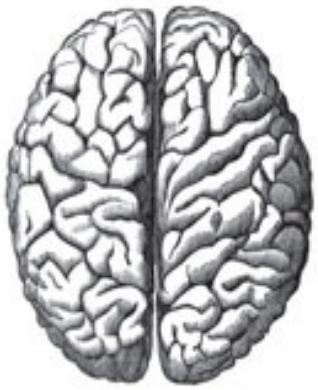
PSYCHOLOGY *FACTS, BASICS, STATISTICS, TESTS,* AND MORE!



CLASSICAL CONDITIONING WAS IVAN PAVLOV'S MOST FAMOUS AND INFLUENTIAL WORK, AND IT LAID THE GROUNDWORK OF BEHAVIORAL PSYCHOLOGY. IN ESSENCE, THE IDEA OF CLASSICAL CONDITIONING IS SIMPLY LEARNING SOMETHING BY ASSOCIATION.

PSYCH101

PSYCHOLOGISTS STILL DISAGREE ON THE EXTENT TO WHICH VISUAL PERCEPTION RELIES UPON EXTERNAL STIMULUS.

A CRASH COURSE IN THE **SCIENCE OF THE MIND**

PAUL KLEINMAN

PSYCH 101

PSYCHOLOGY *FACTS, BASICS, STATISTICS, TESTS,* AND MORE!

PAUL KLEINMAN

adamsmedia
Avon, Massachusetts

DEDICATION

For Lizzie—
the one person who can deal with my craziness
and always manage to keep me sane.

ACKNOWLEDGMENTS

I would like to thank my family and everyone at Adams Media for their continued support, and all of the great thinkers of the world, without whom this book would not be possible.

CONTENTS

LEFT AND RIGHT BRAIN

LOVE

KAREN HORNEY

JOHN BOWLBY

ATTRIBUTION THEORY

EMOTION

PERSONALITY

LEADERSHIP THEORIES

DREAMS

ART THERAPY

HYPNOSIS

ALBERT ELLIS

COGNITIVE BEHAVIORAL THERAPY

HEURISTICS

HARRY STACK SULLIVAN

THE MAGICAL NUMBER SEVEN, PLUS OR MINUS TWO

ERICH FROMM

THE GOOD SAMARITAN EXPERIMENT

PERSONALITY DISORDERS

DISSOCIATIVE DISORDERS

THE ROSENHAN EXPERIMENT

DAVID KOLB'S LEARNING STYLES

ANXIETY DISORDERS

MARY AINSWORTH AND STRANGE SITUATIONS

MOOD DISORDERS

LEV VYGOTSKY

SOMATOFORM DISORDERS

FALSE CONSENSUS AND UNIQUENESS EFFECTS

STRESS

SELF-DISCREPANCY THEORY

INTRODUCTION: WHAT IS PSYCHOLOGY?

psyche—The Greek word for “spirit, soul, and breath”
logia—The Greek word for “the study of something”

Psychology is the study of mental and behavioral processes. Essentially, those who work in the field of psychology try to give meaning to the questions, “What makes you tick?” and “How do you see the world?” These very simple ideas encompass many different and complicated topics, including emotions, thought processes, dreams, memories, perception, personality, illness, and treatment.

While the roots of psychology date back to the philosophers of Ancient Greece, it wasn’t until 1879, when German psychologist Wilhelm Wundt created the first laboratory completely devoted to the study of psychology, that the field really began to take off. Since then, psychology has expanded exponentially into a truly diverse science, often overlapping with other types of scientific studies such as medicine, genetics, sociology, anthropology, linguistics, biology, and even subjects like sports, history, and love.

So put on your thinking cap, make yourself comfortable (perhaps recline on a couch), and prepare to be enlightened; it’s time to start learning about yourself in ways you never knew possible. Whether this book is a refresher course or you’re learning all of this for the very first time, let’s begin. Welcome to *Psych 101*.

IVAN PAVLOV (1849–1936)

The man who studied man's best friend

Ivan Pavlov was born in Ryazan, Russia, on September 14th, 1849. The son of the village priest, Pavlov originally studied theology until 1870, when he abandoned his religious studies and attended the University of St. Petersburg to study physiology and chemistry.

