



Foundations of Preemptive Compassion: A Behavioral Concept Analysis of Compulsion, Consent, and Assent

Anna M. Linnehan¹  · Awab Abdel-Jalil^{1,2,3} · Sheila Klick^{1,4} · Jonathan Amey⁵ · Richele Yeich^{2,3,6} · Kyle Hetzel⁷

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Abstract

The recent changes to the Behavior Analysis Certification Board *Ethics Code for Behavior Analysts* along with the calls to action for compassionate care have highlighted the need for a reevaluation of behavior research and clinical programs. We propose a behavior analytic definition of compassion where the relieving or prevention of distress is the reinforcer for the professional. One way of minimizing distress may be to require that assent be provided by a participant in an intervention. The definition of assent typically includes reference to willingness to participate in an intervention or activity. We provide a framework that goes beyond simple willingness to participate and distinguishes between apparent/implicit coercion and genuine assent by considering the alternatives described as degrees of freedom available to the participant. We distinguish between compulsion/explicit coercion, consent, and assent. Additionally, we will differentiate genuine consent and assent from apparent consent and assent in the design of compassionate behavioral programs.

Keywords Compassion · Compulsion · Consent · Assent · Degrees of freedom

The relation between how we talk about events, and what we otherwise do about them, is, of course, of interest not only to students of philosophy but also to students of behavior analysis. The terms we use tend to classify our observations. They may thereby dictate what it is that we admit as data, and govern our data collecting procedures. In a scientific discipline, terminological problems can lead to the formulation of scientific puzzles and to the pursuit of experimental

problems which might otherwise not have been pursued. (Goldiamond, 1975, p. 49)

Given as Goldiamond noted, the way we talk about events influences what we do about them—the procedures, we propose a nonlinear contingency analytic (Goldiamond, 1984; Layng et al., 2022) definition of, and approach to assent. This is not only to ensure a common language and understanding of assent but also to encourage behavior analysts to use least restrictive, noncoercive procedures in the moment-to-moment treatment of their clients. In this issue, Abdel-Jalil et al. (2023) describe in detail the relation between a nonlinear contingency analysis of assent and compassion. We will extend this nonlinear treatment of assent by providing a behavioral concept analysis important to achieving compassionate outcomes, and distinguish between compulsion, consent, and assent when used in behavioral programs. Further, we will make the distinction between apparent consent and assent (implicit coercion) and genuine consent and assent.

Taylor et al. (2019) state “. . . compassion converts empathy into an act *aimed at* the alleviation of suffering” (p. 655; emphasis added). We maintain this distinction between empathy and compassion with some added clarity. *Empathy* is defined as behavior that expresses concern over another’s distress, but does not necessarily involve actions taken to relieve that distress. *Compassion* is defined as behavior

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✉ Anna M. Linnehan
alinneha@endicott.edu

¹ Endicott College, Institute for Applied Behavioral Science, Beverly, MA, USA

² Eastern Florida Autism Center, Palm Bay, FL, USA

³ Great Leaps Academy, Palm Bay, FL, USA

⁴ Melmark, Berwyn, PA, USA

⁵ AIMS Instruction, Pittsburgh, PA, USA

⁶ University of West Florida, Pensacola, FL, USA

⁷ Oakland Zoo, Oakland, CA, USA

maintained by (*aimed at*—à la Taylor et al.) the removal or mitigation of distress in others. We contend that preventing distress is also compassionate (cf. Scallan & Rosales-Ruiz, 2023). In describing his constructional approach, which emphasizes the establishment rather than the elimination of behavior, Goldiamond (1974/2002, p. 180) pointed out that constructional programs can prevent distress by seeking “constructional solutions which alleviate human distress by *preempting* it” (p. 184; emphasis added). Thus, we define compassion as behavior maintained by the removal, mitigation, or *prevention* of distress for others. In the case of the latter, we maintain that procedures that often result in refusal and uncooperative behavior can be replaced by procedures which maintain involvement without aversive interventions, behavior decelerating practices, or restrictive positive reinforcement procedures.

