Perspectives on Behavior Science (2018) 41:517–540
https://doi.org/10.1007/s40614-018-00182-y

COMMENTARY

Implications of Behavioral Narratology for Psychotherapy, Help-Seeking Behavior, and Substance Use

Susan Snycerski[1] · Sean Laraway[1] · Jennifer Gregg[1] · Matthew Capriotti[1,2] · Glenn M. Callaghan[1]

Published online: 14 November 2018

Keywords Narrative · Relational frame theory · Motivating operations · Acceptance and commitment therapy · Psychotherapy · Substance use · Substance use disorders · Verbal behavior · Help-seeking · Minority health disparities · Sexual minority health

Hineline (in this issue) thoughtfully explored the amenability of narrative to a behavioral analysis. As Hineline noted, narrative plays an important role in many areas of life, including entertainment, religion, culture, politics, and science. Indeed, narrative seems to underlie our very sense of who we are as humans—our "self," "self-concept," "life story," and similar verbal constructs (Barnes-Holmes, Hayes, & Dymond, 2001a; Bruner, 1997; Fivush, Booker, & Graci, 2017; Habermas & Bluck, 2000; McLean, Pasupathi, & Pals, 2007; Polkinghorne, 1991; Reese, Yan, Jack, & Hayne, 2010). In addition, narratives can underpin behavioral and educational interventions. For example, writing personal narratives may provide mental and physical health benefits (Pennebaker & Seagal, 1999). Presenting narratives about accidents may improve the effectiveness of safety education programs (Rae, 2016). Incorporating patient narratives into medical education programs may improve medical service delivery to patients (Bleakley, 2005). Of course, research is needed to examine the effectiveness of narrative interventions across a variety of domains (e.g., Bekker et al., 2013).

A systematic behavioral analysis of narrative could assist in such efforts and improve our understanding of this important human behavior by informing relevant applications. Following Grant (2007), we suggest referring to this effort as *behavioral narratology* (much as one refers to the behavior-analytic study of drug effects as *behavioral pharmacology*). And we agree with Hineline that the required analysis must

✉ Sean Laraway
sean.laraway@sjsu.edu

[1] Department of Psychology, San José State University, San José, CA 95192-0120, USA

[2] Department of Medicine, Division of Nephrology, University of California, San Francisco, CA, USA

take into account foundational theoretical frameworks such as the Motivating Operations Concept (MOC; Laraway, Snycerski, Michael, & Poling, 2003; Laraway, Snycerski, & Poling, 2004; Laraway, Snycerski, Olson, Becker, & Poling, 2014; Michael, 1982, 1988, 1993, 2000, 2007) and Relational Frame Theory (RFT; Hayes, Barnes-Holmes, & Roche, 2001c; Dymond & Roche, 2013). The purpose of the present article is to examine, within three specific domains, some implications of doing so.

Below we provide some general background about MOs and RFT. In the remaining sections we discuss the importance of narrative to three major domains of application, noting how MOs and RFT might help to promote understanding in these domains. The resulting major sections focus on the importance of narrative in psychotherapy and in help-seeking and substance use.

Motivating Operations

Hineline's behavioral analysis of narrative included a description of motivating operations (MOs) or, in his terms, the "establishing/abolishing stimuli/conditions," involved. In brief, MOs are variables that influence the effectiveness of events as operant consequences (i.e., the *value-altering effect*) and the current strength of behaviors controlled by those consequences (i.e., the *behavior-altering effect*). MOs also affect the evocative capacity of related discriminative stimuli. MOs can increase (*establish*) or decrease (*abolish*) the capacity for events to function as reinforcers or punishers. The former are termed *establishing operations* (EOs) and the latter are termed *abolishing operations* (AOs). An MO can either increase (*evoke*) or decrease (*abate*) the current strength of behaviors controlled by the consequences affected by that MO.

Verbal stimuli can function as MOs, as seen in Hineline's spelling "onomatopoeia" example, in which he describes the motivational function of offering his students $5 to the first person who can spell the word correctly. This verbal rule describing the contingency ("spell onomatopoeia correctly, get $5") functions as an establishing operation/stimulus that makes several items that could provide the correct spelling (e.g., cell phones, laptops) more effective as reinforcers and evokes behavior that produces them. The behavior affected by an MO can be also verbal. Consider Skinner's (1957/2014, Ch. 3) definition of the *mand*, which explicitly involves evocative control of that verbal operant by a relevant motivational variable: "A 'mand,' then, may be defined as a verbal operant in which the response is reinforced by a characteristic consequence and is therefore under the functional control of relevant conditions of deprivation or aversive stimulation" (pp. 35–36). The value-altering effect of a relevant EO is seen in the strengthening of a future mand by the delivery of its consequences, as demonstrated in studies that report successful acquisition of mands under appropriate motivating conditions (e.g., Shillingsburg, Bowen, Valentino, & Pierce, 2014). To summarize, the behavior-altering effect is seen in the emission of a mand in the presence of an EO *prior* to the delivery of the reinforcer for that mand. Put simply, the value-altering effect makes teaching of mands possible by making the consequences of those mands more effective as reinforcers, thereby strengthening future mands, and the behavior-altering effect makes previously taught mands more likely when relevant EOs (and discriminative stimuli) are present. Mand-training procedures

using contrived and natural MOs have been demonstrated to be highly effective in teaching mands to individuals with impoverished mand repertoires (Sundberg, 2013).

Relational Frame Theory

Hineline echoed previous writers (e.g., Fryling, 2013; Greer & Speckman, 2009; Hayes & Hayes, 1992; Hayes & Barnes-Holmes, 2004; Hayes, Blackledge, & Barnes-Holmes, 2001a; Stewart & Roche, 2013) in noting that a strictly Skinnerian (1957/2014) analysis of verbal behavior, although useful, remains incomplete for understanding complex verbal phenomena like narrative. Hineline described how his account of narrative is consistent with RFT (Hayes et al., 2001a), which contrasts the learning of human language and cognition obtained through direct experience (*contingency-shaped responding*) with learning gained through derived relational responding (*emergent responding*). A full discussion of RFT is beyond the scope of this article, and readers seeking more explanation should consult several excellent books and articles (e.g., Dymond & Roche, 2013; Gross & Fox, 2009; Hayes et al., 2001c; Hayes & Barnes-Holmes, 2004; Hayes, Barnes-Holmes, & Roche, 2003; Hayes & Hayes, 1992; Hayes & Wilson, 1993; Roche, Barnes-Holmes, Barnes-Holmes, Stewart, & O'Hora, 2002).

According to RFT, in the development of language, initial verbal responses are generated through direct contingencies, but typically developing children quickly learn the ability to *derive* relations between objects and their words as a result of a history of training with multiple exemplars across many situations (Barnes-Holmes & Barnes-Holmes, 2000; Greer & Speckman, 2009; Hayes et al., 2001b; Hayes & Wilson, 1993; Roche et al., 2002). In other words, they become able to respond to one stimulus in terms of another stimulus, even without explicit training. This type of responding has been termed *arbitrary applicable relational responding* (AARR; e.g., Stewart & Roche, 2013). As an example of AARR, after having been directly taught to say "ball" in the presence of a round, red toy (see ball ➔ say "ball"), language-emergent children quickly develop the ability to identify and respond to the ball (e.g., point to it, grab it) in the presence of the auditory stimulus "ball" (e.g., hear "where is the ball?" ➔ point to the ball; "go get the ball" ➔ grab the ball) even when these responses were never directly reinforced. Thus, *relating* becomes a generalized operant response class through which humans come to associate words with one another (and with physical objects and their properties) along nonformal dimensions and through different types of relationships such as *same as*, *different than*, *more than*, *opposite of*, *better than*, *worse than*, *before–after*, and so on (Dymond & Roche, 2013; Hayes et al., 2001a; Roche et al., 2002).

Relational frames refer to "patterns of arbitrary applicable relational responding" (Stewart & Roche, 2013, p. 61), and functionally related groups of relational frames are referred to as *relational networks*. An important aspect of RFT is the *transformation of function*, in which the behavioral functions of one stimulus change based on its participation in a relational frame (verbal relation) with another stimulus. Thus, the stimulus functions (e.g., reinforcing, discriminative, motivational, emotion-eliciting) of objects, concepts, and events are transferred and transformed through our relational ability and contextual cues (Hayes et al., 2001a). For example, if you hear a story about

a round, red "ball" exploding in somebody's hands, you might feel "fear" in the presence of my round, red toy even if it has no obvious flaws and is not overinflated. Upon hearing this story, the fear-producing function of hearing about another ball exploding transfers to the present ball, giving rise to "fear" responses (e.g., moving away from the ball, feeling uneasy, saying "be careful with that ball, they sometimes explode").

The Importance of Narrative in Psychotherapy

Verbal behavior, and by extension narrative, plays a central role in two distinct psychotherapy interventions, cognitive therapy (CT; Beck, 1979) and Acceptance and Commitment Therapy (ACT; Hayes, Strosahl, & Wilson, 1999). CT and ACT both heavily emphasize the role that language plays in creating and sustaining more effective behaviors and reducing distress. In both cases, language (and by extension, narrative) is viewed as central to the mechanism of the problem (i.e., the *principle-driven etiological hypothesis*) and to mechanisms of change, which are the corresponding principles that alleviate suffering. ACT was expressly designed with principles of behavior as touchstone. CT was not, but it is possible to conceptualize the role of language in both CT and ACT by referring to narrative components that have discriminative stimulus, MO, or function-altering effects (Blakely & Schlinger, 1987; Schlinger & Blakely, 1987). In order to illustrate the value of Hineline's focus on this type of verbal behavior, we briefly address how an understanding of language and narrative may apply to CT and ACT in the context of treating human suffering.