From 1884 to 1886, Pavlov studied under renowned cardiovascular physiologist Carl Ludwig and gastrointestinal physiologist Rudolf Heidenhain. By 1890, Pavlov had become a skilled surgeon and took an interest in the regulation of blood pressure. Without the use of any anesthesia, Pavlov was able to almost painlessly insert a catheter into a dog's femoral artery and record the impact that emotional and pharmacological stimuli had on blood pressure. However, Pavlov's most influential research with dogs—classical conditioning—was yet to come.

From 1890 to 1924, Ivan Pavlov worked at the Imperial Medical Academy as a professor of physiology. In his first ten years at the academy, he began to turn his attention towards the correlation between salivation and digestion. Through a surgical procedure, Pavlov was able to study the gastrointestinal secretions of an animal during its life span within relatively normal conditions; and he conducted experiments to show the relationship between autonomic functions and the nervous system. This research led to the development of Pavlov's most important concept, the conditioned reflex. By 1930, Pavlov had begun using his research on conditioned reflexes to explain human psychoses.

Doctoral Definitions

CONDITIONED REFLEX: A response that becomes associated with a previously unrelated stimulus as a result of pairing the stimulus with another stimulus normally yielding the response.

Though he was praised and supported by the Soviet Union, Pavlov was an outspoken critic of the government's Communist regime and even denounced the government publicly in 1923, following a trip to the United States. When, in 1924, the government expelled the sons of priests at the former Imperial Medical Academy (which was then known as the Military Medical Academy in Leningrad), Pavlov, the son of a priest himself, resigned from his position as professor. Dr. Ivan Pavlov died on February 27th, 1936, in Leningrad.

The Many Accolades of Ivan Pavlov

During his lifetime, the research of Dr. Pavlov was met with great praise. Here is a sampling of his achievements:

- Elected as a corresponding member of the Russian Academy of Science (1901)
- Awarded a Nobel Prize for Physiology and Medicine (1904)
- Elected Academician of the Russian Academy of Science (1907)
- Awarded honorary doctorate at Cambridge University (1912)
- Received the Order of the Legion of Honour from the Medical Academy of Paris (1915)

CLASSICAL CONDITIONING—LEARNING BY ASSOCIATION

Classical conditioning was Ivan Pavlov's most famous and influential work, and it laid much of the groundwork of behavioral psychology. In essence, the idea of classical conditioning is simply learning something by association. Pavlov identified four basic principles:

1. **The Unconditioned Stimulus:** A stimulus is any act,

influence, or agent that creates a response. An unconditioned stimulus is when the stimulus automatically triggers some type of response. For example, if pollen makes a person sneeze, then pollen is an unconditioned stimulus.

2. **The Unconditioned Response:** This is a response that is automatically triggered as a result of the unconditioned stimulus. In essence, this is a natural, unconscious reaction to whatever the stimulus might be. For example, if pollen makes a person sneeze, the sneeze is the unconditioned response.
3. **The Conditioned Stimulus:** When a neutral stimulus (a stimulus that is not related to the response) becomes associated with an unconditioned stimulus, thus triggering conditioned response.
4. **The Conditioned Response:** This is a response that was learned from the once-neutral stimulus.

Confused? Don't be. It's actually very simple! Imagine if you flinched after hearing a loud sound. The sound triggered a natural response, making it an unconditioned stimulus, and the flinching was the unconditioned response because it was something that you did unconsciously as a result of the unconditioned stimulus.

Now, if you repeatedly witnessed a certain movement happen at the same time as, or a little bit before, the loud noise occurred—for example, a person swinging their fist to slam it on a table—you might then begin to associate that movement with the loud sound, flinching whenever you see a fist move in a similar manner, even if there is no sound. The movement of the fist (the conditioned stimulus) became associated with the unconditioned stimulus (the sound), and made you flinch (the conditioned response).