In clinical practice and research, behavior analysts are required to follow ethical guidelines set forth by their credentialing board, the Behavior Analysis Certification Board (BACB), to protect the consumer as well as the certificants. The *Ethics Code for Behavior Analysts* defines assent as “vocal or nonvocal verbal behavior that can be taken to indicate willingness to participate in research or behavioral services by individuals who cannot provide informed consent (e.g., because of age or intellectual impairments). Assent may be required by a research review committee or service organizations, in such instances, those entities will provide parameters for assessing assent” (BACB, 2020, p. 7). In addition to guidance provided by the BACB, behavior analysts conducting research in the United States must also adhere to federal regulations set forth by the U.S. Department of Health and Human Services in the protections of human subjects in research (*Federal Policy for the Protection of Human Subjects*, 2018). Regulation §46.402 defines assent as “. . . a child's affirmative agreement to participate in research. Mere failure to object should not, absent affirmative agreement, be construed as assent” (*Federal Policy for the Protection of Human Subjects*, 2018, Subpart D). In addition, federal regulations provide guidance for institutional review boards (IRB) in determining if assent is required for children in research and under what conditions assent may not be required.

Whereas the BACB and the U.S. Department of Health and Human Services do not provide an analytical tool to evaluate assent, they do share language in the “willingness” or “affirmative agreement” to participate. Possible topographic indicators might include, approaching an activity, e.g., walking, turning, reaching, and possibly affect, such as smiling, or a spoken “yes.” But is willingness or affirmative agreement to participate, regardless of the indicator, really *the* indicator of genuine assent? The next section addresses this question.

Degrees of Freedom

Writing for the National Commission for the Protection of Human Subjects of Biomedical and Behavioral Research, Israel Goldiamond made the distinction between apparent consent (implicit coercion) and genuine consent (Goldiamond, 1976). To accomplish this Goldiamond employed a nonlinear contingency analysis that requires that the consequences maintaining the behavior, signing a consent form in this case, be evaluated in the context of the available alternative contingencies that provide the same critical consequence. It is important to emphasize that having other available contingencies is not enough, they must provide the same critical consequence. Goldiamond described this further through two related formulas: degrees of freedom and degrees of coercion. Degrees of freedom (df) are calculated by considering the number of contingency alternatives (n) within a given context and subtracting by one, resulting in the following formula: $df = n - 1$. For example, if one is offered a surgical procedure or alternatively a series of medications to repair a damaged heart, the patient has one degree of freedom ($2 - 1 = 1$). If a regimen of diet and exercise over time can also result in repair, the patient has two degrees of freedom ($3 - 1 = 2$). Consent then is not solely governed by the ultimate consequence of a repaired heart, but also by other program-specific (after Goldiamond, 1974/2002; 1976) consequences. In this case, such program-specific consequences might include time to repair, recovery time, monetary costs, response effort, effects on the family, and so on. Genuine consent, therefore, requires a minimum of one degree of freedom.

It is important to note that the option to obtain the same consequence is not the defining feature, it is the option to obtain the same critical consequence, that is, given a variety of consequences, it is the one that governs the contingency (Goldiamond, 1976; Layng, 2020). Thus, where two options are given that produce the same consequence and not choosing one of those two results in an aversive event, without which neither would be chosen, it is the aversive event that is the governing contingency, and thus degrees of freedom are not defined.