Cognitive Therapy (CT)

CT, and its conceptual cousin cognitive-behavioral therapy (CBT), share the view that dysfunctional core beliefs (or schemas) and associated negative automatic thoughts can be at the root of suffering. From this perspective, changing those beliefs and thoughts is central to the creating therapeutic change. For economy of expression, hereafter we will refer only to CT even though many of our observations apply equally to CBT. Although cognitive psychologists may understand dysfunctional core beliefs (or schemas) and negative automatic thoughts as resulting from mentalistic causes, they can be easily understood as private/covert verbal behavior that serve, for example, discriminative and motivating functions for the speaker as listener (Hayes & Wilson, 1993; Wilson & Hayes, 2000). Core schemas take the form of self-evaluative narratives that, from a CT perspective, cause a person to feel badly and behave ineffectively. Consider a clinical example in which a woman was sexually assaulted by a man. Following the assault, that woman may develop a core belief or schema that "all men are unsafe and dangerous." Although the emergence of this belief or narrative about men would make some sense given the trauma she experienced, it would be overgeneralizing to include *all* men. From a CT perspective, this narrative (or dysfunctional core schema) could cause the woman to feel anxious or scared around men, and she may engage in multiple escape and avoidance behaviors involving men as aversive stimuli.

Narratives, from a behavioral perspective, may be understood as verbal events that can have discriminative, motivational, and/or function-altering effects for a variety of

behaviors. Although rules are often thought of as socially mediated (provided by individuals other than the one whose behavior is governed), in the case of clinically related narratives the speaker (the generator of the narrative or rule) can also be the listener (the follower of the rule). When a narrative serves the function of explicit or even implicit rules (like "men are dangerous" or "stay away from men"), then that verbal behavior serving functionally as a discriminative stimulus or MO can give rise to other behavior that is then consequated. Although rules (narratives) and rule-governed behaviors are subject to the contingencies of reinforcement or punishment (Hayes et al., 2001a), in various ways they can become insulated from naturally occurring contingences (Hayes et al., 2001a), and thereby cause undermatching of behavior to available sources of reinforcement (Wulfert, Greenway, Farkas, Hayes, & Dougher, 1994). The latter deprives individuals of reinforcers, and the former makes this problem difficult to change.

The mechanism of change from a CT perspective is to alter dysfunctional narratives by replacing them with more accurate ones, that is, narratives that are more consistent with a person's experience of the everyday world. In our example of sexual assault, the cognitive therapist may work with the client to replace that schema/narrative with one like "there are situations that may be unsafe with men, and some men may be dangerous, but many, if not most, men are not an immediate threat to me." The key is that this narrative is realistic and testable in the world. In most CT, this narrative is addressed via interventions including exposure, behavioral activation, and skills training. These components will not be explained here except to say that they help to validate the correspondence between replacement narratives and experience. Thus, CT therapists attempt to establish an alternative narrative that may have discriminative, motivational, and/or function-altering effects that differentially give rise to more effective responding. In general, these alternative narratives occasion more flexible (less rigid) responding. New forms of responding occasioned by the replacement narrative would then be subject to various consequences, social and otherwise, that, if reinforcing, should strengthen both the replacement narrative and the behaviors it occasions. In this way, the new narrative should supplant the older, more problematic, narrative.

Our client who was sexually assaulted may try out the narrative "I can be safe in the presence of men and may be able to trust some of them." If this narrative has discriminative, motivational, and/or function-altering stimulus effects that prompt effective responses, such as engaging in social opportunities or decreasing vigilance and distress, then the new narrative may be affected by positive or negative reinforcement or a combination of both. For instance, the new narrative may prompt the woman to attend her friend's birthday party and there enjoy positive interactions with others, including the birthday woman's male friends. Both the new narrative and social engaging (e.g., interacting or talking with others) may therefore be positively reinforced. The new narrative also may be negatively reinforced if it evokes less fear and vigilance than the old one, and thus becomes an increasingly likely response to future social situations.

Overall, there is nothing about a replacement-narrative approach that contradicts the tenets of a clinical behavior analysis perspective to psychotherapy, and therefore no reason why CT cannot be an effective clinical tool. From a pragmatic perspective, the hypothesized mechanisms of change (cognitive schema versus narrative rule behavior)

may not be as important as the ultimate clinical utility of the therapeutic techniques and the resulting outcomes. A contemporary behavior therapist or clinical behavior analyst may not understand the mechanism of change in the same way as a cognitive therapist. However, for some clients, focusing on the importance of narrative via the discriminative, motivational, and/or function-altering effects of language can have powerful clinical utility.

Acceptance and Commitment Therapy (ACT)

Like CT, ACT is a clinical intervention that relies heavily on verbal behavior and recognizes a potentially powerful role for self-narratives in clinical problems. ACT's roots are behavior-analytic and functional-contextualist, and it differs from CT by seeking to change, not the existence of problematic thoughts and narratives, but instead how individuals *respond to* their thoughts and narratives. In order to address how this "responding to" covert verbal behavior is accomplished, it is important to first examine the role of language in human suffering. As we alluded to earlier, ACT understands this in terms of RFT. If we take the example of the woman above, following the sexual assault, the actual experience of the assault will become related to the words she uses to describe it to herself. All kinds of derived relating may take place in this instance, and the functions of the assault (e.g., terrorizing, violating, helpless) could transfer to the words and thoughts she has about it. These words then have the emotion-eliciting and behavior-evoking functions *terror*, *violation*, and *helplessness,* and they become related with "bad," "awful," and, ultimately, "me." For many reasons, including the aversive experiences associated with these words, the woman might then attempt to avoid thinking about the assault in order to not contact these stimuli. We can see this process in victims of sexual assault who are careful to avoid triggers that produce aversive emotional responses (Rolbiecki, Anderson, Teti, & Albright, 2016).

In this analysis, the acutely anxiety-provoking elements of these thoughts exert strong antecedent control over the response of avoiding. Avoidance of thoughts associated with the assault, with being vulnerable, or perhaps even with being "broken," is negatively reinforced. This avoidance of aversive private events, termed *experiential avoidance*, is the mechanism of the problem in ACT. It is important to note that it is not the content of the private events that is considered problematic, but rather the response of avoiding and attending to short-term aversive stimuli rather than focusing on long-term, positive reinforcers. Thus, the mechanism of change from an ACT account is to change the client's responding to the aversive private events to allow for more flexible responding in line with one's long-term values. This is largely accomplished through targeting *perspective taking* as a method of changing the stimulus functions of the words and thoughts.

Perspective taking has been discussed in many different ways, and recent behavior-analytic accounts have relied on the word "deictic" to describe the type of relating frame utilized when humans relate to their sense of self (McHugh, Barnes-Holmes, & Barnes-Holmes, 2004). Deictic framing involves relational framing in such distinctions as I–YOU, HERE–THERE, and NOW–THEN; these distinctions have no nonarbitrary elements—*I* is dependent on who says it, *here* is determined by the location in which it is spoken, and *now* is different every time it is uttered. Thus, these relations, unlike the direct experience with contingencies experienced by nonverbal animals, are trained as

we discriminate information about ourselves and our perspective. They are, in lay terms, purely subjective.

From an RFT account, this ability to respond verbally to our own behavior (including our own verbal behavior) and experiences requires that we are speaking from the perspective of I-HERE-NOW, even when we are speaking about events that have happened THERE or THEN. This I-HERE-NOW allows us to understand our own behavior from a constant perspective, without contacting the distinctiveness of the content. For instance, for the woman in the example above, the "I" that is here and now would relate to the fear, terror, helplessness, and thoughts about her assault also as HERE-NOW, even when they are by definition THERE-THEN. This might occasion a high level of experiential avoidance given the powerful aversiveness of this antecedent. The goal in ACT is to help shift the woman's perspective without needing to change the content of the thoughts. The intervention would be focused on helping her relate the "I" that is HERE-NOW with the content as being THERE-THEN. This is done through the use of metaphors such as distance; helping her "back up" from the content of thoughts, memories, and feelings in order to see that they are thoughts, memories, and feelings rather than events that are actually HERE-NOW (for discussions of metaphor in RFT, see Foody et al., 2014; Stewart, Barnes-Holmes, Hayes, & Lipkens, 2001, and Törneke, 2010, ch. 5).

The Importance of Narrative in Help Seeking

The preceding discussion focused on a behavioral analysis of how change happens in talk therapies, which can be alleviate suffering only after an individual experiencing distress seeks therapy (either independently or at the urging of a doctor, family member, friend, or other person). However, most individuals suffering psychiatric problems do not seek treatment for these issues (de Girolamo, Dagani, Purcell, Cocchi, & McGorry, 2012; Merikangas et al., 2011). We propose that these issues can be understood as deriving from personal and cultural narratives about the nature of suffering and behavioral deviance. In contemporary U.S. culture, constellations of experiences described as "depression," "anxiety," "schizophrenia," or "attention-deficit/hyperactivity disorder (ADHD)," for instance, are understood to result from biological causes and/or mental events. Research shows that individuals' appraisals of a problem's causes influence their views on the acceptability of different interventions. For instance, individuals endorsing psychologically related narratives about the origins of depression may be more likely to seek psychotherapy, whereas those viewing depression as a physical entity or stress-related illness may be more amenable to pharmacological treatments (for a review, see Hagmayer & Engelmann, 2014).

Extending the above, one can see how sets of interrelated rules (narratives) describing the nature, assessment, and treatment of psychological suffering might come to have significant applied import. For instance, a medical model of depression might be summarized by the following narrative: "*If* a person describes feeling sad and has problems with sleeping, appetite, focusing, and self-esteem, *then* they[1] have a condition called "depression," *which* is caused by brain dysfunction, and *therefore* is best treated

[1] In these types of examples, we will use the gender-neutral pronouns "they" and "them" to refer to individuals.

by medication." For a person experiencing sadness and the aforementioned problems, this narrative might occasion the seeking out of psychotropic medication to help alleviate suffering. Seeking a psychiatrist and taking medication would serve a sense-making function (Hineline, this issue) in the presence of this narrative.

In contrast, a cognitively oriented popular narrative might conceptualize the problem as follows: "*If* a person describes feeling sad and has problems with sleeping, appetite, focusing, and self-esteem, *then* they are experiencing something that can be called "depression," *which* is caused by maladaptive thinking, and *therefore* is best treated by changing thinking patterns (through psychotherapy)." An individual governed by this narrative would likely seek psychotherapy, and this narrative might establish thoughts about doing so as reinforcing in the presence of this narrative. Of course, behavior-analytic versions of the above narrative would differ, but contemporary behavior-analytic views of human behavior are extremely uncommon (or virtually nonexistent) among the lay public. Nonetheless, a radical-behavioristic narrative would still likely occasion the person in distress to seek talk therapy in a mental health setting (but perhaps seek a more behaviorally aligned therapy, such as ACT or CBT).

