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Countercontrol: A Relational Frame Theory (RFT) Account and Revival of a 70-Year-Old Skinnerian Term

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Abstract

Countercontrol is a Skinnerian operant concept that posits that an individual's attempts to exert control over another person's behavior may evoke a countercontrolling response from the person being controlled that functions to avoid or escape the potentially aversive conditions generated by the controller. Despite Skinner's historical concerns regarding the detrimental effects of countercontrol in terms of hindering optimal societal growth and cultural evolution, the concept has not been widely applied within behavior analysis. Drawing from recent developments in rule-governed behavior and relational frame theory, this article seeks to explicate countercontrol from a contemporary behavior analytic perspective and presents several modern-day societal applications. In particular, a relational frame theory account of rule-governed behavior is used as a framework to elucidate the behavioral processes by which rule-following occurs (or fails to occur) in the context of countercontrol. Implications of a renewed focus on countercontrol for understanding pressing societal issues are also discussed.

Keywords Countercontrol · Skinnerian behaviorism · Verbal behavior · Relational frame theory · Rule-governed behavior · Cultural evolution

Skinner (1953), Skinner defined social behavior as "the behavior of two or more people with respect to one another or in concert with respect to a common environment" (p. 297). Recognizing that the sustainability of a society is dependent on the relationship between desired behavior and reinforcing consequences, Skinner proposed the behavioral operant concept of countercontrol, functionally defined by an individual's (i.e., controlee) attempt to escape or avoid the aversive conditions

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imposed by another individual (i.e., controller). This concept was argued to hold significant implications for Skinner's application of behavioral principles for the betterment of society (Skinner, 1961, 1966). Despite these promising implications, countercontrol has remained relatively unexamined within the field of behavior analysis and has yet to be widely applied to socially relevant contemporary issues.

It is our position that countercontrol is worthy of further attention, given that it may shed light on the behavioral processes underlying interpersonal conflict, coercion, and other socially significant aspects of the human experience. Furthermore, in the current sociopolitical climate and public health crisis our world is facing (Mattaini & Rehfeldt, 2020), a greater understanding of the precise behavioral mechanisms underlying countercontrol is sorely needed. Such an understanding may have salient implications for the construction of social contingencies to minimize the detrimental effects of behavior under aversive control. To accomplish this goal, this article attempts to update the Skinnerian concept of countercontrol through the lens of rule-governed behavior (Hayes, 1989) and relational frame theory (RFT; Hayes et al., 2001). Using an RFT framework to update countercontrol may be especially useful due to the extensive application of RFT to a number of relevant issues within the human condition, including language, cognition, the self, and interpersonal interactions (McHugh & Stewart, 2012; Stapleton, 2020).

Skinner's Countercontrol: A Brief History

One person's (i.e., controller) attempt to exert control over the behavior of another may evoke a countercontrolling response on the part of the intended recipient (i.e., controlee). Within this operant framework of negative reinforcement, Skinner (1953) noted that a controlee may engage in two types of countercontrol responses: an overtly aggressive response following contact with aversive controlling conditions; or a passive unresponsiveness to, or avoidance of, the controller's request. In both cases, the countercontrol response functions to extinguish or punish the controller's attempt to control or manipulate the behavior of the controlee.

It is important to note that Skinner's (1953, 1957) original examples of countercontrol generally hinged on the functional properties of overtly observable, and often nonverbal, operant contingencies. A clear example of this is seen in his description of: (1) a caregiver who responds to their child to stop them from crying; (2) individuals who attempt to escape the aversive control of physical restraints; and (3) nations at war that persist in combat until their invading adversary surrenders. Additional examples of nonverbal countercontrol can also be found in the behavior analytic literature. For instance, Seay et al. (1984) describes examples of individuals engaging in countercontrol in response to thinning of reinforcement schedules, as well as when aspects of a behavior modification intervention are perceived to be overly intrusive. In addition, Patterson's (1982) conceptualization of coercive cycles and child noncompliance within familial units provides another example of the detrimental effect of countercontrol responses within social relationships (Reid & Patterson, 1989). However, contemporary societal examples of countercontrol necessarily involve complex verbal behavior and relational networks (i.e., language

and cognition), underscoring the importance of constructing an updated analysis of countercontrol from the perspective of a behavioral account of human language, cognition, and other complex psychological processes (i.e., RFT).

