In Response

Buckle up for Safety: A Comment on Reynolds and Schiffbauer (2004)

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In a recent article published in this journal, Reynolds and Schiffbauer (2004) describe the possible relevance of temporal discounting (Critchfield & Kollins, 2001) to occupational safety. The authors eloquently frame the issue of impulsive choice for more immediate reinforcers (e.g., momentary comfort or reduced response effort) at the expense of more delayed or improbable aversive outcomes (e.g., death or dismemberment) as the central issue in workplace safety. Those individuals who work in the area of behavioral safety would do well to consider the advice for future research and practice provided by Reynolds and Schiffbauer. The community might be better served, however, if a central point in the argument is clarified.

In considering why safe behavior is not maintained by the absence of aversive outcomes, Reynolds and Schiffbauer pose the question, “Why then, is a lifetime of safety, by itself, not sufficient to result in 100% seat-belt usage rates?” (p. 240). Although the intent of their question is clear, the answer is not as clear. With respect to behavioral safety in general, the same question is easily reframed as, “Why isn’t safe behavior maintained by the absence of aversive consequences?” The answer is that most people never contact the

punitive consequences of unsafe behavior. Thus, the absence of these consequences cannot function as negative reinforcement for safe behavior because there is no difference in their prevalence prior to or following engagement in safe behavior. That is, if we define *safety* as the absence of physically injurious consequences, then it is usually just as likely whether or not we engage in a prescribed safe activity. Moreover, because the safety equipment so often necessary for behaving safely (e.g., seat belts, safety goggles, respirators) is not differentially related to the availability of reinforcing consequences, no stimulus control over safe behavior is developed (see Michael, 2004, for a more detailed discussion of stimulus control and discriminative stimuli). The puzzle is why we engage in such safety-related behavior at all! The explanation undoubtedly lies at least in part with our verbal histories.

A lifetime of learning in a society that sometimes reinforces safe practices, sometimes punishes unsafe practices, and spends a great deal of time talking about safe practices results in changes to our own verbal and respondent reactions to certain situations. Although the consequences themselves do not directly affect safe behavior, other people’s descriptions—and our own descriptions—of these consequences do come to control some parts of our repertoires. For example, when one enters a car, the sight of the seat belt can act as a discriminative stimulus for fastening the belt because of a history involving the differential avail-

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ability of reprimands for not fastening it or the presence of certain unpleasant conditioned verbal and respondent responses to an unbuckled seat belt. We buckle up because, in the past, not buckling up has resulted in reprimands from our friends and family or autonomic nervous system arousal (anxiety) evoked by our own thoughts of ghastly injury or costly fines. Alternatively, we might buckle up because others have recognized us for doing so or, in some cases, because it has been explicitly rewarded (e.g., Geller, Davis, & Spicer, 1983; Geller & Hahn, 1984). In any case, the seat belt is not a discriminative stimulus because safety has been more likely in its presence than in its absence.

The safe behavior in which we engage is influenced by our descriptions of the delayed and often improbable consequences of unsafe behavior but is not directly influenced by the consequences themselves. Instead, our verbal descriptions can be viewed as altering the function of various environmental events (Schlinger & Blakely, 1987). The rule statement may alter the evocative function of the sight of the seat belt and establish things such as the click of the seat belt fastening and the feel of the belt around one's waist as reinforcers. In addition, Malott (1992) suggests that for many of us the statement of some rule describing the necessity of fastening our seat belt evokes an unpleasant emotional state from which we escape by fastening the seat belt. That is, our description of the contingency acts as a reflexive conditioned establishing operation by evoking an unpleasant emotional state that establishes its own removal as a reinforcer and evokes any behavior that has produced such removal in the past (Michael, 1982, 2004).

Although the foregoing brief analysis of safety outcomes is by no means exhaustive or prescriptive, it does focus attention on an important issue: Safety is not a functional reinforcer. The consequences of safe behavior are far too remote and improbable to func-

tion as direct-acting reinforcers. At best, they are indirect-acting analogues to reinforcement that are effective only through verbal mediation (Malott, 1992). Moreover, the extrapolation from laboratory to practice in terms of temporal discounting is problematic, in that the participants in the temporal discounting research actually contact both the immediate and delayed reinforcers whereas people rarely if ever contact the aversive consequences of unsafe behavior. Most important, for the laboratory findings concerning temporal discounting to be applicable to behavioral safety, the delayed consequences of behaving safely must function as reinforcers, which they do not. Therefore, framing the problem of verbal humans foregoing delayed and improbable consequences in favor of more immediate consequences in the terms of the experimental temporal discounting literature is, on closer inspection, not justifiable.

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