As described, degrees of freedom can be measured by identifying the alternative contingencies available that provide access to a critical consequence (de Fernandes & Dittrich, 2018; Goldiamond, 1976; Layng, 2020). Although an occasion • behavior relation may have many consequences, as noted in the heart damage repair example above, the consequence that governs the contingency, a repaired heart, is the critical consequence (Goldiamond, 1976; Layng, 2020). Stated otherwise, it is the reinforcer for engagement in the activity. Of course, for a contingency to be available all of its elements must also be available: the

occasion, behavior, and consequence (Layng et al., 2022). Removing an occasion, even if the behavior is otherwise available also eliminates the critical consequence, e.g., the heart medications are unavailable. Likewise, removing the behavior, e.g., an old injury prevents vigorous exercise, can also eliminate an alternative. When surgery is the last remaining option, no degrees of freedom exist. The patient is coerced into surgery and may *willingly* sign the consent form. The program intrinsic consequences of monetary cost, recovery time, and so forth do not have their effect if one is to survive. Where there is only one way to achieve the critical consequence, genuine consent is not possible and the consent may be considered fully coerced; one must consent to the surgery or die if no other alternatives are offered. The critical consequence need not be a positive reinforcer as in the case where either a general and or local anesthetic is offered so we can avoid a painful experience. Hence there are two negative reinforcement contingencies where the local and general anesthetics can have their program intrinsic effects.

We maintain that assent can similarly be treated. This approach provides a preliminary framework for preventing a state of distress/suffering by preemptively programming to maximize degrees of freedom. By doing so, we create the least coercive possible environment, thereby ensuring that learner assent reflects at least one degree of freedom. It is important to note that the presence of at least one or more degrees of freedom does not imply the complete absence of cost for the organism. What it does is to allow this difference in cost to affect the behavior of the organism (see below).

Compulsion, Consent, and Assent: A Behavioral Concept Analysis

We describe and distinguish between three forms of program participation: compulsion, consent, and assent. Further we offer definitions of each based upon a concept analysis (after Layng, 2019; Tiemann & Markle, 1991) that describes the critical features found in each concept and some of the varying features found in the concept of assent. “A concept is a class or category all the members of which share a particular combination of critical properties not shared by another class” (Markle & Tiemann, 1970; also see Layng, 2019). All members of the class or category that comprise a concept, share properties that, if absent, produce a nonexample of the concept (Tiemann & Markle, 1991). These properties or features are “must have” features (Layng, 2019). That is, each example of the concept must have certain features that define the concept. If a must have feature is absent, a nonexample of the concept is produced. In addition to must have features, concepts can also contain “can have” features which vary within the

concept (Bruner et al., 1956; Engelmann & Carnine, 1982; Layng, 2019; Markle & Tiemann, 1969; Mechner, 1962; Merrill et al., 1992; Nishimuta & Layng, 2021; Sota et al., 2011; Tiemann & Markle, 1991). The concept analyses (cf. abstract tact; Skinner, 1957) offered here are based on an analysis of the available alternative contingencies before, during, and after deployment of a program/treatment. Further, the concept analyses of the coordinate concepts (see Layng, 2019) compulsion, consent, and assent, are used to delineate between genuine consent and assent, as opposed to apparent consent and assent (implicit coercion).

