A Resource on Behavioral Terminology: An Annotated Bibliography of *On Terms* Articles in *The Behavior Analyst*

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An annotated bibliography that summarizes the *On Terms* articles on behavior-analytic terminology from *The Behavior Analyst* is provided. Thirty-five articles published between 1979 and 2010 were identified, annotated, and classified using common behavior analysis course-content frameworks.

Key words: annotated bibliography, behavior-analytic terminology, technical language, teaching behavior analysis, verbal behavior

The way we speak about behavioral phenomena—our scientific vocabulary—has long been a priority in behavior analysis (Foxy, 1996; Hayes, 1991; Schlenger, Blakely, Fillhard, & Poling, 1991). Careful use of the discipline's technical terms is considered to be important for effective scientific communication and more precise conceptual analysis. It is not surprising then to consider that *The Behavior Analyst*, an official publication of the Association for Behavior Analysis International, has included a publication section exclusively devoted to articles on behavior-analytic terminology. This *On Terms* section has been a regular feature of the journal since the spring issue of 1980 (Vol. 3).

On Terms articles are short communications (currently 2 to 5 manuscript pages) devoted to a single terminological issue. For example, Peterson (1982) published a cogent two-page argument against the use of the term *feedback* because it does not refer to a specific behavioral principle or procedure. To date, *The Behavior*

Analyst has published 34 *On Terms* articles. These articles serve a number of different purposes, including introducing replacement terms (e.g., Drash, 1988), clarifying the definitions of terms (e.g., Smith, 1986), and describing the conditions of proper term use (e.g., Branch & Vollmer, 2004; Friman, 2004). In addition, the articles include terms that span a number of different areas pertinent to behavior analysis such as the experimental analysis of behavior (e.g., Imam & Lattal, 1992), applied behavior analysis (e.g., Johnson & Layng, 1996), behaviorism (e.g., Marr, 1982) and behavioral methodology (e.g., Smith, 1986). *On Terms* articles are potentially useful for behavior analysts and teachers of behavior analysis in helping them to better understand important technical terms. These articles could be particularly useful in behavior analysis courses as supplements to primary readings to facilitate more in-depth discussion of important terms that might otherwise receive less attention.

On Terms articles are readily available now that back issues of *The Behavior Analyst* (except for the two most recent volumes) are freely available from PubMed Central (www.ncbi.nlm.nih.gov/pmc/journals/557). However, encountering a particular article that one deems relevant would most likely not happen without pe-

The first author is affiliated with the Behavior Analyst Certification Board, which has not reviewed or approved the content of this article, nor does it endorse its content.

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TABLE 1

Annotated bibliography of *On Terms* articles published in *The Behavior Analyst* from 1979 to 2010

Reference	Annotation	Relevant graduate courses	
		ABAI accreditation	BACB certification
Johnston, J. M. (1979). On the relation between generalization and generality. <i>The Behavior Analyst</i> , 2(2), 1–6.*	Clarifies the difference between <i>generalization</i> (a process) and <i>generality</i> (a characteristic of behavioral data).	Applied Principles	Applied behavior analysis Concepts and principles of behavior analysis
Michael, J. (1980). The discriminative stimulus or S ^D . <i>The Behavior Analyst</i> , 3, 47–49.	Provides an operational definition of the term <i>discriminative stimulus</i> (S ^D) that is juxtaposed with other less technical uses of the term.	Principles	Concepts and principles of behavior analysis
Catania, A. C. (1980). On citing the literature. <i>The Behavior Analyst</i> , 3, 63–64.	Argues that literature citations should be considered references to an author's work and not to the author himself.	Research methods	Research methods in behavior analysis
Luce, S. C., Christian, W. P., Lipsker, L. E., & Hall, R. V. (1981). Response cost: A case for specificity. <i>The Behavior Analyst</i> , 4, 75–80.	Describes the various uses of the term <i>response cost</i> and uses data from a survey of <i>Journal of Applied Behavior Analysis</i> editorial board members to support one specific usage.	Applied	Applied behavior analysis
Pennypacker, H. S. (1981). On behavioral analysis. <i>The Behavior Analyst</i> , 4, 159–161.	Argues that the term <i>analysis</i> should refer to a comprehensive search for a behavior's controlling variables and not merely to functional control over an independent variable.	Research methods	Research methods in behavior analysis
Peterson, N. (1982). Feedback is not a new principle of behavior. <i>The Behavior Analyst</i> , 5, 101–102.	Argues against the use of the term <i>feedback</i> because it does not describe a specific behavioral principle or procedure.	Applied	Applied behavior analysis
Marr, J. (1982). Determinism. <i>The Behavior Analyst</i> , 5, 205–207.	Discusses the radical behaviorist position on the issues of <i>determinism</i> and <i>causality</i> .	Conceptual	Concepts and principles of behavior analysis
Deitz, S. M. (1983). Two correct definitions of "Applied." <i>The Behavior Analyst</i> , 6, 105–106.	Describes two distinct uses of the term <i>applied</i> in "applied behavior analysis."	Applied	Applied behavior analysis
Hineline, P. N. (1983). When we speak of knowing. <i>The Behavior Analyst</i> , 6, 183–186.	Describes two arguments against using the term <i>knowing</i> : one based on the term's mentalistic connotations and one based on its various imprecise uses.	Conceptual Principles	Concepts and principles of behavior analysis