The Special Case of Cultural Minority Groups

Mental health services are utilized much less often by individuals from minority cultural backgrounds than those from dominant cultures (e.g., in the United States, non-white people compared to white people of European descent; Alegría et al., 2008; Jimenez, Cook, Bartels, & Alegría, 2013; Keyes et al., 2012; Marrast, Himmelstein, & Woolhandler, 2016). Let us consider the role that some culturally transmitted narratives may play in occasioning efforts to alleviate psychological suffering in these groups. One oft-discussed issue in this regard relates to cultures that conceive of some mental illnesses (e.g., schizophrenia) as related to supernatural phenomena, such as possession by nonphysical entities like spirits or demons (e.g., Caqueo-Urízar, Boyer, Baumstarck, & Gilman, 2015; Kate, Grover, Kulhara, & Nehra, 2012; Khan, Hassali, Tahir, & Khan, 2011; Srinivasan & Thara, 2001). This narrative could go: "*If* a person is hearing voices that others do not hear, *then* they are suffering from possession, *which* is caused by spirits and divine condemnation, and *therefore* is best addressed by exorcism and prayer." This narrative could occasion a search for remedies outside of the contemporary mental health system, and, in turn, rejection of current psychopharmacological and psychotherapeutic interventions (e.g., in favor of complementary or alternative medical treatments). Parallel cultural-dependent differences in narrative can also be seen in the context of other common problems, such as depression, anxiety, and ADHD (Carpenter-Song et al., 2010; Jenkins, 1988; Haack & Gerdes, 2011; Pincay & Guarnaccia, 2007).

To be clear, the above is not intended to type some cultures or individuals as having more "primitive" views of behavioral/psychiatric problems than others, but rather to elucidate the impact of culturally transmitted narratives on the handling of such problems. Majority culturally transmitted narratives also inform how certain kinds of suffering are approached and can have hugely deleterious impacts on minority individuals. For instance, consider traditional versus contemporary narratives surrounding homosexuality. Gallup polling found that until 2006 a majority of Americans saw homosexuality as a moral flaw, rather than a normal variant of human diversity (Saad,

2012). Likewise, homosexuality was defined as psychopathology per se in the gold-standard *Diagnostic and Statistical Manual of Mental Disorders* until 1973 (Rubinstein, 1995). In turn, interventions for sexual minority individuals (e.g., gay, lesbian, bisexual) in distress aimed to alleviate their suffering by "curing" them of their same-sex attraction. A formalized narrative statement of this *Zeitgeist* might be: "*If* a person is attracted to individuals of the same sex and experiences distress, *then* that distress is due to their homosexuality per se, *which* is a form of mental illness, and *therefore* their homosexuality must be cured or undone in order to reduce their suffering." Consistent with this, sexual minority individuals have been submitted to institutionalization, lobotomy, aversive conditioning, "gay cure" therapies, and other interventions that cause clear harm and also do not result in changes in sexual attraction or suffering (American Psychological Association (APA), 2009; Flentje, Heck, & Cochran, 2014).

More recently, cultural views have shifted. Over the past 20 years, the APA, the largest mental health professional body in the United States, has made a series of strong statements affirming homosexuality as a normal variant of human sexuality, including specific calls for "affirmative" therapies that support sexual minorities in dealing with societal discrimination and stigma (American Psychological Association (APA), 1998, 2009, 2011). Around the same time, the "minority stress model" (Meyer, 1995, 2003) has gained traction as a dominant psychological theory explaining observed mental health disparities that affect sexual minorities. A brief summary of this theory's narrative can be described as: "*If* a person experiences same-sex attraction, *then* they are experiencing a normal variant of human sexuality, *which* is not a mental illness, *but* puts them at greatly increased risk for experiencing stigma, rejection, discrimination, and ostracization, *which* leads to suffering, and *therefore* their suffering can be reduced by building skills to cope with these pressures and/or by individual or societal[2] changes which reduce such pressures." From this view, LGBT-affirmative approaches to therapy, which validate the struggles of being a sexual minority person and teach skills to cope with related stressors, have been developed, tested, and shown to be effective in enhancing the well-being of sexual minority individuals (APA, 1998, 2009, 2011; Diamond et al., 2012; Pachankis, Hatzenbuehler, Rendina, Safren, & Parsons, 2015).

The last several years have brought a decrease in U.S. anti-LGBT policies, whose initial adoption was associated with subsequent increases in the prevalence of psychological problems among U.S. sexual minority individuals (Hatzenbuehler, Keyes, & Hasin, 2009; Hatzenbuehler, McLaughlin, Keyes, & Hasin, 2010). That said, the current state of affairs is hardly utopian; sexual minority individuals still experience elevated rates of stigma, discrimination, and trauma related to their heterosexual counterparts (Dank, Lachman, Zweig, & Yahner, 2014; Katz-Wise & Hyde, 2012; Mays & Cochran, 2001; Rothman, Exner, & Baughman, 2011). In addition, societal adoption of "normal" narratives have lagged far behind for transgender individuals, compared to other sexual minority people (Flores, 2014). Despite these ongoing problems, the changes and advances seen in the approach of the medical and mental

[2] Individual changes might involve a person engaging with support groups and/or moving to a locale in which sexual minority individuals experience less oppression. Societal changes would involve large-scale changes in the ways in which institutions and individuals treat sexual minority individuals (e.g., changes in anti-gay laws, decreases in hate crimes and hate speech related to sexual minorities, increases in public campaigns in support of these minorities).

health communities toward sexual minority people are a clear example of the great power that cultural narrative can wield on views of human behavior and suffering, which may ultimately influence public policy and the behavior of the majority toward said minorities.

The Importance of Narrative in Substance Use

In our view, narratives play a major role in substance use, whether for medical or recreational purposes. In the former, one might tell oneself that "I have high blood pressure, so I need to take Drug A to treat that condition. *If* I don't take Drug A, *then* I may have complications from high blood pressure, *which* might kill me, and *therefore* I should take it." In this situation, the verbal rule "If I take my meds, this will reduce my risk of premature death from complications of high blood pressure" might serve as an EO that makes taking the medication and subsequent verbal responses (e.g., "I took my meds today") reinforcing consequences and evokes self-administration. Of course, the behavioral variables involved in medication compliance are varied and complex, but we think that a good understanding of an individual's rules with respect to compliance could have practical benefits. With recreational use, one might say "I had a rough day at work, I could use a drink" with the logic being "I am experiencing stress, so *if* I drink alcohol, *then* I'll feel better (less stressed), and *therefore* I'll have a few drinks." This statement might function as an EO making alcohol more effective as a reinforcer and evoking alcohol-seeking and drinking behavior. Of course, we assume multiple control of operant behavior (Sundberg, 2013), so we would not propose that these example verbal statements serve as the only controlling variables, but rather one of many that could increase the likelihood of self-administration.

Because self-administration of medications and engaging in other health-related behaviors (e.g., eating a proper diet, exercising, performing safe sexual practices) may not produce any immediate detectable changes in mood, physiology, or behavior, rules or narratives seem necessary for many people to perform such healthy behaviors. With recreational drug use, we have the opposite problem: self-administration produces fairly immediate (and often highly reinforcing) psychoactive changes in mood and behavior, but long-term use may produce harmful outcomes that may take years to occur (e.g., developing lung cancer from smoking tobacco). Indeed, because of delayed outcomes (whether beneficial or harmful) associated with many health-related behaviors, *helpful* rules/narratives are needed to bring these delayed consequences into the psychological present, so that we can behave more effectively to increase our likelihood of contacting them (Roche et al., 2002). This is particularly important in situations in which the consequences have not been experienced, such as death from high blood pressure in the above example (Barnes-Holmes, Hayes, & Gregg, 2001b; Whelan & Barnes-Holmes, 2004). RFT theorists have provided a clear formulation of how we construct verbal descriptions of events that have yet to occur and then behave effectively with respect to those descriptions (e.g., Hayes et al., 2001a). These verbal descriptions and their resulting behavior involve narratives about the consequences of unhealthy behaviors that lead to engaging in behaviors that lead to healthier outcomes (Roche et al., 2002).

An evidence-based approach to treating substance use that appears to involve narrative is motivational interviewing (MI). In MI, the psychotherapist "uses a collaborative, non-confrontational, and non-judgmental style to resolve a client's ambivalence to changing their behavior" (Osilla et al., 2015, p. 79). A proposed mechanism of action for MI is *change talk*, which refers to clients' arguments for changing their own behavior compared to arguments that oppose changing drug-use behavior (*sustain talk*; D'Amico et al., 2015). D'Amico et al. found that participants who engaged in change talk during a group MI condition reported they were less likely to use alcohol in the future and reported they reduced their consumption. In contrast, the group that engaged in sustain talk reported they were less motivated to reduce their substance use, were more likely to use cannabis, and expected to experience more rewarding effects of cannabis and alcohol.

Even though these authors did not describe the mechanisms of action of their intervention from a behavior-analytic perspective, their study shows the importance of narrative in substance use treatments. Also relevant to the effects of narrative on substance use treatment outcomes, Kelly, Saitz, and Wakeman (2016) argued that "The language used to describe health conditions reflects and influences our attitudes and approaches to addressing them, even to the extent of suggesting that a health condition is a moral, social, or criminal issue" (p. 116). They presented evidence that narratives regarding the cause and controllability of substance use (e.g., using terms like "drug abuse" and "drug abuser") "may evoke implicit punitive biases" that could adversely impact the medical care that substance users receive, as well as "diminish patients' own feelings of empowerment for change and contribute to suboptimal health care" (p. 120). These examples support the notion that narrative plays a role in the treatment of harmful outcomes related to substance use. Different narratives regarding substance use can lead to very different approaches to dealing with the problem, including public policies and the actions of service providers and government agencies.

Cultural Narratives about Substance Use

Apart from personal narratives regarding one's own drug use, narratives regarding substance use *in general* may influence an individual's behavior (verbal and otherwise) with respect to recreational drug use by *others*, and these narratives may inform public policy, as well as the actions of governmental and nongovernmental organizations. Indeed, different narratives regarding substance use exist in American culture (Laraway, Snycerski, Byrne, & Poling, 2000). One popular narrative, which we can term the *prohibitionist* (*zero-tolerance* or *moral*) model of substance use can be summarized in this way: "*If* a person chooses to use recreational drugs and experiences distress and/or health problems, *then* they are at fault for these problems, and *therefore* they deserve punishment for their drug use, *which* should stop them from using drugs and deter others from doing so." This model promotes complete abstinence (or "use reduction") from prohibited drugs as the primary goal (Marlatt, 1996; McMaster, 2004).

