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SI: TEACHING THE HISTORY OF BEHAVIOR ANALYSIS

Teaching a Course on the History of Behavior Analysis

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Abstract

Teaching the history of behavior analysis can be approached in many ways. One is to embed history in courses on the field's discipline and subdisciplines (e.g., its basic and applied sciences and their conceptual foundations) and practice. Another is to teach courses on the histories of the discipline and subdisciplines and practice. Still another is to teach a stand-alone course that includes these approaches and more (e.g., their integration, relations with other sciences, the influence of U.S. history and culture). The purpose of this article is to foster teaching the stand-alone course. It has four sections. The first addresses structural considerations: course titles, catalog descriptions, curricula, certification, and accreditation. The second addresses contextual considerations: purposes of teaching history; distinctions between history and historiography; and starting points in selecting textbooks. The third addresses functional considerations: course content organized by topics and their required and recommended readings. The fourth discusses how the course might be revised by eliminating topics (e.g., the Middle Ages), expanding topics and subtopics (e.g., the behaviorisms, philosophy of science) and adding topics and subtopics (e.g., institutional history; diversity, inclusion, and equity). Given the field's continuing development as a science, system, and practice and the rapid growth in its number and variety of its members, its history is becoming its common core—and a means of teaching it. The course elucidates the field's integrity; incorporates the entirety of its community of students, scientists, scholars, and practitioners; and advance its coherence as a cultural practice.

Keywords Teaching · History · Historiography · Behavior analysis · Psychology · Behavioral science

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Behavior analysis has a long past, a short history, and recent origins. Its long past began in 500 BCE. Greece, notably in Aristotle's (384–322 BCE) advancement of naturalism in philosophy (Rachlin, 1994). Its short history began in early 20th-century America, principally in J. B. Watson's (1878–1958) advancement of behaviorism in psychology (Day, 1998). Its recent origins began in the neobehaviorisms of 1930s America, in particular, in B. F. Skinner's (1904–1990) science and system of behavior, respectively, the experimental analysis of behavior (see Malone, 1990) and radical behaviorism (Moore, 2008).[1]

Teaching this history may begin at these points and others and approached in at least five ways. It might be embedded in courses on the field's discipline and subdisciplines (e.g., its basic and applied sciences) and its practice (see, e.g., Lattal, 2022b; Moore, 2022; Morris & Peterson, 2022). It might be taught in conjunction with its subdisciplines (e.g., conceptual *and* historical foundations). It might be taught as stand-alone histories of the field's discipline and subdisciplines and its practice (e.g., applied behavior analysis). It might be taught as a stand-alone course on the field's history that meets BACB certification requirements and ABAI accreditation standards (e.g., for conceptual foundations). And it might be taught as a stand-alone course that meets program requirements independent of the BACB and ABAI. This article describes an exemplar of a stand-alone: my course, ABSC 981 "History of Behavior Analysis," although it is not everywhere exemplary. The course's objective is to elucidate the field's integrity as an evolving science and system; incorporate the entirety of its community of students, scientists, scholars, and practitioners; and advance its coherence as a cultural practice.

This article's purpose is to foster teaching this course, but its usefulness will depend on its audience. Its principal audience is the course's instructors and prospective instructors. A slightly larger audience may be instructors of stand-alone histories of the field's discipline and subdisciplines and its practice. A still larger audience may be instructors who teach history in conjunction with one of its subdisciplines. An even larger audience may be instructors who embed history in their behavior analysis courses. The largest audience is behavior analysts drawn to the field's history for reasons described below (see Morris, 2022). A then-smaller audience is behavioral, cognitive, and social scientists for whom the history of behavior analysis is part of their fields' histories (e.g., in education, psychology, sociology). The smallest audience, but a vital one, is historians for whom the field's history is part of the histories they research and write (e.g., historians of psychology; e.g., Hothersall & Lovett, 2022; Leahey, 2013; Pickren & Rutherford, 2010; Woody & Viney, 2020).

To accomplish its purpose, the article is organized into four sections that offer a sequence of considerations for teaching the course. The first addresses structural considerations: titles, descriptions, curricula, requirements, and standards. The

[1] As noted in E. Morris (2022), the distinction between psychology's long past and short history was originally made by Hermann Ebbinghaus (1850–1909), who wrote: "Psychology has a long past, yet its real history is short" (Ebbinghaus, 1908, p. 3). E. G. Boring (1886–1968) made it famous as: "Psychology has a long past, but only a short history" (see Boring, 1929, p. vii).

second addresses contextual considerations: the purposes of teaching history, historiographic methods, and textbook selection. The third addresses functional considerations: course content. The fourth discusses course revisions: eliminating some topics (i.e., the Middle Ages), expanding others (e.g., philosophy of behaviorism), and including new ones (e.g., women's history). As for the course's pedagogy (i.e., instructional methods; e.g., active learning), this is beyond the article's purview, yet warrants independent research, development, and dissemination (see, e.g., Bloom et al., 1956; Boyce & Hineline, 2002; Keller, 1968).

Structural Considerations

Structural considerations in teaching a history course include course titles, catalog descriptions, undergraduate and graduate curricula, Behavior Analysis Certification Board (BACB) certification requirements, and Association for Behavior Analysis International (ABAI) accreditation standards. These are most pertinent for instructors teaching or proposing to teach the history course and related courses (e.g., history of applied behavior analysis), but also relevant for instructors of history in related fields (e.g., biology, psychology, anthropology).

Course Titles

The first consideration is the course's title. Here, "History of Behavior Analysis" is preferred to "The History of Behavior Analysis." The definite article "the" in the latter suggests that the course covers all the field's history. No course can do that, of course, which is why most history of psychology textbooks use the indefinite article "a" in their titles, as in *A History of Psychology: The Emergence of Science and Application* (Woody & Viney, 2020) or *A History of Modern Psychology* (e.g., Goodwin, 2015) or no article at all, as in *History of Psychology* (e.g., Hothersall & Lovett, 2022). Few textbooks use "The History of Psychology" (e.g., Munger, 2003). This article on teaching the history of behavior analysis, though, does not always adhere to this practice, for instance, in using the phrase "the history of behavior analysis." Here, the "the" refers to history generically, not all of it. Finally, as a matter of style, eliminating the "the" sometimes sounds awkward (e.g., "a course on history of behavior analysis").

Catalog Descriptions

Course titles should be consistent with their course descriptions in college and university course catalogs. The University of Kansas (KU) course catalog lists ABSC 981 as follows (see http://absc.ku.edu/courses):

> **ABSC 981 History of Behavior Analysis:** An advanced graduate seminar on the history of behavior analysis from Greek naturalism to the 21st century. It covers the history and philosophy of science and psychology (e.g., evolution vs. revolutions, ontology, epistemology); the long past, short history, and

> recent origins of behavior analysis in cultural context (e.g., Social Progressivism); historical and conceptual relations between behavior analysis and other systems (e.g., behaviorism, psychoanalysis, phenomenalism, cognitivism); and historiographic issues and methods (e.g., great person vs. Zeitgeist history, presentism vs. historicism). Prerequisite: ABSC 800 [Conceptual Foundations of Behavior Analysis] or instructor permission. SEM [for seminar].[2]

This description is obviously too ambitious. No course can include all of it in any depth. In being ambitious, though, it is aspirational. Aspirational descriptions can also be strategic. They can accommodate variations in the missions of undergraduate and graduate programs, as well as variations within instructors over time and across them at the same time. This allows the course to be taught without continually revising its description and to survive in competition with other courses as curricula grow, develop, and evolve.

A related consideration is university and college committees for graduate and undergraduate studies. Their charge is, in part, to approve new and revised courses and, in the process, check for redundant or overlapping descriptions within and across schools and departments (e.g., in counseling, special education, psychology). Instructors proposing a history of behavior analysis course should consult with their schools and departments and other schools and departments and their instructors of history to prepare course descriptions that are not redundant or do not overlap extensively, but that may be complementary. Deans and provosts favor schools and departments that play well together.

Curricula

The place of history in a behavior analysis curriculum depends on various internal and external requirements. The former include department, college, school, and university missions and requirements for undergraduate and graduate degrees (e.g., capstone courses, core competencies). Among them are (1) BACB requirements for bachelor's level BCaBA and Master's level BACB certification and (2) ABAI program accreditation.