TABLE 1

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Reference	Annotation	Relevant graduate courses	
		ABAI accreditation	BACB certification
Vargas, E. A. (1984). A new term and some old advice. <i>The Behavior Analyst</i> , 7, 67–69.	Proposes the term <i>postcedent</i> for describing events that follow behavior, just as “antecedent” is used to describe events that precede behavior.	Principles	Concepts and principles of behavior analysis
Poling, A. (1984). Comparing humans to other species: We’re animals and they’re not infrahumans. <i>The Behavior Analyst</i> , 7, 211–212.	Argues that behavioral scientists should use the terms <i>nonhuman animals</i> or <i>other animals</i> instead of “infrahumans” and “animals” when describing nonhuman research subjects.	Research methods	Research methods in behavior analysis
Chase, P. N., & Hyten, C. (1985). A historical and pedagogic note on establishing operations. <i>The Behavior Analyst</i> , 8, 121–122.	Identifies the origin of the term <i>establishing operation</i> (Keller & Schoenfeld, 1950) and contrasts the Keller and Schoenfeld and Michael (1982) treatments of the concept.	Principles	Concepts and principles of behavior analysis
Deitz, S. M., & Malone, L. W. (1985). Stimulus control terminology. <i>The Behavior Analyst</i> , 8, 259–264.	Discusses several potential sources of confusion among the terms used to describe certain stimulus control applications (e.g., prompting, stimulus fading and shaping).	Applied Principles	Applied behavior analysis Concepts and principles of behavior analysis
Brownstein, A. J., & Shull, R. L. (1985). A rule for the use of the term, “Rule-governed behavior.” <i>The Behavior Analyst</i> , 8, 265–267.	Argues that the term <i>rule-governed behavior</i> should not be treated as a core behavioral principle and proposes an alternative description: “responses under discriminative control of contingency-specifying stimuli.”	Conceptual Principles	Concepts and principles of behavior analysis
Ator, N. A. (1986). Behavioral biology. <i>The Behavior Analyst</i> , 9, 123–125.	Presents a case for the term <i>behavioral biology</i> being adopted as the name of the science of behavior, apart from the discipline of psychology.	Conceptual Principles	Concepts and principles of behavior analysis
Smith, G. A. (1986). Observer drift: A drifting definition. <i>The Behavior Analyst</i> , 9, 127–128.	Identifies several uses of the term <i>observer drift</i> and argues that the term should be reserved for when a gradual change in the use of an operational definition has occurred.	Research methods	Research methods in behavior analysis

TABLE 1

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Reference	Annotation	Relevant graduate courses	
		ABAI accreditation	BACB certification
Gleeson, S., & Lattal, K. A. (1987). Misdescribing the carneau: A perplexing plurality. <i>The Behavior Analyst, 10</i> , 111–112.	Examines both grammatically correct and incorrect descriptions of White Carneau pigeons in the experimental literature and provides recommendations to promote proper grammar in subject description.	Research methods	Research methods in behavior analysis
Hackenberg, T. D. (1987). When we speak of integrating... . <i>The Behavior Analyst, 10</i> , 113–116.	Defines behavioral integration as a synthesis of the molecular and molar influences on behavior and argues against the mentalistic connotations of the term.	Experimental analysis of behavior	Concepts and principles of behavior analysis
Comunidad Los Horcones. (1987). The concept of consequences in the analysis of behavior. <i>The Behavior Analyst, 10</i> , 291–294.	Proposes a system for classifying events that follow behavior. The system includes <i>postcedent</i> as a descriptor for all subsequent events and reserves <i>consequence</i> for subsequent events produced by the behavior.	Principles	Concepts and principles of behavior analysis
Drash, P. W. (1988). Radical behaviorism: A nonradical recommendation. <i>The Behavior Analyst, 11</i> , 87–89.	Identifies disadvantages of the term <i>radical behaviorism</i> and argues for replacing it with <i>scientific behaviorism</i> .	Conceptual	Concepts and principles of behavior analysis
Imam, A. A. (1989). Misconstruing behavioral consequences: Teleology or teleonomy. <i>The Behavior Analyst, 12</i> , 81–83.	Refutes characterizations of the causal role of operant consequences as being <i>teleological</i> and argues that <i>teleonomic</i> would be a better characterization.	Conceptual	Concepts and principles of behavior analysis
McIlvane, W. J., & Dube, W. V. (1992). Stimulus control shaping and stimulus control topographies. <i>The Behavior Analyst, 15</i> , 89–94.	Proposes that (a) <i>stimulus control shaping</i> be revisited as a general descriptor for the family of stimulus shaping, stimulus fading, and delayed prompting procedures and (b) <i>stimulus control topography</i> be revisited as a descriptor for the functional differences between members of a stimulus class.	Applied Principles	Applied behavior analysis Concepts and principles of behavior analysis

