

Secondary Reinforcer

Authored by
mohammad looti

October 7, 2025

RECOMMENDED CITATION

mohammad looti (2025). *Secondary Reinforcer*. PSYCHOLOGICAL SCALES. Retrieved from <https://scales.arabpsychology.com/?p=34914>

Secondary Reinforcer

Primary Disciplinary Field(s): Psychology (Learning Theory, Behaviorism)

1. Core Definition

A secondary reinforcer, formally known as a **conditioned reinforcer**, is a stimulus that acquires its ability to strengthen a behavior through a learned association with a primary reinforcer. Unlike primary reinforcers, which inherently satisfy biological needs or reduce drives (such as food, water, or safety), secondary reinforcers hold no intrinsic biological value to the organism prior to a conditioning history. Their effectiveness is entirely dependent upon the systematic pairing of the neutral stimulus with a previously established reinforcer, leading the organism to associate the presence of the secondary stimulus with the subsequent delivery of the primary reward.

The central purpose of the secondary reinforcer is to act as a reliable signal or predictor of forthcoming primary reinforcement. The initial process of establishing a secondary reinforcer relies heavily on the principles of classical conditioning, where a neutral stimulus is repeatedly presented just before or alongside an unconditioned stimulus (the primary reinforcer). Through this repeated contingency, the neutral stimulus transforms into a conditioned stimulus, eliciting an expectation or preparatory response. When utilized in an operant context, this conditioned stimulus is then deployed as a consequence following a target behavior; because the organism has learned that this consequence predicts reward, the consequence itself effectively strengthens the preceding behavior.

This mechanism is essential for explaining complex behavioral chains and delayed gratification in both animal and human populations. For example, in the classic case often attributed to Ivan Pavlov, the meat powder served as the **primary reinforcer** because it naturally elicited salivation. When a sound was consistently paired with the meat powder, the sound became a conditioned stimulus. In an operant context, this sound, having been associated with the primary reinforcer (meat powder), would then function as a **secondary reinforcer**, capable of increasing the likelihood of an arbitrary response, such as pressing a lever, that precedes its presentation. The learned value allows the reinforcer to bridge the time gap between a desired action and the eventual satisfaction of a biological need.

2. Mechanism of Acquisition: Higher-Order Conditioning

The process by which a neutral stimulus gains reinforcing power is known as higher-order conditioning, specifically focusing on the informational value of the conditioned stimulus. Acquisition is typically most effective when the neutral stimulus (which will become the secondary reinforcer) is presented immediately preceding the primary reinforcer, maximizing the predictive

power of the association. The strength of the resulting secondary reinforcer is correlated with the number of pairings, the reliability of the contingency (i.e., the secondary reinforcer must almost always lead to the primary reinforcer), and the motivational state of the organism regarding the primary reinforcer.

The learned association is critical because the secondary reinforcer does not produce reinforcement intrinsically; it functions solely as a cue. This predictability allows the organism to anticipate and prepare for the primary reward. The effectiveness of the secondary reinforcer thus depends on the continued validity of its predictive power. This mechanism allows for sophisticated behavioral manipulation, as trainers or educators can use easily administered cues (like a verbal marker, a click, or a token) to reinforce behavior precisely at the moment it occurs, rather than waiting for the delivery of the primary, often cumbersome, reward. This temporal precision is fundamental for effective shaping of novel behaviors.

Furthermore, secondary reinforcers themselves can be used to establish subsequent levels of conditioned reinforcement--a process called second-order conditioning. A stimulus that reliably predicts a known secondary reinforcer can itself become a new, tertiary reinforcer, albeit often weaker than the original. This chaining capability permits the construction of elaborate sequences of reinforcement that sustain long-term behavioral persistence. This hierarchical structure explains how abstract concepts far removed from basic needs, such as academic success or professional recognition, can maintain powerful motivational control over complex human behavior.

3. Key Categories: Specific and Generalized Reinforcers

Secondary reinforcers are typically categorized based on the scope and diversity of the primary reinforcers they predict, leading to the distinction between specific and generalized conditioned reinforcers. This categorization is essential for understanding the stability and utility of the learned reward.

A **specific secondary reinforcer** is paired with only one type of primary reward. For example, a flashing light paired exclusively with the presentation of water will only serve as a reinforcer when the organism is thirsty. The reinforcing value of such a stimulus is highly unstable and susceptible to prompt satiation. Once the organism is no longer deprived of the specific primary reward (e.g., once thirst is quenched), the conditioned stimulus loses its power until deprivation recurs. This dependency limits their utility in long-term or broad-context behavior modification programs.

A **generalized secondary reinforcer (GSR)**, conversely, is a stimulus that has been associated with multiple different primary reinforcers (e.g., food, water, warmth, social attention) and various other strong secondary reinforcers. Because the GSR predicts access to a wide variety of backup reinforcers, the temporary satiation of any single primary need does not significantly diminish the overall reinforcing power of the stimulus. B. F. Skinner emphasized GSRs, noting their immense

practical utility.