Undergraduate Curricula

On January 1, 2022, the BACB requirement for bachelor's level BCaBA certification was increased from 45 contact hr of instruction in "Concepts and Principles of Behavior Analysis" (4th Edition Task List) to 90 hr in "Philosophical Underpinnings; Concepts & Principles" (5th Edition Task List; see January2017-newsletter-200828.pdf). As a result, BCaBA curricula now require an additional course,

[2] "ABSC" is the catalog abbreviation for courses in the Department of Applied Behavioral Science (ABS), which was the successor to the Department of Human Development and Family Life (HDFL) at the University of Kansas in 2004. The department would have adopted "ABS," but KU's Department of Visual Arts was using the abbreviation for courses in "art basic studies" (e.g., ABS 100).

one that could include history, for example, "Philosophical and Historical (or Historical and Philosophical) Foundations (or Underpinnings) of Behavior Analysis." On January 1, 2026, however, the two-course requirement will be reduced to 45 hr in "Foundations of Behavior Analysis" (see *BACB Newsletter*, March 2022). These will include: "[a] the basic concepts and principles of operant and respondent conditioning, and [b] the underlying theoretical and philosophical foundations of behavior analysis (i.e., behaviorism)." History could still be taught in conjunction with these foundations, but a stand-alone history course would not meet BCaBA requirements beyond them. The history course, though, could meet program objectives other than certification.

As for ABAI's undergraduate accreditation standards, they already include history in its required 45 hr of "conceptual analysis." Its purpose is:

> To develop competence in the *history* and philosophy of behaviorism, theoretical approaches to understanding behavior, and interpretation of behavior in terms of the concepts and principles of behavior analysis. (emphasis added; see https://accreditation.abainternational.org/apply/accreditation-standards.aspx)

A course titled "Historical and Conceptual Foundations of Behavior Analysis" could also meet this requirement without adding a course to the curriculum. Again, although a stand-alone history course would not meet ABAI standards beyond the conceptual foundations, it could meet program objectives beyond accreditation.[3] Given the foregoing considerations, it might be taught in a stand-alone historical and conceptual foundations course that meets the BCaBA requirements and ABAI standards. Indeed, students might better understand the field's foundations if they—the foundations—are taught in the context of the field's history (and vice versa; see Beins, 2011; Mauskopf & Schmaltz, 2012; R. Watson, 1966). It might be taught in stand-alone courses on the histories of the field's discipline and subdisciplines and its practice (e.g., history of the experimental analysis of behavior). It might also be embedded in other courses, for instance, in those that meet BACB and ABAI content requirements in basic and applied research and practice (e.g., assessment, research methods). Indeed, it might be taught in every behavior analysis course (see Wertheimer, 1999). For this, curriculum committees should systematically assess what history should be embedded in which courses and in what sequence to ensure depth and breadth in its coverage and to avoid gaps and redundancies.

Master's Curricula

On January 1, 2022, the BACB requirements for BCBA certification were also increased from 45 contact hr in "Concepts and Principles of Behavior Analysis"

[3] To facilitate BCaBA certification, ABAI currently offers two verified course sequences (VCSs). These are "a set of courses that has been verified by [ABAI] as meeting specific coursework requirements, content hours, and faculty standards." One sequence is for "verified coursework for Behavior Analyst Certification Board examination applications" (see VCS—Association for Behavior Analysis International). VCSs are available for the 2022 and 2026 BCaBA certification requirements as well as for BACB certification.

(4th Edition Task List) to 90 hr in "Philosophical Underpinnings; Concepts & Principles" (5th Edition Task List; see January2017-newsletter-200828.pdf). Just as in the 2022 BCaBA requirements, the BCBA requirements must also include an additional course. For this, they could include history in a course titled "Philosophical and Historical (or Historical and Philosophical) Foundations (or Underpinnings) of Behavior Analysis." Unlike the BCaBA requirements, after January 1, 2026, this two-course BCBA requirement will be retained in a new content area—"Theory & Philosophy in Behavior Analysis." It includes, but is not limited to: "the underlying theoretical and philosophical foundations of behavior analysis (i.e., behaviorism)" (see *BACB Newsletter*, March 2022). Thus, it could include history in a course titled "The Historical, Philosophical, and Theoretical Foundations of Behavior Analysis."

As in ABAI's accreditation standards for bachelor's programs, its master's accreditation also includes history in its required 45 hr of "conceptual analysis" for the same purposes: "To develop competence in the *history* and philosophy of behaviorism. . ." (emphasis added; see https://accreditation.abainternational.org/apply/accreditation-standards.aspx). Another blended course titled "Conceptual and Historical (or Historical and Conceptual) Foundations of Behavior Analysis" could also meet this requirement without adding a course to the curriculum. Again, although a stand-alone course would not meet ABAI master's standards beyond the conceptual foundations, it could meet program objectives beyond accreditation.[4]

Given the foregoing considerations, teaching the history of behavior analysis course at the master's level might be approached in the same ways. It might be taught in conjunction with a stand-alone historical and conceptual foundations course as long as it meets the BCBA requirements and ABAI standards for conceptual foundations. Again, students might better understand the foundations if taught in the context of the field's history (and vice versa). It might be taught in stand-alone courses on the histories of the field's discipline and subdisciplines and its practice (e.g., the three waves of behavior therapy). And, it might be embedded in other courses, for instance, in those that meet BACB requirements, ABAI standards, and program objectives (e.g., research methods), given the foregoing caveat that programs assess what history is taught in which courses and in what sequence.

Doctoral Curricula

In addition to requiring a course on the philosophical and historical foundations of behavior analysis and incorporating history in doctoral courses, a stand-alone history course might be required in all ABAI-accredited (or not) doctoral programs. This may be more feasible than requiring it in master's programs. First, it may be easier to require because master's programs already have many requirements. Second, it can fulfill one of ABAI's requirements for two semesters of doctoral coursework in the field's conceptual foundations, as does ABSC 981. Third, it might garner

[4] For changes that go into effects in 2032, see https://www.bacb.com/wp-content/uploads/ 2022 /01/ BACB_March2022_Newsletter-220713.pdf.

more university, college, school, department, and program support than a master's program (e.g., administrative, faculty, teaching assistants).

Moreover, a history course can meet one of the field's pressing needs. Given the continuing development of its sciences (e.g., basic, applied, translational, behavioral neuroscience, quantitative analysis) and systems (e.g., functional contextualism**,** pragmatism, radical behaviorism) and the rapid growth in the number and diversity of its graduate programs, students, scientists, scholars, and practitioners (e.g., in clinical behavior analysis, education, organizational behavior management), behavior analysis is becoming so varied that its history is increasingly its one common core. The history course can elucidate the integrity of the field's sciences and systems; incorporate the entirety of its community of students, scientists, scholars, and practitioners; and advance its coherence as a cultural practice. To paraphrase Baer et al. (1968), a history course can make the discipline's diversity in basic research (e.g., on relational frame theory, stimulus equivalence, verbal behavior), applied research (e.g., discrete trial training, contingency management, positive behavioral supports), conceptual foundations (e.g., functional contextualism, pragmatism, radical behaviorism), and practice (e.g., applied behavior analysis, behavior therapy, clinical behavior analysis) an integrated whole rather than a collection of variants. The latter are difficult to expand systematically, to teach, and to learn.

Contextual Considerations

Contextual considerations in teaching the history course include its purposes (and teaching the purposes); distinctions between history and historiography (and teaching historiography); and starting points in textbook selection. These considerations are not only pertinent for behavior analysts teaching or proposing to teach a history of behavior analysis course or history courses in its discipline and its subdisciplines and practice, but are also relevant to faculty members teaching or proposing to teach history courses in the other behavioral, cognitive, and social sciences.

Purposes: Reasons and Rationales

As in any course, teaching history has purposes, that is, reasons and rationales (see Morris, 2022). They include Marcus Tullius Cicero's (106–143 BCE), "Those who know only their own generation remain children forever"; Mark Twain's (1835–1910), "[History] is fatal to prejudice, bigotry, and narrow-mindedness. . . " (Twain, 1869, p. 427); George Santayana's (1863–1952), "Those who do not learn from history are doomed to repeat it" (Santayana, 1905/2005–2006, p. 284; see also Farrington, 1949; Wineburg, 2018); Carl Sagan's (1934–1996), "You have to know the past to understand the present" (www. quteslyfe.com); and Ibram X. Kendi's (1982–present), "To know the past is to know the present. To know the present is to know yourself" (Reynolds & Kendi, 2020, p. ix). In addition to referencing complementary purposes in teaching the history of psychology (e.g., Graham et al., 1983; Pettit & Davidson,

2014; R. I. Watson, 1966), Morris (2022) described these purposes within behavior analysis itself (e.g., Critchfield, 2011; Michael, 2004; Morris et al., 1990).

