What Is First-Wave Behavior Therapy?

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In 2004, Steven C. Hayes published an article in *Behavior Therapy* titled, "Acceptance and Commitment Therapy, Relational Frame Theory, and the Third Wave of Behavioral and Cognitive Therapies" (Hayes, 2004). It was based on his 1988 presidential address – "Human Suffering" (Hayes, 1998) – at the meeting of the Association for Advancement of Behavior Therapy (AABT) (Steven C. Hayes, personal communication, September 20, 2020).[1] In it, he wrote: "Behavior therapy can be roughly categorized into three waves or generations…a 'wave' is a set or formulation of dominant assumptions, methods, and goals, some implicit, that help organize research, theory, and practice" (p. 640).[2] According to Hayes (2004, pp. 640–645), the three waves were (as they are today) behavior therapy (ca. 1950-present), cognitive-behavior therapy (ca. 1970-present), and clinical behavior analysis (ca. 1990-present).[3] In addition to calling the first wave *behavior therapy*,

[1] In 2005, AABT was renamed the Association for Behavioral and Cognitive Therapies. *Behavior Therapy* (est. 1970) remains its flagship journal.

[2] Waves and generations are different, of course. A wave is prototypic: a change in behavior therapy's assumptions (e.g., philosophies), methods (e.g., research), and goals (e.g., in science and practice). A generation is demographic: a cohort of behavior therapy's founders (e.g., the Greatest Generation, b. 1901–1927). More than one generation can participate in a wave; more than one wave can appear in a generation.

[3] Hayes (2004) was not the first to use a "waves" or "generations" historiography. Some behavior therapists have used two waves or generations; others have used three waves or generations (e.g., O'Donohue, 1998b; Plaud & Vogeltanz, 1997); and still others have used more (e.g., O'Donohue et al., 2001; O'Donohue & Krasner, 1995a). Most uses of the first, second, and third waves and generations, though, are the same, but not always (e.g., Hayes was a "second generation behavior therapist"; Plaud & Vogeltanz, 1997, p. 406).

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W. O'Donohue, A. Masuda (eds.), *Behavior Therapy*,
https://doi.org/10.1007/978-3-031-11677-3_4

Hayes also used the term for "the entire range of behavioral and cognitive therapies" (p. 640). These uses are respected here: *behavior therapy* for the first wave, *Behavior Therapy* for a range of the waves.

This chapter describes the foundations of behavior therapy, that is, the assumptions, methods, and goals manifest in its research, theory, and practice (hereafter, in its systems, sciences, and practices). The first section offers a representative view of behavior therapy – Hayes (2004) – along with some clarifications. The second section addresses behavior therapy's foundations, organized by its long past (ca. 500 B.C.E.–1900), short history (ca. 1900–1950), recent origins (ca. 1950–1960), and institutional founding (ca. 1960–1970).[4] The third section considers behavior therapy yesterday and today, describing its differences with the clinical traditions, within its own streams, and with the other waves of Behavior Therapy. Some of the differences are complementary, some paradigmatic, and some contingent.

A Representative View of Behavior Therapy

In his article, Hayes (2004) described the clinical traditions in psychotherapy during the 1940s and 1950s and then the emergence of behavior therapy as an alternative to them. The clinical traditions were the psychoanalytic and humanistic theories and therapies (and psychiatric theories and therapies more than a century earlier). They were criticized for having "a very poor link to scientifically established principles, vague specification of interventions, and weak scientific evidence in support of the impact of the interventions" (p. 640). Hayes continued: "Early behavior therapists believed that theories should be built upon a bedrock of scientifically well-established basic principles, and that applied technologies should be well-specified and rigorously tested" (p. 640). As for the basic principles: "Behavior therapy is an orientation to understanding and ameliorating human suffering, through behavior change, that is influenced by principles derived from experimental psychology, particularly learning research" (O'Donohue et al., 2001, p. xii). Although the bedrock was not always the same bedrock, the principles of learning were fundamental:

> …learning is experience that results in relatively enduring changes in behavior. This focus precisely addresses the general question involved in the enterprise of psychotherapy: How can therapists structure experience so that relatively enduring changes occur in the client's behavior. (O'Donohue, 1998a, p. 6)

After this, Hayes (2004) described two major streams in behavior therapy – neobehaviorism and behavior analysis (p. 641) – noting that they were united in their

[4] The distinction between behavior therapy's long past and short history is borrowed from 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 the distinction famous as: "Psychology has a long past, but only a short history" (Boring, 1929, p. vii).

criticisms of the clinical traditions and united in having scientific bases, but that they were different, too. They have also been conflated, as clarified below.

Neobehaviorism

Hayes (2004) aligned neobehaviorism with associationism: "In the late 1960s, neobehaviorists began to abandon simple associative concepts of learning in favor of more flexible mediational principles and mechanistic computer metaphors" (p. 642). Actually, neobehaviorists began to abandon some of behaviorism's associationism in the late 1920s, specifically, the stimulus-response (S-R) associationism of John B. Watson's (1878–1958) classical behaviorism. In its place, most neobehaviorists favored a behaviorism that included mediational constructs (e.g., attention, motivation, representations) within the organism (O) to explain the relations between stimuli (Ss) and responses (Rs) in S-O-R mediational behaviorism, for instance, the drives, habits, and inhibitors in Clark L. Hull's (1884–1952) theory of learning. Although complex, the mediational constructs were still often associative and were implicitly mentalistic. What the neobehaviorists abandoned in the late 1960s was the surface structure of these constructs in favor of the explicitly mentalistic, computational constructs in information processing (e.g., encoding, memory, retrieval). The deep structures of mediational behaviorism and cognitivism, though, were largely the same: their logic of explanation (Leahey, 1992).

Behavior Analysis

As for behavior analysis, Hayes (2004) aligned it with B. F. Skinner's (1904–1990) article, "The Operational Analysis of Psychological Terms" (Skinner, 1945), and his book, *Verbal Behavior* (Skinner, 1957). Actually, behavior analysis was also a neobehaviorism, but not a mediational behaviorism, whose paradigm was different. It abandoned Watson's associative Ss and Rs, too, not in favor of mediational constructs, but in favor of classes of Ss and Rs and their functional relations (Skinner, 1938). As for the philosophy of his science, Skinner (1945) called it *radical behaviorism*, where radical meant basis or root: Behavior was the basis or root of psychology (Schneider & Morris, 1987). This was a metaphysical behaviorism in which psychological terms denoted descriptive concepts for behavior to be explained (e.g., feeling, thinking), not explanatory constructs that putatively explained behavior (e.g., feelings, thoughts). In his radical behaviorism, Skinner included private events as more behavior to be explained (e.g., covert responses). This, Hayes (2004) averred, "overthrew the Watsonian restriction against the direct scientific analysis of thoughts, feelings, and other private events" (p. 642). Actually, Watson's restriction was ultimately against them as explanatory constructs, not as descriptive concepts, which is described later.

