DIFFICULT TASKS

<table>
<thead>
<tr>
<th>Session</th>
<th>1</th>
<th>2</th>
<th>3</th>
<th>4</th>
<th>5</th>
<th>6</th>
<th>7</th>
<th>8</th>
</tr>
</thead>
<tbody>
<tr>
<td>Easy or difficult</td>
<td>D</td>
<td>E</td>
<td>E</td>
<td>D</td>
<td>D</td>
<td>E</td>
<td>E</td>
<td>D</td>
</tr>
<tr>
<td>No. of behaviors</td>
<td>12</td>
<td>0</td>
<td>3</td>
<td>7</td>
<td>14</td>
<td>2</td>
<td>1</td>
<td>18</td>
</tr>
<tr>
<td>On-task %</td>
<td>20</td>
<td>80</td>
<td>85</td>
<td>30</td>
<td>30</td>
<td>65</td>
<td>80</td>
<td>15</td>
</tr>
</tbody>
</table>

In a similar vein, a test of the problem behavior serving an escape function due to task difficulty could be done with another student. Again, with the occurrence of a target problem behavior, the assignment or task is stopped for a 1- to 2-minute break, then reintroduced. A possible hypothetical sample of data across eight brief sessions of 10- to 15-minute durations (consider child’s grade level) is presented in Table 2.30 for the two sets of conditions: difficult tasks (D) versus easy tasks (E). One can see by the data collected that the presentation of difficult tasks generates high frequencies of problem behavior and low rates of on-task behavior. Conversely, easy tasks generate a low frequency of problem behavior and high rates of on-task behavior.

© Springer Publishing Company

This is a sample from FUNCTIONAL BEHAVIORAL ASSESSMENT, DIAGNOSIS, AND TREATMENT: A COMPLETE SYSTEM FOR EDUCATION AND MENTAL HEALTH SETTINGS, THIRD EDITION
Analogue tests can also be conducted with other socially mediated access and escape problem behaviors (see Table 2.31). For example, some clients have difficulty when presented with a novel task or routine. This can be tested in a contrived condition by alternating the presentation of novel tasks with familiar tasks (see Example 1 in Table 2.31). The same requirement for allowing the problem behavior to terminate the condition would be in effect for both conditions. In Example 2, a test of the antecedent for socially mediated problem behavior involving an inability to wait for a reinforcer is tested. In one condition a wait of some interval is imposed, with the target behavior being given after some criterion level of problem behavior has been demonstrated. A differential result between the wait condition and the no-wait condition would provide evidence regarding a hypothesis of tangible reinforcer.

When I Say “NO!” Fred was an individual who was referred to Keven Schock for evaluation of severe SIB. In its most severe form, his SIB involved tearing pieces of flesh from his legs and throwing them at staff members. This resulted in significant levels of blood loss and significant risk to his life. Given the severity of this behavior, the facility had responded with progressively more restrictive procedures. These procedures included 1:1 staffing, psychotropic medications, and locked, hard plastic boots to prevent access to his legs.

Keven’s first observation of Fred’s SIB revealed a sequence of behaviors that he engaged in prior to the severe form of self-injury. While Keven was observing him, a staff person came into his room and asked him to go wash his hands before breakfast. He said “no.” The staff person then insisted that he must get ready for breakfast and told him again to go wash his hands. He then began screaming “NO.” The staff person again told him that he must wash his hands; he continued to yell “NO” and began to spit at the staff. The staff again directed him to go wash his hands. He stopped spitting and began to hit the staff person. The staff person now prompted him to stop pinching himself and go wash his hands. Fred then began grabbing the flesh on his legs causing a wound and bleeding. The staff person blocked Fred from grabbing his legs and called emergency staff. The emergency staff attended to his wounds, but no more requests were made to wash his hands.

Keven Schock then talked with staff who had worked with Fred for several years and had indicated that the most likely conditions to evoke the self-injury were repeated and persistent demands to complete any task. Staff who had reported success in avoiding self-injury told me that they simply stopped task demands when he said “no” and would re-present those demands in 15 minutes, at which time Fred would typically comply with the request.

Keven presented the findings from the descriptive assessment to the treatment team. Despite the data depicting clearly the function of escape from a social demand, the team disagreed with his findings. They were insistent that Fred was engaging in SIB for attention. Their logic was the following: when Fred engaged in the severe form of SIB, that is, throwing his pieces of skin at them, multiple staff members came to interact. When multiple staff arrived, he would then stop tearing flesh from his legs. Subsequently, he received one-on-one attention from the nurse. Rather than engaging in a protracted argument, Keven offered to provide empirical support that this behavior was maintained by escape. To provide such data, he tested three.

