

*PUNISHMENT HAPPENS: SOME COMMENTS ON
LERMAN AND VORNDRAN'S REVIEW*

TIMOTHY R. VOLLMER

UNIVERSITY OF FLORIDA

Some readers will view the article by Lerman and Vorndran as controversial. It is a review of existing basic and applied research on punishment and a call for additional research on punishment. The thesis of my commentary is that the paper should not be viewed as controversial. Punishment happens. To ignore a natural phenomenon and its implications for a technology of behavior is akin to ignoring the physical nature of the universe. A science and a technology of behavior are incomplete without research on punishment. Five reasons to pursue punishment research are discussed, along with some caveats.

DESCRIPTORS: punishment, commentary

The paper by Lerman and Vorndran (2002) undoubtedly will be met with a degree of controversy. Punishment is a topic of considerable debate, which at times has become heated. In my view, scientists interested in the nature of human behavior cannot ignore or otherwise obviate the study of punishment. There should be no controversy. Scientists and practitioners are obligated to understand the nature of punishment if for no other reason than because punishment happens. Therefore, the paper by Lerman and Vorndran is appropriate and timely.

Whether or not one agrees with the utility or ethics of implementing punishment in clinical practice, punishment occurs like the wind and the rain. Many natural phenomena, like hurricanes, are viewed as undesirable but unstoppable. Few would argue that scientists should not seek a thorough understanding of how hurricanes work. Rather, most would argue that scientists should study hurricanes and their effects before, during, and after they happen. To ignore punishment as a topic for research is akin to ignoring the physical nature of the universe. Also, many applications of technology

would be avoided until the cost of avoidance is too great, as is the case with bypass surgery or chemotherapy. Few would argue that scientists should not explore the direct and indirect effects of invasive medical procedures. To ignore punishment as an application is akin to ignoring the benefits and limitations of medical technology. Of course, such research needs to be conducted in an ethical and humane manner, but that is an assumption that Lerman and Vorndran begin with.

Lerman and Vondran assert that "the assumption that pertinent guidelines and cautions about the application of punishment will accompany published research findings" (p. 433). A second assumption is implicit: that the study of punishment is important from a standpoint of clinical practice and basic principles. It is my objective to emphasize some of the points relevant to these assumptions. In the commentary that follows, I will briefly discuss five reasons why punishment research should continue in the same rigorous vein as any other research in the tradition of the experimental analysis of behavior. The five reasons are as follows: One, unplanned nonsocially mediated punishment happens frequently; it cannot be stopped and it will always happen. Two, unplanned socially mediated punishment happens frequently. Three, planned socially me-

Direct correspondence to Timothy R. Vollmer, Psychology Department, University of Florida, Gainesville, Florida 32611 (e-mail: vollmera@ufl.edu).

diated punishment is implemented frequently by untrained individuals. Four, unplanned socially mediated punishment is delivered or prescribed frequently by behavior analysts. Five, planned socially mediated punishment is implemented by sophisticated behavior analysts, and such applications will continue until there is better empirical support or ethical arguments against the use of punishment. Each of these reasons is discussed briefly below.

First, unplanned nonsocially mediated punishment happens frequently to virtually all human beings as we merely make our way through the day. Turning the wrong knob in the shower, touching a hot stove, taking an incorrect golf club swing are all examples of behavior that is punished. If behavior analysts do not study punishment, we will never fully understand how and why humans behave as they do. In the history of our species, the human sensitivity to punishment has been a very good thing; without it, it is unlikely that our species would have survived. I wish only to emphasize that the very prevalence of punishment contingencies in natural human interactions with the environment requires us as scientists and practitioners to understand how punishment influences behavior, both in terms of direct effects and side effects. We can never understand the entire puzzle of human behavior if we do not understand how punishment works. Punishment is a fact of nature; it just happens. Lerman and Vorndran present and review factors that influence punishment effects, and hence, the authors provide a model for understanding how punishment naturally influences behavior.

Second, unplanned socially mediated punishment happens frequently to virtually all humans. For example, an adolescent may sneer at another adolescent when the second adolescent wears a particular item of clothing to school. The first adolescent is not likely conniving to reduce the future prob-

ability of a peer wearing certain clothes, yet this unsophisticated application of punishment may reduce the future frequency of wearing the clothing item and may have various unknown indirect effects on the second adolescent's behavior. Given the social nature of punishment in this second category, behavior analysts and other professionals who oppose the study of punishment would be leaving the subject matter of a cultural analysis and social psychology to researchers outside our philosophical and empirical orientation. Do we want that? That is, current cultural practices and everyday social interactions involve punishment (even when it is unplanned), and this phenomenon presumably relates to how humans act and interact in the social milieu. Punishment is a fact of human interaction. Probably we can never fully understand language development, academic development, interpersonal skill development, and other social phenomena without a basic understanding of socially mediated punishment.