With the exception of isolated, conceptual examples of nonverbal countercontrol (e.g., Davison, 1973; Seay et al., 1984), to our knowledge, Delprato's (2002) critical analysis of the concept is the only literature that attempts to provide a thorough and compelling rationale for the systematic revival of countercontrol. His arguments are briefly summarized here to provide some context of the limited historical interest in the term (see Delprato, 2002, for more details). Delprato discussed several of Skinner's central reasons for the continued analysis of countercontrol and responded to criticisms of the concept. Drawing heavily from Skinner's previous work, Delprato emphasized that all behavior is both *controlled* and *controlling*, and that countercontrol is a seemingly natural response for preserving individual freedom and choice by way of escape or avoidance of controlling contingencies. He further noted the ubiquitous and problematic nature of aversive control within both interpersonal and cultural domains. Delprato's arguments seem particularly relevant today considering that countercontrol may be perpetuating governmental agencies' increasingly restrictive measures to curtail the spread of COVID-19 (Confer et al., 2021) and could also be functioning within the contentious interactions between law enforcement and citizens in marginalized communities (Parks & Kirby, 2021). Related to this, Delprato articulated the importance of countercontrol within Skinner's overarching focus on individual freedom and the application of behavioral principles for the betterment of humankind.

Notwithstanding Delprato's review, and related work by Sidman (1989) on coercion, a contemporary behavior analytic account of countercontrol linked to relevant modern applications has not emerged to date. Despite its potential utility, the term remains largely absent in the mainstream behavior analytic literature outside of the examples presented. This is unfortunate considering the complex issues within our current sociopolitical climate. In the following sections, principles of rule-governed behavior and RFT as they relate to countercontrol are reviewed; and applications of an updated, RFT-informed conceptualization of countercontrol to relevant social issues are discussed.

A Rule-Governed Behavior Account of Countercontrol

Although an extensive review of the historical foundations of research on rule-governed behavior and the development of RFT (two related topics) is beyond the scope of the present article, a brief review of this content is provided in the subsequent sections to the extent that it is relevant to our updated, RFT-informed account of countercontrol. The interested reader is referred to Hayes and Hayes (1989), Hayes, Law, et al. (2021a), Hayes et al. (2001), and Hughes and Barnes-Holmes (2016a, 2016b) for extensive reviews of this literature. In addition, taxonomies of rules and rule-governed behavior have been proposed, which classify rules based on a number of different dimensions, including explicitness, accuracy, complexity, and source (Peláez & Moreno, 1999). Although the reader is

referred to Peláez and Moreno for a more comprehensive account, taxonomies of rule-governed behavior such as this one are useful frameworks for organizing our understanding of how specified contingencies within antecedent verbal stimuli come to control listener (i.e., controlee) behavior.

Discrete social interactions, such as those described in Skinner's (1953) original account of countercontrol, do indeed permit a circumscribed analysis of the functional relations involved in overt, often nonverbal, countercontrol-based operants. However, some radical behaviorists (e.g., Chiesa, 1994; Hayes & Hayes, 1989) began to recognize that more work was needed to expand on Skinner's conceptualization of verbal behavior to achieve a comprehensive—yet theoretically consistent—behavior analytic account of complex (i.e., verbal) human behavior. Early work on rule-governed behavior (e.g., Hayes et al., 1986) and stimulus equivalence (e.g., Sidman & Tailby, 1982) paved the way in this regard. This further led to new approaches for understanding not only verbal behavior, but also the contingencies supporting rule following (or lack thereof).

Research on rule-governed behavior, and the processes by which verbally specified, *indirect* environmental contingences come to control behavioral responding, was an important development in behavior analysis with direct implications for conceptualizing verbally mediated instances of countercontrol (Harte et al., 2020; Kissi et al., 2017; O'Hora & Barnes-Holmes, 2004). In essence, this research demonstrated that rule-governed behavior is generally less sensitive to changes in direct environmental contingencies (Hayes et al., 1986). These findings highlight the pervasive nature of rule-governed behavior and its dominance over behavioral responding at the expense of direct environmental contingencies. This relative insensitivity of rule-governed behavior may shed light on why excessive social control continues to proliferate in many settings, despite its direct link to increased instances, and detrimental effects, of countercontrol.