Hayes (2004, pp. 646, 659) also aligned behavior analysis with the worldview of contextualism, that is, with John Dewey's (1859–1952) pragmatism. He had done this before. In a retrospective review of Stephen C. Pepper's (1891–1972) *World Hypotheses* (Pepper, 1942), he co-wrote: "Behavior analysis is a contextualistic system" (Hayes et al., 1988, p. 110; see Morris, 1988). In particular, he aligned behavior analysis with the functional contextualism of his contextual behavioral science (see Hayes et al., 2012):

> The core analytic unit of functional contextualism is the "ongoing act in context." The core components of functional contextualism are (a) focus on the whole event, (b) sensitivity to the role of context in understanding the nature and function of an event, (c) emphasis on a pragmatic truth criterion ["prediction and influence," p. 647], and (d) specific scientific goals against which to apply that truth criterion. (Hayes, 2004, p. 646)

In passing, Hayes (2004, p. 644) also aligned behavior analysis with mechanism (Pepper, 1942, pp. 186–221). This may have been due (a) to variations in behavior analysis regarding reductionism and causation (Hayes et al., 1988, pp. 104–105) or (b) to functional contextualism's interest in controlling behavior (Hayes et al., 1988, p. 101), but this warrants further analysis.

Criticisms Hayes (2004) then criticized behavior analysis, some of it warranted, some of it not, depending on variations within behavior analysis (and across behavior analysts). For instance, although Skinner (1945, 1957) included private events, Hayes demurred:

> …Skinner's analysis of language and cognition led him to conclude that while a scientifically valid study of thoughts and feelings was possible, it was not needed to understand overt behavior. Language and cognition was [sic] conceived of as simple operant behavior and as such added nothing fundamentally new to the contingency stream surrounding other behavior. (p. 642)

Whether Skinner's analysis of language and cognition added nothing fundamentally new to Behavior Therapy is arguable. Each wave of Behavior Therapy added something fundamentally new. In the 1990s, clinical behavior analysis added a putatively new principle of behavior from relational frame theory (RFT): the transformation of stimulus functions (Hayes et al., 2001, pp. 31–33). In the 1970s, cognitive-behavior therapy added new cognitive constructs (e.g., attributions; see Mahoney, 1974; Meichenbaum, 1977), but not everything new was useful. In the late 1950s, behavior analysis added a new system (i.e., radical behaviorism) and a new science (i.e., of operant behavior; see Skinner, 1938, 1945). Afterward, it added other things, some of them also described later.

Hayes's (2004) foregoing distinction between (a) language and cognition and (b) behavior is a category mistake (Ryle, 1949). The former are behavior: a function of behavior's natural science and natural history. Behavior's natural science is the principles of behavior: a subject matter in the experimental psychologies of learning and behavior (e.g., classical conditioning, reinforcement). They are presumably universal, general, or nomothetic. Behavior's natural history is its biological, individual, and cultural history whose products are the subject matter of other experimental psychologies (e.g., language, cognition). Its "principles," though, are not principles

of learning and behavior, but instead, are historically situated, normative, or idiographic (e.g., predictable differences and regularities within and across behavior; Gergen, 1973). Behavior therapy requires both natural science and natural history for understanding behavioral disorders and developing interventions for them. They are complementary.

As for neobehaviorism's therapies, Hayes (2004) noted that mediational behaviorism and behavior analysis were similar, but again different. They were similar in focusing "directly on problematic behavior and emotion" (p. 641), that is, on "'first order' change" (p. 643), using "didactic" and "eliminative" (pp. 658–659) interventions, as opposed to second-order or constructional interventions (i.e., changes in behavior's functions, not just forms; e.g., repertoires, reinforcers), but this arguable, too (see, e.g., Ferster, 1973; Goldiamond, 1974). As for their differences, mediational behaviorism focused on emotions that caused problem behavior, using "neobehavioral principles" to modify them (e.g., "anxiety was to be replaced by relaxation," Hayes, 2004, p. 643), while behavior analysis focused on behavior caused by the environment, using "conditioning principles" (Hayes, 2004, p. 641) to modify it (e.g., eating, hoarding, isolate behavior, psychotic talk, stuttering, tantrums, wearing glasses). The distinction between emotion and behavior is another category mistake.

Conclusion

This representative view of behavior therapy is accurate, except for occasional oversights, but this is understandable. Its purpose was to advance RFT and ACT in third-wave Behavior Therapy. In contrast, the purpose of this chapter is to describe behavior therapy's foundations – the assumptions, methods, and goals manifest in its systems, sciences, and practices – from a more historicist perspective.

Foundations of Behavior Therapy

As noted above, the foundations of behavior therapy may be organized by its long past, short history, recent origins, and institutional founding. The foundations are so complex, nuanced, and diverse, though, that the chapter must be selective in its descriptions, even though a substantial literature supports them. This includes Agras et al. (1979), Boakes (1984), Catania (2013), Cooper et al. (2007), Erwin (1978), Kalish (1981), Kanfer and Phillips (1970), Kantor (1966, 1969), Kazdin (1978), Krasner (1980, 1982, 1990), Krasner and Ullmann (1965), Leahey (2013), Madden (2013), Malone (1990), Moore (2008), O'Donnell (1985), O'Donohue (1998b), O'Donohue et al. (2001), O'Donohue and Krasner (1995b), Plaud and Eifert (1988), Rachman (2015), Rutherford (2009), Skinner (1938, 1953, 1957, 1974), Smith (1986), Ullmann and Krasner (1965, 1969), Ulrich et al. (1966), and Wolpe et al.

(1974). Where pertinent, this literature is cited, but it is also a bibliography, albeit of mainly secondary sources. It does not include primary sources, which challenges the chapter's historiography. The foundations begin with the long past of behavior therapy.

Long Past: 500 B.C.E.–1900 C.E.

Ancient Greece (500 B.C.E.–400 C.E.) Behavior therapy's long past lies in Greek philosophy circa 500 B.C.E. (Kantor, 1966; Leahey, 2013). When the Greek city-states became physically, economically, and socially secure – a cultural opening – they fostered philosophies that were among behavior therapy's ontologies**.** Thales (ca. 624–546 B.C.E.) proposed a monism that comprised the material world – materialism (i.e., physicalism). Heraclitus (535–475 B.C.E.) advanced becoming over being, as captured in his aphorism: "No one ever steps in the same river twice" – contextualism. Aristotle (384–322 B.C.E.) maintained that the world, including the subject matter of psychology, consisted only of natural things, events, and their relations – naturalism. Ontologies are not essentially true, though. They are "true" because they work. These ontologies worked in the short history and recent origins of behavior therapy.