Teaching the Purposes

The purposes, though, are not always known to students and, thus, should be taught. They could be included in the course syllabus or, better yet, in the first topic (e.g., Topic 1: Introduction). Ideally, they would be taught throughout the course so that students have multiple opportunities to identify and evaluate them. However, the purposes may need behavior-analytic interpretations because they are typically based in psychological systems and folk psychologies inconsistent with behavior analysis (e.g., in Graham et al., 1983; Henle, 1976; R. I. Watson, 1966). For instance, hypothetical explanatory constructs such as *knowledge* are not explanations of behavior, but knowledge is a descriptive concept for what needs to be explained—*knowing* (see Ryle, 1949). The interpretations need to be consistent with the conceptual foundations of behavior analysis (e.g., empiricism, naturalism, monism) and with behavior's basic principles and processes (see, e.g., the experimental analysis of behavior; see Donohoe & Palmer, 1994, on behavioral interpretation).[5]

History and Historiography

Although the terms *history* and *historiography* are often used interchangeably, they are different. History refers to historical events and change—who, what, when, where, why, and how—gleaned from records of them and other artifacts. History is a subject matter. Historiography, in contrast, is a process and a product. As a process, it is the methods of researching and writing history. As a product, it is the result of the process: books, chapters, monographs, articles, presentations, and course lectures. The distinction is captured in the analogy: historiography is to history as the experimental analysis of behavior is to behavior. Research methods are as paramount in a field's natural history as they are in its natural science.

Historiography

Contemporary historiographic methods are usually aligned with the New History of history (ca. 1900; see J. Robinson, 1912), which includes the New History of psychology (ca. 1965; Furumoto, 1989). In general, they are cast as dichotomies between lesser and more favored methods, but this depends on purposes.

[5] The purposes can be interpreted, in part, as conditioned motivating operations that establish positive and negative reinforcers for teaching and learning history that then affect students' subsequent verbal and nonverbal behavior (e.g., operant, respondent; see Hayes et al., 2001; Skinner, 1957, pp. 418–431; Sundberg, 2013). These operations are relevant both to the general purposes of history (e.g., to avoid being children forever, prejudiced, bigoted, narrow-minded, and doomed to repeat history) and to purposes within behavior analysis (e.g., working successfully with one's own behavior and that of others; see Morris, 2022).

One dichotomy is great person versus Zeitgeist historiography. This is a dichotomy between (1) historiography written as the contributions of a field's great persons versus (2) "spirit of the times" historiography written as the influence of a field's cultural, social, intellectual, and scientific contexts (Rosenweig, 1970; Ross, 1969). An example of great person historiography is biography, whether in criticism or hagiography, for instance, biographies of Watson (e.g., Buckley, 1989) and Skinner (e.g., Bjork, 1993). Two examples of *Zeitgeist* historiography are Alexandra Rutherford's (2009) *Beyond the Box: B. F. Skinner's Technology of Behavior from Laboratory to Life, 1950s-1970s* and Smith and Woodward's (1996) *B. F. Skinner and Behaviorism in American Culture.* They address how the American culture influenced the emergence, development, and evolution of behavior analysis. Neither great person nor *Zeitgeist* historiography may be sufficient.

A second dichotomy is internalist versus externalist historiography. This is a dichotomy between (1) historiography written from within a field, for instance, by behavior analysts writing about the who, what, when, where, why, and how of the field's history versus (2) historiography written from outside a field, for instance, by psychologists writing about the history of behavior analysis in psychology's cultural, social, intellectual, and scientific context. An example of the former is Alan Kazdin's (1978) *History of Behavior Modification: Experimental Foundations of Contemporary Research*. An example of the latter is John Mills's (1998) unsympathetic, at best, *Control: A History of Behavioral Psychology* (see Morris, 2002). Internalist and externalist historiography may be useful or biased.

A third dichotomy is presentist versus historicist historiography. This is a dichotomy between (1) historiography written as ceremonial or celebratory history that views a field at present as the winning tradition versus (2) historiography that analyzes history in its time and place (Buss, 1977; B. Harris, 1980; Stocking, 1965). An example of the former is historiography that celebrates the putative cognitive revolution of the 1960s (e.g., Baars, 1986). An example of the latter is historiography that analyzes cognitivism as it emerged in the 1950s and finds nothing revolutionary in it (Leahey, 1992b). Presentism and historicism are not always aligned.

A trichotomy is historiography's tertiary, secondary, and primary sources. Tertiary sources are typically textbook and popular histories based on secondary and other tertiary sources (e.g., Goodall, 1972). Secondary sources are original historiography based on primary and other secondary sources (e.g., books, chapters, articles; e.g., Day, 1998; Hackenberg, 1995; Todes, 2014). Primary sources are original publications (e.g., Loeb, 1900; Pavlov, 1927; J. Watson, 1930), as well as material in public and private archives and collections (e.g., correspondence, interviews, unpublished manuscripts, and artifacts; see the Archives for the History of Psychology, Akron, OH; the Harvard University Archives, Cambridge, MA). Primary sources and artifacts are ultimately the basis of all sound historiography (Parrott & Hake, 1983).

Teaching Historiography

Just as the purposes of teaching history are unfamiliar to many students, so too are historiographic methods and even more so. Thus, they too might be taught. In

arguing for teaching the methods of science, Carl Sagan (1995) observed: "If we teach only the findings and products of science—no matter how useful and even inspiring they may be—without communicating its critical method, how can the average person possibly distinguish science from pseudoscience?" (p. 21; see Trecek-King, 2022). If we replace "science" with "history," this argues for teaching not just history, but also historiographic methods, that is, for teaching critical thinking about history (e.g., distinguishing history from pseudohistory). Teaching these methods would increase the depth and breadth of students' understanding the history of behavior analysis and, thus, of the field today.

Historiographic methods might also be included in the course syllabus or again, even better, in the first topic (e.g., Topic 1: Introduction; see, e.g., Coleman, 1995) or, better yet again, as a separate topic (e.g., Topic 2: History and Historiography). Ideally, they would also be included throughout the course so that students have multiple opportunities to identify and evaluate how they—the methods—affect teaching and learning history. For an introduction to modern historiography in psychology, see Laurel Furumoto's (1989), "The New History of Psychology."[6] For more in-depth considerations, see Hilgard et al. (1991) and Woodward (1980). For reviews of these considerations, see Robert Young's (1966) and Daniel Robinson's (2013) critiques of the Old History in the behavioral, cognitive, and social sciences. In both cases, one of each pair of the articles might be assigned, leaving the other as an instructional resource. For more extended treatments, see Brozek and Pongratz (1980), Kragh (1987), and Walsh et al. (2014).

Just as the purposes of teaching history are often based in psychological systems and folk psychologies inconsistent with behavior analysis, so too is historiography (see, e.g., Danziger, 2015; Furumoto, 1989; D. Robinson, 2013). As a result, it also needs behavior-analytic interpretations. For instance, the great person versus *Zeitgeist* dichotomy characteristically assumes that great persons are self-actional agents and that *Zeitgeists* are essentialist "spirits of the time." In behavior analysis, great persons are not agents of their actions, but loci for a confluence of variables that make a person's contributions unique, perhaps even great (see Skinner, 1972). The *Zeitgeist*, in turn, is not essentialist, but a function of evolving macro- and metacontingencies (see Glenn, 2004; M. Harris, 2007). The dichotomies are also in some sense false (Morris et al., 1990; e.g., Hesse, 1970; D. L. Hull, 1979): All history is an interaction of great persons and *Zeitgeists*; all historiography is internalist and externalist; and all present-day sciences and systems have histories. In the end, methods depend on purposes.[7]

[6] Furumoto (b. 1938) received her doctorate from Harvard University in 1967 for a dissertation titled *Studies of Experimental Extinction in the Pigeon* (Furumoto, 1967). It was conducted in Skinner's Pigeon Lab under the direction of Richard J. Herrnstein (1930–1994). Her other committee members were C. G. Gross and B. F. Skinner. I thank the Harvard University Archives for sending me copies of the signature/acceptance page of her dissertation. The dissertation was published, in part, as "Extinction in the Pigeon after Continuous Reinforcement: Effect of Number of Reinforced Responses" (Furumoto, 1971).

[7] Two other examples of why teaching historiography is important are, first, Rush Limbaugh's (1951–2021) concept of history: "History is real simple. You know what history is? It's what happened" (Nash et al., 1997, p. 6). The second is Sam Wineburg's (2001) consternation on hearing a student describe the difference between history and math as: "In history you just look it up, [in] math you work it out"

Starting Points in Textbook Selection

As noted, the history of behavior analysis course can have several starting points. Some are at the beginning of its long past, short history, and recent origins. Others are practical: where to begin teaching the history of behavior analysis in its long past, short history, and recent origins. Many starting points are possible across and within these beginnings, depending on an instructor's interests and objectives. However, they have consequences for textbook selection.