Critical/Must-Have Features

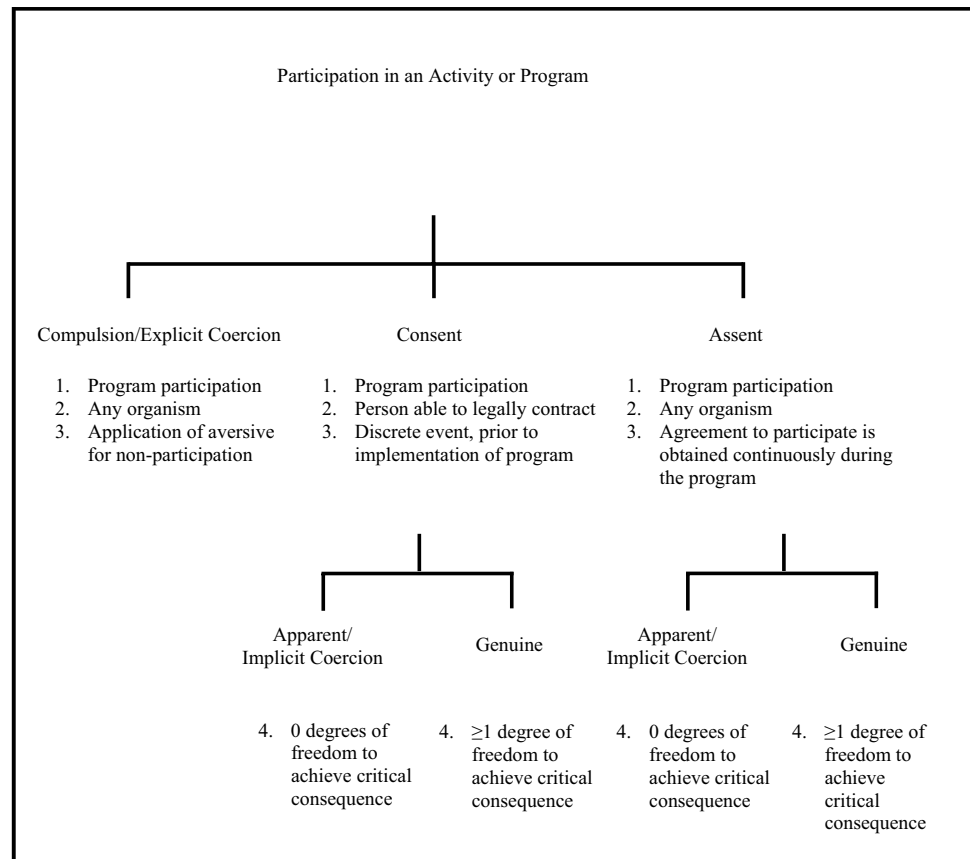
As seen in Fig. 1, the coordinate concepts compulsion, consent, and assent and their corresponding critical/must have features are described. Compulsion, consent, and assent share one crucial feature, program participation. That is, there is a discernible topographical behavior indicating a tendency to participate in the program. Each concept varies in how the contingencies are arranged for participation.

In compulsion, the critical/must have features are (1) program participation; (2) by any organism; (3) where refusal to participate or an attempt to withdraw from participation leads to an aversive event. The aversive event may be physically forced movement, or an aversive consequence for noncompliance—can have features. Although positive reinforcement may be provided as part of the program, program compliance is maintained by the aversive events for noncompliance. Willingness to participate, therefore, is not a consideration. Where physical guidance is resisted or avoided, such forced compliance is considered compulsion. Under those conditions where guidance provides program intrinsic reinforcers (see below) it does not necessarily fall under the category of compulsion.

Consent requires (1) program participation; (2) where affirmative agreement to participate is obtained from a person who meets criteria for legal ability to agree (contract); and (3) occurs prior to implementing the procedures. When a different set of procedures is required, additional consent is also required (see Goldiamond, 1976, for an extended discussion of informed consent and its implications).

Assent requires (1) program participation; (2) by any organism; and (3) where agreement to participate is obtained continuously during the program. Further, assent may be provided by both verbal or nonverbal participants, including nonhuman participants, such as zoo animals (see Abdel-Jalil et al., 2023). It requires no legal standing and occurs once legally defined consent is obtained from a source legally able to provide it.

Fig. 1 Participation in a program behavioral concept analysis



Distinguishing Genuine Assent from Apparent Assent (Implicit Coercion)

As described earlier, an additional critical/must have feature, degrees of freedom, distinguishes apparent/implicit coercion from genuine consent. Likewise, degrees of freedom can be used to distinguish apparent/implicit coercion from genuine assent. Assent may also be considered coerced if an individual has only one path to achieve the critical consequence, yielding zero degrees of freedom. Apparent/implicit coercion assent is defined when an individual “willingly” participates in an activity, but does so because there is no other way to obtain a critical consequence. “Genuine” assent occurs when there is at least one degree of freedom in obtaining the critical consequence. That is, activity A or B both result in the same critical consequence. Now, other consequences that may directly arise from the activity can have their effect. Thus, genuine assent requires at least one degree of freedom, and is distinguished from apparent/implicit coercion assent where participation is maintained through its sole access to the critical consequence, zero degrees of freedom.