As reviewed extensively elsewhere (Hayes et al., 1989; Zettle & Hayes, 1982), three functional classes of rule-governed behavior have been identified, namely, *pliance, tracking*, and *augmenting*. Hayes et al. (1989) describe *pliance* as rule-governed behavior controlled by socially mediated reinforcement and contingent upon correspondence between actual behavior and a specified rule. For example, if an individual wears a mask to prevent the spread of COVID-19 because government officials mandate that they do so, this would constitute an instance of *pliance* (Stapleton, 2020). *Tracking* is another type of rule-governed behavior in which behavior is under control of correspondence between a specified rule and direct environmental contingencies. Returning to the previous example, if an individual's mask-wearing behavior increases after becoming aware of research revealing a link between mask-wearing and reduced viral spread (direct contingency), this would be an instance of tracking (Stapleton, 2020). Lastly, *augmenting* is a type of rule-governed behavior in which behavior comes under the control of alterations in the potential of stimuli to function as either punishers or reinforcers (see also establishing operations or discriminative stimuli; Follette et al., 2000; Michael, 1982). An example of augmenting might involve an individual's increased behavioral adherence to public health guidelines (i.e., rule-following) after successful linkage between rule-following and verbally constructed values

of caring for the health and well-being of vulnerable older adults at greater risk of viral infection (Stapleton, 2020).

One additional functional class of rule-governed behavior described by Hayes et al. (1989) that is especially relevant to a behavior analytic account of counter-control is *counterpliance*. Similar to pliance, counterpliance is roughly defined as behavior controlled by socially mediated reinforcement contingent on behavior *opposite* of that specified in a given rule (Barnes-Holmes et al., 2001; Hayes et al., 1989). Although there is a relative dearth of empirical behavior analytic research on counterpliance, one example of the concept could involve a student's refusal to adhere to COVID-19 pandemic-related mask-wearing mandates per a teacher's instructions, with the refusal behavior subsequently reinforced by social approval from the student's delinquent peers. In sum, principles of rule-governed behavior—especially counterpliance—may be useful for understanding rebellion, socially and culturally based countercontrol, and a lack of rule-following despite comprehension of the rule and possession of relevant behavioral repertoires necessary for rule adherence (Carvalho-Couto et al., 2020; Hayes et al., 1989).

An RFT-Informed Conceptualization of Countercontrol

RFT was developed to provide a behavior analytic account of complex verbal behavior, including rule-governance, verbal stimuli (i.e., verbal antecedents), human language, and other psychological processes (Hayes et al., 2001). Although a comprehensive review of RFT and its underlying theory, applications, and empirical support is beyond the scope of this article, a brief review of an RFT account of rule-governed behavior is provided in order to establish a foundation for our updated conceptualization of countercontrol.

The specific application of RFT to rule-governed behavior may be especially useful for a contemporary understanding of countercontrol (see also counterpliance; Barnes-Holmes et al., 2001; Hayes et al., 1989). To that end, understanding how the verbally specified contingencies a listener has contacted in the past can come to control current responding is at the heart of a behavior analytic conceptualization of rule-governed behavior (McAuliffe et al., 2014; Stapleton, 2020). From an RFT perspective, rule-governed behavior is defined as behavior under the control of verbal stimuli (Hayes et al., 1989). Here, verbal stimuli are operationalized as the formation of relational frames of coordination between the verbal stimuli and events to which the rule corresponds, often in the form of an "if . . . then" relation (Harte et al., 2020). For example, the verbal stimuli "if I (and others) get vaccinated, then the spread of COVID-19 will be reduced" may enter into a frame of coordination with actual events of getting vaccinated and actual prevalence of COVID-19 infection.

Thus, rule following transpires when a listener derives frames of coordination between the relational network specified by the original rule and relations among events in the environment that occur when the rule is followed. As Barnes-Holmes et al. (2001) stated, "newly acquired verbal functions of the previously nonverbal environment allow the rule to control behavior in contexts that are sometimes

radically different to those in which the rule is presented" (p. 108). These verbal functions are acquired through the transformation of stimulus functions, which reveals precisely how arbitrary words (i.e., language) specifying a rule can come to acquire the properties of their direct environmental referents. In essence, this provides a behavior analytic explanation of how rules specify contingencies (O'Hora & Barnes-Holmes, 2004; Stapleton, 2020). Indeed, the process of arbitrarily applicable relational responding allows for verbal conceptualizations of the future to be constructed, which can effectively control current behavioral responding through the development of self-rules, or rules given by others, irrespective of competing direct environmental contingencies (Blackledge, 2003; Hayes & Wilson, 1993).

