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Systemic Racism and Cultural Selection: A Preliminary Analysis of Metacontingencies

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Abstract

Racism is a pervasive social justice issue that has been addressed by a variety of fields, including psychology, neuroscience, and sociology. Behavior-analytic accounts of racism have primarily focused on individual and interpersonal acts of prejudice or bias and have used operant contingencies of reinforcement as a unit of analysis for conceptualizing the development of racism. However, the absence of behavior-analytic theories of systemic racism, which includes cultural practices that are discriminatory in nature, is apparent. In the present discussion, we provide a preliminary analysis of systemic racism through the lens of cultural selection and metacontingencies as units of analysis. We provide a learning-theory perspective on systems of racism, offer solutions to systemic racism based on metacontingencies as a conceptual tool, and describe barriers to those solutions by evaluating correlations between metacontingencies and individual operant contingencies.

Keywords Cultural selection · Metacontingency · Racism · Social justice

Individual racism refers to one's beliefs about or behaviors toward another person based on the person's membership in a particular racial or ethnic group, usually one that represents a minority (Miles & Brown, 2003). It is a form of discrimination that stems from overt or covert personal prejudice toward others based on race. In general, it may appear easy to recognize individual acts of racism (e.g., a racial slur, a person is ignored in a group setting, assault or acts of violence) because the observable features of racist behavior are readily apparent to most people. That is, there is a generally

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undefined yet agreed-upon class of behaviors that constitute racism, which are usually identified by the social environment without explicit education (Briggs & Paulson, 1996).

Although it is common for racism to occur between individuals on an interpersonal level, it is important to recognize that interpersonal racism is not cultivated in a vacuum but can emerge from a community's fundamental beliefs and practices. Racism transcends individual acts and is embedded in a culture's social structure, political systems, and power hierarchies. Historically, racism has manifested in organizations and institutions through policies and procedures upheld by state and federal government. There is an abundance of well-documented cases of discriminatory legislation that has been enacted throughout history, including indigenous residential schools that were designed to assimilate Native children and youth into Euro-Canadian culture (Barnes, Josefowitz, & Cole, 2006), Jim Crow laws that established racial segregation in the United States (Tischauser, 2012), and apartheid, which enforced segregationist policies against non-White citizens of South Africa (Carter & May, 2001).

Many (but not all) historical laws associated with racial and ethnic discrimination have been abolished in several countries; however, racism continues to persist in nations that previously upheld this type of legislation. Systemic racism includes, but is not limited to, the policies and practices entrenched in established institutions that result in the exclusion or promotion of designated groups based on race or ethnicity (Feagin, 2013), despite no observable effort to enact racist policy. Systemic racism results in an inequity of resources between groups of people and is rooted in cultural norms that exclude large numbers of people belonging to particular groups from significant participation in major social institutions (Tator, Henry, Smith, & Brown, 2006). Systemic racism differs from overt acts of interpersonal racism or discriminatory legislation in that no individual "intent" is necessary. Often, systemic racism is not clearly defined through a behavior-analytic lens, as features of these behaviors can be ambiguous.

Systemic racism is the residual effect of discriminatory legislation that reverberates through social, political, and financial systems. It includes the practice of discriminatory customs once rooted in law, and although these practices have changed over time, they continue to oppress people of color. Many examples of systemic racism that perpetuate through society are evident in the United States: There are large differences in the amount of financial credit offered to similarly qualified applicants living in Black versus White neighborhoods (Cohen-Cole, 2011), oppression restricts the access of many Americans of color to adequate health care (Feagin & Bennefield, 2014), there is a disproportionate mass incarceration of Black Americans for misdemeanor crimes compared to White Americans for the same or similar crimes (Taylor, 2013), and there have been attempts to erase and disparage the history of minority groups in American school textbooks (Masanori & Dennehy, 1998).

Researchers agree that there is a strong learning component associated with acts of overt and covert racism, including those that persist at a systemic level (Smith, Marsh, & Mendoza-Denton, 2010). Racist attitudes, beliefs, and practices are a product of our immediate environment and accepted cultural norms. Learning theories based on behavior-analytic accounts of racism have primarily focused on the development of individual acts of racism, or how racist behavior is selected at the level of the individual (e.g., Arhin & Thyer, 2004). For instance, Critchfield, Barnes-Holmes, and Dougher



(2018) noted that a variety of operant processes, such as reinforcement and punishment, motivating operations, stimulus control, and stimulus generalization, could contribute to the development of prejudicial behavior. These accounts of racism from a learning-theory perspective have typically relied on operant selection as the unit of analysis. In this approach, contingencies of reinforcement and punishment operate on behavioral variations of racism by differentially selecting for a repertoire that will result in an increased likelihood of future occurrences of racist behavior. Although theoretically sound, this explanation neglects to account for the influence of cultural systems and societal norms on individual behavior (i.e., systemic racism).

