Backup Reinforcer

Authored by

mohammad looti

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1. Core Definition

A **backup reinforcer** is a highly desirable item, activity, or privilege that an individual can obtain by exchanging a predetermined number of accumulated tokens within a structured behavioral modification system, commonly known as a token economy. These tokens, which serve as conditioned or secondary reinforcers, acquire their reinforcing value through their consistent association with the ultimate, primary rewards provided by the backup reinforcers. The system is designed to bridge the gap between immediate desired behaviors and delayed, more substantial rewards, thereby motivating consistent engagement in target adaptive actions.

In essence, the backup reinforcer represents the ultimate incentive that gives meaning and purpose to the tokens. For instance, an individual might earn a small plastic chip (the token) immediately after exhibiting a desired behavior. These chips, having little intrinsic value themselves, become valuable because they can later be traded for something genuinely rewarding, such as a favorite snack, extra free time, or a special activity. This two-tiered reinforcement system is a cornerstone of many behavioral interventions, leveraging the principles of operant conditioning to shape and maintain positive behaviors across various settings.

2. Etymology and Historical Development

The concept of a backup reinforcer is inextricably linked to the development and widespread application of the **token economy**, a behavior management system rooted in B.F. Skinner's principles of operant conditioning. While Skinner laid the theoretical groundwork for understanding reinforcement schedules and conditioned reinforcers, the practical implementation of token economies, and thus the systematic use of backup reinforcers, gained prominence in the mid-20th century. Early pioneers such as Teodoro Ayllon and Nathan Azrin were instrumental in demonstrating the effectiveness of these systems in institutional settings, particularly with chronic psychiatric patients and individuals with developmental disabilities.

Their groundbreaking work in the 1960s, often cited in the development of applied behavior analysis, illustrated how tangible tokens could be used to reinforce a wide array of adaptive behaviors, from personal hygiene to participation in vocational tasks. The success of these early applications highlighted the necessity of highly motivating backup reinforcers to sustain behavioral change. The selection and availability of these backup rewards were crucial in determining the overall efficacy of the token system, evolving from basic necessities to a more diverse menu of preferred items and activities as researchers and practitioners refined the methodology.

3. Key Characteristics

Exchangeability: Backup reinforcers are fundamentally characterized by their exchangeability. They must be attainable only by trading accumulated tokens, establishing a clear contingency between earning tokens and accessing the desired reward. This exchange mechanism is central to the token economy's function.

High Desirability: For a backup reinforcer to be effective, it must possess significant reinforcing value for the individual. Its desirability motivates the target behavior, as individuals are more likely to engage in behaviors that lead to access to highly preferred items or activities. Preference assessments are often used to identify potent backup reinforcers.

Specificity and Transparency: The relationship between the number of tokens earned and the specific backup reinforcer available must be clearly defined and consistently applied. Individuals need to understand precisely what they are working towards and how many tokens are required for each reward, fostering a sense of predictability and fairness within the system.

Reinforcing Power: The primary function of a backup reinforcer is to strengthen the probability of future occurrences of the target behavior. Its reinforcing power lies in its ability to satisfy a primary need or provide a highly enjoyable experience, thereby making the preceding token-earning behavior more likely to recur.

Diversity and Variability: To prevent satiation and maintain motivation over time, an effective token economy typically offers a diverse menu of backup reinforcers. This variety allows individuals to choose rewards that align with their current preferences and provides options for different levels of token accumulation, from small, immediate rewards to larger, more significant incentives.

4. Significance and Impact

The concept of the backup reinforcer holds significant importance in behavioral science and its applied fields due to its powerful capacity to motivate and sustain behavior change. By providing a tangible, delayed reward for desirable actions, backup reinforcers facilitate the acquisition of new skills, the reduction of maladaptive behaviors, and the maintenance of positive habits across diverse populations. They are particularly effective for individuals who may not respond to intrinsic motivation or less concrete forms of reinforcement, such as verbal praise alone, offering a clear and consistent pathway to desired outcomes.

In structured environments, such as special education classrooms, psychiatric hospitals, and correctional facilities, backup reinforcers are instrumental in creating a highly motivating atmosphere where individuals can observe a direct link between their efforts and tangible benefits. This system helps individuals learn self-control and goal-setting, as they must delay gratification by accumulating tokens over time to access more significant rewards. The structured nature of the token economy, with its reliance on backup reinforcers, provides a clear framework for teaching and reinforcing socially appropriate and adaptive behaviors, thus improving quality of life and

functional independence.