TABLE 2.31 ■ ANALOGUE TESTS

<table>
<thead>
<tr>
<th>Hypothesized EO</th>
<th>Condition A: Presence of EO</th>
<th>Condition B: Absence of EO</th>
<th>Other Considerations</th>
</tr>
</thead>
<tbody>
<tr>
<td>Example 1: Novel</td>
<td>Novel tasks presented</td>
<td>Familiar tasks</td>
<td>Equate length of time between both conditions</td>
</tr>
<tr>
<td>tasks</td>
<td>consecutively</td>
<td></td>
<td></td>
</tr>
<tr>
<td>Example 2: Inability to wait for desired item/ event</td>
<td>Wait time required from request (e.g., 1–5 minutes)</td>
<td>No wait time from request</td>
<td>Require some criterion level of problem behaviors to produce reinforcer</td>
</tr>
</tbody>
</table>

EO, establishing operation.
different conditions. In this case, due to the form of Fred’s severe SIB, he selected a precursor form of self-injury (pinching and pulling on the skin of his forearm) as the response measure during one of the three test conditions. In all conditions simple demands to complete tasks, such as get out of bed, go to the day room, hand me the towel, and so forth, were delivered. To test the escape function, the ability to escape the task demand was evaluated as a function of continued demands. Therefore, in one condition the task demands were stopped for an alternate behavior, and in another condition they were terminated contingent upon the less severe form of SIB. A third condition evaluated a temporary delay in the advent of the next compliance request. The three test conditions are presented in Table 2.32.

- Condition 1—The task demands were stopped any time Fred said “No.”
- Condition 2—The task demands continued after Fred said “No” and were terminated when he completed the task or when he engaged in the less severe form of SIB.
- Condition 3—The task demands were terminated when Fred said “No” and then represented after a 15-minute delay.

A session consisted of presenting each of the three conditions per day, with a 1-hour interval between each test condition. This type of data was collected for 4 consecutive days. Data were recorded for occurrences of self-injury in all conditions. Compliance with demand was recorded only for condition 3. The last column indicates whether compliance occurred in condition 3 after the command was presented the second time, that is, after he said “no.” Keven included this condition and additional data on compliance because some staff members reported that he would comply if you re-presented a demand after a brief delay (see Table 2.32).

When tasks demands were stopped when he said “no,” the rate of SIB was zero. The function of escape is further illuminated when one compares this with what happened in condition 2, where SIB produces escape (rather than saying “no”). Also, staff perceptions about his SIB behavior being less likely when you wait a short time to re-present the demand after the initial refusal seemed correct. Self-injury was absent during this condition, while compliance to the second request occurred three times.

Based on these data, Keven was able to demonstrate that attention was an incidental variable involved in the severe form. Consider that when attention was given to Fred when he picked flesh from his legs, he also experienced a removal of the task demand. It was the latter stimulus change that was driving his behavior, not the attention that also resulted. Keven designed a simple intervention that resulted in 0 occurrences of severe SIB immediately upon implementation. The plan was successful over a long period subsequent to the initial contingency change. Over the next 2 years, there were no occurrences of the severe SIB. There were two occurrences of the less severe SIB. Both occurred when Fred was at medical appointments and the medical staffs at the facility were insistent that he comply with their demands even after he had refused.

<table>
<thead>
<tr>
<th>Condition 1</th>
<th>Condition 2</th>
<th>Condition 3</th>
<th>Compliance With Demand on Second Request (Condition 3)</th>
</tr>
</thead>
<tbody>
<tr>
<td>Day 1</td>
<td>0</td>
<td>3</td>
<td>0</td>
</tr>
<tr>
<td>Day 2</td>
<td>0</td>
<td>5</td>
<td>0</td>
</tr>
<tr>
<td>Day 3</td>
<td>0</td>
<td>1</td>
<td>0</td>
</tr>
<tr>
<td>Day 4</td>
<td>0</td>
<td>2</td>
<td>0</td>
</tr>
</tbody>
</table>
In-Situ Hypothesis Testing

An in-situ hypothesis test uses a design similar to that described in analogue assessments, that is, a quick switching of conditions. However, an in-situ hypothesis test contrasts with an analogue assessment in two dimensions: (a) it is conducted in the setting of interest and (b) a functional treatment (based on the entertained hypothesis) is alternated with a baseline condition (Repp, Felce, & Barton, 1988). In this manner, a comparison is made between the rates of problem behavior during the functional treatment and the rates of behavior during the baseline (i.e., treatment not implemented).

The personnel in the in-situ setting (school, home residence, treatment facility) implement the data collection for the two conditions for only a brief period of the day, rather than across the entire day. The test is not conducted across the entire target time period. Rather, it is abbreviated in length, as its purpose is merely to test and not treat (at this point). At select time periods, across a week to several weeks, the professional alternates two conditions—baseline and treatment conditions. For example, in a school setting, the manner of conducting this assessment would be the following during a math period. On one day, during math period, the baseline condition is implemented. The following day, during math, the treatment condition is implemented. The following day, during math, the treatment condition is implemented. The following is a case example of this assessment method.