Skinner (1981) described a level of selection that occurs when individuals are under the control of common contingencies of reinforcement. When the behavior of a member of a particular group becomes a practice that benefits the group of which the individual is a member, a selection of culture takes place. As a result, it is the effect of consequences for the group as a whole, not individual reinforcement, that maintains cultural practices and the evolution of those practices over time. The behavior-analytic concept of metacontingency (Glenn, 1986, 1988, 2004; Malott & Glenn, 2006) is a conceptual tool with empirical evidence that can be used to understand selection that occurs at the level of groups. The purpose of this article is to provide an account of systemic racism in the context of metacontingencies and cultural selection. This discussion begins with a review of some key concepts in the behavior-analytic literature on cultural selection. Then, we comment on the application of metacontingencies to understanding systemic racism and conclude with some strategies to eliminate systemic racism based on conceptual and empirical studies of metacontingencies.

Cultural Selection and Units of Analysis

Skinner (1981) proposed that human behavior is a joint product of three levels of selection. In the first level, an organism's genes are units that are selected, replicated, and transmitted across generations that enable a species' survival and adaptation to environmental changes (i.e., natural selection). The second level includes the contingencies of reinforcement involved in the selection of individual behavior over the course of the individual's lifetime (i.e., operant selection). In the third level, contingencies operate on groups of individuals who cooperate and contribute toward an evolving social structure (i.e., cultural selection).

Analyzing how groups of individuals interact, as well as the contingencies that maintain these interactions, can provide information on the manner in which cultural selection unfolds. Skinner (1957) described social interactions as an interlocking system of responding because one individual serves as the other's environment during a verbal exchange (and vice versa). The environments controlling the response of each individual during an interaction are the products of each other's behavior, which Skinner (1957) described as the "social environment" in a stream of interlocking contingencies. In social groups, the number of individuals, interactions, and combinations of interactions can produce an infinite number of interlocking contingencies that are maintained, extinguished, or suppressed in a manner that is unique to the social group. What results under these conditions are patterns of coordinated behaviors of



large numbers of people interacting with one another, not simply the individual behaviors of each one (Tourinho & Vichi, 2012).

Metacontingencies are characterized by at least three distinguishable features: (a) interlocking behavioral contingencies (IBC) that involve different individuals, (b) the product that results from interlocking contingencies, and (c) the cultural consequence that is contingent on the product and as a result selects the interlocking contingencies, and their product, as a cultural unit. Glenn (2004) described the relation between IBCs plus their product and its consequence as a "metacontingency," and that these contingencies perpetuate cultural phenomena. This contingency is described as "meta" because it operates on lower level IBCs and their products, which therefore assumes the metacontingency itself operates as a larger unit of analysis (Tourinho, 2013). In other words, IBCs are the units of variation (in contrast to behavioral units in operant selection), and the metacontingency is the unit of analysis of cultural selection. In the same way that operant behavior is selected by consequences, IBCs, too, are selected by their consequences; however, the unit of analysis involved occurs at the cultural level as opposed to the level of the individual. For example, in a hospital, the coordinated efforts of the doctors, nurses, technicians, and administrative staff in arranging and providing medical care to patients represent IBCs, the care that is directly delivered to patients serves as the product, and the cultural consequences for such care could include patients paying their bill, providing a positive review of the hospital, or recommending specific doctors to other people.

By adopting metacontingencies as the unit of analysis of cultural phenomena, it is possible to explain most human behavior, including social justice issues, by evaluating the IBCs related to the phenomena under study. Cultural practices emerge from the interrelated behavior of individuals; therefore, they necessarily involve the behaviors of one or more individuals under the control of social reinforcement (i.e., group-level contingencies; Zilio, 2019). However, the more pertinent consideration is not to investigate the extent to which cultural practices that are analyzed at the level of metacontingencies can be reduced to the interaction of operants, but to determine the degree to which such an analysis has explanatory power in its own right. Therefore, we next apply the concept of metacontingency to systemic racism and provide a preliminary behavior-analytic account for racism that occurs beyond the level of the individual.