Middle Ages (400 B.C.E.–1300 C.E.) When Greece succumbed to interstitial wars and assimilation by the Roman Empire, life became less safe, secure, and stable (100 B.C.E.–400 C.E.), which fostered opposing ontologies (e.g., immaterialism, supernaturalism). When Rome fell, natural philosophy waned for a millennium – a cultural closing. In these Middle Ages, the Roman Empire devolved into kingdoms of feudal societies and economies, while the Church offered physical and metaphysical havens. No foundations of behavior therapy emerged at the time, mainly contrasts. Scholasticism (1100–1500), for instance, averred that true knowledge of nature lay in the Church's interpretations of Aristotle, not in his actual philosophy and science.

The Renaissance (1300–1600) Europe's recovery from the Middle Ages was the Renaissance, an intellectual and artistic reopening of culture and philosophy. In it, the Scientific Revolution (1600–1800) offered a new epistemology for knowing nature. Francis Bacon (1561–1626), in particular, advanced empirical-inductive methods in technology and science. The goal was to predict and control nature to improve the human condition (see Smith, 1986). A later outcome was Isaac Newton's (1642–1727) deductive, deterministic, mechanistic physics. These philosophies would be integral to one or more major streams in behavior therapy.

Modern History (1500–1900) In early-Modern history (1500–1800), Rene Descartes (1596–1650) proposed a philosophical construct of mind in mind-body dualism. Mind was immaterial and independent of the body; some of its content was

innate (e.g., language). This was a rationalist philosophy of mind. In late-Modern history (1600–1900), British philosophy advanced a psychological construct of mind based in experience. John Locke (1632–1704) conceived of the mind as a blank slate. David Hume (1711–1776) later proposed that simple ideas came from experience, while complex ideas were based in their associations. This empiricist philosophy of mind is found among behavior therapy's major streams.

Modern Science (1600–1900) As for the body, Descartes viewed it as a machine, which was consistent with the materialism, determinism, and empiricism in physics. Scientists thus began studying the body in these terms, too. Claude Bernard (1813–1878) founded experimental physiology using empirical-inductive and within-subject methods. Charles Darwin (1809–1882) founded an evolutionary biology based in natural selection. When these were extended to mind and behavior, the result was comparative psychology and the psychology of adaptation (Boakes, 1984). In the latter, Ivan P. Pavlov (1849–1936) conducted the first systematic analyses of reflex behavior (e.g., salivation in dogs), which he explained reductionistically (i.e., neurologically), while Edward L. Thorndike (1875–1949) conducted the first systematic analyses of instrumental behavior (e.g., cats escaping from boxes), which he explained mentalistically (e.g., the satisfactions it produced). These presaged, in part, behavior therapy's bases in learning.

Conclusion

Although not nuanced, this historiography of behavior therapy's long past describes assumptions (e.g., materialism, naturalism), methods (e.g., empirical, inductive) and goals (e.g., prediction, control) at the start of behavior therapy's short history. Some of them, though, conflicted with others (e.g., monism vs. dualism, induction vs. deduction), but sometimes unnecessarily so, as described later, too.

Short History: 1900–1950

In the 1870s, Wilhelm Wundt (1832–1920) founded experimental psychology in Germany (Kantor, 1969; Leahey, 2013). Its methods were objective (e.g., psychophysical), its independent variables were material (e.g., stimuli), but its subject matter was not behavior. It was consciousness – experience – inferred through verbal and nonverbal measures. In America, Edward B. Titchener (1867–1927) made Wundt's science into psychology's first system: Structuralism. Its subject matter was the structure of consciousness – its elements: sensations, feelings, and images – observed introspectively. Behavior was not its subject matter either.

American psychology was more interested in the function of consciousness – mental adaptation – than its structure. This became psychology's second system:

Functionalism. Its subject matter was not conscious content (e.g., feelings, sensations), but conscious processes (e.g., feeling, sensing), still not behavior. As the construct of consciousness was increasingly questioned, psychology was drawn more to the function of behavior – behavioral adaptation. This was psychology's third system: behaviorism in many varieties (Malone, 1990; O'Donohue & Kitchener, 1998; O'Donohue & Krasner, 1995b). It was supported by the turn-of-the-century American culture, for example, urbanization and Social Progressivism (1880–1920) (O'Donnell, 1985). In contrast to America's familiar, rural folk psychology, urbanization favored a psychology that fostered effectiveness in impersonal urban settings. Social Progressivism favored a psychology that advanced efficiency in business, industry, and daily life. Behavior therapy was not an accident, but then, neither was it predestined. America's deep-seated belief in mind and agency worked against natural philosophy, sciences of behavior, and their applications – and still works against them.

Russian Neuroscience Based on advances in nineteenth century European physiology, Russian neuroscience was behavior therapy's first major scientific stream, although not its first major systematic stream. As noted above, its system was reductionistic, which behavior therapy was not (and is not), even as it included (and includes) biological participation in all behavior and biological independent variables (e.g., genetic, hormonal, neural).[5] In critiquing Structuralism, Ivan M. Sechenov (1829–1905), the father of Russian physiology, contended that cerebral reflexes accounted for behavior better than consciousness did and that physiology offered more objective methods than introspection did. Independent of reductionism, Pavlov's research was the basis of the first natural science of behavior – an empirical-inductive science of reflex behavior (and a 1904 Nobel prize) – which he used in behavioral interpretations of language and psychopathology. Vladimir M. Bekhterev (1857–1927) conducted related research on motor reflexes (e.g., leg flexion in dogs), critiqued psychoanalysis, and offered behavioral interpretations of typical and atypical human behavior (e.g., personality).

As a science, Russian neuroscience's unit of analysis was a two-term relation between unconditional responses (i.e., reflexes; R_R's) and their unconditional antecedents (i.e., eliciting stimuli; S^E's) (see Pavlov, 1927). The S^E-R_R relations were the basic principles and processes of unconditional reflexes (e.g., habituation, potentiation) and explained, in part, rudimentary emotion (e.g., feelings) and cognition (e.g., awareness). When other stimuli entered the unit, new principles and processes – conditional ones (e.g., conditioning, discrimination, extinction, generalization) – and functions emerged (i.e., or were derived; e.g., conditional responses and stimuli), while still others were derived from them (e.g., blocking, inhibition). These explained, in part, more emotion and cognition (e.g., fear, anxiety). In addition,

[5] The past tense (e.g., "was not") indicates behavior analysis in the history of behavior therapy. The present tense (e.g., "is not") indicates behavior analysis today. This past-present distinction holds for other characteristics of behavior analysis and in other streams in behavior therapy, but will be assumed, not made, except as summary prompts (e.g., "includes").

contextual variables affected the functional relations (e.g., conditioning history, occasion-setting), accounting for still more emotion (e.g., anticipation) and cognition (e.g., memory) (see Bouton & Nelson, 1998).