As with homosexuality, cultural views of recreational drug use have been changing in the United States, particularly with respect to cannabis ("marijuana"). In recent years, 40 states have lessened the penalties for drug possession and use (DeSilver, 2014). In 2013, 72% of Americans stated that cannabis prohibition is not worth the cost, with

60% endorsing the view that the federal government should not enforce federal cannabis prohibition in states that allow its use (Caumont, 2013). The narrative that cannabis is a so-called "gateway drug" that leads to the use of more dangerous drugs like the opiates (e.g., heroin) has been a major tenet of the prohibitionist model for years (Laraway et al., 2000). The percentage of the U.S. population who endorses this narrative has decreased substantially over the several decades. In 1977, 60% of respondents endorsed the gateway theory; in 2013 only 38% of respondents did so (Caumont, 2013). Thus, it appears that the prevailing narrative regarding recreational drug use, particularly with respect to cannabis, is moving away from one that emphasizes punishment (primarily incarceration) as the primary means to control its use. It remains to be seen how long this trend will last.

With the prohibitionist narrative of recreational substance use and policies based on this narrative losing favor (Coyne & Hall, 2017), other narratives are becoming more commonplace. One popular narrative could be termed the *medical/disease* model of substance use. This model can be summarized in this way: "*If* a person experiences distress and/or health problems from their drug use, *then* they have a disease called a "substance use disorder," *which* can be treated with behavioral and/or pharmacological interventions." Compared to the prohibitionist model, the medical model conceptualizes substance users who experience drug-related distress as "sick people in need of help" rather than "bad people in need of punishment." Another nonpunitive narrative is the *harm-reduction* model, which has five assumptions as described by McMaster (2004):

1. Substance use has and will be a part of our world; accepting this reality leads to a focus on reducing drug-related harm rather than reducing drug use.
2. Abstinence from substances is clearly effective at reducing substance-related harm, but it is only one of many possible objectives of services to substance users.
3. Substance use inherently causes harm; however, many of the most harmful consequences of substance use (HIV/AIDS, hepatitis C, overdoses, automobile accidents, and so forth) can be eliminated without complete abstinence.
4. Services to substance users must be relevant and user friendly if they are to be effective in helping people minimize their substance-related harm.
5. Substance use must be understood from a broad perspective and not solely as an individual act; accepting this idea moves interventions from coercion and criminal justice solutions to a public health or social work perspective. (p. 358)

We can summarize the narrative inherent in the harm-reduction model as: "*If* people experience harmful effects from their substance use, *and* continue to use in spite of these harmful effects, *then* we should focus on mitigating the harm associated with substance use rather than focus on complete abstinence, *because* the harm from substance use can be reduced even without abstinence." Both the medical and harm-reduction models view substance use as a public health problem that can be managed based on empirical data and evidence-based approaches. They therefore suggest nonpunitive methods to treat substance misuse and/or to mitigate its harmful outcomes, including 12-step programs, pharmacological treatments (e.g., methadone maintenance and buprenorphine for opioid dependence, disulfiram for alcohol dependence), CBT, needle-exchange programs, safe injection sites, and education and prevention programs.

Motivational Effects of Verbal Stimuli

An important consideration for our understanding of recreational substance use is the capacity of verbal stimuli, including rules and narratives, to influence drug effects and self-administration by serving as MOs (Laraway et al., 2003; Laraway et al., 2004; Laraway et al., 2014; Michael, 1982, 1988, 1993, 2000, 2007). There is convincing evidence that verbal stimuli such as narratives ("drug talk") and drug-related covert behaviors that likely involve verbal components (e.g., fantasies of using a drug) can produce self-reported craving, withdrawal symptoms such as sickness, and drug-seeking/taking behaviors in people with substance use disorders (Childress, McLellan, Ehrman, & O'Brien, 1988; O'Brien et al., 1990; Siegel, 2005). In describing the effects of a questionnaire they created to produce conditioned withdrawal, O'Brien, Childress, McLellan, Ehrman, and Ternes (1988) noted that the list of drug-related words on their questionnaire produced self-reported withdrawal symptoms and/or craving in over half of their participants. Although items on a list may not constitute a narrative, this shows the powerful effects that verbal stimuli can have on drug-related responses (e.g., self-reported craving). We imagine that drug narratives would produce even more powerful effects due to their coherence (and "meaning") and expanded use of relevant drug-related verbal stimuli (e.g., multiple descriptive words used in context vs. isolated words in a list). Of course, this hypothesis needs to be tested further.

Rules or instructions appear to be closer to narratives (stories) than a simple list of drug-related stimuli, as stories are "account[s] of incidents or events" and "statement[s] regarding the facts pertinent to a situation in question" (www.merriam-webster.com). As Hineline mentioned, Zettle and Hayes (1982) proposed two types of rule-following: (a) pliance, which involves following a rule due to socially mediated consequences; and (b) tracking, which involves following a rule because it leads to consequences arranged by the natural (vs. social) environment. As an example of pliance (the resulting operant by the listener would be termed a *ply*), consider a teenager who smokes a cigarette due to peer pressure (possibly functioning as an EO for escape from aversive peer pressure) and peer praise and removal of peer pressure as potential reinforcers; here, the reinforcers are primarily social. As an example of tracking (the resulting operant by the listener would be termed a *track*), consider a novice user of opioid tablets who is told that "shooting up [injecting] gives you a better high than taking pills"; here, the potential reinforcer is the increased feelings of opioid intoxication that comes with the bolus effect produced by the intravenous route compared to the oral route of administration. Of course, as with other operant behaviors, rule-governed behavior in the natural environment could show multiple sources of control; so, a given instance of rule-governed drug use could involve both pliance and tracking. For example, in response to a rule given by a peer, a user could take a drug and have that self-administration behavior reinforced by both the responses (verbal and otherwise) of people around (pliance) and the reinforcing psychoactive effects of the drug (tracking).

Prior research has shown that rules/instructions can have motivational functions with respect to drug use (Poling & LeSage, 1992). For example, Perkins et al. (2006) reported that instructions could modulate the reinforcing effectiveness of smoked nicotine. In women participants, accurate instructions regarding the dose of nicotine (no nicotine vs. normal amount of nicotine) increased self-administration and self-reported rewarding effects of smoked cigarettes compared to the absence of those

instructions. Thus, for these women, the instructions (which we could consider a form of narrative) functioned as an EO for the reinforcing effectiveness of nicotine and evoked increased drug use. In contrast, for men, the reinforcing and rewarding effects of nicotine were not affected by accurate instructions about dose. As a nondrug example, Valdivia, Luciano, and Molina (2006) reported that a story describing conditions that would make one hot and thirsty (e.g., walking in a desert under a hot sun, eating foods that produce dry mouth) increased self-reported thirst and water consumption in children. Thus, this narrative functioned as an EO for the reinforcing effectiveness of water and evoked drinking. These examples demonstrate the motivational effects of verbal stimuli on self-administration of drug and nondrug reinforcers. For RFT examples of the motivational effects of verbal stimuli, see Barnes-Holmes et al. (2001) and Roche et al. (2002).

In our view, RFT is a promising approach to understanding the effects of verbal motivational stimuli (which for convenience we will label *VMS*) in that it posits two types of such stimuli: the *formative* and *motivative augmentals*. Formative augmentals are verbal statements that change *formerly neutral stimuli* into effective operant consequences, whereas motivative augmentals are verbal statements that influence the reinforcing/punishing effectiveness of stimuli that have *previously functioned* as operant consequences (Barnes-Holmes et al., 2001a; Hayes & Wilson, 1993; Ju & Hayes, 2008). Consider these examples of augmenting with respect to drug use. A formative augmental ("this pot brownie has high THC content") might transform this edible form of cannabis into a reinforcer for someone who had only previously smoked cannabis but who could also describe that THC is the main psychoactive component of the drug. A motivative augmental such as "it's time for a cold one" from a coworker after a long day at work might enhance the reinforcing effectiveness of beer in an experienced drinker and evoke beer seeking/drinking. Based on their motivational functions, augmentals clearly fit the definition of MOs in that they alter the effectiveness of stimuli as operant consequences and change behavior that produces those consequences (Ju & Hayes, 2008; Roche et al., 2002; Valdivia et al., 2006).

Although some behavior analysts (e.g., Laraway et al., 2014; Lotfizadeh, Edwards, & Poling, 2014; Rosales & Rehfeldt, 2007) have suggested that integrating the MOs and RFT would likely benefit our understanding of complex human behavior, this has not yet been done systematically (but for examples of what such integrations might look like, see Barnes & Rehfeldt, 2013; Dougher & Hackbert, 2000; Ju & Hayes, 2008). These two behavior-analytic approaches appear compatible in that they focus on the motivational effects of environmental events. The MO provides functional definitions of operant motivational variables and potential *associative, contingency-shaped* learning histories required to produce those motivational variables; RFT provides functional definitions of VMS, as well as testable hypotheses regarding the mechanisms for changing the motivational functions of nonverbal and verbal stimuli via relational frames, transfer of function, and so on. The integration of the MOC and RFT would likely enhance the usefulness of the MOC for examining complex human behavior (Hayes, Bunting, Herbst, Bond, & Barnes-Holmes, 2006; Lotfizadeh et al., 2014; Maraccini, Houmanfar, & Szarko, 2016; Poling, Lotfizadeh, & Edwards, 2017).