History of Behavior Analysis Textbooks

To date, no textbooks have been published on the history of behavior analysis from ancient Greece forward, behaviorism forward, or neobehaviorism forward. Behavior analysts, however, have written textbooks on the history of psychology, some of them attuned to behavior analysis. Among the first was Fred Keller's (1937, 1973) *The Definition of Psychology*. It is a conventional history of psychological systems, but hints at a behavior-analytic future. Three more recent textbooks warrant closer consideration, but are perhaps better suited for other courses. They are Howard Rachlin's (1994) *Behavior and Mind: The Roots of Modern Psychology*, which is original and creative, but more about philosophy of psychology than history; Joe Pear's (2007) *A Historical and Contemporary Look at Psychological Systems*, which is thorough and thoughtful, but more about systems than history; and John Malone's (2009) *Psychology: Pythagoras to Present*, which is wide-ranging and scholarly, but not a textbook for teaching the history of behavior analysis. Interbehavioral psychologists have also published textbooks on the history of psychology (e.g., Kantor, 1963, 1969; N. Smith, 1990, 2001), but their purview is the history of naturalized psychology in which behavior analysis is but an instance and often flawed by their standards. The scholarship of their histories, though, is deeply instructive.

History of Psychology Textbooks

Textbooks on the history of psychology might also be selected. Its history is part of the cultural, social, intellectual, and scientific context within which behavior analysis emerged, developed, and evolved, generally at one of two starting points.

The first is in 500 BCE Greek philosophy: Socrates' (469–399 BCE), Plato's (427–347 BCE), and Aristotle's advancement of naturalism, which was also the beginning of the long past of behavior analysis. However, given that psychology today is largely mentalistic, its history textbooks do not feature naturalism as much as Plato's essentialism and mentalism (e.g., the Forms). After covering Greek and Roman philosophy, the textbooks review the 1,000 years of the Middle Ages (500 BCE–1500 CE) and sometimes valuable Islamic history, but little of it relates directly

Footnote 7 (continued)
(p. 42; see also Wineburg, 2018). These examples overlook the role of historiography in seeing "what happened" and how it "worked out."

to behavior analysis, except as contrasts (e.g., supernaturalism, Scholasticism). Not until the Renaissance (1300–1600) and Scientific Revolution (1600–1850) are the textbooks again relevant to the field's long past, mainly in Francis Bacon's (1561–1626) empirical-inductive epistemology (see Bacon, 1620/1960, 1623/1937), which influenced Skinner's research methods and his goals of prediction and control (Skinner, 1956a, 1977; see L. Smith, 1986, pp. 259–297). Afterward, the history of psychology textbooks includes more of behavior analysis's long past: British Empiricism and Associationism (e.g., David Hume, 1711–1776), Scottish Common Sense Realism (e.g., Thomas Reid, 1710–1796), and biology—experimental physiology (e.g., Claude Bernard, 1813–1878), evolutionary biology (e.g., Charles Darwin, 1808-1882), and general physiology (e.g., Jacques Loeb, 1859–1924)—up to the beginning of the field's short history.

The second starting point in the history of psychology textbooks is the founding of experimental psychology in late 19th-century Germany. This began with Wilhelm Wundt's (1832–1920) establishing psychology's first research laboratory and its psychophysical methods in Germany, and then Edward B. Titchener's (1867–1927) making over Wundt's psychology in America into the field's first system—Structuralism—and its introspective methods. The texts then typically address animal behavior (see Boakes, 1984), functionalism (e.g., Woodworth, 1918), classical behaviorism (e.g., J. Watson, 1913b), and neobehaviorism. Neobehaviorism includes mediational behaviorism's theories of learning (e.g., C. Hull, 1884–1952; Tolman, 1886–1959) and Skinner's science and system of behavior. Often, though, the history of psychology textbooks do not distinguish Skinner's science and system much from the other neobehaviorisms or consider Skinner's science and system much at present.

Selecting a History of Psychology Textbook

Whether a history of psychology textbook should be selected for a history of behavior analysis course again depends on the instructor's interests and objectives. On the one hand, assigning a history of psychology textbook might benefit behavior analysts who, then or later, work with psychologists. Not only would they understand psychology's historical foundations, they could also address its comparisons and contrasts with behavior analysis in the past and at present (e.g., ecological perspectives, ethology, humanism, phenomenology, pragmatism, the social construction of knowledge) and correct psychology's misunderstandings of behavior analysis (e.g., its putative denial of instinct and consciousness, its putative death in the cognitive revolution). On the other hand, textbooks that start in Greek philosophy include 1,000 years of the Middle Ages that might keep the course from addressing the short history and recent origins of behavior analysis more thoroughly. This could be addressed, in part, by selecting a history of psychology textbook that starts with German experimental psychology (e.g., Goodwin, 2015), but it would elide much of the long past of behavior analysis. Supplementary readings would be required.

When I last taught the history of behavior analysis, I assigned Thomas Hardy Leahey's (2013) textbook, *A History of Psychology: From Antiquity to Modernity*, for several reasons. First, Leahey provides nuanced and thick descriptions of the

cultural, social, intellectual, and scientific context from which behavior analysis emerged, developed, and evolved. This illustrates the field's many origins. Second, he maintains that psychology had neither a behavioral nor a cognitive revolution. This addresses key issues in the history and historiography of behavior analysis. Third, he describes behavior analysis accurately and well, yet denies that psychology can be a natural science. This prompts discussion about what psychology and natural science entail. Fourth, he is attuned to the New History of psychology. This makes students better readers of history.

Functional Considerations

The functional considerations in teaching a history of behavior analysis course are its content, usually organized as weekly topics with required and recommended readings. I started teaching my history course in KU's then-named Department of Human Development and Family Life (HDFL; 1964–2004) in the 1970s and 1980s. It was an elective summer readings course on the history of psychology. The main readings were, each time, one of psychology's classic or contemporary history and systems texts (e.g., Boring, 1950; Heidbreder, 1933; Marx & Cronan-Hillix, 1973) and the emerging literature on the history of behaviorism and behavior analysis (e.g., Boakes, 1984; O'Donnell, 1985; Smith, 1986). The students were master's and doctoral students in developmental and child psychology and in behavior analysis.

In the 1980s and 1990s, the course became a stand-alone HDFL course on the history of psychology in which I assigned Leahey (e.g., Leahey, 1992a), along with articles and chapters on the history and systems of psychology and behavior analysis. The course evolved further as I joined the History of Science Society (1924–present), Cheiron: The International Society for the History of the Behavioral Sciences (1968–present), and APA Division 26 Society for the History of Psychology (SHP; 1966–present) and subscribed to their journals, respectively: *ISIS*, *Journal of the History of the Behavioral Sciences*, and *History of Psychology*. The course's students now included graduate students in clinical child psychology.

In the 1990s and 2000s, the course became a history of behavior analysis course in the renamed Department of Applied Behavioral Science (2004–present)—a behavior-analytic department. I still assigned Leahey's (1997, 2000, 2004) text, but the course continued to evolve as I participated in Cheiron's and SHP's conferences and governance (see, e.g., Morris & Bigelow, 2017). In addition, I required that students rate and rank each topic's required readings, comment on them, and query me about them, which I used to inform course revisions.

In assigning Leahey's texts, my course was organized largely by his books' organization, beginning in psychology's long past in Greek philosophy. For the topics, I prepared weekly syllabi that included required and recommended readings and commentary on them and the topic. I turn now to the topics and readings from the last time I taught the course. For the required readings, I include authors and titles; for the recommended readings, I include selected publications in parentheses.

Topic 1: Introduction and Overview

Topic 1 is an introduction to and overview of the course (e.g., pedagogy, requirements) and the course topics (i.e., the content, readings). The topics are listed below as margin headers.