**I Hear Voices.** In-situ hypothesis tests are well suited to assessing the symptoms of mental illness. Consider the case of Joann, a 41-year-old female who had been diagnosed as having schizophrenia. She frequently would report that she heard voices telling her to harm herself. She often reported that she felt worthless and that she had let her family down by “getting mental illness.” Keven Schock developed an initial hypothesis involving this class of verbal behaviors as maintained by staff (adult) attention. He observed that her talking about hearing voices resulted in staff talking with her for extended periods of time. Such behavior appeared to be functional in accessing protracted conversations, with staff becoming an interested audience. Here is a great example of this function. A staff person might ask her how the meds were working. At that point, she began to talk about “hearing voices.” This led to multiple questions from the staff about the content of the “voices,” with a conversation that could last 15 minutes. Unfortunately, the times when she tried to start a friendly, but nonsymptomatic conversation, the opposite result occurred. The staff person would be polite, but the conversation lasted less than 1 minute. It seemed like lengthy attention from staff was the differential consequence that explained her verbal behavior. Keven set up two test conditions to see if two rates of symptomatic behavior would result.

The usual contingencies were kept in place at the mental health center. This required no manipulation of what had previously happened when Joann reported hearing voices. The staff person would talk with Joann and ask her about the content of her hallucinations. The length of social interaction was typically dependent on Joann reporting higher levels of hallucinations and describing the content of the hallucinations in some detail. This is termed condition 1. Every report about hallucinations and hearing voices was tallied in this setting.

Keven implemented the test condition in her home (condition two). The same behavior (reporting to staff that she was hearing voices) was the dependent measure. The staff members in the home were instructed to provide differential levels of social attention dependent on the content of her conversation. The staff responded to any reports of auditory hallucinations by simply saying, “What coping skills are you using for that?” and then a prompt to Joann to, “Go practice them and let me know how it worked.” However, if Joann initiated a conversation that did not involve references to auditory hallucinations, the staff would simply talk with her about the topic she presented during the appointment. In other words, a treatment based on attention only was deployed in this setting. If the symptomatic behavior went down in the home while still remaining at heightened levels at the center, the data confirm the attention hypothesis. Each test condition was in place on alternating weeks (for a total of 8 weeks). Results are presented in Figure 2.1. These data clearly demonstrate that for this individual, the reports of auditory hallucinations functioned to access staff attention.

**It’s Attention I Desire.** The case of Marta, a 28-year-old female who was diagnosed with borderline personality disorder, was referred to Keven Schock. She engaged in several
difficult behaviors, including threats to harm herself as well as an incident involving a self-administered overdose of medications. Keven had the opportunity to observe Marta both at a drop-in socialization center and when she initially moved into his facility. He noted that when she made a threat to harm herself there was a dramatic increase in the level of social interaction from her peers and the professional staff at the center. All she needed to do was to say “I don’t feel like living anymore, no one would care if I disappeared,” and staff came to her immediately. Standard operating policies in the mental health system required that professional staff assess her risk of suicide immediately. Therefore, all verbal threats were taken as a potential prelude to the actual act of hurting oneself and attempting suicide. Of course, the process of assessing this risk necessarily involved a great deal of one-on-one interaction with staff. The incident of her overdose on medication also resulted in both immediate increases in social interaction, starting with the emergency transport to the hospital and continuing with the medical staff once admitted to the hospital.

Based on these direct observations, Keven hypothesized that her threats and attempts to harm herself were maintained by staff attention. He decided to empirically determine if attention was the maintaining contingency by conducting two test conditions. In the first condition, noncontingent continuous attention from staff was provided for the entire day. In the second condition, the usual level of staff interaction was provided. These two conditions were presented in an alternating fashion on 6 consecutive days. The results were rather dramatic. There were no threats to harm herself and no attempts to harm herself on the days when attention was provided noncontingently. There were multiple threats to harm herself on the days that attention was at usual levels (see Table 2.33).

Based on this in-situ assessment, Keven and staff were able to determine that the problematic behaviors that had led to a diagnosis of borderline personality disorder were maintained by staff attention. They were then able to design an effective treatment that involved an initial habituation phase of continuous noncontingent attention and then thinning the schedule of staff attention. The intervention also included the development of a network of peers to provide sufficient levels of social interaction.

In Classrooms. How would you use in-situ hypothesis tests in educational settings? You believe a child’s problem behavior in an elementary special day class serves to access teacher attention on some intermittent basis. The in-situ hypothesis test for teacher attention
as the maintaining variable would involve 6 to 10 short sessions (30–45 minutes in length) over a 2-week period. For half the sessions, the teacher would not alter the usual manner of managing the student (baseline condition). For the other half of the sessions, if the child was engaged in work, the teacher would systematically provide attention in the form of social approval and points for on-task behavior. Therefore, in the functional treatment condition, a treatment addressing an attention hypothesis is implemented for a short period of time during the day. If problem behaviors are dramatically more frequent during baseline sessions, the maintaining contingency would seem to be teacher attention.

An in-situ hypothesis test provides the following advantages:

- It is a direct assessment of the target behavior in the setting of interest, with all relevant contextual variables present.
- If treatment fidelity is obtained, an effective treatment is discovered, leaving only the requirement to develop staff monitoring for extended periods of application.
- The staff, parents, and teachers who implemented the test will probably need less convincing that an effective treatment will be worth the time because they “had a hand” in the test.