Third, planned socially mediated punishment is implemented frequently by untrained individuals. Parents, teachers, and judges, among others, implement punishment—or at least what they believe to be punishment—for the expressed purpose of decreasing problematic behavior. These individuals cannot possibly know or understand the optimal conditions under which their procedures would be effective (no one does). It is of course possible to argue that parents, teachers, and judges should never use punishment, but what would be the empirical basis for that position? Social networks at all levels—families, classrooms, communities, and nations—regularly establish and implement contingencies intended to function as punishment. What is the effect of sending a toddler to time-out? What is the effect of having a token “apple” removed from one's token apple tree contingent upon disruptive behavior in the kin-

dergarten classroom? How does sending someone to prison for 5 years influence future behavior? Behavior analysts, it is unfortunate to say, can only begin to scratch the surface in answering these complex questions. My reading of Lerman and Vorndran tells me that we do not have enough data available to provide reasonable consultation on the use of planned punishment in complex social contexts. Punishment is a fact of social policy at all levels; behavior analysts should understand how it works.

Fourth, highly trained behavior analysts often implement procedures that may function as socially mediated punishment, perhaps unwittingly. Procedural components like response blocking, redirection, mild reprimand, physical guidance, and so on are not only common in written behavioral plans in facilities and schools but are also pervasive in the pages of *JABA*. Lerman and Vorndran pointed out that one cannot contend that any one of these procedures is necessarily punishment in any given case (just as one would not argue that reinforcement is necessarily transsituational), but any one of these events could function as punishment under some circumstances. To treat procedural components as neutral is not good practice for a technology of behavior or for a science of behavior. Punishment is a fact of behavioral treatment. For better or worse, punishment is often a component of our treatment packages. A failure to study the operative components of our recommended treatment procedures to determine whether they sometimes inadvertently function as punishment is like a failure to study the effects of chemotherapy on untargeted cells; it is irresponsible.

I would like to make some side notes related to this fourth reason to study punishment. As Lerman and Vorndran alluded to, some scientists and practitioners have argued that a functional analysis of behavior obviates the need for punishment. The logic is

that we now have an assessment methodology that allows us to identify reinforcers that maintain problem behavior; therefore, the reinforcers can be withheld following problem behavior and presented following some adaptive alternative behavior. Although this appears to be good logic on the surface, it is not perfect logic as it relates to the obviation of punishment procedures: (a) A functional analysis does not always identify the reinforcers that maintain the target behavior. The differential reinforcement treatment model that extends from a functional analysis is attainable only if the reinforcers for problem behavior are identified; otherwise those reinforcers cannot be withheld or presented differentially. (b) The reinforcers that maintain problem behavior cannot always be withheld, even when they have been identified. For example, if physical contact from an adult reinforces aggression by one child to another, it is unlikely that the adult would be able to simply ignore severe aggression (the same is true for life-threatening self-injury). (c) If the behavior produces its own source of reinforcement, other sources of reinforcement may not necessarily override or compete with the reinforcers that maintain problem behavior. (d) At times a functional analysis outcome may actually prescribe punishment. For example, if problem behavior is maintained by escape, it may be therapeutic to increase the level of demands contingent on a target behavior rather than to reduce the level of demands. Similarly, if problem behavior is maintained by attention, it may be therapeutic to turn off ongoing attention as a consequence of the target behavior (i.e., response cost or negative punishment).

Now I will address the fifth reason to pursue research on punishment. Many highly trained and ethically minded behavior analysts implement punishment, presumably because they believe it is the best course of treatment for a given individual at a given

time. This practice is likely to continue until better empirical evidence or better ethical arguments against it come forward. Some of the most commonly raised concerns about the application of punishment include (a) punishment produces negative emotional side effects; (b) the effects of punishment are short-lived; (c) the abuse potential of punishment presents too great a risk for its application; and (d) there is nothing inherent in punishment that teaches alternative replacement repertoires.