The paramount example of a human generalized secondary reinforcer is **money**. Money acquires its massive reinforcing power because it can be exchanged for nearly every primary need (food, shelter) and countless secondary rewards (status, entertainment). Its value remains high regardless of whether an individual is currently hungry or tired, making it an exceptionally potent and stable motivator for sustained economic and social activity. Other examples of GSRs include praise, attention, and tokens used in structured behavioral economies.

4. Historical Context and Behaviorist Integration

While the foundational principles of associative learning were established by Pavlov, the integration of conditioned stimuli into the functional analysis of behavior as *reinforcers* was primarily driven by the work of B. F. Skinner and the tradition of operant conditioning. Skinner defined reinforcement strictly by its consequence--does the consequence increase the future probability of the behavior? Within this framework, a secondary reinforcer is defined not by its origin, but by its function in controlling behavior, making it a powerful tool for experimental and applied behavioral science.

Skinner recognized that relying solely on primary reinforcers limited the scope of behavioral research and application, particularly given the necessity of immediate reinforcement. By introducing secondary reinforcers, he provided a mechanism to bridge the temporal gap between a response and a delayed primary reward. The immediate delivery of a conditioned reinforcer provides necessary feedback to the organism, solidifying the association between the action and the consequence, which is often crucial for effective learning. Without this bridging mechanism, complex behaviors requiring long response chains would be nearly impossible to train or sustain due to the inherent delay in primary reinforcement.

Theoretical debates in the mid-20th century explored whether secondary reinforcement was purely a function of classical pairing or if it involved cognitive elements such as "hope" or "expectancy." Modern understanding synthesizes these views, acknowledging that the initial acquisition involves simple associative learning (classical conditioning), but the application of the reinforcer in complex operant tasks often involves the organism recognizing the stimulus as informative--a signal providing predictive information about the environment and the eventual outcome. This predictive signaling is the source of its motivational strength.

5. Practical Applications and Token Economies

The clinical and educational utility of secondary reinforcers is most evident in structured environments utilizing token economy systems, a key strategy within Applied Behavior Analysis (ABA). In a token economy, individuals earn tangible, easily dispensed tokens (e.g., plastic chips,

points, tickets) for desired behaviors. These tokens are highly effective **generalized secondary reinforcers** because they can be accumulated and later exchanged for a variety of "backup" reinforcers, which may include primary items (preferred foods), highly valued privileges (extra free time), or access to specific activities.

Token economies are invaluable in settings where primary rewards cannot be continuously administered, such as psychiatric units, schools, and therapeutic residential programs. They allow staff to maintain immediate and consistent reinforcement schedules, ensuring that reinforcement is delivered precisely after the target behavior occurs, thus maximizing the learning curve. Furthermore, the use of generalized tokens mitigates the problem of satiation; if a student is no longer interested in one backup reward, they still value the token because it can be exchanged for something else on the menu.

Beyond clinical settings, secondary reinforcement drives most industrial, commercial, and societal motivations. Financial compensation (salary), grades in academic courses, professional titles, and even social recognition (likes on social media) are all examples of complex, generalized secondary reinforcers that guide behavior on a massive scale. These stimuli are pursued vigorously because they reliably predict access to comfort, resources, and social standing--all of which are ultimately linked back to primary needs and social fulfillment. The entire concept of delayed gratification, central to successful human endeavor, is functionally reliant on the power of these learned, conditioned rewards.

6. Extinction and Factors Affecting Longevity

A crucial vulnerability of the secondary reinforcer is its reliance on the primary reinforcer. Since its value is learned, its absence can lead to **extinction**. If the secondary reinforcer is repeatedly presented without the subsequent delivery of the predicted primary reinforcer, the predictive association weakens, and the secondary reinforcer gradually loses its power to strengthen behavior. The organism eventually learns that the cue no longer reliably signals the reward.

The speed and completeness of extinction are influenced by the conditioning history. Secondary reinforcers that were established quickly with few pairings may extinguish rapidly. Conversely, generalized secondary reinforcers are highly resistant to extinction. Due to their long history of being paired with myriad backup rewards, it is practically impossible for the contingency linking a GSR (like money) to all its associated primary reinforcers to break simultaneously. This extensive reinforcement history ensures the longevity and stability of GSRs across various environmental changes.

Practical application must always involve periodic maintenance of the association, known as **booster pairings**. Even powerful secondary reinforcers must occasionally be paired with their backup primary rewards to renew the strength of the contingency. If trainers or parents fail to "cash

in" the secondary reinforcers (tokens, praise, etc.) for real, meaningful primary or established secondary rewards, the entire motivational system will eventually collapse as the conditioned stimuli become mere meaningless cues.

7. Further Reading

[Secondary reinforcement \(Wikipedia\)](#)

[Operant Conditioning and B. F. Skinner's Analysis](#)

[Simply Psychology: Operant Conditioning and Types of Reinforcement](#)

[Generalized conditioned reinforcer](#)

[Token economy in Applied Behavior Analysis](#)

ARABPSYCHOLOGY.COM