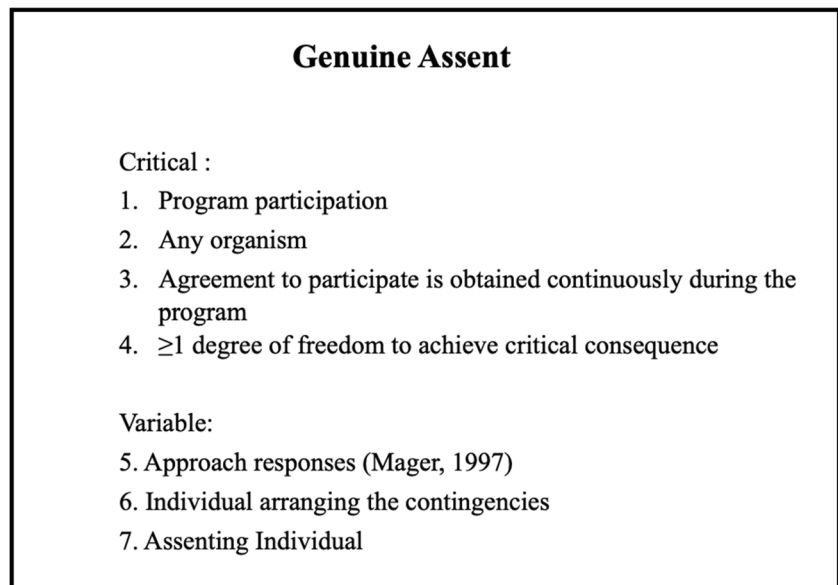
Figure 1 describes the critical/must have features of each concept and how the addition of degrees of freedom distinguishes between apparent/implicit coercion and genuine assent. With zero degrees of freedom apparent/implicit coercion

consent and assent are considered fully coerced. That is, there is but one way to obtain a withheld critical consequence, even if that consequence is a positive reinforcer. Institutions (or individuals) can arrange the conditions that make a critical consequence contingent on a single way to obtain it, institutionally instigated coercion, or may take advantage of environmental conditions, institutional opportune coercion, that do so (see de Fernandes & Dietrich, 2018; Goldiamond, 1976).

It is important to note that even when a degree of freedom exists, one alternative may simply provide the lesser of two evils in terms of the costs to the individual. This at least provides a means of reducing the aversiveness of an activity and perhaps more important, allows a practitioner to have a way of comparing procedures. By continually offering different alternatives, one can ascertain which procedures result in the greatest reduction of aversiveness and the greater likelihood of program intrinsic reinforcement, resulting in more compassionate programming.

Figure 2 provides a brief, abridged concept analysis of genuine assent that depicts both the critical/must have features and some of the variable/can have features of the concept. Although there is a wide range of variable/can have features, for the purpose of this discussion three categories were selected, approach responses, individual arranging the contingencies, and assenting participant. These were

Fig. 2 Genuine Assent
Abridged Concept Analysis



selected to illustrate the role of varying features as they may be commonly occurring for practitioners.

Approach behaviors refer to a specific response class that involves active engagement within the instructional or research context. Some examples may include talking, writing, reading, moving toward, or spending currency (tokens) on an object or event (Mager, 1997). The second variable feature is the individual arranging contingencies. Assent within behavioral programs can be considered a relation between an individual arranging contingencies (e.g. BCBA, caregiver, RBT, animal trainer), and the “assenting” participant(s) (e.g., learner).

We argue the addition of apparent/implicit coercion and genuine, which require an analysis of degrees of freedom, represent a more thoroughgoing analysis that is essential to determine the level of coercion in programs/treatment. In this approach, coercion is defined not simply through application of force or aversive stimuli, but also through positive reinforcement when there is only one way to obtain a critical reinforcer. Thus, many common practices such as differential reinforcement of alternative behavior (DRA), differential reinforcement of incompatible behavior (DRI), and differential reinforcement of other behavior (DRO) often may be categorized as coercive along with escape extinction and forced correction. Current BACB guidelines stipulate that if one is required to choose which procedure to use, an aversive event or reinforcer, current practice dictates using positive reinforcement (*Ethics Code for Behavior Analysts*, section 2.14). However, either procedure can be coercive and both have by-products which must be considered. Abdel-Jalil et al. (2023) provide a range of case studies demonstrating how genuine assent

can be gained within behavioral practice for both verbal and nonverbal participants.