RFT also appears promising for contributing to our understanding of substance use. As one possibility, RFT could help identify the processes by which verbal stimuli and cognitions come to function as EOs (sometimes called "cues" or "triggers") that elicit

craving and evoke drug-seeking behavior in individuals in the absence of a direct relationship between those stimuli and drug self-administration. A behavioral narratology that integrates RFT and MOC might also offer some insights as to the motivational processes involved when individuals who are drug-free relapse even after months or years of abstinence, in which physiological withdrawal is not possible (e.g., Siegel, 1988). As another example, RFT could identify how learning histories endow formerly neutral stimuli with the capacity to evoke drug-taking behavior in drug-naïve individuals (e.g., a teenager who tries beer for the first time). As we noted earlier, RFT describes how humans can construct verbal narratives about events that have yet to be experienced, and formative augmentals may help make such narratives effective in influencing behavior, for better or worse (Whelan & Barnes-Holmes, 2004). So, such augmentals are possibly involved in the initiation of drug using *before* the reinforcing effects of the drugs are experienced as well as the conversion of formerly aversive drug-related stimuli (e.g., cigarette smoke and initial resulting feelings of sickness) into reinforcing stimuli. RFT could also be used to describe how formerly neutral stimuli enter into relational classes with functional drug stimuli, including psychoactive drug effects, feelings of withdrawal/abstinence, and mood states that influence subsequent drug seeking/taking.

RFT might also help explain how less experienced users learn to describe the subjective/psychological effects of drugs (and withdrawal and other drug-related states) from more experienced users. It would be interesting and important to understand the behavioral processes by which naïve users become initiated into drug-using subcultures, many of which promulgate narratives about drug use, often using a particular nomenclature for drugs and their effects (see, for example, The Vaults of Erowid, 2015). Users of various drugs often provide narratives about their experiences under the influence of these drugs, with several famous published literary examples in existence (e.g., Baudelaire, 1860/1996 Burroughs, 1953/2003; Crowley, 1922/2010; De Quincey, 1886; Huxley, 1954/2004; Thompson, 1971/1998). For more contemporary accounts, search the Internet for "drug trip reports" (e.g., see The Vaults of Erowid, 2017). So, it is likely that naïve users are exposed to such narratives as they interact with more experienced users and/or read published narratives of drug effects. As DeGrandpre (2006) noted, ". . . most psychoactive drugs eventually acquire their own social histories, their own mythologies, which often turn into self-fulfilling prophecies" (p. 17). These histories, mythologies, and self-fulfilling prophecies likely involve narrative, and RFT could help elucidate the behavioral mechanisms involved.

The sometimes life-changing effects of psychedelic drugs, such as psilocybin ("magic mushrooms"), lysergic acid diethylamide (LSD, "acid"), and 3,4-methylenedioxymethamphetamine (MDMA, "ecstasy"), might benefit from an RFT analysis. Researchers have reported that the administration of these drugs can produce profound and relatively long-lasting changes in "personality traits, attitudes and beliefs," including increases in "relatedness to nature" and decreases in authoritarian political views (e.g., Lyons & Carhart-Harris, 2018), all of which involve verbal behavior (and likely narrative). In addition, researchers have demonstrated that these drugs can produce "mystical" and "religious" experiences and alter personal meaning, with increased self-reported well-being, optimism, quality of life, and life satisfaction, as well as reduced death anxiety and depressive symptoms. These effects appear to persist months after administration (Griffiths et al., 2016; Griffiths, Richards, Johnson,

McCann, & Jesse, 2008). RFT's conceptualization of transfer of function for stimuli in relational networks might help explain these dramatic and long-lasting changes in individuals who have taken psychedelic drugs (see Barnes-Holmes et al., 2001, for an RFT interpretation of verbal events related to "religion, spirituality, and transcendence").

In summary, RFT analyses of drug use and the verbal processes involved could yield a better understanding of the variables that influence drug-seeking and drug-taking, the acute and persistent effects of some drugs (e.g., the psychedelics) on language and cognition, and effective treatments for substance use disorders (Wilson & Hayes, 2000). Indeed, as we mentioned above, ACT, which is based on RFT, shows promise in treating substance use disorders (Hayes & Levin, 2012; Twohig, Shoenberger, & Hayes, 2007; Wilson, Hayes, & Byrd, 2000). In his meta-analysis of the relevant literature, Öst (2014) concluded that ACT was "possibly efficacious" for treating substance use disorders but needed further evaluation with stronger research designs and overall methodology. Lee, An, Levin, and Twohig (2015) reported that their "results provide a promising, albeit preliminary, case for ACT as a treatment for substance use disorders" but that "well-powered randomized trials with long term follow-up and process of change analysis are now needed" (p. 8). We look forward to increased research in this important area, including randomized controlled trials of ACT alone and in combination with other behavioral approaches to treating substance use disorders (e.g., voucher-based therapy, contingency management, the community reinforcement approach) and drug-replacement therapy.

As an everyday example of an RFT and MOC analysis with respect to substance use, imagine a novice cannabis user who is introduced to the drug by her friends. At first, she may not know what the cannabis plant looks like in its prepared form, but she can state from her drug-education classes that there is a drug called "marijuana" that is also called "pot" (i.e., she shows a bidirectional relationship between the words "marijuana" and "pot"). Her friends show her the cannabis plant material and tell her that these are "buds." Imagine that she says "so that's what marijuana looks like" to the sight of the cannabis. This statement produces approving laughter and other social reinforcers from her friends. While smoking a puff of cannabis, she smells and tastes the smoked drug, and soon she starts to feel its effects. She notes these effects to her friends, who tell her "that's the sticky icky; it gets you high." Further reinforcing social interactions then ensue. In this case, the word "marijuana" becomes related to the sight of the plant material, the smell and tastes of the smoked plant material, the subjective and physical effects of the drug, and slang names ("buds," "sticky icky"). All of these stimuli become members of the same relational class. Thus, each stimulus comes to "mean" the same thing, and she could exhibit AARR with respect to these stimuli. In the future, new relations could emerge without explicit training. For example, if someone showed her an edible form of cannabis and called it a "pot brownie," she could state that the brownie contained "buds" that would "get you high," even if she were not explicitly taught to respond that way to the edible. Stating that the edible contained "buds" that "get you high" might serve as an EO that increases the reinforcing effectiveness of the edible and evokes self-administration even though she has had no previous experience with edibles. Imagine that after eating an edible she experiences a stronger drug effect than she anticipated. She might then state that "pot brownies get you higher than smoking," and this would now enter into her personal drug narrative, which she may

share with others, influencing their drug-taking behavior. This new narrative may also influence her own future drug-taking (she may turn down or take up offers to ingest edible forms of cannabis based on her previous experience). Given the ubiquity of "drug-talk" (narratives) and rules about drugs and their effects, further study of the role of verbal stimuli in drug self-administration and substance use disorders is warranted. We feel that an integrated RFT and MOC analysis can contribute to these efforts.

Discussion and Future Directions

In this article, we used Hineline's ideas regarding the importance of a behavioral narratology as a springboard for discussing the role of narrative in contemporary psychotherapy, help-seeking, and substance use. We agreed with Hineline that behavioral narratology can benefit from considering MOs and RFT, and we feel that the MOs might be better understood by reference to RFT. We also proposed that behavioral narratology can help us better understand the etiology of human suffering and its treatment, particularly if incorporated into contextualist behavioral science approaches to such suffering (e.g., ACT). We discussed the role of narrative as a verbally generated contextual feature that affects help-seeking and a broader cultural understanding of suffering.

We conclude with two general observations. The first is that behavior analysts are a bit late to the game when it comes to studying narrative. Other fields have a rich history of analyzing this phenomenon (e.g., Bruner, 1997; Combs, 1996; Labov, 1997; Labov & Waletzky, 1967; Schiffrin, De Fina, & Nylund, 2010; Smith, 2000). In order to quickly build momentum with respect to an unfamiliar topic, behavior analysts may profit from examining analyses of narrative from these other fields. Scholars in those fields often have carefully described the problems to which narrative might be related, which can come in handy when the interest is in a phenomenon, like help-seeking, that has received little attention from behavior analysts. Moreover, it is difficult to assess how behavior analysts can contribute to a science of narrative without knowing what work has already been done and what theoretical/empirical gaps remain. Our discussion of cognitive therapy illustrates how something can be learned even from accounts that do not employ the language and theory of behavior analysis. Overall, behavior analysts should be open to the possibility that the field of narrative analysis, as Riessman (1993) suggested, "inherently interdisciplinary" (p. 1).

Our second concluding observation is that, no matter how potentially useful a science of behavioral narratology might be, one cannot emerge until its unit of analysis has been clarified. Currently there is no precise *functional* definition of what counts as a "narrative." Outside of behavior analysis, "narrative" has been defined as "a spoken or written text that involves temporal sequences of events and actions . . . [with] a 'valued endpoint' . . . and a set of events and characters that make the endpoint more or less probable, accessible or vivid" (Maitlis, 2012, p. 493). This definition intermingles structural (e.g., "temporal sequences of events and actions") and functional ("valued endpoint," i.e., a reinforcing conclusion) components, and probably demands refinement.

Hineline (this issue) and Grant (2005, 2007) contributed by suggesting that effective narratives use verbal EOs to keep the readers' (or viewers') attention (an evocative effect) until they reach a reinforcing outcome in the story. As Grant (2007) posited:

> In a story, there is a story-establishing operation that consists of introducing a relatively mild aversive stimulus, the disruptor event, which introduces uncertainty that the reader can escape from by continuing to listen or read and learn the outcome of the story, at which point the aversive stimulus is removed in some way. (p. 67)

Likewise, Hineline suggested that the verbal EOs in narrative "promise an eventual reinforcer," and this reinforcer could be "a bit of the mystery is solved or seen, a suspect is eliminated, or a matter of suspense is neutralized." Neither writer, however, has said how to create a narrative or how to definitively recognize one when we see one, as a scientific approach would require.

This suggests one more way in which RFT may be informative. Barnes-Holmes, Hayes, Dymond, and O'Hora (2002) proposed that stories (narratives) are "larger language units" that involve "complete" relational networks, for which "events in the network, and the network itself, serve as a context for relational activity" (p. 36). They then noted that "The simplest level of a complete relational network appears to correspond to what is commonly described as a sentence" (p. 36). Likewise, Barnes-Holmes et al. (2001a) stated that

> The concept of relational network provides a way to approach the organization of larger language units in everyday terms, including sentences, paragraphs, chapters, stories, trilogies, and so on . . . thus one could say that the lowest level of a complete relational network in RFT is a sentence. (p. 57)

Many sentences likely count as narratives (e.g., "I met with Jack today at the bar and we had a drink"). However, not all sentences, even complete ones (in both the grammatical and RFT sense) will qualify as a narrative or story (e.g., the mand "Please hand me that bottle"). So, it seems that according to an RFT perspective, a narrative is a complete relational network involving contextual cues and a listener's history with respect to those cues. Our field will have made progress in understanding narrative when it can specify what makes a relational network "complete" so precisely as to guide any informed observer in constructing an effective narrative.

