Methods to define and modify behaviour

Psychology can be rightly defined as the study of behavior. As such, psychologists have developed ways to study and modify behavior. The most commonly used techniques in behavior modification are classical conditioning, operant conditioning, and social learning/modeling. Psychologists also attach considerable significance to conditioning because it typically has predictable results.

Classical Conditioning is social learning device used to create a connection between an artificial stimulus and a natural stimulus, so that the artificial stimulation begins to create the desired response even when the natural stimulus is removed. Classical Conditioning is the type of learning made famous by Pavlov's experiments with dogs. Pavlov presented dogs with food, and measured their salivary response. He then began to ring a bell just before presenting the food. At first, the dogs did not begin salivating until the food was presented. After a while, however, the dogs began to salivate when the sound of the bell was presented. They learned to associate the sound of the bell with the presentation of the food. As far as their immediate physiological responses were concerned, the sound of the bell became equivalent to the presentation of the food.

Let us consider, for the sake of illustrating the idea of classical conditioning, we are trying to get a child to eat their vegetables. The current behavior of the boy is to sit, and pout about having to eat veggies, which to him are the most awful food on the planet.

In order to change the child's behavior, his mother sets a slice of delicious chocolate cake (the boy's favorite food) on the counter, and tells the child

that if he eats the vegetables, he can have the cake. The child eats the veggies, enjoys the cake (which subconsciously he pairs as a reward with the behavior of eating his veggies). The boy runs out of the kitchen, grinning with the prospect of playing with his friends. Parent repeats the cake offer on several occasions, and eventually the child eats the vegetables (and starts to like the veggies over time) without the promised reward.

Let's examine the individual components of this experiment. When Pavlov observed his experiments with the dogs salivating over the meat and the bell he outlined four variables in order to understand his findings. These four variables are still used today in context with classical conditioning. These four elements are:

Unconditioned Stimulus (UCS): Is something we have ether a positive or negative response and leads to the action of… (In the example we have two: [1] The hatred of Veggies, and [2] The love of chocolate cake.)…

Unconditioned Response (UR): Is both our natural response to the UCS, and the behavior we are trying to modify (In our example, the boy [1] won't eat the veggies, because they are disgusting. And [2] loves cake…)…

Conditioning Stimulus (CS): Is something we can use to modify a response to something we find pleasurable or not pleasurable…(In the example we add the greater pleasure of the cake to the undesirability of the veggies in order to modify the UCS of the aversion to veggies…

Conditioned Response (CR): The conditioned response is modified behavior created by the pairing of the CS with the USC. (again in our example, this is the child eating his veggies even without the cake.)

Ethically, classical conditioning may not be the greatest method in our schema for training a human child. While classical conditioning may be effective in eliciting a desired behavior, there are significant risks including: the development of phobias (Little Albert) through association, and the undesired risk of the subject becoming dependent upon a stimulus (Cake in our example above) to carry out simple tasks. Maybe our boy from the experiment will refuse to eat his veggies if the cake is not offered to him. Perhaps a better method of conditioning is a method, know as operant conditioning.

Operant Conditioning is another training device in which the trainee is conditioned to make a connection between a behavior and a consequence. A trainee connects the behavior with a consequence. A kid is trained to eat veggies and rewarded with cake. The child begins to associate the treat with his behavior. Eating veggies gets me cake. The child begins to eat his veggies without the promise of cake. This particular situation is called a positive reinforcement.

In addition to Positive Reinforcement, there are three other quadrants which comprise what is known as the Operant Conditioning Schedule:

[1]. Positive Reinforcement: favorable events or outcomes that are presented after the behavior. In situations that reflect positive reinforcement, a

response or behavior is strengthened by the addition of something, such as praise or a direct reward.

[2.] Negative Reinforcement: involve the removal of an unfavorable events or outcomes after the display of a behavior. In these situations, a response is strengthened by the removal of something considered unpleasant.

[3.] Positive Punishment: sometimes referred to as punishment by application, involves the presentation of an unfavorable event or outcome in order to weaken the response it follows.

[4.] Negative Punishment: also known as punishment by removal, occurs when an favorable event or outcome is removed after a behavior occurs.

In our particular case positive reinforcement is the most effective strategy because the child is more apt to repeat the desired behavior. If we were to use Negative Reinfocement, the mother could add something to the veggies to mask the flavor, and the child will be robbed of the chance to grow through the experience of doing something he does not want to do. To use Positive Punishment, the mother may give the child more veggies if he does not eat the original amount in a certain amount of time – the child might eat the veggies and be no more apt to eat the veggies the next time or worse yet resent his mother and the veggies. An example of the forth and last quadrant of the Operant Conditioning Schedule, Negative Punishment, The mother says no cake and no play tonight since you complained and did not eat your veggies.

Operant conditioning was coined by behaviorist B. F. Skinner. As a behaviorist, Skinner believed that internal thoughts and motivations could not be used to explain behavior. He suggested that we should look only at external, observable causes of human behavior. Skinner used the term operant to refer to any active behavior that operates upon the environment to generate consequences. In other words, Skinner's theory explained how we acquire the range of learned behaviors we exhibit each and every day.