The precursors of behavior therapy in Russian neuroscience included (and include) naturalism, as opposed to supernaturalism; rigorous within-subject research methods; an empirical-inductive science and theory of reflex behavior; new basic and derived behavioral principles, processes, and functions; interpretations of language, personality, and psychopathology; syntheses and analyses of emotional disorders in nonhumans (e.g., neuroses in dogs); and applications that became desensitization for human anxiety (see Franks, 1969).

Classical Behaviorism The first systematic and second scientific stream in behavior therapy's short history was Watson's (1930) classical behaviorism. Its goal was to make psychology and its applications objective. As a system, it was initially a form of methodological behaviorism: Consciousness existed, but was unobserved in practice or was unobservable in principle and, thus, set aside (Watson, 1913b). Although this view of classical behaviorism remains common, Watson soon rejected it for a metaphysical behaviorism in which only biology, environment, and behavior existed (Watson, 1913a). Consciousness did not – not as an explanatory construct. However, Watson included "implicit" behavior: behavior unobserved by others, for instance, subvocal verbal behavior and private emotional reactions (e.g., fear, rage, love). In this, consciousness was a descriptive concept.

As a science, Watson's behaviorism included Pavlov's two-term S-R relations, but from a then-molecular perspective: Every R had an S and every S had an R. By 1930, though, this science began to falter. It could not account for variability in the putatively essentialist S-R relations. Thus, although classical behaviorism was the first systematic stream in behavior therapy's short history, it was not also a scientific stream. Nevertheless, it included (and includes) precursors of behavior therapy: objectivity, as opposed to subjectivity; S-R interpretations of psychopathology; analyses and syntheses of emotional behavior, albeit sometimes flawed (Harris, 1979); practical applications for children's fears, for instance, systematic desensitization (e.g., Jones, 1924); and applications for adult behavior, among them, negative practice for stuttering, aversion therapy for alcoholism, and assertiveness training for social phobias (Kazdin, 1978).

When classical behaviorism's science faltered, neobehaviorism emerged in two varieties, which were behavior therapy's next major systematic and scientific streams. They sought to account for variability in the S-R relations that Watson's science could not. One was mediational behaviorism, the other was operant behaviorism, both introduced earlier.

Mediational Behaviorism In contrast to Watson's methodological behaviorism, mediational behaviorism did not set unobservable constructs aside. It incorporated them. At the time, philosophers were formalizing science as a hypothetical-deductive method of theory construction in which the meaning of terms was paramount (Leahey, 2013). In logical positivism, psychological terms denoted operationally,

but narrowly defined descriptive concepts that needed to be explained (e.g., thinking as merely subvocal speech). In the logical empiricism that followed, the terms denoted operationally-defined constructs within the organism (O) that explained the S-R relations in S-O-R psychology (e.g., thought explained thinking; Moore, 2008). This was another form of methodological behaviorism: Behavior was still what psychology studied, but was not its subject matter. Its subject matter was the explanatory constructs, for instance, cognition and emotion. The goal was to predict behavior based on hypotheses deduced from theories about the constructs. The truth of the theories was their correspondence with the behavior they predicted. This constituted, in part, explanation.

The precursors of behavior therapy in mediational behaviorism included (and include) rigorous between-subject research methods (e.g., prediction, but not within-subject control); operationally-defined explanatory constructs (an implicit mentalism); hypothetical-deductive theories of the constructs (not of behavioral concepts established empirically); interpretations of psychoanalytic theory and therapy (e.g., Dollard & Miller, 1950); and applications that became behavior therapy (e.g., for reducing nocturnal enuresis; Mowrer & Mowrer, 1938).

Operant Behaviorism The other major stream of neobehaviorism was Skinner's system and science of behavior (1930-present), which he differentiated from methodological behaviorism, logical positivism, and logical empiricism (Skinner, 1945,1953; see Moore, 2008; Smith, 1986). First, he adopted Charles S. Peirce's (1839–1914) pragmatism whose criterion of truth was successful working (Moxley, 2001). The most common but least rigorous form of successful working was coherence in descriptions of behavior and the variables that putatively controlled it (e.g., behavioral interpretations). A less common but more rigorous form was correspondence in predictions of behavior based on variables that putatively controlled it (e.g., correlations in between-subjects research). The least common but most rigorous form was the experimental control of behavior based on variables that demonstrably controlled it (e.g., in within-subject research). The truth of description was correspondence: the prediction of behavior. The truth of prediction was control: the experimental control of behavior. Experimental control was the goal of operant behaviorism. It constituted, in part, explanation.

Second, Skinner (1947) included theory: "…behavior can only be satisfactorily understood by going beyond the facts themselves. What is needed is a theory of behavior" (p. 301; see Moore, 2008; O'Donohue & Krasner, 1995c). Theory was the organization and integration of behavior's descriptions (e.g., behavioral interpretations), predictions (e.g., of the operant, everyday behavior), and control (e.g., behavioral principles, by the everyday environment). In turn, it generated hypotheses about as-yet unanalyzed descriptions, predictions, and control. It was a theory of behavior, not a theory of explanatory constructs (Skinner, 1956).

Third, Skinner (1945) behavioralized the meaning of psychological terms: Meaning was a function of the variables that controlled the verbal behavior of speakers and listeners. As such, the terms denoted concepts that described behavior.

Personality, for instance, was behavior extended in time and space, not a construct that explained it. This is illustrated by the analogy: The climate is to the weather as personality is to behavior. Thus, operant behaviorism did not exclude personality or other psychological concepts, such as cognition, emotion, intelligence, language, memory, motivation, perception, or thought, nor did it exclude clinical concepts, such as attributions, awareness, expectancies, learned helplessness, observational learning, and self-control. These terms denoted the products of behavior's natural history (e.g., self-efficacy) that needed to be explained (e.g., behaving efficaciously), not constructs that explained them (e.g., self-efficacy). That would be circular (see Biglan, 1987).

In Skinner's (1938) science, his research with rats pressing bars distinguished instrumental or operant behavior from reflex or respondent behavior. It was a thenmolar account of behavior as lawful, orderly functional relations between classes of responses and classes of stimuli, not instances of them. In it, variability in behavior was explained by analyzing the conditions that controlled it, not by positing explanatory constructs (Sidman, 1960). This was a second natural science of behavior – a fundamentally new science – but it did not make behavioral science post-Pavlovian. It included both sciences. They were complementary.