Selection of Racism as a Cultural Practice

The IBCs involved in institutional racism, wherein laws and power hierarchies were purposefully enacted to marginalize and suppress people of color from participating in financial, social, and educational institutions, are easier to define because they were explicitly described in legislation. For instance, examples of Jim Crow laws in the United States included forbidding interracial marriage, ordering business owners and public institutions to separate Black and White clientele, and requiring minority children to attend different schools than White children (Tischauser, 2012). Skinner (1953) suggested that these types of laws specify a contingency of reinforcement maintained by a controlling agency (e.g., government). These contingencies represent a new cultural norm, which assures a cultural practice is followed. In these cases,



controlling agencies (i.e., institutions and systems) enforced cultural practices and provided aversive consequences when individual behavior was incongruent with the cultural practice (e.g., an individual behaved inconsistently with the law and must be punished). In this sense, racist laws consist of operant contingencies, interlocked into metacontingencies (Todorov, 2005).

The abolition of laws such as Jim Crow has not prevented acts of racism from continuing, nor has it eliminated the controlling agencies that foster racist cultural practices. Instead, these cultural practices have evolved in a manner consistent with cultural selection described by Skinner (1981). That is, the cultural consequences that select IBCs and their product change over time as a process similar to biological or ontogenetic evolution (Tourinho & Vichi, 2012). Cultural practices are shaped over time wherein the IBCs and products may only approximate initial group practices, but the consequences that perpetuate racism are similar (i.e., advantages for group members who participate in those practices). Therefore, to understand racism that persists across generations and manifests subtly in modern society requires an analysis of both metacontingencies and related controlling agencies.

The concept of metacontingency highlights the functional relation between racist IBCs (e.g., the coordinated efforts of two or more majority individuals that exclude minorities), their aggregate product (e.g., greater availability of resources for members and less availability for nonmembers), and the cultural consequences (e.g., access to greater wealth or opportunities for the majority group) created by and for a society of majority individuals. Moreover, conditional relations are supported by members of the majority over successive generations, even after the original reasons for discrimination have been eliminated. That is, metacontingencies support cultural practices designed by initial controlling agencies, even when those agencies have been removed or changed (e.g., a change in legislation). For example, the behaviors of the members of an Anglo-Saxon cultural group (including White bankers, White teachers, White engineers, and others) and their products (financial systems, education delivery, neighborhood design) are built upon a preabolitionist controlling agency designed by White majority groups. These products are supported by cultural consequences that benefit the group (wealth, literacy, community). Cultural contingencies are contingent not on the individual operant behavior of each member of the group, but on the harmonized effort of their behaviors and their products.

Identifying the metacontingencies involved in systemic racism is obscure because even such contingencies likely interlock in complex ways (Glenn & Malott, 2004). However, analyzing racism of this kind begins with identifying the social groups that participate in IBCs and the controlling agencies that enforce participation. In this case, these groups are likely comprised of majority (i.e., White) individuals who unknowingly benefit from social structures that were a product of segregationist and presegregationist policy (e.g., White police officers assess Black citizens more negatively than they do White citizens, so White citizens are less likely to be fined or arrested; Vrij & Winkel, 1992). The metacontingencies that perpetuate racism can be

¹ In the present discussion, the terms *majority* and *minority* are used based on census definitions, which indicates that *majority* refers to individuals who are European or White and that *minority* refers to individuals who primarily represent the following groups: Arab, Black, Chinese, Filipino, Japanese, Korean, Latin American, South Asian, Southeast Asian, West Asian, and biracial.



subtle but have a significant impact on the well-being of majority and minority groups. For example, two equally qualified employees, one a majority individual and one a minority individual, may both apply for a job promotion wherein a majority employer might favor the majority employee because the two individuals share a common cultural network (e.g., participate in an IBC whose aggregate product might be a belief of greater comradery among employees and is reinforced through social interaction). Similarly, if only majority members participate to produce certain IBCs, which ultimately leads to a cultural consequence favorable for members of the group, those individuals are likely to continue to engage in those behaviors (i.e., a "cultural practice" that fosters racism). This network serves only to advance the well-being of its members while ignoring the repercussions for nonmembers (i.e., minorities). Over time, these events may lead to the selection of controlling agencies that strengthen these practices (e.g., financial institutions that are more likely to provide loans to one group over another).