In sum, recent advances within RFT (Harte et al., 2020; Stapleton, 2020) offer a comprehensive functional and contextual account of the contingencies supporting rule-governed behavior. Furthermore, an analysis of rule-governed behavior, as it relates to individual behavior in the context of social environments and governmental institutions, is particularly relevant today (Mattaini & Rehfeldt, 2020). For instance, the likelihood of an individual exhibiting countercontrolling responses following directives to receive the COVID-19 vaccination may be influenced by relational networks related to beliefs about the role of government within public health, views of the self as autonomously independent, and cultural values related to distrust of authority. As described in this section, behavior analysts have examined how individuals understand rules and under what circumstances they are most likely to comply or disobey (Barnes-Holmes et al., 2001; Stapleton, 2020). These recent RFT advances in rule-governed behavior appear promising in furthering a contemporary explication of Skinner's concept of countercontrol and modern societal and cultural issues centered on social control and rule-following.

Attenuating Countercontrol from an RFT-Informed Perspective

Particularly relevant to our RFT-informed conceptualization of countercontrol, several RFT researchers and theorists (e.g., Barnes-Holmes et al., 2001; Stapleton, 2020; Törneke et al., 2008) have considered the specific behavior analytic reasons why an individual may understand a rule, possess the requisite behavioral repertoire, but yet choose not to follow the rule. For example, public health guidelines encourage vaccination to reduce the spread of COVID-19—a directive (i.e., rule) that is sometimes met with resistance (i.e., countercontrol). Barnes-Holmes et al. (2001) cited several reasons why rules may not be followed, including: (1) lack of credibility of the speaker; (2) lack of ability of the speaker or authority figure to mediate contingencies for rule-following; and (3) implausibility of a given rule. One can easily see how an RFT approach to rule-governed behavior can provide explanations for the specific behavioral processes operating in these situations. For example, the inability of the speaker to provide reinforcement for appropriate rule-following (or punishment for lack thereof) undermines instances of pliance. Likewise, if a speaker institutes a rule that is framed in opposition to a listener's extant derived relational networks (i.e., lack of coherence), the behavior of the listener is unlikely to come under control of that rule (Barnes-Holmes et al., 2001; Stapleton, 2020). These

rule-governed behavioral principles are also relevant to instances of countercontrol that arise in the context of modern sociopolitical issues involving resistance to public health guidelines and reluctance of police departments or governmental agencies to reform and combat systemic racism. In these situations, individuals may be less likely to follow guidelines or heed community calls for reform due to a perceived lack of credibility of the speaker delivering the message (i.e., controller), or the lack of coherence among relational networks of the verbally specified contingencies with extant relational networks (i.e., speaker's message is in a frame of opposition with extant relational networks).

Stapleton (2020) recently expanded upon current RFT accounts of rule-following and explored reasons why an individual may choose to not follow public health-oriented guidelines in the context of the COVID-19 pandemic. In citing Barnes-Holmes et al. (2001) work on rule-governed behavior, Stapleton highlighted how insufficient motivative augmentals, counterpliance, and a lack of well-formed behavioral momentum can all be catalysts for noncompliance with a given rule. Stapleton went on to outline ways authority figures can increase the likelihood of compliance with relevant public health-based rules, such as strengthening motivative augmental control by connecting a rule to what individuals value in an effort to make rule-following more likely (Törneke et al., 2016). Stapleton also cited a number of heuristics for reducing counterpliance, including actively monitoring rule-following, ensuring that contingencies supporting rule-following are contacted readily (i.e., tracking), and deemphasizing freedom-threatening language in light of reactance to control.

Toward a Behavioral Science for the Betterment of Humankind: Applied Implications of an RFT-Informed Conceptualization of Countercontrol

Despite the historical lack of interest in countercontrol, one might consider the contemporary implications of the topic in light of the detrimental effects of rigid social control in governmental, institutional, and other societal contexts (Meiran, 2010). This becomes especially apparent when considering Skinner's longstanding intentions of promoting a behavioral science of cultural and societal concerns for the betterment of humankind (Skinner, 1948, 1961, 1974), as well as more recent applications of behavioral principles to pressing social issues (e.g.,Mattaini & Rehfeldt, 2020 ; Stapleton, 2020). To that end, an RFT account of rule-governed behavior allows for a greater understanding of countercontrol and presents an avenue for achieving desperately needed social change in regard to the crises our world currently faces. The sparse attention given to countercontrol within the literature to date, juxtaposed with its prominent—but often implicit—role in complex social interactions, suggests that an RFT-informed conceptualization of countercontrol is sorely needed.