The science's unit of analysis was a two-term functional relation between emitted operant responses (R_O) and their unconditioned consequences (i.e., reinforcers, punishers; e.g., S^Rs; see Skinner, 1938). This included the basic principles and processes of operant behavior (e.g., reinforcement, extinction, schedules of reinforcement) and explained, in part, rudimentary purpose and motivation. When other stimuli and contingencies entered the unit, new principles, processes, and functions emerged (i.e., or were derived), among them, conditioned reinforcers and discriminative stimuli (S^Ds). The former expanded the operant account of purpose (e.g., conditioned) and motivation (e.g., social). The latter was a fundamentally new principle: It made the two-term contingency a three-term contingency – S^D-R_O-S^R. It accounted for even more purpose and motivation (e.g., conditional purposes), as well as cognition (e.g., attention, perception; Nevin & Reynolds, 1973).

Contextual variables also affected these relations (Balsam & Tomie, 1985). In the early 1930s, Skinner called them *third variables*, the first and second variables being responses and stimuli. The third variables were *conditioning* (i.e., behavioral history), *drive* (i.e., motivating operations), and *emotion* (i.e., emotional operations), but also biology (e.g., typical and atypical neurophysiology). They were part of Skinner's science, but controlled for in the three-term contingency, except when they were analyzed, for instance, in research on deprivation, anxiety, and inheritance (e.g., Estes & Skinner, 1941; Heron & Skinner, 1939). The three-term contingency and its contextual variables were an integrated whole: Each constituent was a function of the others and understandable only in relation to each other in a system or field.

The precursors of behavior therapy in Skinner's operant behaviorism included (and include) naturalism and objectivity; rigorous within-subject research methods; an empirical-inductive science and theory of operant behavior; new basic and derived behavioral principles, processes, and functions; operant interpretations of

thinking and verbal behavior; the synthesis and analysis of nonhuman behavior (e.g., emotion, superstition); conditioned human behavior (e.g., in comatose patients); applications with nonhumans (e.g., animal training); and myriad suggestions for individual, social, and cultural applications (Morris et al., 2005).

Conclusion Although the preceding historiography omitted relevant behaviorisms (e.g., interbehaviorism; Kantor, 1959; see Delprato, 1995) and pioneering applications (e.g., Burnham, 1917; Mateer, 1918), it described the major streams in behavior therapy's short history (see Krasner, 1982, 1990). The first two were Russian neuroscience and classical behaviorism. They opposed consciousness as a construct and promoted objectivity. When classical behaviorism's science faltered, neobehaviorism emerged in two other streams: mediational behaviorism and operant behaviorism. In its recent origins, then, behavior therapy comprised Russian neuroscience, mediational behaviorism, and operant behaviorism.

Recent Origins: 1950–1960

Just as the emergence of Greek naturalism and American behaviorism were culturally influenced, so too were the recent origins of behavior therapy. After the Second World War, America embraced science and technology, among them, clinical psychology (Leahey, 2013). In this, behavior therapy had destructive and constructive programs (Krasner, 1980; O'Donohue & Krasner, 1995b). As noted earlier, the former criticized the clinical traditions for being unscientific. When it also critiqued the medical model of psychopathology, the program became broader. Another criticism came from the experimental psychologist's, Hans J. Eysenck's (1916–1997), research on psychotherapy's effectiveness: It was not as effective as hoped for or claimed (Eysenck, 1952). This led to advances in outcome research and then to evidence-based practices – behavior therapies (e.g., Paul, 1966; see Strumey & Hersen, 2012).

The constructive programs was applications of behavior therapy's three major streams, but this was complicated. Although the first two streams – Russian neuroscience and mediational behaviorism – remained distinct as systems (Malone, 1990), their sciences were often combined as learning theory. The third stream was Skinner's behavior theory, which included learning. With the first two major streams integrated into one, learning theory and then behavior theory became the two major clinical streams in behavior therapy's recent origins.

Learning Theory The first stream emerged in South Africa and England in the early 1950s (Kazdin, 1978). Dissatisfied with psychoanalysis for treating "war neuroses" (i.e., post-traumatic stress disorders), the South African psychiatrist, Joseph Wolpe (1915–1997), turned to Pavlov, Hull, and Hull's colleague, Kenneth W. Spence (1907–1967). He extended the research on the synthesis of neuroses in cats and formulated the principle of reciprocal inhibition: Anxiety produced by inhibitory stimuli (e.g., shock) could be reduced by exposure to excitatory stimuli

(e.g., food). With this, he treated cats' neuroses. In treating military personnel, this became systematic desensitization: muscle relaxation in the presence of an ascending hierarchy of anxiety-inducing situations (or of imagining them). The emphasis on neuroses was principled. Neuroses were central to psychoanalytic theory and therapy. As an alternative, behavior therapy had to address neuroses, too. Wolpe (1958) did this in research on the effectiveness of systematic desensitization, its comparative effectiveness, and the effectiveness of its components. As a military psychiatrist, Wolpe made the neuroses of soldiers the initial provenance of behavior therapy. However, the provenance – its methods and clients – was historically contingent, not necessary, yet it became an identity.

At the Institute of Psychiatry at Maudsley Hospital in London, Eysenck was establishing a clinical training program, pursuing his outcome research, and, with the clinical psychologist, Monte B. Shapiro (1912–2000), extending psychology from testing to include adult psychotherapy. In their research, Eysenck elaborated on learning theory accounts of neurosis, while Shapiro conducted clinical case studies. In this, Eysenck was the first to use the term *behavior therapy* (Rutherford, 2003). When Stanley Rachman (1934–2021) brought systematic desensitization to Maudsley from South Africa in 1959, Maudsley incorporated it in interventions for phobias, while continuing its own clinical programs (e.g., assertiveness training). Again, adult psychotherapy was historically contingent, not necessary, in behavior therapy.

Arnold Lazarus (1932–2013) brought South African and British behavior therapy to America where it took hold. It was consistent with America's practical culture and the varieties of behaviorism, as well as with the emerging scientist-practitioner model of clinical psychology (see Hilgard et al., 1947).

Behavior Theory In the early 1950s, Skinner's behavior theory was not among the recent origins of behavior therapy. It was still part of behavior therapy's short history. Over the decade, this changed due to advances in Skinner's behavioral interpretations and science of behavior.

