

Behaviorism

From Emerging Perspectives on Learning, Teaching and Technology

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Independent Chapter Review

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What is Behaviorism?

Behaviorism is primarily concerned with observable and measurable aspects of human behavior. In defining behavior, behaviorist learning theories emphasize changes in behavior that result from stimulus-response associations made by the learner. Behavior is directed by stimuli. An individual selects one response instead of another because of prior conditioning and psychological drives existing at the moment of the action (Parkay & Hass, 2000).

Behaviorists assert that the only behaviors worthy of study are those that can be directly observed; thus, it is actions, rather than thoughts or emotions, which are the legitimate object of study. Behaviorist theory does not explain abnormal behavior in terms of the brain or its inner workings. Rather, it posits that all behavior is learned habits, and attempts to account for how these habits are

formed.

In assuming that human behavior is learned, behaviorists also hold that all behaviors can also be unlearned, and replaced by new behaviors; that is, when a behavior becomes unacceptable, it can be replaced by an acceptable one. A key element to this theory of learning is the rewarded response. The desired response must be rewarded in order for learning to take place (Parkay & Hass, 2000).

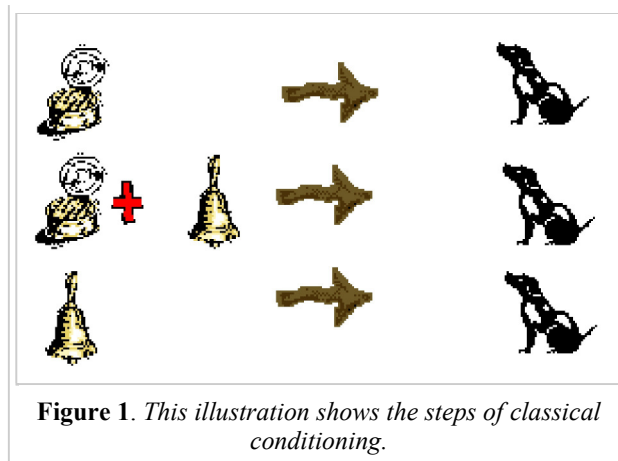
In education, advocates of behaviorism have effectively adopted this system of rewards and punishments in their classrooms by rewarding desired behaviors and punishing inappropriate ones. Rewards vary, but must be important to the learner in some way. For example, if a teacher wishes to teach the behavior of remaining seated during the class period, the successful student's reward might be checking the teacher's mailbox, running an errand, or being allowed to go to the library to do homework at the end of the class period. As with all teaching methods, success depends on each student's stimulus and response, and on associations made by each learner.

This chapter introduces behaviorism's principal advocates and their distinct approaches to the theory. Some implications for classroom management are also presented, along with methods for maintaining and eliminating behaviors. This paper presents information useful to instructional designers, media developers, and, especially, classroom teachers.

Behaviorism Advocates

John B. Watson (1878-1958) and B. F. Skinner (1904-1990) are the two principal originators of behaviorist approaches to learning. Watson believed that human behavior resulted from specific stimuli that elicited certain responses. Watson's basic premise was that conclusions about human development should be based on observation of overt behavior rather than speculation about subconscious motives or latent cognitive processes. (Shaffer, 2000). Watson's view of learning was based in part on the studies of Ivan Pavlov (1849-1936). Pavlov was studying the digestive process and the interaction of salivation and stomach function when he realized that reflexes in the autonomic nervous system closely linked these phenomena. To determine whether external stimuli had an affect on this process, Pavlov rang a bell when he gave food to the experimental dogs. He noticed that the dogs salivated shortly before they were given food. He discovered that when the bell was rung at repeated feedings, the sound of the bell alone (a **conditioned stimulus**) would cause the dogs to salivate (a **conditioned response**). Pavlov also found that the conditioned reflex was repressed if the stimulus proved "wrong" too frequently; if the bell rang and no food appeared, the dog eventually ceased to salivate at the sound of the bell.

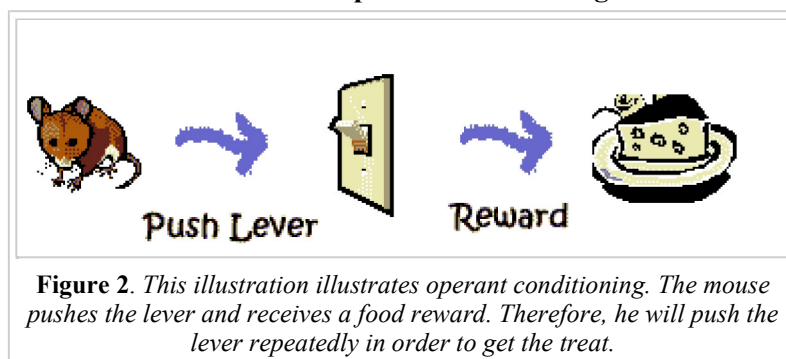
Classical Conditioning



1. Food= salivation
2. Food + Stimulus = salivation (conditioned stimulus)
3. Bell alone produces salivation (conditioned response)