PAVLOV'S DOGS

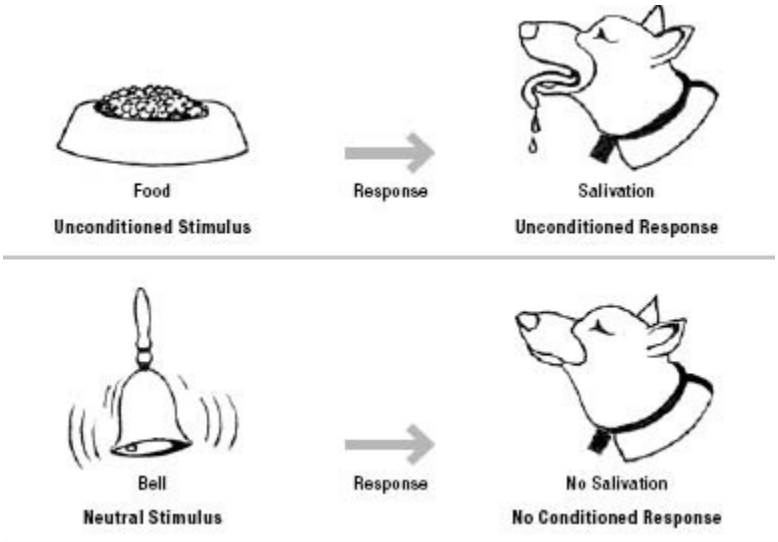
Dr. Ivan Pavlov was able to establish these ideas by observing the irregular secretions of nonanesthetized dogs. Pavlov initially began studying digestion in dogs by measuring the amount of saliva that the animals had when both edible and nonedible items were introduced.

Eventually, he began to notice that the dogs would begin salivating every time an assistant entered the room. Believing that the animals were responding to the white coats the assistants wore, Pavlov hypothesized that this production of saliva was actually in response to a certain stimulus, and that these dogs were associating the white coats with the presentation of food. Furthermore, Pavlov noted, the production of saliva that occurred when food was presented to the dogs was an unconditioned reflex, while the production of saliva that was a result of the dogs seeing the white coats was a learned, or conditioned, reflex. To dig deeper into his findings, Pavlov set out to create one of the most famous scientific experiments of all time: Pavlov's dogs.

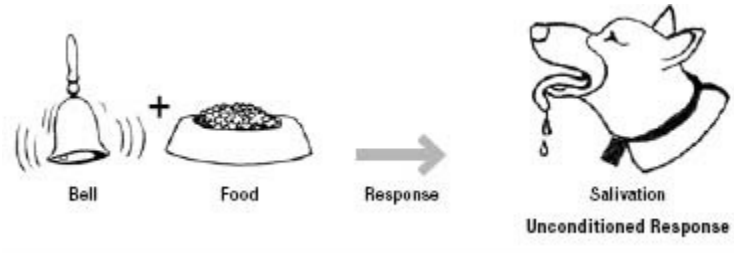
EXPERIMENT

FOR WHOM THE BELL TOLLS: CONDUCTING THE CONDITIONED RESPONSE EXPERIMENT

BEFORE CONDITIONING



DURING CONDITIONING



AFTER CONDITIONING

PAVLOV'S DOGS EXPERIMENTAL PROGRESSION

1. The test subjects in this conditioned response experiment are laboratory dogs.
2. First, an unconditioned stimulus must be chosen. In this experiment the unconditioned stimulus is food, which will evoke a natural and automatic response: salivation. For a neutral stimulus, the experiment utilizes the sound of a metronome.
3. Observing the subjects prior to conditioning reveals that saliva is generated when the dogs are exposed to food, and no saliva is generated when the dogs are exposed to the sound of the metronome.
4. To begin the process, the subjects are repeatedly exposed to the neutral stimulus (the sound of the metronome) and are immediately presented with the unconditioned stimulus (food).
5. Over a period of time, the subjects will begin to equate the sound of the metronome to the delivery of food. The longer the experiment progresses, the more deeply ingrained the conditioning will become.
6. After the conditioning phase is completed, the neutral stimulus (the metronome) will cause the subjects to begin salivating in anticipation of food, regardless of whether or not food is presented. Salivation has become a conditioned response.

Even though he is most well known in popular culture for his famous dogs, the importance of Pavlov's research goes far beyond the production of saliva. His revelations on conditioning and learned responses have played a major role in understanding behavioral modification in humans, and in advancing the treatment

of such mental health issues as panic disorders, anxiety disorders, and phobias.

B. F. SKINNER (1904–1990)

It's all about the consequences

Burrhus Frederic Skinner was born on March 20th, 1904, in Susquehanna, Pennsylvania. The son of a lawyer and housewife, Skinner had a warm and stable childhood, and was left with plenty of time for creativity and invention—two traits that would serve him well throughout his career. Having graduated from Hamilton College in 1926, Skinner originally set his sights on becoming a writer. It was while working as a bookstore clerk in New York City that Skinner discovered the works of John B. Watson and Ivan Pavlov, which so fascinated him that he put his plans of becoming a novelist to the side and decided to pursue a career in psychology.