The question remains as to what maintains racist IBCs across generations and how controlling agencies play a role in this maintenance. The probability altered in metacontingencies is not the recurrence of operant behavior, but the recurrence of the IBC (Tourinho & Vichi, 2012). This suggests that it is not necessary for the same individuals to always participate in the IBC. Members of a group that participate in common cultural practices can be replaced insofar as some members remain in order to teach new members and reinforce behavior consistent with the IBC. It is also probable that some elements of a prior controlling agency are carried forward and support members of a majority group over generations. This results in cultural heredity: Members of a specific group are replaced over time, but the IBCs are maintained and the controlling agencies evolve. A cultural system of oppression (e.g., systemic racism) is not affected over generations by the removal of members (e.g., through death or displacement) because cultural consequences are contingent on IBCs, not on individual behaviors. Furthermore, it is not the case that these IBCs are necessarily explicit, nor is the transmission between members explicit, which may explain, in part, why systemic racism cannot be easily pinpointed.

Not only do systems of racism continue to function when members are replaced, but the coordination of IBCs also evolves in a manner consistent with cultural heredity. As members of a cultural group are exposed to changing cultural contingencies, IBCs and controlling agencies become increasingly sophisticated but may continue to perpetuate cultural practices (Todorov, 2013). For example, overt racism in America may have begun with an agency of colonization, evolved into institutional racism with Jim Crow laws, and further evolved into a system of racism in the 21st century. These early IBCs were explicitly defined, but latter forms of systemic racism are implicit. Although IBCs have increased in complexity, members of majority groups that benefit from systems of racism have been replaced, and the cultural consequences contingent on racist IBCs (and their products) have changed over time, collectively this evolution shares the common thread of promoting majority cultural practices (e.g., Euro-American values) while excluding nonmembers of the cultural group (e.g., Black Americans). This promotion is likely a function of both evolving controlling agencies (e.g., schools, financial systems) and group-level social consequences. However, the specific manner in which IBCs evolve over time and how this perpetuates a system of implicit racism are not clear, but evidence suggests that IBCs can be controlled by changing



antecedents (Vieira, Andery, & Pessoa, 2016), the schedule in which cultural consequences are delivered (Soares, Martins, Leite, & Tourinho, 2015), and higher order shaping (Pavanelli, Leite, & Tourinho, 2014). There is even evidence that suggests IBCs can be selected adventitiously (Marques & Tourinho, 2015). It is possible that any or all of these different factors could play a role in the evolution of systemic racism over time.

It is important to recognize that not all IBCs and their products are rooted in prior legislation or are the result of enforcement by a controlling agency. Instead, these practices occur due to an education system that is perpetuated by a social group (i.e., an informal education system in which IBCs consistent with a cultural practice are promoted). Todorov (2013) suggested that IBCs involved in metacontingencies are acquired by children through basic learning processes such as modeling (e.g., behaving in ways consistent with other members of the cultural group) and following rules (given by adults in the group), or through direct exposure to cultural consequences (e.g., benefiting individually, either implicitly or explicitly, through actions of the cultural system). This latter process may be equivalent to, or at least associated with, McIntosh's (1988) concept of "White privilege." However, these learning processes are not specific to children, nor are they specific to generational metacontingencies. For example, in the mid-1980s, anti-Indian hate groups emerged in the state of New Jersey that targeted, threatened, and killed Indian Americans, despite the U.S. government never explicitly enacting an anti-Indian racist policy (Gutierrez, 1996). However, anti-Indian sentiment among Americans led to the development of novel IBCs, and the product (i.e., deaths of Indian Americans) resulted in a cultural consequence that was perceived to benefit its members (e.g., nationalism; Anand, 2006). Therefore, it appears that IBCs can play an additional role in fostering xenophobia alongside racism and that the development of these behavioral networks can occur somewhat spontaneously.

Addressing Systems of Racism Through Metacontingencies

Given that both theoretical and empirical evidence exists that novel IBCs can be developed, and that IBCs can evolve when transmitted (i.e., the process of cultural heredity), there is promising evidence that systemic racism is a cultural event that can be targeted for change. By adopting metacontingencies as the unit of analysis during cultural selection, a number of strategies derived from the experimental literature can be used to address systemic racism that occurs as a cultural practice.