In his interpretations, Skinner elaborated on private events and offered accounts of consciousness, self-control, and constructive thinking (Skinner, 1953, 1957; see Keller & Schoenfeld, 1950). Private events were not just covert responses, but covert respondents and operants, which included their controlling variables. Consciousness involved describing one's public and private respondents and operants. However, teaching people to describe and explain the private events was problematic. It could not be systematically contingent on the events because they could not be observed by others (e.g., parents, teachers, therapists). Only public events could be observed: (a) public behavior (e.g., crying, lethargy) that was putatively collateral with private events (e.g., pain, boredom) and (b) public accompaniments (i.e., a death in the family) of putative private events (e.g., feeling depressed). The poor correspondence made reports of private events less reliable than reports of public events, and, thus, more subjective. In self-control, public or private controlling responses (e.g., counting to ten, physical exercise) controlled related responses

that were specifiable in advance – controlled responses (e.g., managing anger, reducing depression). In constructive thinking, public or private controlling responses (e.g., deciding, problem-solving) controlled related responses that were not specifiable in advance – also controlled responses (e.g., divorcing, changing jobs). Self-control and thinking were complex behavior in which the controlling responses were something fundamentally new in the contingencies that controlled the controlled responses.

In Skinner's science, behavior theorists were expanding research on the basic behavioral principles and processes with nonhumans (e.g., chaining, conditioned reinforcement, escape-avoidance, punishment, schedules or reinforcement, stimulus control; Keller & Schoenfeld, 1950; see Honig, 1966). By the mid-1950s, they were extending the science in translational research to behavior increasingly relevant to application (Kazdin, 1978; Rutherford, 2009). Some of them replicated the basic behavioral principles and processes in humans, for instance, in children with and without developmental disabilities (e.g., autism) and adult psychiatric patients. In the latter, Ogden R. Lindsley (1922–2004) and Skinner first used the term *behavior therapy* in print (Rutherford, 2003). Others demonstrated that adult verbal behavior could be reinforced socially, leading to its use in understanding psychotherapy (see Cautilli et al., 2005). Still others experimentally analyzed and synthesized socially important human behavior, for instance, cooperation, motor tics, stuttering, and thumb sucking, but did not intervene on it.

By the late 1950s, behavior theory became the second major clinical stream in the origins of behavior therapy as its research was variously consistent with what would be the seven dimensions of applied behavior analysis (see Baer et al., 1968). The research was *behavioral*: behavior was defined precisely and reliably; *analytic*: experimental control was demonstrated within subjects; *technological*: methods were sufficiently described for replication; and *conceptually systematic:* interventions were based in behavioral principles and processes. When the research was also *applied* (i.e., socially important) and *effective* (i.e., socially significant), applied behavior analysis was founded. Identifying the founding publication, though, depends on its consistency with the dimensions and which ones, which varied. As a result, several publications were plausibly founding (e.g., Ayllon & Michael, 1959; Williams, 1959; see Morris et al., 2013). As for the founding research programs, they were likely Teodoro Ayllon's (1929-present) work with psychiatric patients at Saskatchewan Hospital in Weyburn, Saskatchewan, Canada (1958–1961) and Montrose M. Wolf's (1935–2004) work with children with and without disabilities at the University of Washington and the Rainier State School in Washington (1962–1964; see Altus et al., 2021).

As in South Africa and England, behavior therapy's provenance in America was also contingent. Behavior theorists were experimental psychologists who could create therapeutic environments, not psychiatrists or clinical psychologists trained in systematic desensitization. Their provenance was also historically contingent in its methods (e.g., discrete trial training) and clients (e.g., children with autism), yet it, too, became an identity, although not a necessary one.

Conclusion The foregoing historiography of behavior therapy's recent origins omitted other relevant behaviorisms (e.g., social or paradigmatic behaviorism; see Staats, 1975) and elided the diversity and complexity of behavior therapy's founding (see O'Donohue & Krasner, 1995a). Nonetheless, it described behavior therapy's major clinical streams at the time. One was based in Russian neuroscience and American mediational behaviorism, whose sciences were combined as learning theory. Its application was often called *behavior therapy* (and sometimes *behavior modification*). The other major clinical stream was based in Skinner's behavior theory, which included learning. Its application was often called *behavior modification* (and sometimes *behavior therapy*), but later, *applied behavior analysis*. In the 1960s, the two streams together were often called *behavior therapy*. This was also when behavior therapy was founded institutionally.

Institutional Founding (1960–1970)

The institutional founding of behavior therapy included professional organizations, among them, the American Psychological Association's Division 25 for the Experimental Analysis of Behavior (1964), the Association for Advancement of Behavior Therapy (1966), the Behavior Therapy and Research Society (1970), and the Midwest Association for Behavior Analysis (1974), now the Association for Behavior Analysis International (ABAI; ca. 2003).[6] It included journals for publishing peer-refereed research, among them, *Behaviour Research and Therapy* (1963), the *Journal of Applied Behavior Analysis* (1968), the *Journal of Behavior Therapy and Experimental Psychiatry* (1970), and *Behavior Therapy* (1970). And, it included seminal works: texts, chapters, articles, reports, and presentations (see Krasner & Ullmann, 1965; Ullman & Krasner, 1965; Ulrich et al., 1966). By the late 1960s, behavior therapy was not only a professional practice. It was also a cultural practice (Rutherford, 2009).

Yesterday and Today

The chapter's preceding section described the assumptions, methods, and goals of behavior therapy manifest in its systems, sciences, and practices, and organized by its long past, short history, recent origins, and institutional founding. This was

[6] On November 21, 2021, I emailed ABA International (mail@abainternational.org) asking about the year ABA became ABAI 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).

behavior therapy yesterday – and Behavior Therapy yesterday. Afterward, its foundations developed and evolved internally in its systems, sciences, and practices and externally in relation to the next two waves. This is behavior therapy today – but not Behavior Therapy today. This section addresses the yesterday and today of behavior therapy by considering its differences with the earlier clinical traditions (e.g., revolution or evolution); within its own systems, sciences, and practices (e.g., explanations); and across the other waves – cognitive-behavior therapy and clinical behavior analysis.

Yesterday

Founded in the 1950s, behavior therapy was not distinguished as a wave until it was differentiated from cognitive-behavior therapy in the 1970s or, again when it was differentiated from clinical behavior analysis in the 1990s (or when the differentiations were constructed). At its founding, it was distinguished only from the clinical traditions in psychoanalysis and humanism, but it was not a wave in those traditions. It was, though, a tsunami in psychotherapy. Whether it was revolutionary or a new paradigm depends on context and definition.

Context Although the three major streams in behavior therapy's short history – Russian neuroscience, mediational behaviorism, and behavior theory – varied in their systems, sciences, and practices, they bore family resemblances (O'Donohue et al., 2001). As noted earlier, they opposed the clinical traditions for their "poor link to scientifically established principles, vague specification of interventions, and weak scientific evidence" (Hayes, 2004, p. 640). And, they developed therapies "built upon a bedrock of scientifically well-established basic principles, and that applied technologies [that were] well-specified and rigorously tested" (Hayes, 2004, p. 640). In this context, behavior therapy was revolutionary in psychotherapy. In psychology, it was not. It was part of psychology's evolution as a science (Leahey, 1992).