Some example (EG) and nonexample (NEG) vignettes are provided to illustrate the distinction between apparent/implicit coercion and genuine assent.

1. EG: Davonte is a picky eater. During his food expansion program, Davonte is presented with three non-preferred foods on a plate. Davonte can obtain his favorite cookie by interacting with the non-preferred food in any way (touch, smell, lick, bite, etc.), or at any time walk to another table across the room to gain access to his favorite cookie.
2. NEG: Elenore is a picky eater. During her food expansion program, a bite of the nonpreferred food is held up to her mouth. She must open her mouth and accept the bite for the spoon to be removed. Opening her mouth and accepting the bite is the only way the spoon is removed. (Compulsion/explicit coercion, zero degrees of freedom)
3. EG: An RBT notices Melinda glancing at the cookie jar on the shelf. The RBT said “What do you want?” Melinda can get a cookie by any of these skills which are currently in her repertoire, verbally saying “cookie,” signing, or exchanging a picture with any of the staff in the classroom. (The topography Melinda chooses allows the RBT to evaluate the consequences other than cookies that maintain saying, signing, or exchanging a picture.)
4. NEG: Xavier was reaching for a snack. The RBT pointed to the snack, and said “What do you want? Snack?” The only way Xavier can get the snack is by saying the word “snack.” (Implicit coercion, zero degrees of freedom)

5. EG: Lucas's highly preferred activity (critical consequence) is playing with peers. The RBT offers Lucas a few choices of programs which all involve play with peers: (1) a matching game program; (2) a tacting program, e.g. "I spy . . ."; (3) an imitation program.
6. NEG: Charlie's highly preferred activity is playing with peers. The RBT offers Charlie a few choices of programs to do: (1) a matching game program, and earn play time with peers; (2) he can do a tacting program, and earn candy; (3) he can do an imitation program and earn access to an iPad. He chooses the matching program. (Although there are alternative contingencies, they do not provide the same critical consequence; apparent/implicit coercion, zero degrees of freedom to obtain critical consequence)
7. EG: An alpaca living in a petting zoo, interacting with either a zoo guest or a trainer, is provided access to food by posing for a selfie, making eye contact with the trainer, touching a target with nose, touching a guest's cheek with their nose, or gaining access to food in a food trough.
8. NEG: A goat living in a petting zoo is provided access to food only by posing for a selfie. (Apparent assent, zero degrees of freedom)
9. EG: Jimmy is participating in a tacting program. He is required to complete 10 trials to gain access to a tablet, however he can also request the tablet at any time and receive access. At trial number 6, Jimmy requests the tablet. The teacher provides access to the tablet. (The teacher evaluates the program prior to the next session)
10. NEG: Sally is participating in a matching program. She is required to complete 10 trials to gain access to a tablet. At trial number 4, Sally walks away from the table and asks a teacher she was not working with for the tablet. The teacher tells Sally she needs to complete the rest of her program before she can have the tablet.

Degrees of Coercion

Goldiamond (1976) was hesitant to provide a complete mathematical representation of coercion, but recognized that the two are inversely related—as degrees of freedom increase, degrees of coercion decrease and vice versa. By this definition, as stated by Goldiamond, “. . . the issue is never coercion versus no coercion. . . . The issue is the amount and type of coercion we are willing to accept, and the protections against abuse we set up” (p. 23). The greater degrees of freedom, the less coercion. Even with one degree of freedom, the participant is still coerced into making one of two choices. As degrees of freedom increase, there is less coercion. However, even with only one degree of freedom, the activity specific consequences can still have some effect, where they cannot if there are zero degrees of freedom. This allows for continuous program evaluation. Where a participant continually

chooses one path over another, it can inform us as to how our programs need to be changed so the program itself will produce more activity specific reinforcers than an alternative (for applied examples, see Abdel-Jalil et al., 2023).