TABLE 1

Continued

Reference	Annotation	Relevant graduate courses	
		ABAI accreditation	BACB certification
Imam, A. A., & Lattal, K. A. (1992). A suggestion for describing combinations of response-dependent and response-independent events. <i>The Behavior Analyst, 15</i> , 179–182.	Critically analyzes existing descriptions of combinations of response-dependent and response-independent events and proposes a new term to describe such phenomena, the <i>concomitant schedule</i> .	Experimental analysis of behavior Principles	Concepts and principles of behavior analysis
Davison, M. (1993). Concomitants, categories, and constraints. <i>The Behavior Analyst, 16</i> , 129–130.	Argues against adopting a new schedule descriptor (<i>concomitant schedule</i> ; Imam & Lattal, 1992) on the grounds that the existing taxonomy for categorizing schedules is already unwieldy and that further extension would be unproductive.	Experimental analysis of behavior Principles	Concepts and principles of behavior analysis
Cherpas, C. (1993). Do establishing operations alter reinforcement effectiveness? <i>The Behavior Analyst, 16</i> , 347–349.	Argues that <i>establishing operations</i> might only produce evocative effects and not both evocative and reinforcer-establishing effects as proposed by Michael (1993).	Experimental analysis of behavior Principles	Concepts and principles of behavior analysis
Johnson, K. R., & Layng, T. V. J. (1996). On terms and procedures: Fluency. <i>The Behavior Analyst, 19</i> , 281–288.	Defines behavioral <i>fluency</i> and describes fluency-building strategies and the outcomes of the instructional approach.	Applied	Applied behavior analysis
Dougherty, K. M., & Johnston, J. M. (1996). Overlearning, fluency, and automaticity. <i>The Behavior Analyst, 19</i> , 289–292.	Argues that the concepts of <i>overlearning</i> , <i>fluency</i> , and <i>automaticity</i> may represent the same learning phenomena.	Applied Principles	Applied behavior analysis Concepts and principles of behavior analysis
Cleland, B. S., Guerin, B., Foster, T. M., & Temple, W. (2001). Resurgence. <i>The Behavior Analyst, 24</i> , 255–260.	Describes different ways the term <i>resurgence</i> has been defined and argues that the term be used descriptively, especially considering the many different operations to which it refers.	Experimental analysis of behavior Principles	Concepts and principles of behavior analysis

TABLE 1

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Reference	Annotation	Relevant graduate courses	
		ABAI accreditation	BACB certification
O'Donnell, J. (2001). The discriminative stimulus for punishment or S ^{DP} . <i>The Behavior Analyst</i> , 24, 261–262.	Proposes the term <i>discriminative stimulus for punishment</i> and corresponding symbol (S ^{DP}) to describe an antecedent stimulus condition correlated with the availability of both reinforcement and punishment.	Principles	Concepts and principles of behavior analysis
Dinsmoor, J. A. (2003). Experimental. <i>The Behavior Analyst</i> , 26, 151–153.	Reviews the history of the term <i>experimental</i> in behavior analysis and argues that current usage should be limited to descriptors of the experimental method.	Principles Research methods	Concepts and principles of behavior analysis Research methods in behavior analysis
Holth, P. (2003). Generalized imitation and generalized matching to sample. <i>The Behavior Analyst</i> , 26, 155–158.	Argues that the modifier “generalized” in the terms <i>generalized imitation</i> and <i>generalized identity matching</i> is irrelevant because true imitation and identity matching necessarily include instances of responding that have not been directly reinforced.	Applied Principles	Applied behavior analysis Concepts and principles of behavior analysis
Branch, M. N., & Vollmer, T. R. (2004). Two suggestions for the verbal behavior(s) of organisms (i.e., authors). <i>The Behavior Analyst</i> , 27, 95–98.	Argues that the term <i>behavior</i> should be considered a mass noun (e.g., “problem behavior”) instead of a count noun (e.g., “problem behaviors”).	Principles	Concepts and principles of behavior analysis
Friman, P. C. (2004). Up with this I shall not put: 10 reasons why I disagree with Branch and Vollmer on behavior used as a count noun. <i>The Behavior Analyst</i> , 27, 99–106.	As a reply to Branch and Vollmer (2004), Friman provides pragmatic reasons for retaining the mass noun and count noun functions of the term <i>behavior</i> .	Principles	Concepts and principles of behavior analysis
Neuman, P. (2007). Some comments on the distinction between intention and intentionality. <i>The Behavior Analyst</i> , 30, 211–216.	Provides an analysis of the lay terms <i>intention</i> and <i>intentionality</i> , in which intention often connotes verbal mediation (e.g., rule governance) and intentionality often connotes contingency-shaped behavior.	Conceptual	Concepts and principles of behavior analysis