Definition The resemblances notwithstanding, the major streams within behavior therapy differed (Kazdin, 1978). For instance, Russian neuroscience was physiologically reductionistic, mediational behaviorism tended toward it, but operant behaviorism opposed it. Also, Russian neuroscience and operant behaviorism were naturalistic and monistic, while mediational behaviorism tended toward mentalism and dualism. These differences worked against behavior therapy being a revolution. First, the conflicting foundations made it, in part, conceptually confused. It was not coherent, which is required of worldviews (Pepper, 1942). Second, the conflicting foundations prevented it from being paradigmatic. It was not a new "normal" science that replaced old "normal" traditions, which is required of revolutions in science (Kuhn, 1962).

The foregoing criteria for and against paradigms and revolutions are, of course, debatable. Some may be too broad, some too narrow, and some too idiosyncratic. Further historiography is required. Nonetheless, behavior therapy was a tsunami in psychotherapy and an undercurrent that became a sea change in clinical psychology – Behavior Therapy.

Today

As behavior therapy was distinguishing itself from the clinical traditions, it was the beginning of the sea change. Although it was the first wave of Behavior Therapy, it is not behavior therapy today. After its founding, it developed and evolved, as its major systematic, scientific, and clinical streams developed and evolved, but not always seamlessly.

Russian Neuroscience Russian neuroscience has remained a major scientific and clinical stream in behavior therapy (and Behavior Therapy). As a system, it is still reductionistic in the Pavlovian tradition, but now also incorporates mediational and cognitivist constructs. Independent of these systems, its science continues to advance research on unconditional and conditional stimuli and responses (Kehoe & Macrae, 1998; Lattal, 2013), even as its account of conditioning has evolved. It is increasingly based in molar S-S contingencies rather than molecular S-S contiguities (Rescorla, 1988). In its translational and applied research, Russian neuroscience continues to address the basic science's role in understanding emotional behavior and developing interventions for its disorders (e.g., avoidance, fear, obsessive-compulsivity), as well as programs for preventing them (see O'Donohue, 1998b, pp. 36–145; Plaud & Eifert, 1998). However, clinical training in its basic behavioral principles and processes has sometimes been displaced by training in the interventions as but a technology. The interventions are thus less easily understood in terms of the basic principles and processes on which they were founded and, thus, less easily amended or adapted when they are wanting (O'Donohue, 1998a). In the process, the inclusion of its science and practice in behavior therapy (and Behavior Therapy) has become somewhat routinized, structural, and standardized than remaining individualized, functional, and adaptive. Independent of behavior therapy, of course, Russian neuroscience has burgeoned as a science unto itself, especially in behavioral neuroscience. There, it describes how the nervous system participates in learning and behavior (e.g., in conditioning and extinction; i.e., in memory; see Kandel et al., 2012) and, presumably, how it participates in behavior therapy, but the latter warrants further integrative programs of research (see Corwin & O'Donohue, 1998; Jokić-Begić, 2010).

Mediational Behaviorism Mediational behaviorism and its cognitive and emotional constructs remained a major clinical stream in behavior therapy in the 1960s, but receded as they merged with cognitive-behavior therapy in the 1970s and

became one of its two major clinical streams. Here, the mediational constructs became ascendant as the *cognitive* in cognitive-behavior therapy, as might be expected in a culture that prizes mind and free will. The emotional constructs were also incorporated in this clinical stream, but not differentiated as "emotion-behavior therapy."

Russian neuroscience and operant behaviorism were retained as the *behavior* in cognitive-behavior therapy – its second major clinical stream. In comparison to the cognitive stream, though, the behavioral stream has been the lesser stream, even as Russian neuroscience and operant behaviorism continued to develop and evolve. First, both have been recast, in part, in cognitive and teleological terms (see Mahoney, 1974), for instance, "the client perceives…," as opposed to the client's behavior is under discriminative control or "the client's purpose is…," as opposed to behavioral control by the client's history of reinforcement. Given this cognitivism, the basic behavioral principles and processes seem inapplicable to understanding behavioral disorders and developing interventions for them. Second, as in Russian neuroscience, clinical training in the basic behavioral principles and processes has sometimes been displaced by training in the interventions as but a technology. Thus, as noted above, the interventions are less easily understood in terms of the basic principles and processes on which they were founded and less easily amended or adapted when they are wanting (O'Donohue, 1998a). As a result, the inclusion of *behavior* in cognitive-behavior therapy has also become more routinized, structural, and standardized than individualized, functional, and adaptive.

As manifest in Russian neuroscience and behavior analysis, however, the naturalization of psychology remained a source of tension in cognitive-behavior therapy. Thus, when a component analysis of cognitive-behavior therapy for depression revealed that the cognitive component added little to its effectiveness, some behavior therapists turned to the behavioral component alone (see Jacobson et al., 2001). Where this involved assessments of relative rates of reinforcement and punishment, the interventions were referred to as *behavioral activation* – the activation of nondepressed behavior. Although this was practiced earlier in behavior therapy (Ferster, 1973; Goldiamond, 1974), it has become subsumed under clinical behavior analysis (see Layng et al., 2022).

Behavior Analysis Behavior theory grew markedly in the 1960s as a major systematic, scientific, and clinical stream in behavior therapy, and even more so as a field unto itself (Rutherford, 2009). However, it has not always been well-integrated with behavior therapy (and Behavior Therapy). First, after behavior theory became *behavior analysis* in the 1970s, a plethora of behavior-analytic organizations and journals were founded (e.g., ABAI's special interest groups; *Behavior Modification*, est. 1977; Cambridge Center for Behavioral Studies, est. 1981; *Behavior Analysis: Research and Practice*, est. 1999). Many of them were seemingly independent of behavior therapy. The term was not used in their titles or, seemingly, was it with in their purview, and ABAI had no special interest groups for behavior therapy. Second, the emergence of cognitive-behavior therapy in the 1970s made Behavior Therapy appear inhospitable to behavior analysis. Although behavior analysis was a major

systematic, scientific, and clinical stream in behavior therapy and, in part, in cognitive-behavior therapy, its development and evolution were sometimes isolated from them and vice-versa. Third, as in Russian neuroscience and cognitive-behavior therapy, clinical training in the basic behavioral principles and processes was sometimes displaced by training in the interventions as technology. Thus, again, the interventions have been less easily understood in terms of the principles and processes on which they were founded and less easily amended or adapted when the interventions are wanting. As a result, again, the inclusion of behavior analysis in behavior therapy (and Behavior Therapy) has become more routinized, structural, and standardized than individualized, functional, and adaptive (O'Donohue, 1998b). This can be corrected, though, by integrating the advances in its system, science, and practice over the past 60 years, for example, as follows. For the literature, see *Behavior Analysis in Practice*, *The Behavior Analyst* (now *Perspectives in Behavior Science*), the *Journal for the Experimental Analysis of Behavior*, and the *Journal of Applied Behavior Analysis*.