**Why Did You Do That?**

Some naive people ask the children or clients, “Why did you do that?” The individual being asked supposedly examines his or her thought process and purposes behind such behavior and then provides an answer. In other words, the purpose of behavior is often assumed to be available by simply asking the client to engage in self-introspection. The following is a hypothetical scenario of such an interaction.

**Teacher:** Jose, why did you hit Bobby?

**Jose:** Well, Ms. Farrier, I believe that I am more likely to hit other students when we both want the same thing. I have noticed that when I hit most of the children on the playground, they pretty much back away from whatever it is I want. I then get access to the item, toy, or activity, unencumbered by anyone else. I guess my hitting capability is pretty effective in accessing tangible reinforcers and is maintained because of this effect it has on the other children. I guess being “feared” on the playground has its advantages.

**Teacher:** Well thank you, Jose, for your fabulous insight.

Now there is an insightful analysis by this student of his aggressive behavior’s function. If that does not sound like anything you have heard, that is because it never happens like that in real life! Here is a more typical scenario.

---

**TABLE 2.33 • DATA UNDER EACH CONDITION**

<table>
<thead>
<tr>
<th>Day</th>
<th>NCR Attention</th>
<th>Usual Attention</th>
</tr>
</thead>
<tbody>
<tr>
<td>1</td>
<td></td>
<td>6 threats to harm herself</td>
</tr>
<tr>
<td>2</td>
<td>0 threats</td>
<td></td>
</tr>
<tr>
<td>3</td>
<td></td>
<td>8 threats to harm herself</td>
</tr>
<tr>
<td>4</td>
<td>0 threats</td>
<td></td>
</tr>
<tr>
<td>5</td>
<td></td>
<td>4 threats and 1 attempt to harm herself</td>
</tr>
<tr>
<td>6</td>
<td>0 threats</td>
<td></td>
</tr>
</tbody>
</table>
Teacher: Jose, why did you hit Bobby?
Jose: I don't know.
Teacher: What kind of answer is that?
Jose: I don't know. He makes me mad.
Teacher: He makes you mad? How do you think he feels when he gets hit?
Jose: I don't know.

If asking the individual why he exhibited a particular behavior would lead to an FBA, we would be writing the chapter solely on functional treatment. At least in the year 2016, it is still necessary for a person with training in behavior analysis to collect several sources of objective and subjective data when determining why somebody does something.

WHAT IS NOT AN FBA?

FBA has grown in popularity since it was specified as a federal requirement for special education students with disabilities who engage in certain problem behaviors. A common approach to this requirement from personnel who do not understand that a function exists in the presence of a specified EO is to simply list all the activities and events that occur prior to the behavior in one column (called antecedents). Concurrently, these untrained personnel then observe and record all the staff responses that occur subsequent to the behavior. These are listed in a column to the right of the behavior. Their analysis then concludes that antecedents for the target behavior can be any of a number of events and stimuli. Concurrently, the consequences of the behavior can also be any of a number of events that follow the response. Table 2.34 illustrates this (technically incorrect) format for analyzing problem behavior (often found in many reports called FBA).

It should now be clear that this type of analysis ignores basic tenets of an FBA in this text. Note in Table 2.34 that one of the antecedents for verbal abuse and oppositional behavior (which would need a more pinpointed definition) is during instruction. If such behavior is more likely under this condition, which of the consequent events listed in the third column is the maintaining contingency? The answer is: We don't know because the author of this type of report is probably oblivious to a true understanding of behavioral function!

An FBA does not simply entail a listing of observed phenomena! One must examine data and information and make sense of it. One should conclude that the target behavior is maintained because of what it produces or removes reliably in the social or physical environment, under a given EO. Now that you have read this material, be an advocate for the correct deployment of an FBA in school and other settings. Point out that the analysis in Table 2.34 does not reflect sufficient knowledge for the author to claim an FBA has been conducted!

<table>
<thead>
<tr>
<th>TABLE 2.34</th>
<th>NONEXAMPLE OF FBA</th>
</tr>
</thead>
<tbody>
<tr>
<td><strong>Antecedents</strong></td>
<td><strong>Target Behavior(s)</strong></td>
</tr>
<tr>
<td>During instruction</td>
<td>Verbal abuse and oppositional behavior</td>
</tr>
<tr>
<td>When bored</td>
<td>Peer attention</td>
</tr>
<tr>
<td>Too much light</td>
<td>Controls environment</td>
</tr>
<tr>
<td>Not enough light</td>
<td>Gets his way</td>
</tr>
<tr>
<td>Too much noise</td>
<td></td>
</tr>
<tr>
<td>When playing games with others</td>
<td></td>
</tr>
</tbody>
</table>

FBA, functional behavioral assessment.
ECOSYSTEMIC ASSESSMENT

Is it necessary to conduct an FBA for every significant behavior problem? It might very well be that simply correcting “wacky contingencies” in the classroom (or other settings where task demands are made) would produce the desired effect (see Chapter 3). In classroom settings, contingencies for desired classroom behavior should be considered first, whether such are produced for on-task behavior, assignment accuracy and completion, or the absence or low rates of problem behavior. An ecosystemic assessment of the existent classroom contingencies may reveal inequities in differential reinforcement (see Table 2.35).

