

## Lucky! Lucky! Lucky!

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Wintario does it; Lottario does it; Lotto 649 does it; Ontario 49 does it; Instant Bingo does it; Encore does it; PayDay does it; Super 7 does it; and all of the various instant scratch games do it. Do what? All of these Ontario gaming entries rely on what is called instrumental or operant conditioning to help prolong the existence of the game.

Instrumental conditioning is a psychological learning theory that is based on the concept of reinforcement. In the context of lottery games, the desired behaviour, from the perspective of the controllers of the game, is the purchase of tickets. From the perspective of the participants in the game (i.e., the consumers), the desired reinforcement or reward is the monetary value of a winning ticket or gaming card.

An ad that we see for a particular game represents the external stimulus. The purchase of tickets represents the response (i.e., the behaviour to be learned). The monetary value of a winning ticket represents the positive reinforcement for the behaviour carried out (i.e., the purchase of a ticket). As long as this behaviour is reinforced in a positive way (i.e., positive reinforcement occurs), the behaviour (i.e., buying tickets) has a greater likelihood of being continued because of the strengthening of this response.

So, how do lotteries ensure that we will continue to purchase tickets? They do it by offering a great number of prizes of very low value. While the odds of winning the major prize in the Lotto 649 game is about 1 in 14 million, the odds of winning \$10 is about 1 in 57 (need 3 of the 6 numbers drawn) and the odds of winning \$5 is about 1 in 81 (need 2 of the 6 numbers drawn plus the bonus number). The odds of winning the major prize in the Super 7 game is almost 1 in 21 million, but the odds of winning the smallest prize, a free ticket, is a little more than 1 in 7. You also can win a \$10 prize, if you have 3 of the 7 numbers and the bonus number (about a 1 in 66 chance) or 4 of the 7 numbers drawn (about a 1 in 61 chance). The odds of winning the various prizes for the lotteries offered by the Ontario Lottery Corporation can be found on the following website: <http://www.olg.ca>.

If the lotteries only offered the major prize, consumer interest in a game would fall off very quickly, since there would be no reward by participating in the game (except for the lucky winner). The winning of anything in a lottery, even if it is only a free ticket or \$5 is often sufficient to keep a consumer's interest in continuing to purchase tickets; who knows, maybe the next ticket purchased will be the big winner! How would you feel if your lucky numbers won the next draw, but you did not purchase a ticket? And, as the ads use to say, you can't win if you don't play!

Perhaps the best way to illustrate the relevance of the concept of reinforcement to lottery games is to examine the behaviour of someone buying a ticket and scratching it in the store. The odds are that, if the person wins a small monetary prize, he or she will not pocket the money and walk away. In a sense that would be the more logical response, because isn't that the reason people buy lottery tickets or scratch-and-win game cards? Instead of pocketing the money, the more likely response is that the person will immediately spend the winnings on more tickets, hoping to receive another reward (i.e., positive reinforcement). The odds are, however, that the person's luck will quickly run out, but there is always hope in the future. Continually buying tickets that are losers leads to punishment, which in turn will eventually extinguish the behaviour of purchasing tickets. Since not everyone can win the major prize, the lottery operators have to find a way to avoid having the behaviour of purchasing tickets from becoming extinguished. The offering of many small prizes is one way to reduce the likelihood of such a result.

While the offering of some reward helps reduce the likelihood of the desired behaviour from being extinguished, it is also important to ensure that the reward schedule (i.e., when a reward is received) itself encourages repeat purchases. A reward schedule can be of a fixed-interval, variable-interval, fixed-ratio, or variable-ratio nature. The extreme of a fixed-ratio reinforcement schedule is winning every time you purchase a ticket or game card. This approach is also referred to as a continuous reinforcement schedule. Unfortunately for the game controllers, if a ticket buyer won a prize every time a ticket was purchased, as soon as reward was no longer offered, the likelihood of continuing the purchase behaviour would decrease very quickly. However, if the game participant only won something every so often (i.e., a variable reward schedule) and/or in terms of the number of tickets purchased (i.e., a ratio reward schedule), the likelihood of continuing the behaviour would more likely continue, especially under a variable-ratio schedule. Clearly, the lotteries are structured to be consistent with the latter situation. It would also be financially cheaper for the game controllers to structure the games so that not every ticket or card is a winner.

So, the next time you buy a lottery ticket, analyze your behaviour and feelings, whether you win or lose. You might even try scratching tickets some time after you purchase them and a location other than a lottery outlet. Alternatively, at the very least, you might want to put at least half of your winnings in your pocket and only try to continue your luck with remaining half. No matter what you do, remember what the ads use to say: You can't win if you don't play!

### Questions:

1. What is meant by instrumental conditioning?
2. Explain what is meant by each of the following possible outcomes of an instrumental (operant) conditioning situation: positive reinforcement, negative reinforcement, punishment.
3. What is meant by extinguishing a behaviour?

4. Explain the nature of each of the following reinforcement schedules: fixed-interval, variable-interval, fixed-ratio, variable-ratio, continuous.
5. Many retailers and other marketers offer reward or loyalty programs. In the past, the offering of trading stamps (e.g., S&H Green Stamps) was a popular approach used by supermarkets. Subway also has used the stamp approach. Air Miles and the loyalty programs offered by airlines reflect another approach. Gourmet coffee shops often use a punch card, offering the customer a free drink after a row on the card is completed (i.e., the customer's card is punched after each purchase). Once the required number of purchases is made, the free drink can be obtained. Identify which reinforcement schedule applies to each of these approaches. Can you identify and explain any other such marketing programs?
6. What types of lotteries exist in your area? What type of reinforcement schedule is used by the major lotteries in your area?
7. You are the marketing manager for Bonanza State Lotteries. You are about to develop a weekly lottery draw and a game-card lottery for the state. Explain how each of the reinforcement schedules could, if at all, be applied to your market offerings. Which approach would be the best to use to ensure continued patronage? Why?