As a system, behavior analysis continued (and continues) to develop and evolve, both internally and externally (Morris, 1992). This has included integrating selection-by-consequences in behavior (e.g., reinforcement) with natural selection in biology and cultural selection in the life sciences (e.g., evolutionary biology, cultural anthropology); advancing the concepts and values of humanism, freedom, and dignity in behavior analysis (e.g., without incorporating them as explanatory constructs); describing its relations with other philosophical systems (e.g., Dewey's pragmatism in contextualism, Ryle's conceptual analysis, Wittgenstein's ordinary-language philosophy) and philosophies of science (e.g., Giere's scientific perspectivism, Laudan's analysis of scientific progress); examining the complementarities between behavior analysis and neuroscience (e.g., neural networks) and developmental systems theory (e.g., nature is the product of the process of nurture; see also neural Darwinism, probabilistic epigenesis); clarifying the affinities between behavior analysis and psychological theories of direct action (e.g., nonmediational ecological approaches to cognition, memory, perception); pursuing cultural analyses (e.g., macro- and meta-contingencies); and addressing myriad topics in diversity, equity, and inclusion (e.g., advocacy, colonialism, cultural humility, feminism, multiculturalism, racism, sexism).

As a science and practice, behavior analysis also continued (and continues) to develop and evolve, especially outside the three-term contingency (see O'Donohue, 1998b). Among these areas in basic and translational research are adjunctive behavior (a third type of behavior; e.g., schedule-induced aggression), automatic reinforcement and punishment (as oppose to socially mediated reinforcement and punishment), behavioral economics (e.g., non-rational, but lawful decision-making; e.g., delay discounting), the response-deprivation hypothesis (i.e., a motivating operation superseding the Premack Principle), the matching law (e.g., multiple schedules, concurrent operants), and motivating operations (i.e., a fourth term for variables controlling the effectiveness of reinforcers and punishers).

Because of their relation to cognitive-behavior therapy and clinical behavior analysis, two other areas of basic and translational research warrant special mention (see Guinther & Dougher, 2013). One is rule-governed behavior (see Hayes, 1989). Prior to the 1960s, behavior-analytic theory and research in nonhuman and human behavior primarily addressed contingency-shaped and maintained behavior. By mid-decade, though, Skinner (1950) was distinguishing between contingency-shaped and rule-governed behavior. At the same time, research with verbally-competent children and adults was finding that the rates and patterns of behavior on schedules of reinforcement differed from those with nonhumans and nonverbal humans. Behavior was more variable across individuals and more susceptible to experimenter instructions across and within them, that is, to rules regarding the contingencies. Rule-governed behavior, though, was operant behavior, subject to reinforcement and stimulus control, but at the same time rules were also function-altering contingency-specifying stimuli – something new in behavior analysis (Schlinger & Blakely, 1987). This was a forerunner of the transformation of stimulus functions in relational frame theory (Hayes et al., 2001).

The other area of research was stimulus equivalence. Beginning in the 1960s, matching-to-sample research demonstrated that arbitrary stimuli could enter the formal and functional relations of transitivity, symmetry, and equivalence with other arbitrary stimuli without being taught directly and that the conditional discriminative stimuli controlling these relations were another fourth term in the three-term contingency (see Sidman, 1994). These were applied in teaching language and reading to children and adults with intellectual disabilities. Relational frame theory then expanded the research preparation to include other physical (e.g., different, more-less) and functional relations (e.g., reinforcing, fear) and their transformation without direct instruction (Hayes et al., 2001). These account for more emotion and cognition and have been the bases for interventions with children with developmental disabilities (Rehfeldt & Barnes-Holmes, 2009) and in Acceptance and Commitment Therapy in adult psychotherapy (see Zettle et al., 2016). Given these advances, Behavior Therapy is continuous in its upward and downward continuity between its first and third waves, that ism between behavior therapy and Clinical Behavior Analysis.

Both advances are also, in part, contingent. Interventions for children with autism and other developmental disabilities have been dependent on the confluence of behavior therapists who can provide the interventions and insurance coverage (and to a lesser extent on APA certified clinical child psychologists who cannot provide the interventions). In turn, interventions for adults with psychiatric disorders have been dependent on the confluence of APA certified adult clinical behavior analysts who can provide the interventions and insurance coverage (and to a lesser extent on behavior therapists who are not APA certified to provide the interventions). The waves of behavior therapy are not defined by their clients, the behavior therapists who serve them, and insurance coverage. These are orthogonal to systems, sciences, and practices that define behavior therapy, even if identified with them.

Conclusion

This chapter has addressed the foundations of the first wave of Behavior Therapy – behavior therapy – by describing the assumptions, methods, and goals manifest in its systems, sciences, and practices. It was organized, first, by a representative view of behavior therapy. This was a contemporary view, along with some clarifications. Second, it was organized historically by behavior therapy's long past (ca. 500 B.C.E.–1900), short history (ca. 1900–1950), recent origins (ca. 1950–1960), and institutional founding (ca. 1960–1970). This included philosophy, science, psychology, behaviorism, applications, and success. Third, its success was organized by the development and evolution of behavior therapy in relation to the clinical traditions in psychoanalysis and humanism yesterday, where it was revolutionary, and in relation to the two other waves of behavior therapy today, where its influence continues.

However, behavior therapy (and Behavior Therapy) have not achieved their full potential due to some mutual isolation among its systems, sciences, and practices, especially in clinical training. Behavior therapists (and Behavior Therapists) should not be blamed for this. They and their waves were – like organisms – always right. That is, their behavior is lawful, given their natural science and natural history, even if not always correct. Various factors have worked against their success, some external, some internal. The former include cultural practices (e.g., mind, agency), openings and closings (e.g., social influences and needs), and contingency. The latter include mutual isolation across the waves (e.g., in paradigms), within its waves (e.g., training programs), and in its practices (e.g., first- and second-order change).

Thus, behavior therapy may falter, but if its system, science, and practice are possible, it will not die. The emergence of behavior activation from cognitive-behavior therapy suggests that effectiveness and efficiency remain powerful consequences for behavior therapy as a cultural practice. Whether behavior therapy should be called *behavior therapy*, though, may be a vanity. More important is its success in improving the human condition. This will be behavior therapy (and may be Behavior Therapy) tomorrow — a tsunami.

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