Topic 2: History, Historiography, and Behavior Analysis

Topic 2 introduces the history and historiography of behavior analysis and reasons and rationales for teaching them. The first readings are Leahey's (2013) Preface, which describes his approach to teaching history (e.g., New History); his "Introductory Essay," which explores the very idea of psychology as a natural science and concludes that psychology is more of a humanity than a science (see Gergen, 1973); and the opening pages in Chapter 1 ("Science, History, and Psychology"). I address the chapter's main section ("Understanding Science") later in the course when discussing methodological behaviorism, operationalism, and logical positivism, where scholarship in behavior analysis becomes relevant (e.g., Moore, 2008; L. D. Smith, 1986, pp. 257–297). The next reading is Jack Michael's (2004) chapter, "Historical Antecedents of Behavior Analysis." Although admittedly oversimplified, Michael offers a synopsis of the field's historical foundations as they converge on and extend from a great person—Skinner. The readings that follow are Laurel Furumoto's (1989) chapter, "The New History of Psychology"; the last section in Leahey's Chapter 1—"Understanding History" (see also Observer, 1975, 1979, 1983; Observer was Kantor); Willard Day's (1998) introduction to his chapter, "The Historical Antecedents of Contemporary Behaviorism"; Morris et al.'s (1990) "The History of Behavior Analysis: Some Historiography and a Bibliography"; and Parrott and Hake's (1983) "Toward a Science of History." Parrott and Hake point out that, if historiography is the process and product of historians interacting with written history, historical records, and historical artifacts—not literally with the past—then history can be a science, albeit a historical science (i.e., natural history), not a natural science (see also Kantor, 1960; Mountjoy & Ruben, 1984; Vyse, 2001). The topic's final reading is Steve Coleman's (1995) chapter—"The Varied Usefulness of History, with Specific Reference to Behavior Analysis."

Topic 3: The Classical World, Middle Ages, and Renaissance

Topic 3 begins with the long past of behavior analysis in ancient Greece circa 500 BCE. The first reading is Kantor's (1968) "Behaviorism in the History of Psychology," which describes the emergence of naturalism in psychology and then its waxing and waning (see also Kantor, 1963; N. W. Smith, 1990). Next is Day's (1998) section on ancient philosophy, followed by Leahey's (2013) Chapter 2 ("The Legacy of Ancient Greece"), which introduces three topics. The first is Plato's Formism, for which I assign Palmer and Donohoe's (1992) contrasting "Essentialism and Selectionism in Cognitive Science and Behavior Analysis." The second is Aristotle's

four causes, for which I assign Jay Moore's (1984) behavior-analytic interpretation in "On Behaviorism, Knowledge, and Causal Explanation" (see also Hocutt, 1974; Killeen, 2001). The third is a molar analysis of behavior, for which I assign Billy Baum's (1995) "Introduction to Molar Behavior Analysis" (see also Rachlin, 1994). The next two readings are Leahey's (2013) Chapter 3—"Antiquity: 323 – to 1000 CE" (e.g., Middle Ages; see Neuringer & Englert, 2017)—and his Chapter 4—"The Premodern World: 1000 CE to 1600 CE" (e.g., the Renaissance). The final assignment is Jeanne Goldberg's (2017), "The Politicization of Scientific Issues: Looking through Galileo's Lens or Through the Imaginary Looking Glass." She introduces Lucretius's (50 CE/2003) poem, *On the Nature of Things*, and Stephen Goldblatt's (2011) related book, *The Swerve: How the World Became Modern*, that is, how the world became scientific up to post-modernism. Goldberg is skeptical of postmodernism. Overall, Topic 3 introduces ontological isms that are, on a behavior-analytic account, philosophical and scientific practices and values, some useful (e.g., determinism, materialism), some not (e.g., idealism, dualism). Their names are economical terms for denoting them. It is good that practices and values have names, except when their names have varying meanings (e.g., empiricism, realism).

Topic 4: The Scientific Revolution and Rise of Modern Philosophy

Topic 4 addresses material more directly relevant to behavior analysis, beginning with Leahey's (2013) Chapter 4—"The Scientific Revolution." Central to the revolution was Bacon's empirical-inductive epistemology in establishing and advancing technology and science. Skinner (1956a, 1979) embraced Bacon's methods, not those of logical positivism or logical empiricism (L. D. Smith, 1986, pp. 257–297). Central to these methods was their goal: prediction-and-control. This is addressed in the next two readings: Day's (1998) section on modern philosophy and Larry Smith's (1992) "On Prediction and Control: B. F. Skinner and the Technological Ideal." These are followed by Morris's et al. (1993), "Prediction and Control: Watson, Skinner, and Beyond," which argues that prediction-and-control properly serves the goal of understanding, not control for control's sake (see Hackenberg, 1995). Also central to the Scientific Revolution was a mechanistic worldview, in particular, discrete mechanism (see Pepper, 1942, pp. 195–212), not later consolidated mechanism (Pepper, 1942, pp. 212–221; see Delprato, 1993). The former was a basis for the success of the Revolution, but it was not the behavior-analytic worldview after Skinner proposed that responses and stimuli were class concepts, discovered the operant, and advanced selection by consequences (Skinner, 1938, 1966b). In the next assignments, Roy Moxley (1992) addresses these points historically in "From Mechanistic to Functional Behaviorism" (see also Chiesa, 1992), whereas Morris (1993) addresses them at present in "Behavior Analysis and Mechanism: One Is Not the Other." The topic ends with Leahey's (2013) Chapter 6—"The Enlightenment, 1700–1815"—where little behavior-analytic material is available, but should be (e.g., on French materialism, Scottish Common Sense Realism). This has only been briefly explored in British Empiricism, for which I assign Nuzzolilli and Diller's (2015), "How Hume's Philosophy Informed Radical Behaviorism."

Topic 5: The Ascent of Science in Psychology

Topic 5 covers philosophy and science in the 1800s (e.g., positivism, physiology). The first readings are Leahey's (2013) Chapter 7—"The Ascent of Science 1815-1914"—and Day's (1998) section on 19th-century German psychology. Positivism was fundamental, especially in Ernst Mach's (1838–1916) influence on Skinner. For this, I assign Jack Marr's (1985) "'Tis the Gift to be Simple: A Retrospective Appreciation of Mach's *The Science of Mechanics*" and Day's (1998) section on William James (1842–1910) and Mach (see also Chiesa, 1992; Marr, 2003). They address Mach's philosophical-historical method, meaning of "function" for "cause," and approach to observation, hypothesis, and theory. In science, experimental method was becoming fundamental. Here, I assign Travis Thompson's (1984) "The Examining Magistrate for Nature: A Retrospective Review of Claude Bernard's *An Introduction to the Study of Experimental Medicine*." Bernard dismissed vitalism and explanatory reductionism; identified physiology's independent variables through experimental analysis; and replicated his findings within organisms. Although Bernard did not influence Skinner directly, experimental physiology presaged Skinner's (1956a, 1966a) science (see Johnston & Pennypacker, 2008; Sidman, 1960), as illustrated in the next reading: Bushell and Burgess's (1969) chapter, "Characteristics of the Experimental Analysis of Behavior." This intellectual lineage extends to the General Physiology of Jacques Loeb and William J. Crozier (1892–1955). For this, I assign Tim Hackenberg's (1995) "Jacques Loeb, B. F. Skinner, and the Legacy of Prediction and Control," which expands on the meaning of prediction-and-control as understanding (see Morris et al., 1993). I conclude with Ernest Vargas's (1995) "Prologue, Perspectives, and Prospects of Behaviorology," which describes Crozier–Skinner correspondence that illustrates how science is, in part, scientists interacting with other scientists.

Topic 6: The Psychologies of Consciousness and the Unconscious

Topic 6 addresses the psychologies of the conscious and unconscious. It begins with Leahey's (2013) Chapter 9 ("The Psychology of Consciousness"), which describes Wilhelm Wundt's founding of experimental psychology as, largely, psychophysics (cf. behavioral economics). Edward B. Titchener advanced a more subjective form of self-report—introspection—in his Structuralism (see Coon, 1993). In the second reading, "The Psychology of Unconsciousness," Leahey (2013) introduces Sigmund Freud (1856–1939) and psychoanalysis, which were accepted and rejected in the United States. For this, I begin with Gail Hornstein's (1992) "The Return of the Repressed: Psychology's Problematic Relations with Psychoanalysis, 1909–1960." Behaviorism and psychoanalysis are usually considered antithetical. For this, I assign Skinner's (1954) article, "A Critique of Psychoanalytic Concepts and Theories," which is critical of the mentalism in psychoanalysis, even as Clark L. Hull's drive-reduction learning theory was used to explain psychoanalysis as a system and a psychotherapy (Dollard et al., 1939). The next reading is Skinner's (1956b) chapter, "What Is Psychotic Behavior?," which offers a more constructive perspective. For affinities between behavior analysis and psychoanalysis, I assign Robert Nye's

(1992) chapter ("Views on Sigmund Freud") and Marc Richelle's (1993) chapter ("Freud in Skinner's Writings"; e.g., historical causation, single-subject methods). For what psychoanalysis makes of Skinner, the next reading is Alan Elms's (1981) psychobiography of Skinner: "Skinner's Dark Year and *Walden Two*." The final reading is Vicki Lee's (1988) review of Roy Schafer's (1976) book, *A New Language for Psychoanalysis*. She points out that, like Skinner, Schafer urged that nouns be avoided in describing behavior (e.g., aggression) in favor of verbs (e.g., aggresses), adverbs (e.g., aggressively), adjectives (e.g., aggressive), and gerunds (e.g., aggressing).

