

Try It Yourself 3.1

Consider the following examples. Try to determine what the stimulus is and what the response is. Is the response a reflex or is it voluntary?

- You have spent 2 hours in a stuffy classroom and you yawn.

A yawn is a reflex. The stuffiness of the classroom (with insufficient oxygen) is a stimulus eliciting the reflexive response of a yawn.

- Your mother yells at you and you turn your music up louder.

Your action of turning up the music is voluntary. Mother's yelling is the stimulus, which you respond to with the response of increasing the music's volume.

- Your mouth starts to water as you pass the door of a bakery.

Salivation is a reflexive response, elicited by the stimulus of delicious smells coming from the bakery.

- You close your eyes while watching a horror movie.

Closing your eyes is a voluntary response. You make this response because you have glimpsed (or anticipate glimpsing) a gory or frightening stimulus in the movie.

Try It Yourself 3.2

The following are common situations which can be explained by basic classical conditioning principles. Can you identify them?

- A one year old baby, who earlier liked all people, now reacts negatively to strangers.

This may be a case of stimulus generalization: the baby may have been frightened by a stranger and now generalizes the response to all people with whom the child is unfamiliar.

- After cutting yourself badly with an electric saw, you feel uneasy about using an electric knife to carve a roast beef.

Again, stimulus generalization may be at work: since an electric saw and an electric knife have much in common, you may be generalizing your caution about electric saws to the electric knife.

- Continuing the above situation, you have forced yourself to use the electric knife several times and you have had no mishaps. Now you find your anxiety is gone. *After using the electric knife with no mishaps, you have subjected yourself to extinction trials. The electric knife is no longer paired with the use of the electric saw's bad outcome, and you now show stimulus discrimination in reacting with unease to the electric saw and with no anxiety when using the electric knife.*

- You are introduced to someone by a close friend, and you like the person immediately.

This may be a case of higher order conditioning. Your close friend has been paired with your feelings of enjoyment, support, companionship:

UCS	→	UCR
<i>good times</i>		<i>pleasure</i>
CS ¹	→	CR
<i>friend</i>		<i>pleasure</i>

Your friend now may serve as a higher order US. By pairing an unknown person with your friend, he or she may elicit the response of pleasure as well:

CS ¹	→	UCR
<i>friend</i>		<i>pleasure</i>
CS ²	→	CR
<i>unknown person</i>		<i>pleasure</i>

Try It Yourself 3.3

The processes of classical conditioning can give us greater understanding of many phenomena involving our emotions and our physical responses. Can you see how Pavlovian principles can be applied to the following situations?

- George's father died, and in the year since then, he has had an uncommonly large number of colds and flues.

As stated in the text, stimuli associated with low points of immune system functioning may continue to impair immune response at later times. It is reasonable to assume that George's immune system was impaired with the stress of his father's death, making him more prone to disease. In the year since then, there would be several stimuli in George's life that would remind him of his father's death and of his grief. For example, special days such as holidays and birthdays are commonly reported to be very difficult for mourners in the first year following the death of their loved one. One classical conditioning situation may be as follows:

UCS	→	UCR
<i>father's death</i>		<i>grief and lowered immunity</i>
CS	→	CR
<i>memories of father</i>		<i>fresh grief and lowered immunity</i>

- Patricia finds that every time she feels nervous, she wants a cigarette.

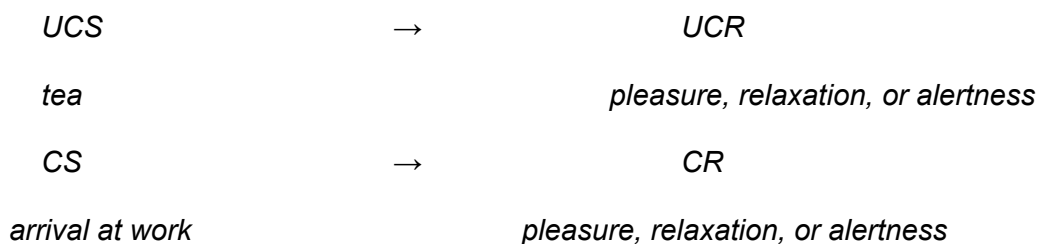
For a smoker, effects of nicotine are typically pleasurable, and many smokers feel relaxation when they light up a cigarette. The cigarette has become a conditioned reinforcer. In Patricia's case, nervousness provokes a desire for relaxation. The situation may be as follows:

UCS	→	UCR
<i>nicotine</i>		<i>pleasure, relaxation</i>
CS	→	CR
<i>cigarette</i>		<i>relaxation</i>

Patricia may then perform an operantly conditioned response, such as lighting a cigarette, to attain the reinforcer of relaxation.