First, concerted efforts need to be made to detangle existing IBCs that have fostered a culture of systemic racism. Preliminary experimental evidence suggests that the degradation of interlocking responses by terminating cultural consequences can lead to the fracturing of metacontingencies (Caldas, 2009). In practice, this requires members of the existing cultural group (e.g., White males) to withhold social reinforcers contingent on products created by the cultural group. Therefore, the abolition of systems of racism, which have become entrenched cultural practices, depends on the acts of individuals in majority groups. This is a challenging task, given that many IBCs are maintained by implicit cultural consequences and it may be unclear which cultural consequences should be suspended to effectively modify the metacontingency.

A second strategy involves the modification of existing IBCs to include minority groups to promote cultural heredity that is racially inclusive. This would involve



developing new interlocking behaviors that include involving minorities in new cultural practices. In practice, this might include police reform that involves the selection and promotion of visible minorities (Jain, Singh, & Agocs, 2008), cultural diversity training in workplaces (e.g., Sue, 1991), and the provision of greater access to education and resources for underprivileged neighborhoods (e.g., Kayaalp, 2019; Leonardo & Grubb, 2018). Collectively, practices like these may foster the development of new IBCs between majority and minority groups that lead to products created by a diverse cultural group and benefit all individuals independent of race or ethnicity. Moreover, new patterns of interlocking operants may eventually lead to the dissolution of historically racist controlling agencies. For a metacontingency to produce new cultural practices, other agencies must be leveraged, including the education system and mainstream media. However, as previously noted, cultural heredity is generational, and political or social reform intended to produce new metacontingencies may benefit future cultural groups as opposed to present-day minority individuals.

Although these solutions seem viable, there are clear barriers to the successful implementation of these strategies that can be derived from behavior-analytic research on cultural selection. The most obvious of these barriers includes conditions in which there is a direct conflict between individual operant contingencies and group cultural contingencies. For example, belonging to a cultural group that fosters racial insulation might require avoiding culturally diverse experiences consistent with one's personal preferences (e.g., music, fashion, and cinema created by minorities). Tourinho (2013) described this conflict of tempering individual actions in order to benefit the cultural group as "ethical self-control" because it leads to reinforcer loss at the individual level in order to strengthen social contingencies for the group. Experimental studies on ethical self-control provide additional evidence that operant consequences are contingent on individual operant behavior and cultural consequences are contingent on individual operant behavior and cultural consequences are contingent on IBCs (Borba et al., 2014). This may, in part, explain why majority individuals continue to perpetuate racist IBCs (albeit unknowingly) despite a "moral" (i.e., individual operant) sense of disagreement with overt acts of racism.

Ethical self-control suggests that when conflicts between operant and cultural consequences arise, members of majority groups (e.g., White males) are more likely to behave in a manner consistent with cultural practices, and thus experience delayed or immediate cultural consequences, rather than act to obtain immediate individual reinforcers. Jones and Rachlin (2006) described this as social discounting, in which individuals will forego a reward for themselves in order to benefit others. The degree to which social discounting occurs is a function of the relationship between the individual and other members of a group, including common interests between the individual and others.

Both conceptual and empirical evidence suggests that ethical self-control could be a purely verbal phenomenon. For example, Borba et al. (2014) had participants respond in conditions under which other members of the group were present, but participants were unable to interact with them verbally. In this situation, participants did not behave in a manner consistent with group contingencies. Borba et al. (2014) found that ethical self-control prevailed only when members of a group were able to verbally interact with one another. This suggests that systemic racism that persists over time and the cultural practices within are verbally mediated. However, preventing verbal interactions among culturally complex IBCs in real-world social settings is impossible, and not behaving in



a manner consistent with the group's cultural practice may lead to social disapproval (e.g., White males being referred to as "unpatriotic" by other White males).

Relatedly, group members who act in accordance with individual contingencies that conflict with group contingencies are likely to experience aversive consequences associated with these acts, which are delivered by other members of the group. Under these circumstances, efforts to behave against the group will likely discontinue. Unpleasant social situations (e.g., such as those that members of a cultural group might present) are aversive, and learning to avoid such embarrassment is reinforcing (Todorov, 2013). However, if society is to ever accept new cultural norms and do away with systems of racism, individuals will be required to expose themselves to stressful (i.e., aversive) situations. Moreover, both laboratory and applied research has shown that changes in large behavioral repertoires require reinforcement that is more frequent and of larger magnitude to shape new behavior, and ultimately cultivate novel IBCs.