To address the above issues in order: (a) Reinforcement procedures also can produce negative emotional side effects, such as when an individual fails to meet criterion for reinforcement. When an individual fails to meet criterion for reinforcement, all of the negative side effects of extinction are possible. More research is needed to evaluate the negative side effects of both punishment and reinforcement and to elucidate methods to attenuate those negative side effects. (b) As exemplified by over 30 years of elegant reversal designs published in *JABA*, the effects of reinforcement are also fleeting. More research is needed to evaluate maintenance of treatment effects and methods for sustaining treatment effects with both punishment and reinforcement. (c) The abuse potential of reinforcement should be of equal ethical concern to behavior analysts. Reinforcement too can be severely misused, such as in the case of a sexual predator using candy or toys to lure a child to a successively closer proximity. I once learned of institutional staff members using chewing tobacco to reinforce toilet cleaning by an adult man with moderate mental retardation. The man was not paid to do the job and he owned the chewing tobacco; the staff were paid to clean the toilets and did not own the chewing tobacco (by the way, the staff were caught and ostensibly punished). Clearly, natural phenomena can be mishandled and abused by many. Rigorous ethical guidelines should be devel-

oped and adhered to by all individuals in service professions. (d) The most apt ethical position would be that punishment should never be applied in a vacuum. Virtually all of human operant behavior can be viewed as choice, insofar as it occurs in the context of concurrent schedules of reinforcement and punishment. The task of the ethical behavior analyst should be to arrange contingencies such that reinforcement is loaded on the desired response alternative (i.e., the one that does not pose a threat to the individual or to others in the environment). Reinforcement for the problematic alternative (i.e., the one that poses a threat to the well-being of the individual or others in the environment) should be minimized. In the case in which dangerous behavior is maintained even when the therapist has attempted to minimize reinforcement for that alternative, it seems ethical to introduce punishment (assuming all other necessary precautions were taken). For example, it is sometimes the case that the reinforcement for severe self-injury comes in the form of unavoidable immediate physical contact (e.g., holding the individual following self-injury to prevent continued occurrences of the response). The introduction of punishment to the dangerous behavior should shift response allocation toward the desired alternative, such that the individual may learn new skills and may contact rich schedules of reinforcement in new ways. More research is needed on human choice responding, both in terms of reinforcement and punishment effects.

By no means do Lerman and Vorndran imply that they are advocates of punishment per se, without reference to the context in which that punishment occurs. In fact, they have taken special precautions to emphasize only the empirical facts about punishment. They have largely avoided the ethical issues that inherently revolve around the use of punishment. Although my commentary has generally been supportive of punishment ap-

plication and research, I want to be sure that my position is understood from the proper perspective: From an ethical standpoint, behavior analysts must pay careful attention to the circumstances under which punishment should be allowed or disallowed. For example, in Florida we have begun a new initiative to teach foster parents behavioral parenting skills based on positive reinforcement. We have chosen to emphasize positive reinforcement and deemphasize punishment for at least three reasons. First, many children in foster care have experienced a history of noncontingent aversive stimulation (or aversive stimulation contingent on age-typical disruptive behavior). From a standpoint of the matching law, a child is unlikely to spend time in an environment in which aversive stimulation is pervasive and rates of positive reinforcement are low. He or she is likely to engage in behavior that will escape or avoid such environments. Our goal is to stabilize the placement of foster children; we want them to stay in one home as long as possible. Second, many children in foster care have previously engaged in behavior that led to physical punishment, which in turn has led to physical abuse. Given that procedures such as differential reinforcement are known to be effective under some conditions and do not inherently include forceful physical contact, those procedures are less likely to lead to physical abuse if imple-

mented correctly. Our goal is to reduce the frequency of child abuse. Third, if punishment were to be recommended, relatively untrained individuals (foster parents) would administer it. It is our contention that not enough is known about punishment effects to leave its application in the hands of untrained individuals who are required by law to treat children as humanely as possible.

Lerman and Vorndran have done an expert job in outlining and evaluating what is currently known about punishment and what needs to be learned about this topic. A great deal of research is needed to understand how punishment works and how it might be used to shift response allocation to more desired alternatives that result in high rates of reinforcement for adaptive behavior. Behavior analysts do not yet know when and if punishment is ever an optimal treatment or treatment component, but we do know that punishment happens. Therefore, scientists and practitioners are obligated to pursue a better understanding of punishment effects. Until we have a better understanding of how punishment works, the application and research on punishment must be advanced with all the caution that one expects (hopes?) would be characteristic of any application of science.

Received July 19, 2002

Final acceptance July 23, 2002

Action Editor, Wayne Fisher