The consequence can be positive or negative. In this case, positive and negative are not terms that are of qualitative meaning a good consequence or a bad one. Positive is any consequence that is something added or started. Negative means that something is taken away or ended. Positive or negative reinforces can be perceived as either good or bad to the subject.

We have punishers or reinforcers. Punishers decrease a behavior, reinforces increase a behavior. The goal is to get the trainee to decrease undesirable behaviors and increase desirable behaviors. If you want to train a dog to do something, you want to reinforce a desirable behavior. If the dog is doing something the trainer doesn't want, you want to decrease the behavior. Often the term " punishment" is seen as a negative thing. In this context, however, a punishment is simply that which is used to decrease a behavior.

Another type of behavior modification is called modeling /social learning. Social learning theory focuses on the learning that occurs within a social context. It considers that people learn from one another, including such concepts as observational learning, imitation, and modeling. Among others, Albert Bandura is considered the leading researcher/developer of this theory.

social learning theory is unique in that it can be considered a bridge or a transition between behaviorist learning theories and the cognitive learning theories discussed earlier.

General principles of social learning theory follows:

1. People can learn by observing the behavior is of others and the outcomes of those behaviors.

2. Learning can occur without a change in behavior. Behaviorists say that learning has to be represented by a permanent change in behavior, in contrast social learning theorists say that because people can learn through observation alone, their learning may not necessarily be shown in their performance. Learning may or may not result in a behavior change.

3. Cognition plays a role in learning. Over the last 30 years social learning theory has become increasingly cognitive in its interpretation of human learning. Awareness and expectations of future reinforcements or punishments can have a major effect on the behaviors that people exhibit.

4. Social learning theory can be considered a bridge or a transition between behaviorist learning theories and cognitive learning theories.

How the environment reinforces and punishes modeling:

People are often reinforced for modeling the behavior of others. Bandura suggested that the environment also reinforces modeling in several possible ways:

1, The observer is reinforced by the model. For example a student who changes dress to fit in with a certain group of students has a strong likelihood of being accepted and thus reinforced by that group.

2. The observer is reinforced by a third person. The observer might be modeling the actions of someone else, for example, an outstanding class leader or student. The teacher notices this and compliments and praises the observer for modeling such behavior thus reinforcing that behavior.

3. The imitated behavior itself leads to reinforcing consequences. Many behaviors that we learn from others produce satisfying or reinforcing results. For example, a student in my multimedia class could observe how the extra work a classmate does is fun. This student in turn would do the same extra work and also receive enjoyment.

4. Consequences of the model's behavior affect the observers behavior vicariously. This is known as vicarious reinforcement. This is where in the model is reinforced for a response and then the observer shows an increase in that same response. Bandura illustrated this by having students watch a film of a model hitting a inflated clown doll. One group of children saw the model being praised for such action. Without being reinforced, the group of children began to also hit the doll .

Contemporary social learning perspective of reinforcement and punishment:

1. Contemporary theory proposes that both reinforcement and punishment have indirect effects on learning. They are not the sole or main cause.

2. Reinforcement and punishment influence the extent to which an individual exhibits a behavior that has been learned.

3. The expectation of reinforcement influences cognitive processes that promote learning. Therefore attention pays a critical role in learning. And attention is influenced by the expectation of reinforcement. An example would be, where the teacher tells a group of students that what they will study next is not on the test. Students will not pay attention, because they do not expect to know the information for a test.

Cognitive factors in social learning:

1. Learning without pressure of performance: A distinction between learning through observation and the actual imitation of what has been learned.

2. Cognitive processing during learning: theorists contend that attention is a critical factor in learning.

3. Expectations: As a result of being reinforced, people form expectations about the consequences that future behaviors are likely to bring. They expect certain behaviors to bring reinforcements and others to bring punishment. The learner needs to be aware however, of the response reinforcements and response punishment. Reinforcement increases a response only when the learner is aware of that connection.

4. Reciprocal Causation: Bandura proposed that behavior can influence both the environment and the person. In fact each of these three variables, the person, the behavior, and the environment can have an influence on each other.

5. Modeling: There are different types of models. There is the live model, and actual person demonstrating the behavior. There can also be a symbolic model, which can be a person or action portrayed in some other medium, , such as television, videotape, computer programs.

Many behaviors can be learned, through modeling. Some examples include watching (a parent, or other authority archetype): a parent reading or a teacher solving mathematic problems or seen someone act bravely in a fearful situation. Aggression can be learned through models. Much research indicates that children become more aggressive when they observed aggressive or violent models (BOBO dolls). Moral thinking and moral behavior are influenced by observation and modeling. This includes moral judgments regarding right and wrong which can in part, develop through modeling.

Much research has been done in the name of behavior modification, and a lot of social tools have become available to people who in the not-so-distant past would have had very little hope of correcting their negative behaviors/addictions. Tools such as conditioning and modeling continue to be on the forefront in the psychology professions because they are effective ways to break negative behaviors and build positive habits.