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In Response

"Look Homeward Angel" A Call to Return to Our (Functional) Roots

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Applied behavior analysts engaged in the treatment of severe behavior problems appear to be faced with a contemporary dilemma. A dilemma, in the field of logic, is an argument in which a choice of alternatives is presented, each being conclusive and fatal. The choices being presented to those who are embroiled in the controversy involve the use of aversive procedures as treatment for behaviors such as severe aggression, tantrums, and self-injurious behavior. The choices appear to be: Either you support the use of aversive procedures or you do not. Clearly, there are staunch supporters for both "horns" of this dilemma. National organizations such as the American Association on Mental Deficiency, the Association for Retarded Citizens, and the Association for Persons with Severe Handicaps, as well as individuals such as LaVigna and Donnellan (1986), have all come out against the use of aversive procedures. Others, with equal force and eloquence, have supported the use of these procedures for dangerous behaviors when less intrusive approaches have not been successful (e.g., Axelrod, 1987; Bailey, 1987; Favell et al., 1982).

Some professionals have opted out of the dilemma by retreating to the classic tactic of debating semantics. Statements such as "What really is aversive?" and "Isn't taking away a preferred reinforcer perceived as aversive?" are really attempts to avoid the horns of the dilemma. Although these are important questions, they nonetheless detract from the central issue of this debate, that is, whether we have the right to inflict pain and suffering on another person *without their permission,* independent of the anticipated outcomes. The moral and ethical issues surrounding this dilemma have been articulated elsewhere (e.g., Guess, Helmstetter, Turnbull, & Knowlton, 1987) and will therefore not be the focus of this response. Instead, I would like to address the nature of the treatments (both aversive and non-aversive) currently used with severe behavior problems, and suggest that by returning to our "functional roots" we may be able to eliminate the need to introduce controversial interventions.

The functionalists, such as William James (see James, 1893), relying heavily on Darwin's theory of evolution, posited that mental processes evolved to serve useful functions for individuals struggling to cope with complex environments (Rachlin, 1970). Early behaviorists, theorizing about the nature of problematic behavior, also stressed the functional nature of these responses. Thus, these writers did not see these behaviors as just excesses requiring suppression. They hypothesized that these actions were rational and reasonable reactions to antecedents and consequences present in the environment. Ferster (1965), for example, described the situations surrounding a child's crying:

> Crying could occur as a reflex effect of a loud noise, a temperature extreme, or food deprivation; or it could result from a parental reaction providing consequences to the child, which, in turn, increase the frequency of the crying. (p. 10)

Progressing from these early observa-

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tions, the research of Lovaas and his colleagues empirically demonstrated that at least one form of severe problem behavior, self-injury, could be maintained by its consequences. In a classic study (Lovaas, Freitag, Gold, & Kassorla, 1965), empathic statements (e.g., "I don't think you are bad!") were presented to a 9-year-old girl each time she hit herself. This presumably humanistic treatment of her distress resulted in an *increase* in her self-injurious behavior, indicating that she may have been hitting herself to gain access to social attention.

Clearly, this line of research was a major advance in our understanding the nature of severe behavior problems. It experimentally demonstrated that responses such as life-threatening self-injury, rather than being bizarre manifestations of psychotic processes, could be explained as responses that served to gain access to such reinforcers as social attention. Subsequent research has identified other important factors that may influence severe behavior problems (e.g., sensory consequences, see Rincover, 1978; escape from unpleasant situations, see Carr, Newsom, & Binkoff, 1976; tangible consequences, see Durand, 1986).

Despite these advances in our understanding of the functions of these problematic behaviors, our application of this knowledge to treatment has proceeded slowly. Few studies of the treatment of severe behavior problems routinely incorporate a functional analysis into the design of interventions (Deitz, 1978). Although most writers on this subject acknowledge the importance of conducting these analyses, it is not unusual to see only a perfunctory treatment of this issue in intervention studies themselves. (The classic line appears to be, "There were no obvious antecedents or consequences to this behavior.") Yet, there is room for optimism.

First, significant advances have been made in the technology of conducting a functional analysis, making this endeavor more accessible to all treatment settings (e.g., Durand & Crimmins, 1988; Iwata, Dorsey, Slifer, Bauman, & Richman, 1982). Second, a small, but growing number of studies has appeared recently that apply knowledge of the function of behavior to the treatment of even the most severe problems (e.g., Carr, Newsom, & Binkoff, 1976; Durand & Kishi, 1987; Favell, McGimsey, & Schell, 1982; Smith, 1985; Touchette, MacDonald, & Langer, 1985; Weeks & Gaylord-Ross, 1981). These studies have demonstrated that severe and dangerous behaviors can be effectively treated without resorting to the use of negative consequences (Durand & Carr, in press).

Yet, it is not sufficient for workers using non-aversive procedures to replicate the literature that has documented the success of aversive treatments in initially reducing severe behavior problems. Upon reading the treatment literature, it appears that almost all competently conducted behavioral interventions can briefly reduce severe behavior problems. However, we have yet to demonstrate that *any* treatment strategy can reliably reduce problematic behavior for prolonged periods of time (e.g., Foxx & Livesay, 1984).

The value of a functional approach to treatment may lie, not in its ability to reduce problem behavior initially, but in its ability to facilitate generalization and maintenance of treatment gains. In teaching functionally-equivalent behavior, for example, the goal is to provide individuals with responses that presumably serve the same function as their problem behavior (e.g., Durand & Carr, 1987). This intervention strategy has been demonstrated to reduce problematic behavior significantly by providing individuals with alternative means of gaining access to favored reinforcers (e.g., Carr & Durand, 1985; Durand & Crimmins, 1987; Durand & Kishi, 1987). Since our technology for teaching adaptive responses that generalize and maintain well over time is quite advanced when compared to our behavior reduction technology (Stokes & Baer, 1977), this should allow us to provide more lasting and durable treatments. Successful generalization and maintenance of functionally-equivalent responses should, in turn, assure generalization and maintenance of reductions in problem behavior.

Let us return to our dilemma. Should

one advocate for or against the use of aversive procedures such as contingent electric shock to treat severe behavior problems? Personally, I am against the use of aversive interventions for problem behavior on *conceptual grounds*. This type of intervention does not address the function of problematic behavior, nor does it specifically teach alternatives. However, I also do not advocate the use of such traditional behaviora' techniques as differential reinforcement of other behavior in treating problem behavior—for the same reason. For example, suppose an individual is hitting herself to escape tasks because they are difficult or unchallenging. Techniques that involve punishing her for self-injury or reinforcing her for not hitting herself both fail to provide her with appropriate means of leaving work, and they do not address the issue of whether the tasks themselves are appropriate. Thus, conceptually, these types of interventions may not be able to produce lasting reductions in problem behavior. Using the case described above, the individual will presumably continue to attempt to escape from tasks, and may attempt novel responses (e.g., aggression, destroying materials) toward this end.

Returning to our functional roots will require an increasingly sophisticated technology of functional analysis, in addition to greater attention to the act of teaching alternatives. A source of frustration has been the relative lack of training provided to caregivers on how to teach behavior, yet extraordinary efforts are made to teach these providers how to carry out aversive procedures. Arguing about the pros and cons of aversives should be replaced with more adaptive responses: conducting research on the functional nature of severe behavior problems and developing strategies for more effectively teaching alternatives.

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