Expanding on Watson's basic stimulus-response model, Skinner developed a more comprehensive view of conditioning, known as **operant conditioning**. His model was based on the premise that satisfying responses are conditioned, while unsatisfying ones are not. Operant conditioning is the rewarding of part of a desired behavior or a random act that approaches it. Skinner remarked that "the things we call pleasant have an energizing or strengthening effect on our behavior" (Skinner, 1972, p. 74). Through Skinner's research on animals, he concluded that both animals and humans would repeat acts that led to favorable outcomes, and suppress those that produced unfavorable results (Shaffer, 2000). If a rat presses a bar and receives a food pellet, he will be likely to press it again. Skinner defined the bar-pressing response as **operant**, and the food pellet as a **reinforcer**. **Punishers**, on the other hand, are consequences that suppress a response and decrease the likelihood that it will occur in the future. If the rat had been shocked every time it pressed the bar that behavior would cease. Skinner believed the habits that each of us develops result from our unique operant learning experiences (Shaffer, 2000).

Operant Conditioning



Educational Implications

Behaviorist techniques have long been employed in education to promote behavior that is desirable and discourage that which is not. Among the methods derived from behaviorist theory for practical classroom application are

contracts, consequences, reinforcement, extinction, and behavior modification.

Contracts, Consequences, Reinforcement, and Extinction

Simple contracts can be effective in helping children focus on behavior change. The relevant behavior should be identified, and the child and counselor should decide the terms of the contract. Behavioral contracts can be used in school as well as at home. It is helpful if teachers and parents work together with the student to ensure that the contract is being fulfilled. Two examples of behavior contracts are listed below:

- A student is not completing homework assignments. The teacher and the student design a contract providing that the student will stay for extra help, ask parents for help, and complete assigned work on time. Teacher will be available after school, and during free periods for additional assistance.
- A student is misbehaving in class. The teacher and student devise a behavioral contract to minimize distractions. Provisions include that the student will be punctual, will sit in front of the teacher, will raise hand with questions/comments, and will not leave his seat without permission.

Consequences occur immediately after a behavior. Consequences may be positive or negative, expected or unexpected, immediate or long-term, extrinsic or intrinsic, material or symbolic (a failing grade), emotional/interpersonal or even unconscious. Consequences occur after the "target" behavior occurs, when either positive or negative reinforcement may be given. **Positive reinforcement** is presentation of a stimulus that increases the probability of a response. This type of reinforcement occurs frequently in the classroom. Teachers may provide positive reinforcement by

- Smiling at students after a correct response.
- Commending students for their work.
- Selecting them for a special project.
- Praising students' ability to parents.

Negative reinforcement increases the probability of a response that removes or prevents an adverse condition. Many classroom teachers mistakenly believe that negative reinforcement is punishment administered to suppress behavior; however, negative reinforcement increases the likelihood of a behavior, as does positive reinforcement. Negative implies removing a consequence that a student finds unpleasant. Negative reinforcement might include:

- Obtaining a score of 80% or higher makes the final exam optional.
- Submitting all assignments on time results in the lowest grade being dropped.
- Perfect attendance is rewarded with a "homework pass."

Punishment involves presenting a strong stimulus that decreases the frequency of a particular response. Punishment is effective in quickly eliminating undesirable behaviors. Examples of punishment include:

- Students who fight are immediately referred to the principal.
- Late assignments are given a grade of "0".
- Three tardies to class results in a call to the parents.
- Failure to do homework results in after-school detention (privilege of going home is removed).

Table1. *Reinforcement and punishment comparison*

	REINFORCEMENT (Behavior Increases)	PUNISHMENT (Behavior Decreases)
POSITIVE (Something is added)	Positive Reinforcement Something is added to increase desired behavior Ex: Smile and compliment student on good performance	Positive Punishment Something is added to decrease undesired behavior Ex: Give student detention for failing to follow the class rules
NEGATIVE (Something is removed)	Negative Reinforcement Something is removed to increase desired behavior Ex: Give a free homework pass for turning in all assignments	Negative Punishment Something is removed to decrease undesired behavior Ex: Make student miss their time in recess for not following the class rules

Click Here to Play the Movie Caption: This video illustrates negative reinforcement, positive reinforcement, and punishment. In the first example, the teacher sees that one student has turned in all of her homework assignments. He gives her a free homework pass as negative reinforcement for her behavior. The student explains that receiving a homework pass made her want to turn in all of her homework on time. In the second example, a student is distracting another student during class time. The teacher asks the disruptive student to go stand outside. He comes out and asks the student how she should be punished. They decide that she should go to study hall while the other students go outside for recess. The student explains that it made her feel very badly to be punished for her behavior and it made her not want to get in trouble again. In the last example, the teacher asks a student to complete a problem on the board and she completes the problem correctly. The teacher tells her she did a very good job and he smiles giving her positive reinforcement for her behavior. The student explains that it made her feel good when the teacher told her she did a good job and it made her want to do well again. By Keith Connor, Chesley Cypert, and Anne Meyers. (2004)

Extinction decreases the probability of a response by contingent withdrawal of a previously reinforced stimulus. Examples of extinction are:

- A student has developed the habit of saying the punctuation marks when reading aloud. Classmates reinforce the behavior by laughing when he does so. The teacher tells the students not to laugh, thus extinguishing the behavior.
- A teacher gives partial credit for late assignments; other teachers think this is unfair; the teacher decides to then give zeros for the late work.
- Students are frequently late for class, and the teacher does not require a late pass, contrary to school policy. The rule is subsequently enforced, and the students arrive on time.

