

History of Psychology

Test Chapter 9, 10, and 11

1. Why is the story of Hans the Wonder horse important? Wilhelm Van Osten owned Clever Hans who was the most famous horse in the history of psychology. The owner spent years teaching Hans the fundamentals of human intelligence. His goal was to prove that Darwin was correct in suggesting that humans and animals have similar mental processes. He believed horses and other animals with the right kind of training could show they are intelligent beings. Hans the wonder horse was taught to add, subtract, use fractions and decimals, read, play card games, spell, and perform astonishing feats of memory. The animal's intelligence was found to be legitimate. Van Osten's efforts were purely scientific, and he eventually convinced the Western world the horse when properly trained can show it is an intelligent being.
2. How did animal psychology influence the development of Behaviorism? Watson wrote "Behaviorism is a direct outgrowth of studies in animal behavior during the first decade of the twentieth century." We can say that the most important antecedent of Watson's program was animal psychology, which grew out of evolutionary theory and led to attempts to demonstrate the existence of mind in lower organisms and the continuity between animal and human minds. Romanes and Morgan were two noted pioneers in animal psychology. Morgan's law of parsimony and his greater reliance on experimental instead of anecdotal techniques, so animal psychology became more objective, although consciousness remained its focus. Jacques Loeb, a German physiologist, and zoologist developed a theory of animal behavior based on the concept of tropism, an involuntary forced movement. The behavioral response is forced by the stimulus and does not require any explanation in terms of the animal's alleged consciousness. Robert Yerkes began animal studies in the 1900's. He used a variety of subjects ranging from jellyfish and earthworms to frogs, monkeys, and apes in which his research strengthened the position and influence of comparative psychology. William Small, a graduate student at Clark University, developed a maze for rats. The white rat and the maze became a standard method for the study of learning for generations of psychology. Consciousness continued to be part of animal psychology. His writings about the rat's ideas and images continued to reflect a concern with mental processes and elements. Margaret Floyd Washburn taught animal psychology. In her work the attribution of consciousness to animals persisted as did the method of introspecting the animal mind by analogy with the human mind.
3. Why was the work of Ivan Pavlov (1849-1936) so important to the development of psychology? Pavlov's famous research helped to complete the shift in the study of learning from its earlier emphasis on subjective ideas to objective and quantifiable psychological events such as glandular secretions and muscular movements. Pavlov's work provided Watson with a method for studying behavior and for attempting to control and modify it. During his career, he worked on three major problems. The first concerned the function of the nerves of the heart, the second involved the primary digestive glands, and the third involved the study of conditioned reflexes. In working on the digestive glands in dogs, Pavlov used the method of surgical exposure to permit digestive secretions to be collected outside the body where they could be observed, measured, and recorded. Pavlov noticed that sometimes saliva flowed even before the food was given. The dogs salivated at the sight of the food or the sound of the footsteps of the man who regularly fed them. The unlearned response of salivation had become conditioned, connected to stimuli previously associated with food. These psychic reflexes were aroused in the lab dogs by stimuli

other than the original one (food). He stated this reaction occurred because these stimuli (sight, and sounds of the attendant), had been related to feeding. He painstakingly followed a scientific method, standardized experimental conditions, applied rigorous controls, and eliminated sources of error. He was concerned with outside sources influencing the reliability of the research. He wanted nothing to influence the experimental animals except the conditioning stimuli to which he exposed them.

4. What did John Watson (1878-1936) believe should be the subject matter of behaviorism? The primary subject matter for Watson's behavioral psychology was the elements of behavior, that is, the body's muscular movements and glandular secretions. As the science of behavior, psychology could deal only with acts, or responses that could be described objectively, without using any subjective or mentalistic terminology. His view could be as simple as a knee jerk or more complex responses called acts. He considered response acts to include events such as eating, writing, dancing, or building a house. An act involves the organism's movement in space that accomplishes some goal that affects one's environment. Responses can be explicit and directly observable or implicit such as visceral movements. By modifying his requirements, psychology's data can be observable. In both methods and subject matter, Watson's behaviorism was an attempt to construct a science free of subjective notions and methods, a science as objective as physics.
5. What were Watson's beliefs about thought processes? The traditional view of thought processes was that they occurred in the brain "so faintly that no neural impulse passes out over the motor nerve to the muscle, hence no response takes place in the muscles and glands." According to this theory, because thought processes occur in the absence of muscular movements, they could not be seen or experimented upon. Thought was regarded as intangible, something exclusively mental therefore had no physical reference points. Watson attempted to reduce thinking to implicit motor behavior. He reasoned that the behavior of thinking must involve implicit speech reactions or movements. He reduced thinking to subvocal talking that relies on the same muscular habits we learn from overt speech. As we grow up these muscular habits become inaudible and invisible allowing thinking to become a way of talking silently. Watson suggested that focal points for much of this implicit behavior are the muscles of the tongue and the larynx. We also express thoughts through gestures such as frowns and shrugs which are overt reactions to stimuli. Watson theory also suggested most of us are aware that we do talk to ourselves while we are thinking.
6. What were the elements of Tolman's purposive behaviorism? Tolman's approach to behaviorism was put forth in his book *Purposive Behavior in Animals and Men*. His term may appear at first glance to be a curious amalgam of two contradictory ideas: purpose and behavior. Attributing purpose to an organism's behavior seems to imply consciousness, a mentalistic concept that has no place in behavioral psychology. Tolman made it clear, however, that he was very behaviorist in subject matter and methodology. He was not urging psychology to accept consciousness. Like Watson, he rejected introspection and had no interest in presumed internal experiences that were not accessible to objective observation. He argues that purposiveness in behavior can be defined in objective behavioral terms without resorting to introspection or to reports about how one may feel about an experience. He felt all actions were goal-directed. Tolman said behavior "reeks" of purpose and is oriented toward achieving a goal or learning the means to an end. He is dealing with the objective responses of the organism and that the measurements are stated in terms of changed in response behavior as a function of learning. These measurements yield