To summarize, we found Hineline's analysis of narrative stimulating and provocative, but understandably incomplete and in need of elaboration, which we have sought to add by describing three everyday domains in which narrative matters. We hope that our modest contribution helps to highlight Hineline's central implication, namely that in order to explore new areas behavior analysts will need to learn about unfamiliar topics, extend their conceptual tools, and develop new empirical approaches. As suggested by one behavior analyst who was not afraid to tackle new things, it is important to, "regard no practice as immutable. Change and be ready to change again. Accept no eternal verity. Experiment" (Skinner, 1979, p. 346).

References

Alegría, M., Canino, G., Shrout, P. E., Woo, M., Duan, N., Vila, D., et al. (2008). Prevalence of mental illness in immigrant and non-immigrant US Latino groups. *American Journal of Psychiatry, 165*(3), 359–369.

American Psychological Association (APA). (1998). Resolution on appropriate therapeutic responses to sexual orientation. *American Psychologist, 43*, 934–935.

American Psychological Association (APA). (2009). Report of the American psychological association task force on appropriate therapeutic responses to sexual orientation. Retrieved March 2, 2018, from http://www.apa.org/pi/lgbt/resources/sexual-orientation.aspx

American Psychological Association (APA). (2011). APA policy statements on lesbian, gay, bisexual, and transgender concerns. Retrieved from http://www.apa.org/about/policy/booklet.pdf. Accessed 2 March 2018.

Barnes, C. S., & Rehfeldt, R. A. (2013). Advances in language interventions based on relational frame theory for individuals with developmental disorders. In S. Dymond & B. Roche (Eds.), *Advances in relational frame theory: research and application* (pp. 151–177). Oakland, CA: New Harbinger Publications.

Barnes-Holmes, D., & Barnes-Holmes, Y. (2000). Explaining complex behavior: Two perspectives on the concept of generalized operant classes. *The Psychological Record, 50*(2), 251–265.

Barnes-Holmes, D., Hayes, S. C., & Dymond, S. (2001a). Self and self-directed rules. In S. C. Hayes, D. Barnes-Holmes, & B. Roche (Eds.), *Relational frame theory: A post-Skinnerian account of human language and cognition* (pp. 119–139). New York, NY: Kluwer Academic/Plenum.

Barnes-Holmes, D., Hayes, S. C., Dymond, S., & O'Hora, D. (2002). Multiple stimulus relations and the transformation of stimulus functions. In S. C. Hayes, D. Barnes-Holmes, & B. Roche (Eds.), *Relational frame theory: A post-Skinnerian account of human language and cognition* (pp. 51–71). New York, NY: Kluwer Academic/Plenum.

Barnes-Holmes, D., Hayes, S. C., & Gregg, J. (2001b). Religion, spirituality, and transcendence. In S. C. Hayes, D. Barnes-Holmes, & B. Roche (Eds.), *Relational frame theory. A post-Skinnerian account of human language and cognition* (pp. 239–251). Kluwer Academic/Plenum: New York, NY.

Barnes-Holmes, D., O'Hora, D., Roche, B., Hayes, S. C., Bissett, R. T., & Lyddy, F. (2001). Understanding and verbal regulation. In S. C. Hayes, D. Barnes-Holmes, & B. Roche (Eds.), *Relational frame theory. A post-Skinnerian account of human language and cognition* (pp. 103–117). Kluwer Academic/Plenum: New York, NY.

Baudelaire, C. (1996). *Artificial paradises* (S. Diamond, Trans.). New York, NY: Citadel Press. (Original work published 1860)

Beck, A. T. (Ed.). (1979). *Cognitive therapy of depression*. New York, NY: Guilford Press.

Bekker, H. L., Winterbottom, A. E., Butow, P., Dillard, A. J., Feldman-Stewart, D., Fowler, F. J., Jibaja-Weiss, M. L., Shaffer, V. A., & Volk, R. J. (2013). Do personal stories make patient decision aids more effective? A critical review of theory and evidence. *BMC Medical Informatics and Decision Making, 13*(2), S9.

Blakely, E., & Schlinger, H. (1987). Rules: Function-altering contingency-specifying stimuli. *The Behavior Analyst, 10*(2), 183–187.

Bleakley, A. (2005). Stories as data, data as stories: making sense of narrative inquiry in clinical education. *Medical Education, 39*(5), 534–540.

Bruner, J. (1997). A narrative model of self-construction. *Annals of the New York Academy of Sciences, 818*(1), 145–161.

Burroughs, W. S. (2003). *Junky*. New York, NY: Grove Press. (Original work published 1953)

Caqueo-Urízar, A., Boyer, L., Baumstarck, K., & Gilman, S. E. (2015). The relationships between patients' and caregivers' beliefs about the causes of schizophrenia and clinical outcomes in Latin American countries. *Psychiatry Research, 229*(1), 440–446.

Carpenter-Song, E., Chu, E., Drake, R. E., Ritsema, M., Smith, B., & Alverson, H. (2010). Ethno-cultural variations in the experience and meaning of mental illness and treatment: Implications for access and utilization. *Transcultural Psychiatry, 47*, 224–251.

Caumont, A. (2013, August 13). *Americans skeptical of value of enforcing marijuana laws*. Retrieved from http://www.pewresearch.org/fact-tank/2013/08/13/americans-skeptical-of-value-of-enforcing-marijuana-laws/

Childress, A. R., McLellan, A. T., Ehrman, R., & O'Brien, C. P. (1988). Classically conditioned responses in opioid and cocaine dependence: A role in relapse. *NIDA Research Monograph, 84*, 25–43.

Combs, G. (1996). *Narrative therapy: The social construction of preferred realities*. New York, NY: Norton.

Coyne, C. J., & Hall, A. R. (2017, April 12). Four decades and counting: The continued failure of the War on Drugs (Cato Institute Policy Analysis No. 811). Retrieved from https://www.cato.org/publications/policy-analysis/four-decades-counting-continued-failure-war-drugs

Crowley, A. (2010). *Diary of a drug fiend*. San Francisco, CA: Red Wheel/Weiser. (Original work published 1922)

D'Amico, E. J., Houck, J. M., Hunter, S. B., Miles, J. N. V., Osilla, K. C., & Ewing, B. A. (2015). Group motivational interviewing for adolescents: Change talk and alcohol and marijuana outcomes. *Journal of Consulting and Clinical Psychology, 83(1)*, 68–80.

Dank, M. D., Lachman, P., Zweig, J. M., & Yahner, J. (2014). Dating violence experiences of lesbian, gay, bisexual, and transgender youth. *Journal of Youth and Adolescence, 43*, 846–857. https://doi.org/10.1007/s10964-013-9975-8.

de Girolamo, G., Dagani, J., Purcell, R., Cocchi, A., & McGorry, P. (2012). Age of onset of mental disorders and use of mental health services: Needs, opportunities and obstacles. *Epidemiology and Psychiatric Sciences, 21*, 47–57. https://doi.org/10.1017/S2045796011000746.

De Quincey, T. (1886). *Confessions of an English opium eater*. London, UK: George Routledge & Sons.

DeGrandpre, R. (2006). *The cult of pharmacology: How America became the world's most troubled drug culture*. Durham, NC: Duke University Press.

DeSilver, D. (2014, April 2). *Feds may be rethinking the drug war, but states have been leading the way.* Retrieved from http://www.pewresearch.org/fact-tank/2014/04/02/feds-may-be-rethinking-the-drug-war-but-states-have-been-leading-the-way/

Diamond, G. M., Diamond, G. S., Levy, S., Closs, C., Ladipo, T., & Siqueland, L. (2012). Attachment-based family therapy for suicidal lesbian, gay, and bisexual adolescents: A treatment development study and open trial with preliminary findings. *Psychotherapy, 49*, 62–71.

Dougher, M. J., & Hackbert, L. (2000). Establishing operations, cognition, and emotion. *The Behavior Analyst, 23*(1), 11–24.

Dymond, S., & Roche, B. (Eds.). (2013). *Advances in relational frame theory: Research & application*. Oakland, CA: Context Press/New Harbinger.

Fivush, R., Booker, J. A., & Graci, M. E. (2017). Ongoing narrative meaning-making within events and across the life span. *Imagination, Cognition and Personality, 37*(2), 127–152.

Flentje, A., Heck, N. C., & Cochran, B. N. (2014). Experiences of ex-ex-gay individuals in sexual reorientation therapy: Reasons for seeking treatment, perceived helpfulness and harmfulness of treatment, and post-treatment identification. *Journal of Homosexuality, 61*, 1242–1268.

Flores, A. R. (2014) National trends in public opinion on LGBT rights in the United States. Los Angeles, CA: Williams Institute. Retrieved from https://williamsinstitute.law.ucla.edu/wp-content/uploads/POP-natl-trends-nov-2014.pdf. Accessed 2 March 2018.

Foody, M., Barnes-Holmes, Y., Barnes-Holmes, D., Törneke, N., Luciano, C., Stewart, I., & McEnteggart, C. (2014). RFT for clinical use: The example of metaphor. *Journal of Contextual Behavioral Science, 3*(4), 305–313.

Fryling, M. J. (2013). Constructs and events in verbal behavior. *Analysis of Verbal Behavior, 29*(1), 157–165.

Grant, L. K. (2005). The secrets of Scheherazade: Toward a functional analysis of imaginative literature. *Analysis of Verbal Behavior, 21*(1), 181–190.

Grant, L. K. (2007). The veils of Clio: Dimensions of a behavioral narratology. *Analysis of Verbal Behavior, 23*(1), 57–69.

Greer, R. D., & Speckman, J. (2009). The integration of speaker and listener responses: A theory of verbal development. *The Psychological Record, 59*(3), 449–488.

Griffiths, R. R., Johnson, M. W., Carducci, M. A., Umbricht, A., Richards, W. A., Richards, B. D., Cosimano, M. P., & Klinedinst, M. A. (2016). Psilocybin produces substantial and sustained decreases in depression and anxiety in patients with life-threatening cancer: A randomized double-blind trial. *Journal of Psychopharmacology, 30*(12), 1181–1197.