Furthermore, the systematic application of backup reinforcers allows practitioners to tailor interventions to individual needs and preferences. By regularly assessing the reinforcing value of various items and activities, the system can remain dynamic and effective, preventing habituation and ensuring that the rewards continue to drive behavior. This adaptability makes backup reinforcers a versatile tool in addressing a wide range of behavioral challenges, from academic performance to social skills development and personal care routines.

5. Debates and Criticisms

Despite their established effectiveness, token economies and the reliance on backup reinforcers have been subjects of various debates and criticisms within the behavioral and ethical communities. One primary concern revolves around the potential for **over-reliance on external rewards**, which some critics argue may undermine intrinsic motivation. The fear is that individuals might become dependent on tangible rewards for performing tasks they might otherwise do out of genuine interest or for their inherent satisfaction, potentially diminishing their internal drive once the external reinforcement system is removed (Verywell Mind).

Ethical considerations also emerge, particularly concerning the use of token economies in vulnerable populations. Questions are sometimes raised about the potential for manipulation or coercion, especially in settings where individuals may have limited autonomy or control over their environment. Ensuring that backup reinforcers are chosen ethically, that the system promotes genuine skill development rather than mere compliance, and that individuals' basic rights are not withheld as a form of punishment is paramount (APA Ethics Code). The system must always prioritize the individual's well-being and long-term development.

Practical challenges in implementation also present limitations. Identifying consistently powerful backup reinforcers can be an ongoing process, as preferences may change. Additionally, managing tokens, ensuring consistent application by staff, and gradually fading the system to promote generalization of behaviors to natural environments can be complex and labor-intensive. Inconsistent application or inadequate phasing-out strategies can lead to a regression of desired behaviors, highlighting the need for careful planning, training, and ongoing evaluation to maximize the benefits and mitigate potential drawbacks of using backup reinforcers.

6. Practical Applications and Examples

The application of backup reinforcers is foundational to the functioning of a token economy, as demonstrated in various real-world scenarios. For instance, in a clinical or educational setting focusing on behavior modification, a patient or student who consistently practices good hygiene might be immediately given a chip as a token for their adaptive behavior. These tokens are

collected over a specified period, such as a week, and their cumulative count is then equated with access to various backup reinforcers. The value of these backup reinforcers is typically scaled, allowing for a hierarchy of rewards based on effort and consistency.

Following this tiered structure, a patient accumulating 1 to 2 chips might receive a small chocolate bar, a modest yet immediate reward for minimal effort. With 3 to 4 chips, the reward escalates to a medium candy bar, signifying greater effort. Further commitment, evidenced by 4 to 5 chips, could yield a slice of their favorite pizza. For exceptional performance, perhaps 6 chips, the reward might be increased to 1 ½ slices of pizza, and for reaching the highest tier of 7 chips, the individual could receive a generous reward such as 2 slices of pizza combined with a medium candy bar. This graded system effectively incentivizes higher levels of desired behavior.

Beyond personal hygiene, backup reinforcers are widely used in diverse contexts. In classrooms, children might earn stars or stickers for completing assignments or displaying positive social interactions, which they can later exchange for extra playtime, a choice of classroom activities, or even a small toy from a "prize box" at the end of the week (PBIS). In rehabilitation centers, individuals might earn points for engaging in therapy sessions or maintaining self-care routines, leading to access to preferred media, visitation privileges, or special outings. The core principle remains consistent: tokens are immediate, symbolic rewards that gain their power from their direct exchangeability for highly desired backup reinforcers, effectively shaping and maintaining a broad spectrum of adaptive behaviors.

7. Further Reading

Ayllon, T., & Azrin, N. H. (1968). The token economy: A motivational system for therapy and rehabilitation. Appleton-Century-Crofts.
Kazdin, A. E. (2001). Behavior modification in applied settings. Wadsworth Publishing.
American Psychological Association (APA) - Behavioral Psychology Resources.
Positive Behavioral Interventions & Supports (PBIS) Official Website.
Cherry, K. (2023). What Is Intrinsic Motivation? Verywell Mind.