Topic 7: The Psychology of Adaptation and Proto-Behaviorism

Topic 7 begins with Leahey's (2013) Chapter 10 ("The Psychology of Adaptation), which covers evolutionary biology and comparative psychology (see Boakes, 1984). It describes how Lloyd Morgan's Canon refuted subjective inference (Morgan, 1903; see Epstein, 1984), but omits Morgan's inclusion of animal cognition, for which I assign Alan Costall's (1993) "How Lloyd Morgan's Canon Backfired." The next reading is Day's (1998) sections on natural selection, animal behavior, and Functionalism. By the 1880s, the American culture was abetting behaviorism. For its social context, I assign David Bakan's (1966) "Behaviorism and American Urbanization" (see O'Donnell, 1985). For its intellectual context, I assign Roy Moxley's (2001), "Sources of Skinner's above Pragmatic Selection in 1945," which shows that C. S. Peirce's (1839–1914) pragmatism was Skinner's epistemology (see also Moxley, 2002); Leahey's section on John Dewey's (1859–1952) pragmatism that became Stephen C. Pepper's (1891–1972) contextualism (Pepper, 1942, pp. 232–279); and Dewey's (1898) description of behavior as functional relations (see Pronko & Herman, 1982). Leahey mentions neorealism in passing (see Charles, 2011), yet it is consistent with behavior analysis (see Morris, 2003). After this, I assign the first section in Leahey's Chapter 11 ("Behaviorism, 1892–1956") on new directions in animal psychology through Edward L. Thorndike (1874–1949) and Ivan P. Pavlov (1849–1936). For Thorndike, I assign Charlie Catania's (1999), "Thorndike's Legacy: Learning, Selection, and the Law of Effect," and Paul Chance's (1999), "Thorndike's Puzzle Boxes and the Origins of the Experimental Analysis of Behavior" (see also Jonich, 1984; Lattal, 1992). For Pavlov, I assign Catania and Laties's (1999) "Pavlov and Skinner: Two Lives in Science: An Introduction to B. F. Skinner's 'Some Responses to the Stimulus 'Pavlov'"; Skinner's (1966a) article by that title; and Skinner's (1981) "Pavlov's Influence in America" (see also Coleman, 1988; Todes, 2014).

Topic 8: John B. Watson and Classical Behaviorism

Topic 8 focuses on J. B. Watson and classical behaviorism, starting with Leahey's (2013) chapter, "Behaviorism, 1892–1956" (see Buckley, 1989; cf. Morris, 1991). Watson was both pioneering and controversial. When he published his Behaviorist Manifesto—"Psychology as the Behaviorist Views It" (Watson, 1913b), which I assign next—he was a respected researcher in ethology and animal behavior (Todd

& Morris, 1986). The Manifesto is important because it introduces Watson's methodological behaviorism (i.e., he set consciousness aside), which he soon renounced for a metaphysical behaviorism (i.e., consciousness was a concept, not a construct; Watson, 1913a). The Manifesto's practical implications are addressed in Morris's (2013) "The Legacy of John B. Watson's Behaviorist Manifesto for Applied Behavior Analysis." Watson's best-known later "research"—the Little Albert experiment—became a landmark in the history of psychology, but was not so deserving, as Ben Harris (1979) relates in "Whatever Happened to Little Albert?" In Watson's personal life, he became publicly controversial, as Kerry Buckley (1994) describes in his chapter, "Misbehaviorism: The Case of John B. Watson's Dismissal from Johns Hopkins University." In his professional life, he became famous (and infamous) for (1) a strongly stated environmentalist stance in "Give me a dozen healthy infants . . ." (Watson, 1930), which was true, given his premises, and (2) his child-rearing advice, which was enlightened (e.g., he advocated for independence and self-control and for time-out, against corporal punishment (Bigelow & Morris, 2001), except when it was not enlightened (e.g., "Never hug or kiss [your child . . .]" Watson, 1928, p. 81). The next reading is Skinner's (1959) obituary for Watson ("John Broadus Watson, Behaviorist"), which evaluates Watson's influence on psychology. The final assignment is the first part of Leahey's (1992b) article, "Mythical Revolutions in the History of American Psychology," which argues that classical behaviorism was not revolutionary. Psychology was evolving (Samelson, 1981).

Topic 9: Logical Positivism, Neobehaviorism, and Interbehavioral Psychology

Topic 9 covers too much and too little. Logical positivism and logical empiricism and their relation to behavior analysis warrant a stand-alone topic. I begin with Leahey's (2013) section, "The Golden Age of Theory," in his chapter, "Behaviorism 1893–1956" (see L. D. Smith, 1986). Leahey had introduced this material in Chapter 1's section on "Understanding Science," but I did not assign it then and I only recommend it now. It is difficult. The later section also addresses the neobehaviorisms that were mediational behaviorisms, which were a second form of methodological behaviorism: Edward C. Tolman's purposive behaviorism and C. L. Hull's drive-reduction learning theory (see Malone, 1990). In comparing and contrasting the forgoing with Skinner's (1945b) radical behaviorism, I assign Jay Moore's (1975), "On the Principle of Operationism in a Science of Behavior" (see also Moore, 1985, 2011, 2013; Schneider & Morris, 1987). For J. R. Kantor's (1888–1984) Interbehavioral psychology, I assign Mountjoy and Cone's (2006) chapter, "A Biographical Sketch of Jacob Robert Kantor" and Delprato and Smith's (2009), "Sketch of J. R. Kantor's Interbehavioral Field Theory." The latter introduces field or systems theory (see Midgley & Morris, 1988), which complements the readings on Aristotle's Four Causes and Niko Tinbergen's (1963) four "Whys," which I will assign in the future (i.e., mechanism, adaptive value, ontogeny, phylogeny). For a contrast between interbehavioral psychology and behavior analysis, I include Kantor's (1970) critique, "The Experimental Analysis of Behavior (TEAB)." For a comparison, I assign Morris's (1982) "Some Relationships between Interbehavioral Psychology and Radical Behaviorism." In the future, I

may address interbehavioral psychology as a topic among other behaviorisms (e.g., teleological behaviorism, functional contextualism) to illustrate that Skinner was not alone in attempting to naturalize psychology (see O'Donohue & Kitchener, 1999; Zilio & Carrera, 2021).

Topic 10: B. F. Skinner and the Experimental Analysis of Behavior

Topic 10 covers more of Skinner's system and science and introduces him as a person. It begins with Leahey's (2013) review of Skinner's system, which he gets right in his chapter, "Behaviorism 1892–1956," and with Day (1998).[8] They add substance to Skinner's pragmatism and operationism. For Skinner-the-person, I assign Skinner's autobiographical chapter ("B. F. Skinner"; Skinner, 1967), which suffices to that point in his and the field's history (see also Skinner, 1977, 1979). The next four readings describe Skinner's seminal contributions to behavior analysis: his science, that is, the experimental analysis of operant behavior. For his empirical-inductive method, I assign Skinner's (1956a), "A Case History in Scientific Method." For the development of his apparatus, research methods, and concept of behavior, I assign Coleman's (1996) "Skinner's Progress during the 1930s: Reflexes, Operants, and Apparatuses"; Iver Iversen's (1992) "Skinner's Early Research: From Reflexology to Operant Conditioning"; and Coleman's (1991), "From Critic to Theorist: Themes in Skinner's Development from 1928 to 1938" (see also Coleman, 1981, 1984). These readings build on each other, but any one of them may suffice. The next two readings cover the isolation of behavior analysis from mainstream psychology. This began early, but informally. Skinner's system and science were different from mainstream experimental psychology and methodological behaviorism from almost the start, but not different from the natural sciences. Its isolation became more formal as operant psychology became the field of behavior analysis and founded its own journals and professional organizations. For this, I assign David Krantz's (1971) "Schools and Systems: The Mutual Isolation of Operant and Non-Operant Psychology as a Case Study" and Coleman and Mehlman's (1992) "An Empirical Update (1969–1989) of D. L. Krantz's Thesis that the Experimental Analysis of Behavior Is Isolated."

