Ask the Experts

Response to Ahrendt, Houlihan, and Buchanan

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While the authors ask a broad question regarding the utility of reinforcement-based programs, I will use token economies as the exemplar in my response below, given that the piece leading to the questions related to changes in the seeming effectiveness of a token economy. The question has two parts, and each part will be addressed separately.

Why might reinforcement-based programs that work well in controlled settings show different results in applied situations?

Let us first consider how reinforcement-based treatment may be implemented across highly controlled (i.e., a clinic) and controlled (i.e., an inpatient unit) settings. As an aside, I view both of these as “applied” settings. In the highly controlled environment, it is typical that the effect of one reinforcer on one behavior (or, response class) is evaluated. For example, we might note the effect of contingent attention on the appropriate communication or play behavior exhibited by an individual. Or, we might evaluate the effect of contingent access to a preferred activity on compliance. One set of antecedent stimuli (e.g., leisure activities or work) is present, and one type of reinforcer (e.g., attention or preferred activities) is delivered. We base the specific reinforcer on the outcome of some sort of functional analysis of behavior, or individualized stimulus preference assessment known to identify reinforcers. In addition, we often deliver prompts that include contingency specifying statement (e.g., “When you finish your work, you can play with <insert preferred activity here>”). If we note a positive effect, we begin to fade the reinforcement schedule by,

perhaps, providing higher order reinforcers (i.e., tokens) exchangeable for attention or activities. This process occurs in a systematic manner. Finally, the only individuals present outside of the patient are, perhaps, a therapist and a care provider.

In the less controlled setting, several of the above-mentioned elements are missing or compromised. First, we may not conduct an individualized approach to identifying meaningful back-up reinforcers. Instead, we may shoehorn patients (or students, or residents) into a token economy that has a preexisting menu of rewards. Second, we do not take the time to directly reinforce the target behavior with the back-up reinforcer. Instead, we implement indirect contingencies, as they relate to the back-up reinforcer, from the outset of any given individual’s participation. Third, we omit contingency specifying statements from the environment. We provide patients (or students, or residents) with the rules at the outset of their admission, but do not provide ongoing statements that tie together the relation of appropriate behavior and consequence. We may provide reminders from time to time, but not with the frequency and directness observed in highly controlled environments. Finally, and perhaps most importantly, there are other sources of reinforcement available. A number of staff

members, care providers, or teachers may be present. A number of other patients, students, or residents may be present. Each of these individuals may offer opportunities for reinforcement that exist outside of the token economy. Similarly, alternative activities are present, other than just the ones that can be earned through the token economy. Thus, the less controlled environment represents a concurrent schedule of reinforcement, of which the token economy is only a single component. Within the highly controlled context of a clinic, the token economy is the only component of a simple schedule of reinforcement (or, at the very most, one component of a much less complex concurrent schedule). Behavior may respond differently under these two (i.e., simple and concurrent) schedule arrangements.

How might we control for and monitor these differences?

There are a number of ways to control for the differences between the two settings. First, in less controlled settings you could make a functional analysis of behavior or individual stimulus preference assessment a routine part of intake. Use this information to tailor the rewards available for each individual. Second, be sure to incorporate stimuli relevant to the environment in any pre-intervention assessment. That is, do not rely on reports of what may be rewarding at home if the token economy will be implemented at school, as those stimuli may not

be available. Third, in the less controlled setting, you could implement a short-term direct teaching program designed to (a) systematically teach the relation between target appropriate behavior and outcomes, and (b) systematically condition the higher order reinforcers (you could even individualize the type of token by noting if one seemed to condition quicker than another). Finally, in the less controlled environment you could limit access to activities that may be similar to those included in the token economy reward menu.

Aside from taking data on the target responses the token economy was developed to address, perhaps the best way to monitor the effectiveness (or, likely changes in the effectiveness) of the program might be to observe engagement with the rewards when earned. Low engagement with the rewards might suggest that those rewards are no longer preferred and may not function as reinforcers. Similarly, a decreasing trend in engagement may indicate that the rewards are losing their reinforcing value. Practitioners should consider using low engagement and/or decreasing trends in engagement as an indicator to conduct another functional analysis of behavior or individualized stimulus preference assessment.

Author's Note

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