When Skinner was twenty-four years old, he enrolled in the psychology department of Harvard University and began his studies under William Crozier, the chair of the new physiology department. Though not himself a psychologist, Crozier was interested in studying the behavior of animals "as a whole," an approach that was different than the approaches that psychologists and physiologists took at the time. Instead of trying to figure out all of the processes that were occurring inside the animal, Crozier—and subsequently Skinner—was more interested in the animal's overall behavior. Crozier's ideology matched perfectly with the work that Skinner wished to pursue; he was interested in learning how behavior was related to experimental conditions. Skinner's most significant and influential work, the notion of operant conditioning and the invention of the operant conditioning chamber, came out of his days at Harvard. The work Skinner conducted while at Harvard University is still some of the most important research with regards to behaviorism—work which he taught firsthand to generations of students at his alma mater until he passed away at the age of eighty-six, in 1990.

Celebrating Skinner

B. F. Skinner's work left a profound impact on the world of psychology, and his work did not go unnoticed. Some of his more outstanding citations include:

- President Lyndon B. Johnson awarded Skinner the National Medal of Science (1968)
- Skinner was awarded the Gold Medal of the American Psychological Foundation (1971)
- Skinner was given the Human of the Year Award (1972)
- Skinner received a Citation for Outstanding Lifetime Contribution to Psychology (1990)

OPERANT CONDITIONING AND THE SKINNER BOX

B. F. Skinner's most important work was the concept of operant conditioning. Essentially, operant conditioning is when someone learns a behavior as the result of the rewards and punishments associated with that behavior. Operant conditioning can be broken down into four types:

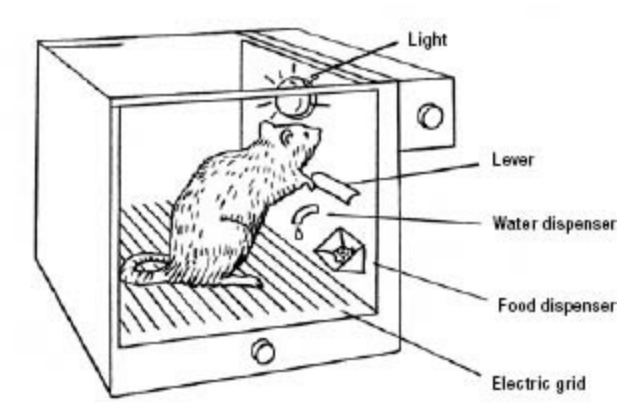
1. **Positive Reinforcement:** This is when a behavior is strengthened and the probability of it recurring increases because a positive condition was the result.
2. **Negative Reinforcement:** A behavior is strengthened as a result of avoiding or stopping a negative condition.
3. **Punishment:** This occurs when a behavior is weakened and the probability of the behavior recurring decreases due to a negative condition being the result.
4. **Extinction:** When a behavior is weakened because the result did not lead to a positive condition or a negative condition.

Positive and negative reinforcement will strengthen a particular behavior, making it more likely to occur, and punishment and extinction will weaken a particular behavior.

To see operant conditioning in action, B. F. Skinner performed a very simple experiment and invented the operant conditioning chamber, which is now often referred to as the Skinner Box.

EXPERIMENT
THE SKINNER BOX AND OPERANT CONDITIONING

1. To conduct the experiment, begin by placing a hungry rat inside of the box. Every time the rat presses a lever inside the box, it will receive a pellet of food. The rat will soon come to learn that by pressing the lever, it will get food (a positive condition), and thus a behavior is strengthened by positive reinforcement.
2. Next, place a rat into the box and then give it a slight electrical shock (a negative condition) to its feet. If the rat presses the lever, the shock will stop. Then send another slight electrical shock to the rat's feet. Once again, when the rat presses the lever, the electrical shock stops. Every time the rat is given an electrical shock, the rat learns that in order to stop it, it must press the lever. This is an example of negative reinforcement, because the rat is learning a behavior in order to stop a negative condition.
3. Place a rat into the box and give it a slight electrical shock (the negative condition) on its feet each time it presses the lever. The behavior of pressing the lever will be weakened because of the negative condition: this is an example of punishment.
4. Now, place the rat into the box and do not give it food or an electrical shock whenever the lever is pressed. The rat will not associate a positive or negative condition to the behavior of pressing the lever, and thus this behavior will be weakened. This is an example of extinction.