Topic 11: Behaviorism and Philosophy, Cognitivism and the Cognitive Revolution

Topic 11 also covers too much and too little. It begins with the final section of Leahey's (2013) chapter, "Behaviorism 1892–1956," which addresses philosophical behaviorism and behavioral philosophy (see also Day, 1998, pp. 334–345). The latter includes Gilbert Ryle's (1900–1976) concept of mind and Ludwig Wittgenstein's (1889–1951) ordinary language philosophy. For Ryle, I assign T. R. Miles's (1994) "Ordinary Language: The Contributions of Gilbert Ryle and John Austin to the Experimental Analysis of Behavior" and Per Holth's (2001) "The Persistence

[8] By now, I have assigned several sections of Day's (1998) chapter, but somewhat out of order from Leahey (2013). As a result, assigning Day is not seamless and sometimes redundant. Thus, although Day is a useful resource, I may not assign it the next time I teach the course.

of Category Mistakes in Psychology" (e.g., reification, the nominal fallacy) and in behavior analysis (e.g., generalized imitation). For Wittgenstein, I assign Deitz and Arrington's (1984) "Wittgenstein's Language Games and the Call to Cognition" on the use of cognitive terms in describing—not explaining—human behavior (see also Day, 1969) and Deitz's (1986), "Understanding Cognitive Language: The Mental Idioms of Children's Talk," which argues that mental talk is idiomatic talk. Next, the topic turns to cognitivism and its putative revolution. The readings are Leahey's (2013) Chapter 12 ("Cognitive Science 1956-2000") and the rest of his 1992 article, "Mythical Revolutions in the History of American Psychology," which argues that no cognitive revolution occurred. Although the surface structure of mediational behaviorism and cognitivism differed, their deep structures were the same: the mentalistic logic of explanation. Following this, the assignments delve into behavior-analytic literatures. The first is Morris's et al. (1982) "Comments on Cognitive Science in the Experimental Analysis of Behavior," which critiques a move toward cognitivism in behavior analysis. The second two are Skinner's (1989) "The Origins of Cognitive Thought"—the origins are in behavior—and "Can Psychology be a Science of Mind?" (Skinner, 1990), his last public address, where his answer was, as always, no.

Topic 12: B. F. Skinner's Contributions to Applied Behavior Analysis

Topic 12 is the first of two applied topics, which parallel Leahey's (2013) final two chapters. Here, I start with his Chapter 13 ("The Rise of Applied Psychology 1892–1939") as context for the rise of applied behavior analysis. The next reading offers background for Skinner's own applications: Dan Bjork's (1996) chapter, "B. F. Skinner and the American Tradition: The Scientist as Social Inventor" (see also Rutherford, 2009; Smith & Woodward, 1996). As for Skinner's contributions to the field's applied sciences, they began at almost the same time as his basic science (e.g., Skinner, 1934; see Morris et al., 2005), but his major applied works did not appear until later. When they did, they were not applied behavior analysis, not technically. They were not systematically aligned with its seven dimensions (see Baer et al., 1968). Of the applied topics Skinner addressed, the course covers seven of them: (1) verbal behavior: Rutherford's (2003) "B. F. Skinner and the Auditory Inkblot: The Rise and Fall of the Verbal Summator as a Projective Technique" (see Skinner, 1936); (2) animal training: Jim Capshew's (1996) chapter, "Engineering Behavior: Project Pigeon, World War II, and the Conditioning of B. F. Skinner" (see Breland & Breland, 1947; Peterson, 2004; Skinner, 1960); (3) childrearing: Benjamin and Nielsen-Gammon's (1999) "B. F. Skinner and Psychotechnology: The Case of the Heir Conditioner" (see Skinner, 1945a); (4) self-management: Skinner's (1983) "Intellectual Self-Management in Old Age" (see Skinner & Vaughan, 1983); (5) education: Ludy Benjamin's (1988) "A History of Teaching Machines" (see Morris, 2003; Skinner, 1968); (6) intentional communities: Altus and Morris's (2004) "B. F. Skinner's Utopian Vision: Behind and Beyond *Walden Two*" (see Skinner, 1948); and (7) clinical psychology: Rogers and Skinner's (1956) "Some Issues Concerning the Control of Human Behavior: A Symposium."

Topic 13: History of Applied Behavior Analysis

Topic 13 is the second of the two applied topics. In this one, I start with Leahey's (2013) Chapter 14 ("The Psychological Society 1940–2000"). It covers psychology as a cultural practice, both in science and application and both internally (e.g., the American Psychological Association, clinical training) and externally (e.g., federal funding, the American culture). The next reading is Alan Kazdin's (1978) comprehensive chapter, "The Emergence of Behavior Modification." It covers experimental neuroses, applications and extensions of conditioning to human behavior, verbal conditioning and psychotherapy, and the development of behavior modification. For recent internalist historiography on the founding of applied behavior analysis through its publications, see Morris et al. (2013) and Altus et al. (2021). The topic's primary reading is externalist: Rutherford's (2009), *Beyond the Box*: *B. F. Skinner's Technology of Behavior from Laboratory to Life, 1950s–1970s*. Based on original interviews, archival sources, and the behavior-analytic literature, she describes how the American culture positively and negatively affected the emergence, development, and evolution of applied behavior analysis. It covers Skinner as a visible scientist: from the baby in a box (Skinner, 1945a) to *Beyond Freedom and Dignity* (Skinner, 1971); nonhuman and human behavior: from Skinner's Pigeon Lab (Lattal, 2002a) to Wolf's et al. (1964) application of behavior analysis to autism; token economies: from Ted Ayllon in Canada to Nate Azrin in Illinois (Ayllon & Azrin, 1968); applications in criminal justice: from CASE in Washington, DC, to START in Missouri (e.g., Cohen & Filipczak, 1971); self-help, self-control, and self-management: from Skinner (1953) to D. L. Watson and Tharp (1972); and *Walden Two* (Skinner, 1948): from Twin Oaks to Los Horcones (see Kuhlmann, 2005). *Beyond the Box* should be read by all students of behavior analysis (and their instructors).

Topic 14: The Past, Present, and Future of Behavior Analysis

Topic 14 is the last topic. Its readings are based on solicited student interests. The last time I taught the course, the first set of readings was on misunderstandings of behavior analysis. For this, I begin with Michael Mahoney's (1989) "Scientific Psychology and Radical Behaviorism: Important Distinctions Based on Scientism and Objectivism" (e.g., on science and subjectivity). In reply, I assigned Catania's (1991) "The Gifts of Culture and of Eloquence," which addresses them. The second set of readings was on the practice of behavior analysis. Here, I assigned Johnston et al.'s (2017) "A History of the Professional Development of Applied Behavior Analysis." It includes the schism between the discipline and the practice of behavior analysis. Students then read Tom Critchfield's (2011) "Interesting Times: Practice, Science, and Professional Associations in Behavior Analysis," which argues that the schism is natural. In the past, students disagreed with Critchfield and published a reply, which is the next reading, "On Critchfield's Proposal" (Bayles et al., 2012), to which I added Susan Schneider's (2012) "Common Goals for the Science and Practice of Behavior Analysis." The third set of readings was on complementarities with behavior analysis. One was on feminism, where I assigned Maria Ruiz's (1995)

"B. F. Skinner's Radical Behaviorism: Historical Misconstructions and Grounds for Feminist Reconstructions." Another was on ecological approaches to cognition, where I assigned Morris's (2003) "Behavior Analysis and a Modern Psychology." The final set of readings was on world survival. For this, I assigned Skinner's (1987) "Why We Are Not Acting to Save the World," followed by Paul Chance's (2007) "The Ultimate Challenge: Prove B. F. Skinner Wrong" and Sam Leigland's (2011) "*Beyond Freedom and Dignity* at 40: Comments on Behavioral Science, the Future, and Chance." My closing comment: Students of behavior analysis will be the future of the world that survives.

Course Revisions

This article has described teaching a stand-alone course on the history of behavior analysis, organized by structural, contextual, and functional considerations. I taught it last in 2017 and would have taught it more recently, but for the COVID-19 pandemic. The pandemic required changes in the department's course offerings and scheduling. Since 2017, the history and historiography of behavior analysis have changed. They and their literatures have grown, developed, and evolved. In addition, U.S. and world history and culture have changed, as has what we know about them. These and other considerations require course revisions.

Among the structural considerations that require revision are the current and future BACB certification requirements and ABAI accreditation standards. For the latter, the course will increase from 42 contact hr a semester (i.e., 3 hr a week for 14 weeks in a 15-week semester) to 45 hr (i.e., 3 hr a week for 15 weeks). In the past, the 15th week was set aside for overflow class discussion.