At times, compulsion may be justified given certain contextual factors, such as legal, safety, medical, etc. In short, degrees of freedom may be a useful starting point for considering the amount of genuine choice embedded within the treatment or research context. However, further analysis is advocated to recognize when fewer degrees of freedom (greater amounts of coercion) are suitable. For example, for the most part, all children are required to participate in reading instruction. However, even at the earliest stages of intervention or instruction, it may be possible to insert opportunities for assent, and such opportunities should be increasingly embedded over time. For example, even though the child was afforded zero degrees of freedom to participate in therapy, the therapist may provide several alternative programs that may provide the same critical consequences, allowing for other “program-intrinsic” (program specific) reinforcers to have their effect.

Morris et al. (2021) conducted a literature review of journals listed on the website of two prominent behavior analysis organizations, Association for Behavior Analysis International (ABAI) and the Behavior Analysis Certification Board (BACB) using the search engine Google Scholar to ascertain if and what procedures are used to determine assent in behavior analytic research. Of the 16 journals searched, a total 226 articles were identified that included the word “assent” out of 23,447 total articles (0.96%). Of the articles included, 39 were excluded leaving 187 articles to code along four dimensions of assent: “Waived,” “No Detail,” “Minimum Detail,” and “Detailed” (p. 5). Given the limited scope of assent in behavior analytic research, the authors proposed creating an empirically validated framework for providing assent but noted that this may be difficult due to a lack of spoken and written repertoires for individuals diagnosed with autism spectrum disorder or developmental disabilities. Work with both humans and animals (Abdel-Jalil et al. 2023; Layng & Abdel-Jalil, 2022) demonstrates the applicability of the definition of genuine assent such that assent is defined through access to critical reinforcers, not the ability to say, “yes” or “no.” We recommend behavior analytic practitioners attempt to constructionally provide at least one degree of freedom wherever it is possible. This will allow for the separate assessment of program intrinsic consequences that would otherwise be overlooked. In addition, we recommend the elimination of implicit coercive practices based on positive reinforcement including many DRO and DRA procedures, and abandon compulsion, including escape extinction and planned ignoring, with the possible exception being cases where procedures are required to keep a person from seriously harming themselves or others.

Conclusion

Our effort here is to develop a common definition based on a nonlinear contingency analysis (Layng et al., 2022) and to begin a framework from which behavior analysts may design more compassionate programs based on genuine assent. We have argued that willingness to participate is not an adequate indicator of assent and even programs maintained by positive reinforcement may be sources of distress for participants. Further, we maintain that preempting such distress should be a goal. As stated by Ala'i-Rosales et al. (2019),

Preventative approaches are an emerging phenomenon and reflect a progression in the practice of behavior analysis. Prevention may lead to acquisition of prosocial behavior before problems arise, to expedited and enhanced treatment, to increased access to favorable learning environments, and, we hope, to improvement in the quality of life for many children at risk for the development of problem behavior. (p. 222)

A compassionate behavior analysis, where removal of distress is a reinforcer for practitioners/caregivers, requires preemptive strategies that minimize the likelihood of such distress. Decreasing distress in the context of building effective behavior analytic programs/treatment requires the careful consideration of the ultimate outcomes for the learner (see Scallan & Rosales-Ruiz, 2023). This may be accomplished in maximizing degrees of freedom by providing sequentially equivalent alternatives, thus reducing overall levels of coercion. Further, a consequence that at one time is critical may at other times no longer be critical. Thus, organisms should be free to terminate the activity at any time, which provides useful information about the program intrinsic consequences of the activity. The feedback provided from the program intrinsic consequences may make a significant contribution to constructing programs that are not only preferred but also effective.

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