Course Learning Outcomes for Unit I

Upon completion of this unit, students should be able to:

1. Discuss the history, early experiments, and basic concepts in learning and memory.
2. Differentiate between behavioral and cognitive approaches to learning.
3. Discuss the ethical issues in the use of animals in research.
4. Show understanding and application of physiological research.
5. Apply the principles of habituation.

Reading Assignment

Chapter 1:
History, Background, and Basic Concepts

Chapter 2:
Innate Behavior Patterns and Habituation

Unit Lesson

Learning about learning?

In the photo above, students are using a pigeon in a Skinner box at the National University of San Marcos in Lima, Peru to learn about operant conditioning. This unit explores the history of the field of learning in psychology, including classic experiments by Skinner, Ebbinghaus, and many using animals as participants.

What are your views on the use of animals in psychological research? As you can imagine, there are strong opinions on either side of this issue. At your convenience, feel free to check out the following resources: www.peta.org, which is a website for People for the Ethical Treatment of Animals; and www.amprogress.org, which is a website for Americans for Medical Progress and humane animal research. In fact, the American Psychological Association has a section in its Code of Ethics dedicated to the humane treatment of animal subjects. Any research study involving animal (or human) participants must undergo a review by an Institutional Review Board before it can begin to ensure the protection and welfare of participants. What are
your views after reading about both sides of the animal research debate? We will be discussing the results of many classic animal research studies throughout this course.

There are adoption programs for animals who were formerly participants in research studies. Using a search engine, search "adoption programs for research animals," and read about these programs or articles about their success.

A second focus of this unit is on something many of you have encountered, but may not have known the name for: habituation. Have you ever lived by a train track or airport, and at first been startled or even awakened by the loud sound of the trains or planes? At first, you may have been startled or even awakened by the loud sound of the trains or planes. After a few days or weeks, you may have noticed that you are no longer startled by these sounds and may sleep right through that once awakening noise. Why? You habituated to it. This is a basic principle of learning that is applicable to our daily lives. Can you think of an example of something you have habituated to in your life?

The reverse of habituation is something that often happens and is known as PTSD (Post Traumatic Stress Disorder). People who experience a traumatic event can have an extreme reaction to triggers that remind them of the trauma, and thus avoid those triggers, or continue to have this exaggerated startle response and even flashbacks as a result of triggers or environmental stimuli that enact this reflexive response. For example, a combat veteran might jump when they hear a loud noise that sounds similar to a gunshot, as the traumatic stimulus has been generalized to other similar stimuli. In exposure-based therapies, a type of cognitive-behavioral therapy based on learning principles, a therapist might slowly expose someone with PTSD to these stimuli using systematic desensitization to habituate them to the stimuli and reduce or eliminate this reflexive exaggerated startle response.

Other applications of the concepts in this unit include the exciting link between learning and actual physiological changes in our brain, including the growth of new neurons, called neurogenesis. This connects historical classic physiological research with animals to modern day issues like rehabilitation from traumatic brain injury and stroke. When working in physical rehabilitation settings, psychologists will often work with patients recovering from stroke and other brain injuries to assist with cognitive rehabilitation and help them re-learn to do activities of daily living.

In addition, the Opponent Process Theory addresses what may be occurring in people who take drugs or participate in high-risk behaviors. Psychologists have to consider this type of learning and emotional reaction when working with patients in addiction rehabilitation programs or in recovery, addressing both cognitive and behavioral components of these types of behaviors in a biopsychosocial approach. For example, once addicted, do people continue to take drugs for the "high" or to escape the unpleasant withdrawal effects?

Will you remember this information? As any student who has had to study for multiple subjects can tell you, trying to learn two different sets of facts one after another is challenging. As you study for psychology, almost inevitably some of the information for the English may be forgotten. Recent research (2011) with college students has found that:

"Specific brain structures seem to carefully balance how much we retain and how much we forget. Learning and remembering is a dynamic process and our brain devotes resources to keep the process flexible. By better understanding this process, we may be able to find novel approaches to help enhance learning and treat patients with memory problems and learning disabilities (p.3270)."

According to Ebbinghaus' research on memory, we follow this curve on forgetting:
Perhaps this new research on the neurobiology of learning and forgetting will help us to overcome this classic forgetting curve, and aid in the learning of concurrent information.

As you can see, the forefathers in learning have contributed greatly to our current understanding and application of the concepts and principles in the field, as well as how they affect our everyday lives.

References


Suggested Reading

In order for the links below to function properly, you must first log into the CSU Online Library and go to the Opposing Viewpoints database.


August 22) Retrieved from
http://ic.galegroup.com/ic/ovic/ViewpointsDetailsPage/ViewpointsDetailsWindow?failOverType=&query=&prodId=OVIC>windowstate=normal&contentModules=&display-query=&mode=view&displayGroupName=Viewpoints&limiter=&currPage=&disableHighlighting=false&displayGroups=&sortBy=&search_within_results=&p=OVIC&action=e&catId=&activityType=&scanId=&documentId=GALE%7CEJ3010062276&source=Bookmark&u=oran95108&jsid=2d753e95b5b6d2fc0a173e590f2bad0

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