TABLE 1

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Reference	Annotation	Relevant graduate courses	
		ABAI accreditation	BACB certification
Jarmolowicz, D. P., & Lattal, K. A. (2010). On distinguishing progressively increasing response requirements for reinforcement. <i>The Behavior Analyst</i> , 33, 119–125.	Identifies several distinct procedures that have all been referred to as <i>progressive ratio schedules</i> and proposes a more specific taxonomy to account for the variants.	Applied Principles	Applied behavior analysis Concepts and principles of behavior analysis

Note. Each article's key terms are italicized in its annotation.

rusing back issues of the journal, a scenario that is likely improbable for many readers. Ideally, it would be most helpful to encounter *On Terms* articles while searching for specific topics in the psychological literature. This is possible, in theory, because *The Behavior Analyst* is indexed in PsycINFO, the primary database of the psychological and behavioral sciences, beginning with Volume 4 (1981). The reality, however, is that *On Terms* articles are unlikely to be easily located via PsycINFO searches. For example, Deitz (1983) wrote a brief commentary on the use of the term *applied* in descriptions of behavior-analytic research. Although this article is indexed in PsycINFO, it would be virtually impossible to locate it using a search designed to obtain literature on discussions and commentaries on this particular dimension of applied behavior analysis because of the generic nature of the term. Such a search would likely identify the Deitz article, but it would undoubtedly be overshadowed by hundreds of other articles on applied behavior analysis. Thus, a lower effort method for encountering published *On Terms* articles appears to be warranted.

The annotated bibliography was selected as the mechanism for assisting behavior analysts in making con-

tact with previously published *On Terms* articles. An annotated bibliography is a reference list of thematically related scholarly works, each accompanied by a succinct content description (Harner, 2000). The first step in generating the bibliography was to scan the Table of Contents of each issue of *The Behavior Analyst* to identify every article published in the *On Terms* section. Thirty-four such articles were identified. An additional article (Johnston, 1979) was selected for inclusion in the bibliography because of its structural and functional similarity to other articles, despite its publication 1 year before the *On Terms* section was initiated. The 35 articles were then read by each author before an annotation was written for each using a consensus process. Each annotation includes one or two sentences that describe the content of the article. Although the articles are quite diverse with respect to their depth of coverage, inclusion of relevant history, style and degree of logical argument, and so on, the annotations focus on the primary term or concept to assist readers in identifying particular articles for further attention. In addition, each article's primary term is italicized within its annotation.

To assist instructors of behavior analysis courses in determining which

articles might be relevant for their courses, each article was classified using two common frameworks for organizing graduate-level behavior analysis course work. First, each article was classified, again by consensus, as being relevant to one of the following course content areas specified in the accreditation requirements of the Association for Behavior Analysis International (2010): applied, conceptual, ethics, experimental analysis of behavior, principles, and research methods. Second, each article was classified as being relevant to one of the following course-content areas specified by the Behavior Analyst Certification Board (2010): applied behavior analysis, concepts and principles of behavior analysis, ethical and professional conduct, and research methods in behavior analysis. The resulting classification of the articles using these two frameworks should be viewed merely as a rule of thumb for identifying article relevance; the classification has no particular psychometric importance.

The annotated bibliography can be found in Table 1. Review of the bibliography reveals two findings that are worth mentioning. First, more than half of the articles were published in the first 10 years of the section's existence. Since then, articles have appeared with some regularity, although at a much lower frequency. The second finding is that the majority of articles (74%) concern issues of terminology relevant to the discipline's conceptual and experimental domains, with relatively few articles (29%) concerned with the terminology of applied behavior analysis. This topical distribution appears to be consistent with content published in *The Behavior Analyst* and, perhaps its most avid readers as well. However, because many more behavior analysts pursue applied rather than solely basic and conceptual interests, the distribution might be viewed as an oddity. Of course, the

case could be made that the conceptual and experimental articles *are* relevant to applied behavior analysis, and we would gladly concede that point.

Given the recent increases in the number of behavior analysis training programs, certified behavior-analytic practitioners, and behavior analysis conventions and attendees, it is likely that the need to address the discipline's technical terms explicitly is greater than ever. We hope that the present annotated bibliography will stimulate interest not only in the existing *On Terms* articles but also in the section itself as a mechanism for thoughtful commentaries on the language we use to describe our science and practice.

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