If the rate of on-task behavior does not matter, in terms of access to preferred events, then on-task behavior is of no consequence. Whether a student is on-task 20% or 80% of the time does not affect the length of time with preferred activities. Similarly, if completing assignments results in the same access to preferred events as failing to start the assignment, then there does not exist a powerful contingency for assignment completion. Finishing the assignment does not produce a different result for the student than not finishing the assignment in the short term. The only probable contingency of repeatedly failing to finish class work is lower grades, which may not be an effective contingency.

<table>
<thead>
<tr>
<th>TABLE 2.35</th>
<th>ECOSYSTEMIC ASSESSMENT OF CLASSROOM CONTINGENCIES</th>
</tr>
</thead>
<tbody>
<tr>
<td>1. Is student on-task behavior systematically producing a powerful reinforcer?</td>
<td></td>
</tr>
<tr>
<td>a. Is on-task behavior or attending behavior systematically and frequently monitored (and not via a daily rating scale)?</td>
<td></td>
</tr>
<tr>
<td>b. When the student engages in higher rates of on-task behavior, is either a conditional reinforcer (points) or a tangible reinforcer provided?</td>
<td></td>
</tr>
<tr>
<td>c. When a student engages in high rates of on-task behavior, is the result more work (i.e., additional nonpreferred assignments) until the end of the time period?</td>
<td></td>
</tr>
<tr>
<td>d. When a student has a lower rate of on-task behavior during a period, does he lose access to a designated reinforcer?</td>
<td></td>
</tr>
<tr>
<td>e. Is the reinforcer potent enough to motivate the student day in and day out?</td>
<td></td>
</tr>
<tr>
<td>2. Is student assignment completion systematically producing a powerful reinforcer?</td>
<td></td>
</tr>
<tr>
<td>a. Is completing assignments systematically and frequently monitored (does teacher immediately receive material when student completes assignment)?</td>
<td></td>
</tr>
<tr>
<td>b. When the student completes an assignment, is either a conditional reinforcer (points) or a tangible reinforcer provided at that point?</td>
<td></td>
</tr>
<tr>
<td>c. Is a Premack contingency in effect for completing work? Does the student get access to a high-probability behavior contingent on successful (accuracy) completion of a prespecified amount of class assignment?</td>
<td></td>
</tr>
<tr>
<td>d. When the student completes an assignment, is the result another assignment (without earning points) for them to complete until the end of the time period?</td>
<td></td>
</tr>
<tr>
<td>e. When the student fails to complete an assignment on a given day, does the student immediately lose access to a designated reinforcer?</td>
<td></td>
</tr>
<tr>
<td>f. Is the reinforcer potent enough to motivate the student day in and day out?</td>
<td></td>
</tr>
<tr>
<td>3. Is there a reinforcement program in effect targeting specifically problem disruptive behavior by the student?</td>
<td></td>
</tr>
<tr>
<td>a. Is disruptive behavior defined in discrete terms and recorded with each occurrence?</td>
<td></td>
</tr>
<tr>
<td>b. Is there a behavioral standard, across a period(s), half day, or full school day that delineates the number of disruptive incidents that will involve removal of a specific contingent reinforcing item or event?</td>
<td></td>
</tr>
<tr>
<td>c. Over the last 2–3 weeks, how often has the student earned such a reinforcer, and how often has the student lost access to this reinforcer?</td>
<td></td>
</tr>
</tbody>
</table>
Depending on your findings, you may conclude that designing an individualized or class-wide contingency management plan that either differentially reinforces acceptable levels of on-task behavior, differentially reinforces assignment completion, or targets disruptive behavior is indicated before resorting to an FBA and treatment. For on-task behavior, an efficient management strategy is the beeper system (Erken & Henderson, 1989). Beeps at unpredictable intervals require the teacher or student (if self-management is utilized) to determine if on-task behavior is occurring at that point in time (i.e., momentary time sampling). The teacher initially designates a level of on-task behavior that accesses a powerful reinforcer (e.g., 60% on-task rate accesses the designated reinforcer). If 20 unpredictable beeps occurred in a 1-hour period and the student rated self on-task for 12 of them, the rate of on-task behavior is 60%, and the student would earn the reinforcer. Differential reinforcement procedures can be used to address other classroom management inequities in class-wide performance problems.

CONDUCT A PERFORMANCE DISCREPANCY ANALYSIS

A performance discrepancy analysis is the final step in determining whether the referred problem behavior is indeed at problematic levels. As indicated before, behaviors that impair the health and welfare of the client or others are apparent and require immediate intervention. However, with other behaviors, such as noncompliance, off-task behavior, failure to follow directions, or tantrum behaviors, there does not exist a readily available standard to determine whether the client’s level of behavior falls within age-appropriate norms. One would likely assume that the acceptable level of behavior can be a function of several variables, such as age of the child or client and context. The basic question for these problem behavior referrals is: How much of this behavior is too much (or often)?