Conclusion

The present discussion provides a preliminary analysis of systemic racism using metacontingencies as the primary conceptual tool. Clearly, experimental and empirical investigations of these concepts are required before any firm proclamations can validate or dispute the role of racist IBCs and their maintenance by cultural consequences that favor certain majority groups. Nonetheless, some provisional conclusions can be drawn based on this exercise in interpretation.

First, operant contingencies that maintain interpersonal acts of racism at the level of the individual are insufficient for understanding the selection and maintenance of systems of racism that are pervasive in a culture. Instead, an analysis of cultural practices requires invoking IBCs, which are networks of coordinated behaviors of large numbers of people interacting with one another. These coordinated efforts are selected by cultural (i.e., social) reinforcers that are contingent on interlocking, which ultimately benefits the cultural group. In systemic racism, these efforts are coordinated among majority individuals and are maintained by cultural consequences (e.g., wealth, opportunity) that benefit majority individuals. Furthermore, there likely exist controlling agencies that perpetuate racist cultural practices as norms despite the fact that these agencies have evolved over time (e.g., financial institutions).

Second, cultural heredity suggests that systemic racism is generational and does not depend on the behaviors of single individuals at a given moment in time. Racism is pervasive over time because cultural practices are perpetuated by members of the majority group and by related controlling agencies. Cultural practices are taught to new members by individuals who perpetuate the culture as status quo through modeling, rules, and reinforcement (including shaping). Therefore, the maintenance of racist IBCs appears to depend on their correlation between the metacontingency and operant social consequences at the level of the individual (e.g., approval or disapproval of individual behavior by existing group members).

Third, ethical self-control serves as a barrier to successfully abolishing systems of racism. When members of a majority group act in a manner inconsistent with the group, a conflict arises between individual operant contingencies and delayed cultural



consequences. Under these circumstances, evidence suggests that group members are more likely to behave in accordance with group contingencies. The concept of ethical self-control highlights the difficulty that majority members (e.g., White patriarchy) face in situations in which there is a moral sense of disagreement with cultural practices (e.g., behaving in a way that seeks to discourage White privilege).

Fourth, when cultural consequences are removed, IBCs tend to degrade, which ultimately leads to the dissolution of cultural practices that previously fostered minority oppression. This requires members of majority groups to actively make efforts to change systems of racism by withholding operant reinforcers that correlate with racist cultural consequences (e.g., providing equal opportunity for all individuals to earn a job promotion despite racial or ethnic differences).

The behavior analysis of systemic racism as a cultural practice is only beginning, and much research is necessary to support the conclusions described herein. However, the absence of such evidence should not serve as a barrier to the development of new concepts and the extension of existing behavior-analytic frameworks to areas of social justice. This does not suggest that systemic racism is entirely (or can only be) explained by metacontingencies. It is equally possible that other conceptual tools, including those not yet described, could account for the evolution of racism over time, including pervasive systemic racism. However, the proposal described in this article, in which metacontingencies serve as an appropriate unit of analysis in understanding systems of racism, appears to be an effective approach to understanding racism that exists beyond the scope of analyzing individual operant behavior.

It is important to recognize that systems of racism can be implicit, and members of majority groups might not make deliberate efforts to perpetuate acts of racism (in most cases). Instead, modern society is built upon complex IBCs that may inadvertently foster racism, possibly unknowingly, and controlling agencies that enforce racist practices. This leads to the question as to what extent have members of the behavior-analytic cultural group participated in the maintenance, preservation, or normalization of racial hierarchies, as well as to what degree training in behavior analysis includes the voices of racial and ethnic minorities (Conners, Johnson, Duarte, Murriky, & Marks, 2019). The results of this discussion make it clear that all members of the behavior-analytic community must make a committed, responsible, and overt effort to battle systems of racism and promote equity between majority (e.g., White) and minority (e.g., Black, indigenous, people of color) individuals. Doing so may serve as an initial stepping-stone that disentangles interlocking patterns of racism in our society.

Compliance with Ethical Standards

Conflict of interest On behalf of all authors, the corresponding author states that there is no conflict of interest.

References

Anand, V. Z. (2006). The Dotbuster effect on Indo-American immigrants. *Journal of Immigrant & Refugee Studies*, 4(1), 111–113. https://doi.org/10.1300/J500v04n01_08.