Among the contextual considerations that require revision may be a new textbook. I am unlikely to assign Leahey (2013) again. Notwithstanding its broad coverage and deep scholarship, it is a long and sometimes difficult read. The 1,000 years of its Greek and Roman philosophy, science, and religion will be missed. Again, however, the 1,000 years of the Middle Ages do not pertain directly enough to the history of behavior analysis, except as contrasts, albeit important contrasts (e.g., with dualism, essentialism, Scholasticism). In addition, the growing historiography of the short history and recent origins of behavior analysis require more coverage. Thus, I will likely assign a textbook that begins in psychology's 19th-century beginnings (e.g., Pickren & Rutherford, 2010) and address the long past of behavior analysis with supplementary readings (e.g., Fredericks, 2006; Marr, 1985; Nuzzolilli & Diller, 2015; Thompson, 1984). The content, coherence, and continuity of Leahey's (2013) text will be a lost, though.

Among the functional considerations that require revision will be changes in the course content—its topics. Some topics will be deleted (e.g., the long past of behavior analysis in the Middle Ages), some expanded, and some added. The topics likely to be deleted or sharply curtailed are the long past of behavior analysis in Greek and Roman history and the Middle Ages. The topics likely to be expanded are Topic 9: Logical Positivism, Neobehaviorism, and Interbehavioral Psychology, and Topic 11: Behaviorism and Philosophy, Cognitivism, and the Cognitive Revolution. They

could be three topics. In expanding them, a subtopic might be added: philosophy-of-science considerations in evaluating scientific progress. Prior to Thomas Kuhn (1962, 1968), progress was evaluated—and still often is—in terms of the progression to Truth through the internalist trinity of reason, argument, and evidence (see D. Hull, 1986). In contrast, Kuhn proposed that science progresses recursively through cycles of paradigmatic "normal" science and scientific revolutions. For a more modern approach, see David Hull's (1986) *Science as a Process*: *An Evolutionary Account of the Social and Conceptual Development of Science* and Hackenberg's (2009) review of Ronald Giere's (1999) *Science without Laws* and *Scientific Perspectivism* (Giere, 2006; see also Batts & Crawford, 1991).

Another subtopic or topic that might be expanded is historiography. Historians of science and psychology are now debating more formally what is new and not new in the New History. One of the recent critiques of the New History (e.g., Lovett, 2006; Watrin, 2017) and a reply to it (e.g., Brock, 2016, 2017) would update teaching historiographic methods.

Among the topics that might be added is the institutional history of behavior analysis, which reveals internal and external tensions in the field's growth, development, and evolution. It could be embedded throughout the course or addressed independently to include (1) unique institutions such as the 1947 and 1948 Conferences on the Experimental Analysis of Behavior at Indiana University (Dinsmoor, 1987), Skinner's Pigeon Lab at Harvard University (1948–1998; Lattal, 2002a), and the 1974 Drake Conference on Professional Issues in Behavior Analysis (Wood, 1975); (2) behavior-analytic and related organizations, for example, the Association for the Advancement of Behavior Therapy (est. 1966), which became the Association for Behavioral and Cognitive Therapies (est. 2005); Division 25 for the Experimental Analysis of Behavior (est. 1964), now for Behavior Analysis, of the American Psychological Association; the Midwest Association for Behavior Analysis (est. 1974), then the Association for Behavior Analysis (est. 1979), and now the Association for Behavior Analysis International (est. 2003)[9]; the Society for the Quantitative Analysis of Behavior (est. 1978); the Cambridge Center for Behavioral Science (est. 1981); The B. F. Skinner Foundation (est. 1988); The International Behaviorology Institute (est. 1998); and the Association for Contextual Behavioral Science (est. 2005; see, e.g., Peterson, 1978; Todd, 1996); and (3) behavior-analytic journals, among them, the *Journal of the Experimental Analysis of Behavior* (est. 1958); *Behavior Research and*

[9] The July 17, 2022 Wikipedia for the Association for Behavior Analysis international lists 1979 as the year MABA became the Association for Behavior Analysis (ABA), citing its house journal—*The Behavior Analyst*—as its source, in particular, its second volume, second issue. In it, Scott Wood (1979) included the "Association for Behavior Analysis" as the publisher of *The Behavior Analyst* and the name of its Executive Council (see Association for Behavior Analysis International—Wikipedia). On November 21, 2021, I emailed ABA International (mail@abainternational.org) asking about the year ABA became ABAI, that is, ABA International. The ABAI Team replied: "When MABA changed to ABA, it was technically changed to 'Association for Behavior Analysis: An International Organization.' However, the first use of 'ABAI' is in the *Inside Behavior Analysis* newsletter, volume 26, issue 2, which was First [sic] printed in the fall of 2003. Use of 'ABAI' vs 'ABA [sic] is a little inconsistent for a few years after that" (Personal communication, November 24, 2021).

Therapy (est. 1963); *Journal of Applied Behavior Analysis* (est. 1968); *Behaviorism* (est. 1973), now *Behavior and Philosophy* (est. 1990); and *The Behavior Analyst* (est. 1978), now *Perspectives on Behavior Science* (est. 2018–present).

Another topic to add is the history of women in behavior analysis, although it could be embedded as a subtopic throughout the course. It might begin with why great person history is usually great man history (see Scarborough & Furumoto, 1987) and then delve into the behavior-analytic literatures on, for instance: (1) feminism (e.g., DeFelice & Diller, 2019); (2) sexism (e.g., Baires & Koch, 2019); (3) Skinner's (1948) treatment of women in *Walden Two* (e.g., Richelle, 1993, pp. 189–194; Wolpert, 2005); (4) the field's invisible women, for instance, its first copy editors and business managers (e.g., Wright, 1993); (5) the lives of women prominent enough to be recently interviewed (e.g., Pilgrim, 2015) and invited to write autobiographies (e.g., Glenn, 2017); (6) a "warranted woman"—Evelyn F. Segal (1932–2017)—who overcame numerous intersectional barriers (Segal, 1982); and (7) women's contributions to the field's conferences, journals, and leadership (e.g., Li et al., 2018). The historiography of women in psychology is richer than that in behavior analysis and a good model and resource. See, for instance, Johnston and Johnson's (2018) "Reimagining the History of the Psychology of Women" (also Travis & White, 2018). For a supplementary textbook, see Scarborough and Furumoto's (1987) *Untold Lives: The First Generation of American Women Psychologists*. It describes social and cultural factors that constrained women's lives and careers (see also Johnston & Johnson, 2008).

The history of women in behavior analysis is, of course, part of the field's broader history of diversity, equity, and inclusion (DEI) or lack thereof, for example, why great person history is generally great white man history, which excludes the history of Indigenous peoples, Black and Brown people, national and ethnic groups, and sexual and gender minorities (see the *Society for the Experimental Analysis of Behavior* & LeBlanc, 2020). Independent of women, the history of DEI in behavior analysis is brief and largely unwritten (C. Morris, personal communication, June, 2022). For evidence and analysis, see Cirincione-Ulezi (2020), Pritchett et al. (2021), and Szabo (2020), but is growing quickly. For another supplementary textbook, see Robert Guthrie's (1998) *Even the Rat Was White: A Historical View of Psychology*. It describes African Americans as the subjects of implicit and explicit racial bias and unethical practices in psychological research (e.g., The Tuskegee Study; see Rutherford, 2009) and as psychologists for whom social and cultural factors constrained their lives and careers.

Because the field's historiography of DEI is may not yet be substantial enough to warrant a stand-alone topic, it might be incorporated in the historiography of women or embedded in other topics and subtopics (e.g., ethics, eugenics). In either case, its inclusion can begin to fulfill the January 1, 2026 BCaBA and BCBA contact hour requirements in DEI embedded in content areas required for certification (see https://www.bacb.com/wp-content/uploads/2022/01/ BACB_ March2022_ Newsletter-220329.pdf) and, in the future, possibly in ABAI accreditation requirements (e.g., in cultural competence and responsiveness; see Hilton et al., 2021).

Conclusion

Teaching the history of behavior analysis serves behavior analysis in many ways. It can be taught in conjunction with courses that fulfill BACB certification requirements and ABAI accreditation standards (e.g., Conceptual Foundations of Behavior Analysis). It can be embedded in required courses that meet these requirements and standards and for undergraduate majors and Master's and doctoral degree programs (e.g., the experimental analysis of behavior). It can be taught in stand-alone courses in the field's discipline and subdisciplines and its practice (e.g., applied behavior analysis). And it can be taught as a stand-alone course on the field's history. There, it can explain why history is important (e.g., its purposes) and teach methods for thinking critically about it (i.e., historiography). It can include advanced topics not covered in behavior-analytic curricula (e.g., what counts as progress in basic and applied sciences). It can advance increasingly timely topics, for instance, the history of women and other marginalized and underrepresented groups, both as course content and as a means for meeting current and future DEI requirements. And it elucidates the field's integrity; incorporates the entirety of its community of students, scientists, scholars, and practitioners; and advances its coherence as a cultural practice. Again, the history course serves behavior analysis in many ways.

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