Let us examine the hypothetical case of a 4-year-old boy referred to you because he doesn’t follow directions at home. Your data-gathering efforts may find that there are certainly occasions when he doesn’t follow directions. However, there are also occasions when he does follow directions. Is this child in need of intervention? Without entering any personal bias, the question becomes, “What is an acceptable level of noncompliance in a 4-year-old child under certain events or activities?” Surely, we do not expect the child to be compliant to all presented instructions and requests every day (please separate delusions from reality here). On the other extreme, never following instructions is certainly unacceptable. What is the happy acceptable medium? A performance discrepancy analysis allows you to determine, in an objective manner, the behavioral standard for acceptability. You can then judge where the current child’s behavior falls in relation to that standard.

A performance discrepancy analysis involves a comparison of the rates of a client’s problem behavior with the acceptable level (or rate) of that behavior. How does one determine what is an acceptable level of any behavior? A method for objectively determining what is an acceptable level of a behavior is the normative comparison method (Kazdin, 1977; Matson, Esveldt-Dawson, & Kazdin, 1983). The method allows one to identify, in measurable terms, the norm for one behavior under specific antecedent conditions.

In utilizing a normative comparison method, one first identifies same-aged peers or persons who are judged to be nonproblematic with respect to the behavior. For example, if you were trying to determine what is an acceptable level of noncompliance for a referred 4-year-old child (noncompliance as a percentage of noncompliance to total first requests), you would want to identify a number of 4-year-olds whose parents or teachers report that they do not have a serious problem with noncompliance. This process is called the criterion group selection (Kazdin & Matson, 1981).

Once the criterion group is selected, you want to measure the occurrence of noncompliance with the criterion group under the same situations as those identified as generating noncompliance in the target child. To simplify potential logistical problems, you can select children who are readily available at your particular site. Once these data are available, you would not need to go out again and repeat this part of the process for other referrals. The observation of these children in the criterion group as well as observation of the target child should occur over multiple observation sessions so that a stable rate of the behavior for each child can be obtained. You have now established a norm with respect to the level of the behavior that is deemed acceptable.
If this aspect of the performance discrepancy is difficult to gather, that is, observing same-aged peers, you may be able to substitute interview data from other teachers or parents for the norms of acceptable behavior. However, realize that such data may not be as reliable as direct observation of a criterion group. Often people verbally state one standard, for example, “All children must raise their hands whenever they want to be recognized,” whereas direct observation may reveal that it is not an exacting standard. Although children may often raise their hands to be recognized, there is a small percentage of times when other behaviors result in recognition by the teacher. If interview data will be the method by which you collect data on the criterion group, try to identify the percentage of occurrence by increments of 10% (0%–10%, 10%–20%, 20%–30%, 30%–40%, etc.).

With the data collected, you can then determine the ranges at which the noncompliant behavior is acceptable and the ranges of noncompliant behavior that appear to be socially unacceptable. As an example, let us say that you identified ten 4-year-old children for the criterion group. You directly measured their rate of noncompliance in target situations. The mean percentage of noncompliance computed across several observation sessions for each child in the criterion group was reported as in Table 2.36.

In examining the data in Table 2.38, with the exception of two children, the mean percentage of noncompliance is between 24% and 44%. This range of noncompliance can then be used as a basis for identifying an acceptable level of noncompliance and used as the standard when assessing and subsequently examining the target child’s level of noncompliance. Table 2.37 presents seven steps to follow in conducting a discrepancy analysis.

### Table 2.36  ■ Noncompliance Data Across 10 Children

<table>
<thead>
<tr>
<th>Child</th>
<th>% Noncompliance</th>
</tr>
</thead>
<tbody>
<tr>
<td>1</td>
<td>24</td>
</tr>
<tr>
<td>2</td>
<td>33</td>
</tr>
<tr>
<td>3</td>
<td>42</td>
</tr>
<tr>
<td>4</td>
<td>41</td>
</tr>
<tr>
<td>5</td>
<td>37</td>
</tr>
<tr>
<td>6</td>
<td>69</td>
</tr>
<tr>
<td>7</td>
<td>28</td>
</tr>
<tr>
<td>8</td>
<td>81</td>
</tr>
<tr>
<td>9</td>
<td>44</td>
</tr>
<tr>
<td>10</td>
<td>33</td>
</tr>
</tbody>
</table>

### Table 2.37  ■ Steps to Performing a Discrepancy Analysis

1. Identify the problem behavior in observable terms.
2. Select a criterion group of same-aged peers in the same or similar locale.
3. Measure the occurrence of the target behavior of persons in the criterion group across several days under the same situations in which the referred client has problems.
4. Identify the range and average (mean) level of occurrence of the problem behavior.
5. Measure the target-referred-client’s problem behavior.
6. Compare the client’s rates of problem behavior with the criterion group’s range and the average rate of occurrence.
7. Identify any discrepancy between the client’s data and the criterion group data.
REVIEW PREVIOUS TREATMENTS IMPLEMENTED

A review of previous treatments implemented should be conducted prior to the design of the intervention strategy. In some cases, the problem behavior may have been previously treated successfully. This review may provide an easy solution to the present concern. In other cases, one might be able to identify ineffective techniques. In reviewing previous treatments, the professional should still take into account the possibility that the maintaining variables might be different from the previous circumstances.