An RFT account of rule-governed behavior provides a foundation on which countercontrol can be renewed and subsequently applied to pressing cultural and social issues. In other words, an RFT approach identifies countercontrol as a concept closely related to counterpliance, such as when a controlee behaves *in opposition*

to a verbally specified rule (Hayes et al., 1989). Some behavior analytic processes that underlie countercontrol may include insufficient motivative augmentals, a lack of well-formed behavioral habits, and inadequate behavioral momentum (Barnes-Holmes et al., 2001). One additional benefit of an RFT conceptualization of countercontrol is in the specific guidance offered for individuals and organizations in positions of power (e.g., teachers, parents, police, and government leaders) to establish potential strategies for preventing instances of countercontrol and counterpliance (Mattaini & Rehfeldt, 2020; Stapleton, 2020)**.** Some of these may include considering the plausibility of given rules, strategically targeting motivative augmentals, and emphasizing tracking repertoires over pliance-based ones (Barnes-Holmes et al., 2001; Stapleton, 2020; Törneke et al., 2008). These strategies for reducing countercontrol hold promise for implementation by parents, teachers, and policy makers across diverse levels of analysis ranging from the individual to broader societal and governmental agencies (Biglan, 2015; Hayes, Merwin, et al., 2021b). One can imagine how parenting, teaching, policing, and governing may be vastly improved due to reduced instances of countercontrol, counterpliance, and other coercive social interactions.

Conclusion

Skinner's original explanation of countercontrol was based on a lofty hope that the science of human behavior could be utilized to effectively improve social harmony, interpersonal cohesiveness, and optimal functioning of cultural norms and values (Skinner, 1961). These assertions continue to be an integral part of behavior analysis writ large and are especially relevant to the challenges our world currently faces. For example, countercontrol, counterpliance, and other principles of rule-governed behavior and RFT have been applied to better understand adherence to public health practices and other psychosocial concerns that have arisen during the COVID-19 pandemic (Carvalho-Couto et al., 2020; Hayes et al., 2020; Stapleton, 2020). Related to this, current issues in the United States regarding racism, prejudice, police violence, and civil unrest have also been detailed from a behavior analytic perspective (Mattaini & Rehfeldt, 2020). This suggests that an RFT-based account of rule-governed behavior may ultimately prove useful for *predicting* and *influencing* relational networks related to racism and prejudice that perpetuate social interactions predicated on countercontrol.

A debt of gratitude is owed to Skinner for planting the seeds of countercontrol that have led to the development of an RFT-informed update of the concept in this article. These new developments provide the impetus for the advancement of a behavioral science better equipped to face the challenge of improving the human condition (Hayes, Merwin, et al., 2021b; Skinner, 1974). Advances in rule-governed behavior and RFT stood on the shoulders of Skinner and have continued the legacy of utilizing behavioral principles explicated through novel theoretical and methodological approaches to better humankind and enact meaningful change for promoting global health, well-being, and prosperity (Hayes et al., 2012). This narrative of cultural, theoretical, and technological evolution within the field of behavior analysis

continues to facilitate the promotion of a coherent knowledge development system designed to further the scope and application of behavioral science.

Code Availability No specific data were presented within the present manuscript; thus, no code was used.

Authors' Contributions The first (SDS) and second (HCK) authors led the literature review, conceptualized the research questions, and prepared the manuscript. The third author (LM) assisted with literature review and manuscript preparation/review. The fourth author (DH) supervised the first three authors in conceptualizing the study, conducting the literature review, and preparing/revising the manuscript, and also assisted in preparing/reviewing the manuscript. The final manuscript was approved by all authors.

Data Availability No specific data were presented within the present manuscript.

Declarations

Conflicts of Interest All authors declare no conflicts of interest.

Ethics Approval Because the present manuscript was not based on collection of original data from human research participants, obtaining IRB approval was not necessary.

Consent to Participate Because the present manuscript was not based on collection of original data from human research participants, obtaining informed consent from participants was not applicable.

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