objective data. He stated the conscious experience associated with purposive behavior did not influence the organism's behavior responses. He was only interested in overt responses.

7. How did Skinner's (1904-1990) behaviorism be similar to Watson's behaviorism? He never attacked a problem by constructing a hypothesis. He drew on the work of the psychologist Watson. Skinner's behaviorism was devoted to the study of responses. He was concerned with describing rather than explaining behavior. His research only dealt with observable behavior, and he believed the task of scientific inquiry is to establish functional relationships between the experimenter-controlled stimulus conditions and the organism's subsequent responses. He Believed human organisms are controlled and operated by force in the environment, the external world, and not by forces within themselves. His studies on operant conditioning were a behavioral response elicited by a specific observable stimulus, which he called the respondent behavior. Another basic experiment called the law of acquisition stated that the strength of an operant behavior increases when it is followed by the presentation of a reinforcing stimulus. Watson and Skinner agreed on the following: the core of psychology is the study of learning, most behavior no matter how complex can be accounted for by the laws of conditioning, and psychology must adopt the principle of operationism. Operationism was the study of science, more objective and precise ridding science of those problems that are not actually observable or physically demonstratable. They both believed if they were given a group of infants, the way they were raised and the environment they put them in would be the ultimate determining factor for how they acted, not their parents or their genetics.
8. How did Skinner's behaviorism differ from Pavlovian conditioning? Skinner's operant conditioning experiments differ from the respondent behavior investigated by Pavlov. In the Pavlovian conditioning situation, a known stimulus is paired with a response under conditions of reinforcement. The behavioral response is elicited by a specific observable stimulus. Skinner called this behavioral response a respondent behavior. Operant behavior occurs without any observable external antecedent stimulus, so the organism's response appears to be spontaneous. From the experimenter's' viewpoint, there is no stimulus because they did not apply one and cannot see one. Another difference between the respondent and operant behavior is that operant behavior operates on the organism's environment respondent behavior does not. The harnessed dog in Pavlov's lab can do nothing but respond (salivate) when the experimenter presents the stimulus (food). The dog cannot act on its own to secure the stimulus. Skinner's law of acquisition states that the strength of n operant behavior increases when it is followed by the presentation of a reinforcement stimulus. Although practice is important, the key variable is reinforcement. Practice by itself will not increase the rate of responding, it only provides the additional reinforcement to occur.
9. What did Bandura's (1925-) social cognitive theory focus on? It is a less extreme form of behaviorism than Skinner's, and it reflects the spirit of its times and the impact of psychology's renewed interest in cognitive factors. His viewpoint remained behaviorist. His research focus was to observe the behavior of human subjects' interaction. He did not use introspection, and he emphasized the importance or rewards or reinforcements in acquiring and modifying behavior. His approach is a social learning theory because it studies behavior as it is formed and modified in social situations. He stressed the influence on external reinforcement schedules of such thought processes as beliefs, expectations, and instructions. He believed behavioral responses are not automatically triggered in humans by externa stimuli, as with a machine or a

robot. Reactions to stimuli are self-activated, initiated by the person. When an external reinforcer alters behavior, it does so because the person is consciously aware of the response.

10. What does it mean to have high self-efficacy and what does it mean to have low self-efficacy?
Bandura conducted considerable research on self-efficacy, described as our sense of self-esteem or self-worth and our feeling of adequacy, efficiency, and competence in dealing with problems. His work has shown that people who have a great deal of self-efficacy believe they are capable of coping with the diverse events in their lives. People with low self-efficacy feel helpless, even hopeless, about coping and think they have little chance to affect the situations they confront. When they encounter problems, they are likely to give up if their initial attempts at solutions fail. They believe nothing they can do will make a difference and that they have little or no control over fate. People higher in self-efficacy tend to get better grades, consider our career possibilities, have greater job success, set higher personal goals, and enjoy better physical and mental health than people in lower self-efficacy. People low in self-efficacy feel helpless, hopeless, and think they have little chance to affect the situations they confront. Men have been found to be higher than women in self-efficacy. High degree of self-efficacy will lead to positive effects in many aspects of life. People high in self-efficacy feel confident about their ability to initiate social contact and develop new friendships. They score high on measures of well-being and are less likely to become addicted to internet use than are those who score low in social self-efficacy.