What are some issues to examine when reviewing documentation on previous programs implemented for a client’s problem behaviors? Previous treatments that were not written up in detail are hard to evaluate, in that the specifics of the treatment deployed are not delineated for your current examination. In addition, in reviewing previous effective or ineffective treatments, the professional must determine whether the treatment strategy was implemented with integrity. Sometimes, previously conducted treatments that were judged ineffective might have been proven effective if carried out reliably over a reasonable period of time. Judging the integrity of previous treatments may be hard to evaluate unless recorded data are available in anecdotal or objective form that demonstrate the integrity of the treatment implementation. Table 2.38 provides some questions to consider when reviewing previous treatments implemented.

If consent is obtained, it can really be helpful to interview staff at agencies that previously served the client. What may not be available in written documentation upon review are factors that may have led to the success or failure of the previous treatment. Talking to someone who was previously involved with the client’s treatment may allow you to discern if the previous treatment failed due to poor design, inadequate functional analysis, or poor implementation of the program procedures. When possible, with the client’s consent for disclosure of information, make the call!

<table>
<thead>
<tr>
<th>TABLE 2.38</th>
<th>QUESTIONS TO CONSIDER IN REVIEWING PREVIOUS TREATMENTS IMPLEMENTED</th>
</tr>
</thead>
<tbody>
<tr>
<td>1.</td>
<td>What was the focus of the treatment?</td>
</tr>
<tr>
<td>2.</td>
<td>Is the current problem behavior the same or similar to that targeted in earlier interventions?</td>
</tr>
<tr>
<td>3.</td>
<td>What was the treatment procedure? Was it effective in remediating the problem?</td>
</tr>
<tr>
<td>4.</td>
<td>If a functional analysis was conducted, what was the conclusion drawn regarding the function(s) of the problem behavior at that time? Does the current problem look similar in function(s) to its previous function?</td>
</tr>
<tr>
<td>5.</td>
<td>How extensive was the staff-training program? How were staff trained on the procedures of the program?</td>
</tr>
<tr>
<td>6.</td>
<td>Has consent for release of information from the individual or legal guardian and agency administration been obtained, or can it be obtained to interview personnel from previous settings? Are the person(s) who were involved with the previous treatment available for contact?</td>
</tr>
</tbody>
</table>
REVIEW OF HEALTH AND MEDICAL RECORDS

A review of medical records and the files of the client may indicate contraindications to certain treatments. In other cases, it may reveal important factors that suggest a pattern of behavior. Does the behavior occur during certain seasons of the year or certain times of the month (Bailey & Pyles, 1989)? The records may also reveal that the problem behavior may be a side effect of medication the client is currently on (Bailey & Pyles, 1989). If any of these possibilities exist, a medical consultation and evaluation are recommended. The questions in Table 2.39 can be considered in light of a medical consultation as possible referral questions for the medical professional (adapted from Bailey & Pyles, 1989). When making the referral, minimally provide the medical professional with the problem behaviors and any information currently gathered through the current or previous behavioral assessments. Also, indicate to the medical professional that your request for a consult would be to evaluate the possibility of medical causes or interventions along with the concurrent use of a behavioral intervention program.

**Self-induced vomiting.** In some circumstances, behavioral data can guide you to the proper decision involving a medical consult. Nolan was a 28-year-old male who had been referred to Keven Schock’s facility to deal with self-induced vomiting. He had been treated for many years by the local mental health provider for various symptoms of depression and psychosis. He had been living in board and care homes for several years prior to his most recent admission to the inpatient psychiatric unit. The vomiting and concomitant weight loss had started about 3 months prior to his admission and had resulted in his losing placement in his group home as well as being admitted to an inpatient psychiatric facility because no obvious medical cause could be determined. Interviews with the inpatient staff and a review of inpatient records did not contain a notation of medical issues. The inpatient staff indicated that Nolan would simply go to the bathroom after a meal and vomit. When efforts were introduced to prevent this (a staff person accompanied him into the bathroom) he began to vomit in other areas of the psychiatric facility and deny that the vomitus the staff found was his.

Upon entry to the facility, Keven and staff began the process of observing him and attempting to determine what contingencies might be maintaining this behavior. We observed that the vomiting occurred after meals; however, it did not occur after eating a small food item such as a snack or candy bar. Quantity of food seemed to be a factor. Socially mediated contingencies were evaluated by examining the conditions present in the facility as well as reports from the prior psychiatric facility. Staff attention seemed unlikely because he made active attempts to avoid detection both while vomiting and to hide the vomitus seemingly to avoid detection. Tangible reinforcement seemed unlikely because no additional items were brought to him after vomiting. Escape as a hypothesis for the vomiting seemed