Modeling, Shaping, and Cueing

Modeling is also known as observational learning. Albert Bandura has suggested that modeling is the basis for a variety of child behavior. Children acquire many favorable and unfavorable responses by observing those around them. A child who kicks another child after seeing this on the playground, or a student who is always late for class because his friends are late is displaying the results of observational learning.

"Of the many cues that influence behavior, at any point in time, none is more common than the actions of others" (Bandura, 1986, p.45)

Shaping is the process of gradually changing the quality of a response. The desired behavior is broken down into discrete, concrete units, or positive movements, each of which is reinforced as it progresses towards the overall behavioral goal. In the following scenario, the classroom teacher employs shaping to change student behavior: the class enters the room and sits down, but continue to talk after the bell rings. The teacher gives the class one point for improvement, in that all students are seated. Subsequently, the students must be seated and quiet to earn points, which may be accumulated and redeemed for rewards.



Figure 3. *In this picture, the child is modeling the behavior of the adult. Children watch and imitate the adults around them; the result may be favorable or unfavorable behavior!*

Click Here to Play the Movie Caption: This video illustrates a teacher using shaping to modify a student's behavior. The student is being taught how to accept criticism appropriately by not throwing a temper tantrum, looking at the teacher, answering when spoken to, and asking for help. Only when the student demonstrates the first step of not throwing a temper tantrum is the second step, looking at the teacher introduced. As the desired behaviors are demonstrated, the new expectations are introduced until the student masters all of the steps. Click here to download a Word document. By Candi Chandler, Leigh Davis, and Kristen Sabo (2006)

Cueing may be as simple as providing a child with a verbal or non-verbal cue as to the appropriateness of a behavior. For example, to teach a child to remember to perform an action at a specific time, the teacher might arrange for him to receive a cue immediately before the action is expected rather than after it has been performed incorrectly. For example, if the teacher is working with a student that habitually answers aloud instead of raising his hand, the teacher should discuss a cue such as hand-raising at the end of a question posed to the class.

Behavior Modification

Behavior modification is a method of eliciting better classroom performance from reluctant students. It has six basic components:

1. Specification of the desired outcome (What must be changed and how it will be evaluated?) One example of a desired outcome is increased student participation in class discussions.
2. Development of a positive, nurturing environment (by removing negative stimuli from the learning environment). In the above example, this would involve a student-teacher conference with a review of the relevant material, and calling on the student when it is evident that she knows the answer to the question posed.
3. Identification and use of appropriate reinforcers (intrinsic and extrinsic rewards). A student receives an intrinsic reinforcer by correctly answering in the presence of peers, thus increasing self-esteem and confidence.
4. Reinforcement of behavior patterns develop until the student has established a pattern of success in engaging in class discussions.
5. Reduction in the frequency of rewards--a gradual decrease the amount of one-on-one review with the student before class discussion.
6. Evaluation and assessment of the effectiveness of the approach based on teacher expectations and student results. Compare the frequency of student responses in class discussions to the amount of support provided, and determine whether the student is independently engaging in class discussions (Brewer, Campbell, & Petty, 2000).

Further suggestions for modifying behavior can be found at the mentalhelp.net web site. These include changing the environment, using models for learning new behavior, recording behavior, substituting new behavior to break bad habits, developing positive expectations, and increasing intrinsic satisfaction. This informative website's URL is <http://mentalhelp.net/psyhelp/chap11/>.

Classroom Importance

Using behaviorist theory in the classroom can be rewarding for both students and teachers. Behavioral change occurs for a reason; students work for things that bring them positive feelings, and for approval from people they admire. They change behaviors to satisfy the desires they have learned to value. They generally avoid behaviors they associate with unpleasantness and develop habitual behaviors from those that are repeated often (Parkay & Hass, 2000). The entire rationale of behavior modification is that most behavior is learned. If behaviors can be learned, then they can also be unlearned or relearned.

In my own teaching, I have found that a behavior that goes unrewarded will be extinguished. Consistently ignoring an undesirable behavior will go far toward eliminating it. When the teacher does not respond angrily, the problem is forced back to its source--the student. Other classroom strategies I have found successful are contracts, consequences, punishment and others that have been described in detail earlier in this chapter. Behaviorist learning theory is not only important in achieving desired behavior in mainstream education; special education teachers have classroom behavior modification plans to implement for their students. These plans assure success for these students in and out of school.

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What is ABA? <http://www.icantoolc.com/whatisaba/>

Instructional Scenarios

Here are some scenarios that portray educational applications of behaviorism:
Scenarios for Using Behaviorism

Citation

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