Griffiths, R. R., Richards, W. A., Johnson, M. W., McCann, U. D., & Jesse, R. (2008). Mystical-type experiences occasioned by psilocybin mediate the attribution of personal meaning and spiritual significance 14 months later. *Journal of Psychopharmacology, 22*(6), 621–632.

Gross, A. C., & Fox, E. J. (2009). Relational frame theory: An overview of the controversy. *Analysis of Verbal Behavior, 25*(1), 87–98.

Haack, L. M., & Gerdes, A. C. (2011). Functional impairment in Latino children with ADHD: Implications for culturally appropriate conceptualization and measurement. *Clinical Child and Family Psychology Review, 14*, 318–328.

Habermas, T., & Bluck, S. (2000). Getting a life: the emergence of the life story in adolescence. *Psychological Bulletin, 126*(5), 748–769.

Hagmayer, Y., & Engelmann, N. (2014). Causal beliefs about depression in different cultural groups—what do cognitive psychological theories of causal learning and reasoning predict? *Frontiers in Psychology, 5*, 1–18.

Hatzenbuehler, M. L., Keyes, K. M., & Hasin, D. S. (2009). State-level policies and psychiatric morbidity in lesbian, gay, and bisexual populations. *American Journal of Public Health, 99*, 2275–2281.

Hatzenbuehler, M. L., McLaughlin, K. A., Keyes, K. M., & Hasin, D. S. (2010). The impact of institutional discrimination on psychiatric disorders in lesbian, gay, and bisexual populations: A prospective study. *American Journal of Public Health, 100*, 452–459.

Hayes, S. C., & Barnes-Holmes, D. (2004). Relational operants: Processes and implications: A response to Palmer's review of relational frame theory. *Journal of the Experimental Analysis of Behavior, 82*(2), 213–224.

Hayes, S. C., Barnes-Holmes, D., & Roche, B. (Eds.). (2001c). *Relational frame theory: A post-Skinnerian account of human language and cognition*. New York: Kluwer Academic/Plenum.

Hayes, S. C., Barnes-Holmes, D., & Roche, B. (2003). Behavior analysis, relational frame theory, and the challenge of human language and cognition: A reply to the commentaries on Relational frame theory: A post-Skinnerian account of human language and cognition. *Analysis of Verbal Behavior, 19*(1), 39–54.

Hayes, S. C., Blackledge, J. T., & Barnes-Holmes, D. (2001a). Language and cognition: constructing an alternative approach within the behavioral tradition. In S. C. Hayes, D. Barnes-Holmes, & B. Roche (Eds.), *Relational frame theory: A post-Skinnerian account of human language and cognition* (pp. 3–20). New York, NY: Kluwer Academic/Plenum.

Hayes, S. C., Bunting, K., Herbst, S., Bond, F. W., & Barnes-Holmes, D. (2006). Expanding the scope of organizational behavior management: Relational frame theory and the experimental analysis of complex human behavior. *Journal of Organizational Behavior Management, 26*(1–2), 1–23.

Hayes, S. C., Fox, E., Gifford, E. V., Wilson, K. G., Barnes-Holmes, D., & Healy, O. (2001b). Derived relational responding as learned behavior. In S. C. Hayes, D. Barnes-Holmes, & B. Roche (Eds.), *Relational frame theory: A post-Skinnerian account of human language and cognition* (pp. 21–49). New York, NY: Kluwer Academic/Plenum.

Hayes, S. C., Gifford, E. V., Townsend, R. C., & Barnes-Holmes, D. (2002). Thinking, problem-solving, and pragmatic verbal analysis. In S. C. Hayes, D. Barnes-Holmes, & B. Roche (Eds.), *Relational frame theory: A post-Skinnerian account of human language and cognition* (pp. 87–101). New York, NY: Kluwer Academic/Plenum.

Hayes, S. C., & Hayes, L. J. (1992). Verbal relations and the evolution of behavior analysis. *American Psychologist, 47*(11), 1383–1395.

Hayes, S. C., & Levin, M. (Eds.). (2012). *Mindfulness and acceptance for addictive behaviors: Applying contextual CBT to substance abuse and behavioral addictions*. Oakland, CA: New Harbinger.

Hayes, S. C., Strosahl, K. D., & Wilson, K. G. (1999). *Acceptance and commitment therapy: An experiential approach to behavior change*. New York, NY: Guilford Press.

Hayes, S. C., & Wilson, K. G. (1993). Some applied implications of a contemporary behavior-analytic account of verbal events. *The Behavior Analyst, 16*(2), 283–301.

Huxley, A. (2004). *The doors of perception and Heaven and Hell*. New York, NY: HarperCollins. (Original work published 1954)

Jenkins, J. H. (1988). Ethnopsychiatric interpretations of schizophrenic illness: The problem of nervios within Mexican-American families. *Culture, Medicine and Psychiatry, 12*, 301–329.

Jimenez, D. E., Cook, B., Bartels, S. J., & Alegría, M. (2013). Disparities in mental health service use of racial and ethnic minority elderly adults. *Journal of the American Geriatrics Society, 61*, 18–25.

Ju, W. C., & Hayes, S. C. (2008). Verbal establishing stimuli: Testing the motivative effect of stimuli in a derived relation with consequences. *The Psychological Record, 58*(3), 339–363.

Kate, N., Grover, S., Kulhara, P., & Nehra, R. (2012). Supernatural beliefs, aetiological models and help seeking behaviour in patients with schizophrenia. *Industrial Psychiatry Journal, 21*, 49.

Katz-Wise, S. L., & Hyde, J. S. (2012). Victimization experiences of lesbian, gay, and bisexual individuals: A meta-analysis. *Journal of Sex Research, 49*, 142–167.

Kelly, J. F., Saitz, R., & Wakeman, S. (2016). Language, substance use disorders, and policy: The need to reach consensus on an "Addiction-ary.". *Alcoholism Treatment Quarterly, 34*(*1*), 116–123.

Keyes, K. M., Martins, S. S., Hatzenbuehler, M. L., Blanco, C., Bates, L. M., & Hasin, D. S. (2012). Mental health service utilization for psychiatric disorders among Latinos living in the United States: The role of ethnic subgroup, ethnic identity, and language/social preferences. *Social Psychiatry and Psychiatric Epidemiology, 47*, 383–394.

Khan, T. M., Hassali, M. A., Tahir, H., & Khan, A. (2011). A pilot study evaluating the stigma and public perception about the causes of depression and schizophrenia. *Iranian Journal of Public Health, 40*(1), 50–56.

Labov, W. (1997). Some further steps in narrative analysis. *Journal of Narrative & Life History, 7*(1–4), 395–415.

Labov, W., & Waletzky, J. (1967). Narrative analysis. In J. Helm (Ed.), *Essays on the verbal and visual arts* (pp. 12–44). Seattle, WA: University of Washington Press.

Laraway, S., Snycerski, S., Byrne, T., & Poling, A. (2000). Drug abuse. In A. Poling & T. Byrne (Eds.), *Introduction to behavioral pharmacology* (pp. 219–248). Reno, NV: Context Press.

Laraway, S., Snycerski, S., Michael, J., & Poling, A. (2003). Motivating operations and terms to describe them: Some further refinements. *Journal of Applied Behavior Analysis, 36*(3), 407–414.

Laraway, S., Snycerski, S., Olson, R., Becker, B., & Poling, A. (2014). The motivating operations concept: Current status and critical response. *The Psychological Record, 64*(3), 601–623.

Laraway, S., Snycerski, S., & Poling, A. (2004). Motivating operations. In J. E. Burgos & E. Ribes (Eds.), *Theory, basic and applied research, and technological applications in behavior science: Conceptual and methodological issues* (pp. 85–118). Guadalajara, Mexico: Universidad de Guadalajara.

Lee, E. B., An, W., Levin, M. E., & Twohig, M. P. (2015). An initial meta-analysis of acceptance and commitment therapy for treating substance use disorders. *Drug and Alcohol Dependence, 155*, 1–7.

Lotfizadeh, A. D., Edwards, T. L., & Poling, A. (2014). Motivating operations in the *Journal of Organizational Behavior Management*: Review and discussion of relevant articles. *Journal of Organizational Behavior Management, 34*(2), 69–103.

Lyons, T., & Carhart-Harris, R. L. (2018). Increased nature relatedness and decreased authoritarian political views after psilocybin for treatment-resistant depression. *Journal of Psychopharmacology, 32*(7), 811–819.

Maitlis, S. (2012). Narrative analysis. In G. Symon & C. Cassell (Eds.), *Qualitative organizational research: Core methods and current challenges* (pp. 492–511). Thousand Oaks, CA: Sage.

Maraccini, A. M., Houmanfar, R. A., & Szarko, A. J. (2016). Motivation and complex verbal phenomena: Implications for organizational research and practice. *Journal of Organizational Behavior Management, 36*(4), 282–300.

Marlatt, G. A. (1996). Harm reduction: Come as you are. *Addictive Behaviors, 21*(6), 779–788.

Marrast, L., Himmelstein, D. U., & Woolhandler, S. (2016). Racial and ethnic disparities in mental health care for children and young adults: A national study. *International Journal of Health Services, 46*, 810–824.

Mays, V. M., & Cochran, S. D. (2001). Mental health correlates of perceived discrimination among lesbian, gay, and bisexual adults in the United States. *American Journal of Public Health, 91*, 1869–1876.

McHugh, L., Barnes-Holmes, Y., & Barnes-Holmes, D. (2004). Perspective-taking as relational responding: A developmental profile. *The Psychological Record, 54*(1), 115–144.

McLean, K. C., Pasupathi, M., & Pals, J. L. (2007). Selves creating stories creating selves: A process model of self-development. *Personality and Social Psychology Review, 11*(3), 262–278.

McMaster, S. A. (2004). Harm reduction: A new perspective on substance abuse services. *Social Work, 49*(3), 356–363.

Merikangas, K. R., He, J. P., Burstein, M., Swendsen, J., Avenevoli, S., Case, B., Georgiades, K., Heaton, L., Swanson, S., & Olfson, M. (2011). Service utilization for lifetime mental disorders in US adolescents: results of the National Comorbidity Survey–Adolescent Supplement (NCS-A). *Journal of the American Academy of Child & Adolescent Psychiatry, 50*, 32–45.