<table>
<thead>
<tr>
<th>TABLE 2.39</th>
<th>QUESTIONS TO CONSIDER IN REVIEWING MEDICAL/HEALTH RECORDS</th>
</tr>
</thead>
<tbody>
<tr>
<td>1. Could the problem behavior be the result of a medical condition of the client?</td>
<td></td>
</tr>
<tr>
<td>2. Is it possibly an allergic reaction?</td>
<td></td>
</tr>
<tr>
<td>3. If the client is or has been on medication, could the problem behavior be a side effect of the medication or a behavioral effect of the medication?</td>
<td></td>
</tr>
<tr>
<td>4. Are there any potential treatment procedures contraindicated, given the client’s physical and metabolic condition?</td>
<td></td>
</tr>
<tr>
<td>5. Could the problem behavior be an allergic or seasonal reaction?</td>
<td></td>
</tr>
<tr>
<td>6. Is this type of problem commonly treated effectively with medical interventions? If so, what are those procedures, and what is the role of the agency in their implementation?</td>
<td></td>
</tr>
</tbody>
</table>
unlikely because no demands were terminated after vomiting. There was no increase or
decrease in social interaction following the vomiting behavior. It appeared to be a behavior
that produced an immediate effect, that is, a direct contingency.

Keven made a full review of Nolan’s medical records and found that several years prior
to his present admission, he had been hospitalized and treated for ingesting lye while living
in another county. The record indicated that he had received several procedures to treat scar
tissue that had accumulated in his esophagus. His assistant contacted the physician who had
originally treated Nolan and asked if the procedures to treat the scar tissue could have any
effect on his current problem with vomiting. The physician indicated that it was highly likely.
Further, Nolan had been scheduled to have a procedure to reopen his esophagus 2 years
prior, but when he moved they had lost touch with him. Keven and staff quickly scheduled
Nolan for the necessary procedure. Following the procedure, vomiting events dropped to
zero for the next 3 weeks. Nolan was discharged from the facility, and 1-year follow-up data
indicated that the vomiting behavior did not recur in the community group home to which
he was discharged.

SUMMARY

This chapter presented five steps in conducting an FBA. First, the problem behavior has to
be pinpointed into observable terms, thereby laying the groundwork for a reliable method
of measuring the problem behavior. In addition to collecting baseline data on the rate of
occurrence of the behavior, an FBA is conducted for the behavior problem, through one
or several methods for collecting such data. Once all the data are collected, a performance
discrepancy analysis is conducted to determine if the problem behavior is at excessive levels
(relative to same-aged peers), and discrepancies are prioritized for intervention. Finally,
previous treatments implemented as well as the client’s medical and health records are
reviewed. With all these data, you are now prepared to analyze and interpret this information.
In identifying the function of the problem behavior, you will now identify which of four
diagnostic categories is most likely.

SELF-ASSESSMENT EXERCISES

- What are your thoughts on the “case of the intimate disclosure”? Do you think such
unsolicited comments about one’s sexual history would be tough to treat (i.e., eliminate)
via the removal of people’s attention (maintaining contingency)? How does this case
relate to the previous chapter’s discussion about contrived contingencies?
- What is the advantage of using a trigger analysis for low-rate problem behaviors? What
information (with respect to contextual variables—EOs) must the clinician have before
using such a technique?
- In Table 2.14, I present three questions one should answer to determine whether a
specific access or escape function is plausible. Explain what information each question
seeks, in terms of zeroing in on the suspected contingency.
- What are some of the problems with descriptive assessment data as it is commonly
used, for example, the often-used A-B-C chart?
- How does the trigger analysis with behavioral description presented in this book differ
from the more common A-B-C charting method? How would you use such a method
(trigger analysis with behavioral description) for discerning the function of a problem
behavior?
- Provide some hypothetical entries for a trial using the trigger analysis with behavioral
description for an escape function involving the presenting of difficult academic tasks
(reading material far in excess of current capability) for a student. You can assume that
the AO is the removal of such a task and the provision of an easier, more preferred assignment (let us say such a task is reading material one grade level below student’s grade level equivalent on a standardized reading test).

- Describe the four conditions used in the functional analysis of behavior model developed by Dr. Brian Iwata and his team at Johns Hopkins University, published in 1982. Delineate the procedural requirements for implementing each condition.

- Explain why it is necessary to provide the reinforcer for the problem behavior in analogue test sessions.

- How is a single EO-function hypothesis test different from the multiple-EO function comparison analogue assessment? What are the advantages and disadvantages of each?

- Review the real-life case of When I Say “No!” in this chapter. Discuss the three test conditions that were compared; does the data make sense to you, and how? What does it say about the function of the problem behavior and how a 15-minute delay procedure ameliorates such an effect?

- What is the utility of an ecosystemic assessment of classroom contingencies? What information might this yield?

Note

1. The difference between inducing an EO condition versus just describing behavior following an observed possible EO rests in the ability to draw a cause and effect relationship. Experimental manipulations that involve inducing a condition and then returning back to the prior (control) condition can provide cause and effect conclusions. Descriptive methodology, which does not involve any active manipulation, can only portend a temporal relationship. While there may be a cause and effect inherent in such, the inability to manipulate the (independent) variable precludes a presumption of causality.

REFERENCES