- Arhin, A., & Thyer, B. A. (2004). The causes of racial prejudice: A behavior analytic perspective. In J. L. Chin (Ed.), *The psychology of racial prejudice and discrimination: Racism in America* (Vol. I, pp. 1–19). Westport, CT: Praeger.
- Barnes, R., Josefowitz, N., & Cole, E. (2006). Residential schools: Impact on Aboriginal students' academic and cognitive development. *Canadian Journal of School Psychology*, 21(1–2), 18–32. https://doi.org/10. 1177/0829573506298751.
- Borba, A., Silva, B. R., Cabral, P. A. A., Souza, L. B., Leite, F. L., & Tourinho, E. Z. (2014). Effects of exposure to macrocontingencies in isolation and social situations in the production of ethical self-control. *Behavior and Social Issues*, 23, 5–19. https://doi.org/10.5210/bsi.v23i0.4237.
- Briggs, H. E., & Paulson, R. I. (1996). Racism. In M. A. Mattaini & B. A. Thyer (Eds.), Finding solutions to social problems: Behavioral strategies for change (pp. 147–177). American Psychological Association. https://doi.org/10.1037/10217-006
- Caldas, R. A. (2009). Análogos experimentais de seleção e extinção de metacontingências [Experimental analogs of selection and extinction of metacontingencies] (Master's thesis). Pontificia Universidade Católica de São Paulo, Programa de Estudos Pós-Graduados em Psicologia Experimental: Análise do Comportamento.
- Carter, M. R., & May, J. (2001). One kind of freedom: Poverty dynamics in post-apartheid South Africa. World Development, 29(12), 1987–2006. https://doi.org/10.1016/S0305-750X(01)00089-4.
- Cohen-Cole, E. (2011). Credit card redlining. Review of Economics and Statistics, 93(2), 700–713. https://doi.org/10.1162/REST_a_00052.
- Conners, B., Johnson, A., Duarte, J., Murriky, R., & Marks, K. (2019). Future directions of training and fieldwork in diversity issues in applied behavior analysis. *Behavior Analysis in Practice*, 12(4), 767–776. https://doi.org/10.1007/s40617-019-00349-2.
- Critchfield, T. S., Barnes-Holmes, D., & Dougher, M. J. (2018). What Sidman did: Historical and contemporary significance of research on derived stimulus relations. *Perspectives on Behavioral Science*, 41, 9–32. https://doi.org/10.1007/s40614-018-0154-9.
- Feagin, J. (2013). Systemic racism: A theory of oppression. New York, NY: Routledge.
- Feagin, J., & Bennefield, Z. (2014). Systemic racism and US health care. Social Science & Medicine, 103, 7– 14. https://doi.org/10.1016/j.socscimed.2013.09.006
- Glenn, S. S. (1986). Metacontingencies in Walden two. Behavior Analysis and Social Action, 5, 2–8. https://doi.org/10.1007/BF03406059.
- Glenn, S. S. (1988). Contingencies and metacontingencies: toward a synthesis of behavior analysis and cultural materialism. *The Behavior Analyst, 11*(2), 161–179. https://doi.org/10.1007/BF03392470
- Glenn, S. S. (2004). Individual behavior, culture, and social change. The Behavior Analyst, 27(2), 133–151. https://doi.org/10.1007/BF03393175.
- Glenn, S. S., & Malott, M. E. (2004). Complexity and selection: Implications for organizational change. *Behavior and Social Issues*, 13(2), 89–106. https://doi.org/10.5210/bsi.v13i2.378.
- Gutierrez, E. (1996). The "Dotbuster" attacks: Hate crime against Asian Indians in Jersey City, New Jersey. *Middle States Geographer*, 29, 30–38.
- Jain, H. C., Singh, P., & Agocs, C. (2008). Recruitment, selection and promotion of visible-minority and aboriginal police officers in selected Canadian police services. *Canadian Public Administration*, 43, 46– 74. https://doi.org/10.1111/j.1754-7121.2000.tb01560.x.
- Jones, B., & Rachlin, H. (2006). Social discounting. Psychological Science, 17(4), 283–286. https://doi.org/ 10.1111/j.1467-9280.2006.01699.x.
- Kayaalp, D. (2019). Towards culturally responsive education: A qualitative approach. European Journal of Education, 2(2), 77–85. https://doi.org/10.26417/ejed-2019.v2i2-65.
- Leonardo, Z., & Grubb, W. N. (2018). Education and racism: A primer on issues and dilemmas. New York, NY: Routledge.
- Malott, M. E., & Glenn, S. S. (2006). Targets of intervention in cultural and behavioral change. *Behavior and Social Issues*, 15(1), 31–57. https://doi.org/10.5210/bsi.v15i1.344.
- Marques, N., & Tourinho, E. (2015). The selection of cultural units by non-contingent cultural events. *Behavior and Social Issues, 24*, 126–140. https://doi.org/10.5210/bsi.v24i0.42.
- Masanori, N., & Dennehy, K. (1998). The history textbook controversy and nationalism. Bulletin of Concerned Asian Scholars, 30(2), 24–29. https://doi.org/10.1080/14672715.1998.10411040.
- McIntosh, P. (1988). White privilege and male privilege: a personal account of coming to see correspondences through work in women's studies (1988). On Privilege, Fraudulence, and Teaching As Learning, pp 17–28.
- Miles, R., & Brown, M. (2003). Racism. New York, NY: Psychology Press.