Meyer, I. H. (1995). Minority stress and mental health in gay men. *Journal of Health and Social Behavior, 36*(1), 38–56.

Meyer, I. H. (2003). Prejudice, social stress, and mental health in lesbian, gay, and bisexual populations: Conceptual issues and research evidence. *Psychological Bulletin, 129*, 674–697.

Michael, J. (1982). Distinguishing between discriminative and motivational functions of stimuli. *Journal of the Experimental Analysis of Behavior, 37*(1), 149–155.

Michael, J. (1988). Establishing operations and the mand. *Analysis of Verbal Behavior, 6*(1), 3–9.

Michael, J. (1993). Establishing operations. *The Behavior Analyst, 16*(2), 191–206.

Michael, J. (2000). Implications and refinements of the establishing operation concept. *Journal of Applied Behavior Analysis, 33*(4), 401–410.

Michael, J. (2007). Motivating operations. In J. O. Cooper, T. E. Heron, & W. L. Heward (Eds.), *Applied behavior analysis* (2nd ed., pp. 374–391). Upper Saddle River, NJ: Pearson.

O'Brien, C. P., Childress, A. R., McLellan, A. T., Ehrman, R., & Ternes, J. W. (1988). Types of conditioning found in drug-dependent humans. *NIDA Research Monograph, 84*, 44–61.

O'Brien, C. P., Childress, A. R., McLellan, T., & Ehrman, R. (1990). Integrating systematic cue exposure with standard treatment in recovering drug dependent patients. *Addictive Behaviors, 15*(4), 355–365.

Osilla, K. C., Ortiz, J. A., Miles, J. N. V., Pedersen, E. R., Houck, J. M., & D'Amico, E. J. (2015). How group factors affect adolescent change talk and substance use outcomes: Implications for motivational interviewing training. *Journal of Counseling Psychology, 62*(*1*), 79–86.

Öst, L. G. (2014). The efficacy of acceptance and commitment therapy: An updated systematic review and meta-analysis. *Behaviour Research and Therapy, 61*, 105–121.

Pachankis, J. E., Hatzenbuehler, M. L., Rendina, H. J., Safren, S. A., & Parsons, J. T. (2015). LGB-affirmative cognitive-behavioral therapy for young adult gay and bisexual men: A randomized controlled trial of a transdiagnostic minority stress approach. *Journal of Consulting and Clinical Psychology, 83*(5), 875–889.

Pennebaker, J. W., & Seagal, J. D. (1999). Forming a story: The health benefits of narrative. *Journal of Clinical Psychology, 55*(*10*), 1243–1254.

Perkins, K. A., Doyle, T., Ciccocioppo, M., Conklin, C., Sayette, M., & Caggiula, A. (2006). Sex differences in the influence of nicotine dose instructions on the reinforcing and self-reported rewarding effects of smoking. *Psychopharmacology, 184*(3–4), 600–607.

Pincay, I. E. M., & Guarnaccia, P. J. (2007). "It's like going through an earthquake": Anthropological perspectives on depression among Latino immigrants. *Journal of Immigrant and Minority Health, 9*, 17–28.

Poling, A., & LeSage, M. (1992). Rule-governed behavior and human behavioral pharmacology: A brief commentary on an important topic. *Analysis of Verbal Behavior, 10*(1), 37–44.

Poling, A., Lotfizadeh, A., & Edwards, T. L. (2017). Predicting reinforcement: Utility of the motivating operations concept. *The Behavior Analyst, 40*(1), 49–56.

Polkinghorne, D. E. (1991). Narrative and self-concept. *Journal of Narrative and Life History, 1*(2), 135–153.

Rae, A. (2016). Tales of disaster: The role of accident storytelling in safety teaching. *Cognition, Technology & Work, 18*, 1–10.

Reese, E., Yan, C., Jack, F., & Hayne, H. (2010). Emerging identities: Narrative and self from early childhood to early adolescence. In *Narrative development in adolescence* (pp. 23–43). Boston, MA: Springer.

Riessman, C. K. (1993). *Qualitative research methods, Vol. 30. Narrative analysis.* Thousand Oaks, CA: Sage.

Roche, B., Barnes-Holmes, Y., Barnes-Holmes, D., Stewart, I., & O'Hora, D. (2002). Relational frame theory: A new paradigm for the analysis of social behavior. *The Behavior Analyst, 25*(1), 75–91.

Rolbiecki, A., Anderson, K., Teti, M., & Albright, D. L. (2016). "Waiting for the cold to end": Using photovoice as a narrative intervention for survivors of sexual assault. *Traumatology, 22*(4), 242–248.

Rosales, R., & Rehfeldt, R. A. (2007). Contriving transitive conditioned establishing operations to establish derived manding skills in adults with severe developmental disabilities. *Journal of Applied Behavior Analysis, 40*, 105–121. https://doi.org/10.1901/jaba.2007.117-05.

Rothman, E. F., Exner, D., & Baughman, A. L. (2011). The prevalence of sexual assault against people who identify as gay, lesbian, or bisexual in the United States: A systematic review. *Trauma, Violence & Abuse, 12*, 55–66.

Rubinstein, G. (1995). The decision to remove homosexuality from the DSM: Twenty years later. *American Journal of Psychotherapy, 49*, 416–427.

Saad, L. (2012, May 14). U.S. acceptance of gay/lesbian relations is the new normal. Retrieved from http://news.gallup.com/poll/154634/acceptance-gay-lesbian-relations-new-normal.aspx.

Schiffrin, D., De Fina, A., & Nylund, A. (Eds.). (2010). *Telling stories: Language, narrative, and social life*. Washington, DC: Georgetown University Press.

Schlinger, H., & Blakely, E. (1987). Function-altering effects of contingency-specifying stimuli. *The Behavior Analyst, 10*(1), 41–45.

Shillingsburg, M. A., Bowen, C. N., Valentino, A. L., & Pierce, L. E. (2014). Mands for information using "who?" and "which?" in the presence of establishing and abolishing operations. *Journal of Applied Behavior Analysis, 47*(1), 136–150.

Siegel, S. (1988). Drug anticipation and the treatment of dependence. *NIDA Research Monograph, 84*, 1–24.

Siegel, S. (2005). Drug tolerance, drug addiction, and drug anticipation. *Current Directions in Psychological Science, 14*(6), 296–300.

Skinner, B. F. (1979). *The shaping of a behaviorist*. New York, NY: Knopf.

Skinner, B. F. (2014). *Verbal behavior*. Cambridge, MA: B. F. Skinner Foundation. (Original work published 1957)

Smith, C. P. (2000). Content analysis and narrative analysis. In T. Reis & C. Judd (Eds.), *Handbook of research methods in social and personality psychology* (pp. 313–335). Cambridge, MA: Cambridge University Press.

Srinivasan, T. N., & Thara, R. (2001). Beliefs about causation of schizophrenia: Do Indian families believe in supernatural causes? *Social Psychiatry and Psychiatric Epidemiology, 36*, 134–140.

Stewart, I., Barnes-Holmes, D., Hayes, S. C., & Lipkens, R. (2001). Relations among relations: Analogies, metaphors, and stories. In S. C. Hayes, D. Barnes-Holmes, & B. Roche (Eds.), *Relational frame theory: A post-Skinnerian account of human language and cognition* (pp. 73–86). New York: Kluwer Academic/Plenum.

Stewart, I., & Roche, B. (2013). Relational frame theory: An overview. In S. Dymond & B. Roche (Eds.), *Advances in relational frame theory: Research & application* (pp. 51–72). Oakland, CA: Context Press/New Harbinger.

Sundberg, M. L. (2013). Thirty points about motivation from Skinner's book *Verbal behavior*. *Analysis of Verbal Behavior, 29*(1), 13–40.

Thompson, H. S. (1998). *Fear and loathing in Las Vegas: A savage journey to the heart of the American dream*. New York, NY: Vintage Books. (Original work published 1971)

Törneke, N. (2010). *Learning RFT: An introduction to relational frame theory and its clinical application*. Oakland, CA: New Harbinger.

Twohig, M. P., Shoenberger, D., & Hayes, S. C. (2007). A preliminary investigation of acceptance and commitment therapy as a treatment for marijuana dependence in adults. *Journal of Applied Behavior Analysis, 40*(4), 619–632.

Valdivia, S., Luciano, C., & Molina, F. J. (2006). Verbal regulation of motivational states. *The Psychological Record, 56*(4), 577–595.

Vaults of Erowid, The. (2015, February 10). Drug slang & terminology vault. Retrieved from https://www.erowid.org/psychoactives/slang/. Accessed 18 July 2018.

Vaults of Erowid, The. (2017). Experience vaults. Retrieved from https://www.erowid.org/experiences/exp_front.shtml. Accessed 18 July 2018.

Whelan, R., & Barnes-Holmes, D. (2004). Empirical models of formative augmenting in accordance with the relations of same, opposite, more-than and less-than. *Revista Internacional de Psicología y Terapia Psicológica [International Journal of Psychology & Psychological Therapy], 4*(2), 285–302.

Wilson, K. G., & Hayes, S. C. (2000). Why it is crucial to understand thinking and feeling: An analysis and application to drug abuse. *The Behavior Analyst, 23*(1), 25–43.

Wilson, K. G., Hayes, S. C., & Byrd, M. R. (2000). Exploring compatibilities between acceptance and commitment therapy and 12-step treatment for substance abuse. *Journal of Rational-Emotive & Cognitive-Behavior Therapy, 18*(4), 209–234.

Wulfert, E., Greenway, D. E., Farkas, P., Hayes, S. C., & Dougher, M. J. (1994). Correlation between self-reported rigidity and rule-governed insensitivity to operant contingencies. *Journal of Applied Behavior Analysis, 27*(4), 659–671. https://doi.org/10.1901/jaba.1994.27-659.

Zettle, R. D., & Hayes, S. C. (1982). Rule-governed behavior: A potential theoretical framework for cognitive-behavior therapy. In *P. C. Kendall (Ed.), Advances in cognitive-behavioral research and therapy (Vol. 1)* (pp. 73–118). New York, NY: Academic Press.