- Domenic, a tea-lover, always had a cup of tea each morning when he first arrived at work. Now that he works the night shift, he finds that he has an intense desire for tea when he arrives at work just before midnight.

Domenic has learned through classical conditioning to associate his arrival at work with a cup of tea. For Domenic, starting his work shift is a potent predictor of having a cup of tea, and he may even feel he cannot start his work without it! The situation is:



Do you see classical conditioning at work in your own behaviour? For example, does hot weather seem to trigger your desire for ice cream? Do you feel anxious when you visit a hospital? Do you have keepsakes with emotional significance?

Try It Yourself 3.4

Are you ever required to take multiple choice tests or examinations? In such a test, you are required to pick out the correct answer out of several possible answers, and you are given marks for each correct selection you make. In essence, you are being rewarded for the frequency of your (correct) responding. This is a valid evaluative technique, but sometimes students complain that their performance on such a test did not reflect their true knowledge and understanding of the material being tested. That is, they argue that the *frequency* of their correct selections did not take into account the *quality* of the answers they might have produced on their own, as would have been the case in a short answer test or an essay. Have you had this experience? What would you consider to be a better way of evaluating your knowledge: through the frequency of your correct choices or the quality of self-produced answers?

Note that there are situations in everyday life where the frequency of response is a useful measure (e.g., the number of times an athlete scores). How would you decide when frequency is an appropriate measure or not?

Frequency is typically a better measure of a response when the quality of the response is not relevant. In golf, for example, whether or not the golfer has made a swing that gives even professional golfers delight is not as important as whether the golf ball makes its way to the hole. In another example, a mother of our acquaintance said of her teenage son, "I don't care whether he throws his clothes into the laundry hamper or places them in carefully, as long as they wind up in the hamper!"

Try It Yourself 3.5

Having studied the basic principles of operant conditioning, can you apply them to these examples?

- Sven doesn't study after every class, but the closer it gets to an examination date, the

more he studies. What type of schedule of reinforcement is Sven responding to?

Sven is on a fixed interval schedule. Examinations are held at specified times, and Sven has learned that he will not get a reinforcer of good marks unless he performs well at that time. Studying well before the examination does not seem to have much reinforcement associated with it to Sven (although in reality it is the better strategy!), but studying close to the time of the examination when reinforcement is potentially imminent, seems like more likely to produce a reinforcer.

- A mother sometimes laughs when her 4 year old son Rex performs a dance, but at other times, especially when she is busy, she doesn't respond. What type of schedule of reinforcement is Rex responding to? If his mother's reactions continue as described, will Rex continue to dance or not?

Rex's mother is administering partial reinforcement to Rex, specifically on a variable ratio schedule. Partial reinforcement tends to produce higher rates of responding than continuous reinforcement, and is much more persistent than behaviour acquired under continuous reinforcement. VR schedules produce steady, high rates of responding that are quite resistant to extinction. Rex will probably continue to dance quite steadily and to persist in dancing, even if his mother no longer laughs.

- Natalie flirts outrageously with every man she meets, unless her husband is present.

How would the principles of operant conditioning explain this?

Natalie's husband is a discriminative stimulus. His absence indicates that her behaviour will probably meet with pleasant outcomes, but in his presence, the possibility of punishment (in his disapproval) is more likely.

- Do you have any 'bad habits'? What is the response? What is the discriminative stimulus that cues the response? What is the reinforcer that sustains it? Can you think of a way to modify your behaviour?

Modifying your behaviour may mean removing the discriminative stimulus that cues your response as well as removing the reinforcer that sustains it. For instructions on how to modify your behaviour, see Applying the Concepts: Using Self-Modification to Change Behaviour in the 'Background' section of the study guide for this chapter.