THE SKINNER BOX

The Unfortunate Legacy of the Skinner Box

In 1943, Skinner's pregnant wife asked him to build a safer baby crib for their child. Always the inventor, Skinner created a heated crib that was enclosed with a plexiglass window and called it the Baby Tender. Skinner sent an article to *Ladies' Home Journal*, and they printed the story as "Baby in a Box." With the legacy of Skinner's work in operant conditioning, a rumor spread that Skinner had used his experimental operant conditioning chamber on his own daughter and that it eventually drove her crazy to the point of suicide. These rumors, however, were completely false.

SCHEDULES OF REINFORCEMENT

Another important component of operant conditioning is the notion of schedules of reinforcement. How often and when a behavior is reinforced can greatly affect the strength of the behavior and the rate of response. Positive and negative reinforcement can be used, and the goal is always to strengthen behavior and increase the chances of it happening again. Schedules of reinforcement can be broken down into two types:

1. **Continuous reinforcement:** Every time a behavior occurs, it is reinforced.
2. **Partial reinforcement:** A behavior is reinforced part of the time.

Interestingly, the response that is the result of partial reinforcement is actually more resistant to extinction because these behaviors are learned over time, and not acquired all at once. Partial reinforcement can be further broken down into four schedules:

1. **Fixed-ratio schedules:** After a specific number of responses, the response is reinforced. For example, a rat only gets food pellets after pressing the lever every three times.
2. **Variable-ratio schedules:** Reinforcement occurs after an unpredictable number of responses. For example, a rat presses the lever several times, but a pellet of food is administered at random and is not based on any sort of fixed schedule.
3. **Fixed-interval schedules:** A response is rewarded after an allotted period of time. For example, if a rat presses the lever within a time frame of thirty seconds, it will be given one food pellet. It does not matter how many times the rat presses the lever, because only one pellet will be given during that time frame.
4. **Variable-interval schedules:** Reinforcement occurs after an unpredictable amount of time. For example, the rat may be rewarded a pellet every fifteen seconds, and then every five seconds, and then every forty-five seconds, etc.

Examples of the four different schedules of reinforcement can be found in everyday life. For instance, a fixed-ratio schedule is commonly found in playing videogames (where the player has to collect a certain number of points or coins to obtain a reward); slot machines exhibit a variable-ratio schedule; having a weekly or biweekly paycheck is an example of a fixed-interval schedule; and when one's boss comes into the office to check on an individual's progress at random times, it is an example of a variable-interval schedule. When learning a behavior that is new, a fixed-ratio schedule is always best, while a variable-interval schedule is extremely resistant to extinction.

Though behaviorism lost its popularity over time, there is no denying the impact of B. F. Skinner. His operant techniques remain vital to mental health professionals in helping treat clients, and his ideas of reinforcement and punishment are still used in teaching and dog training.

SIGMUND FREUD (1856–1939)

The creator of psychoanalysis

Sigmund Freud was born on May 6th, 1856, in Freiberg, Moravia, now the Czech Republic. Freud's mother was his father's second wife, and she was twenty years younger than his father. Freud had two older half-brothers that were around twenty years older than he was; also, he was the first of seven children from his mother. At the age of four, Freud moved from Moravia to Vienna, Austria, where he would spend the majority of his life, despite having claimed to dislike the city.

Freud did well in school, and because he was Jewish—though he later came to identify as an atheist—he attended medical school at the University of Vienna in 1873 (medicine and law were the only viable options available to Jewish men at that time in Vienna). Though Freud wished to pursue neuropsychological research, research positions were extremely hard to come by. As a result, Freud moved into private practice with a focus in neurology.

While training, Freud befriended a physician and psychologist by the name of Josef Breuer. This relationship would prove to be incredibly important to the development of Freud's work once Breuer began treating hysteria patients by using hypnosis and encouraging them to talk about their past. The process of hypnosis, which Breuer's patient Anna O. referred to as "the talking cure," allowed patients to discuss memories that they could not recall during a conscious state; and as a result, the symptoms of their hysteria would be relieved. Freud co-authored *Studies in Hysteria* with Breuer, and then traveled to Paris to learn more about hypnosis under the renowned French neurologist Jean-Martin Charcot.

In 1886, Freud returned to Vienna and began a private practice. Originally, Freud used hypnosis on his neurosis and hysteria patients, but he soon realized that he could get more out of patients by having them sit in a relaxed position (like on a couch) and by encouraging them to say whatever was on their mind (known as free association). By doing so, Freud believed he would