- Pavanelli, S., Leite, F., & Tourinho, E. (2014). A modelagem de contingências comportamentais entrelaçadas complexas [The shaping of complex interlocking behavioral contingencies]. Acta Comportamentalia, 22, 425–440.
- Skinner, B. F. (1953). Science and human behavior. New York: The Macmillan Co.
- Skinner, B. F. (1957). Verbal behavior. Acton, UK: Copley.
- Skinner, B. F. (1981). Selection by consequences. Science, 213(4507), 501–504. https://doi.org/10.1126/science.7244649.
- Smith, J. A., Marsh, J., & Mendoza-Denton, R. (2010). Are we born racist?: New insights from neuroscience and positive psychology. Boston: Beacon Press.
- Soares, P., Martins, J., Leite, F., & Tourinho, E. Z. (2015). Seleção de contingências comportamentais entrelaçadas por consequências culturais intermitentes [Selection of interlocking behavioral contingencies by intermittent cultural consequences]. Revista Brasileira de Análise do Comportamento, 11, 117–124. https://doi.org/10.18542/rebac.v11i2.3780.
- Sue, D. W. (1991). A model for cultural diversity training. *Journal of Counseling & Development*, 70, 99–105. https://doi.org/10.1002/j.1556-6676.1991.tb01568.x.
- Tator, C., Henry, F., Smith, C., & Brown, M. (2006). Racial profiling in Canada: Challenging the myth of "a few bad apples.". Canada: University of Toronto Press.
- Taylor, C. (2013). Introduction: African Americans, police brutality, and the US criminal justice system. *Journal of African American History*, 98(2), 200–204. https://doi.org/10.5323/jafriamerhist.98.2.0200.
- Tischauser, L. V. (2012). Jim Crow laws. Santa Barbara: ABC-CLIO.
- Todorov, J. C. (2005). Laws and the complex control of behavior. *Behavior and Social Issues*, 14(2), 86–91. https://doi.org/10.5210/bsi.v14i2.360.
- Todorov, J. C. (2013). Conservation and transformation of cultural practices through contingencies and metacontingencies. *Behavior and Social Issues*, 22(1), 64–73. https://doi.org/10.5210/bsi.v22i0.4812.
- Tourinho, E. Z. (2013). Cultural consequences and interlocking behavioral contingencies: Selection at the cultural level. *Behavior and Philosophy (Online)*, 41, 60–69.
- Tourinho, E. Z., & Vichi, C. (2012). Behavioral-analytic research of cultural selection and the complexity of cultural phenomena. Revista Latinoamericana de Psicologia, 44(1), 169–179.
- Vieira, M., Andery, M. A. P. A., & Pessoa, C. (2016). Condições antecedentes em metacontingências [Antecedent conditions in metacontingencies]. Acta Comportamentalia, 24, 439–451.
- Vrij, A., & Winkel, F. W. (1992). Crosscultural police-citizen interactions: The influence of race, beliefs, and nonverbal communication on impression formation. *Journal of Applied Social Psychology*, 22(19), 1546– 1559. https://doi.org/10.1111/j.1559-1816.1992.tb00965.x.
- Zilio, D. (2019). On the function of science: An overview of 30 years of publications on metacontingency. Behavior and Social Issues, 28(1), 46–76. https://doi.org/10.1007/s42822-019-00006-x.

