Important Figures in Psychological Science

Midterm Review

1. \_\_\_\_\_**Carl Rogers**\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_

American psychologist who attended the University of Wisconsin, and believed that the mental condition of virtually all patients, whom he referred to as clients, can be improved, given an appropriate environment. Central to this environment is a close personal relationship between client and therapist. His use of the term “client” rather than “patient” expresses his rejection of the traditionally authoritarian relationship between therapist and client, and his view of them as equals. The client determines the general direction of therapy, while the therapist seeks to increase the client’s insightful self-understanding through informal clarifying questions. A hallmark of his method involves the therapist echoing or reflecting the client’s remarks.

1. \_\_\_\_\_\_\_\_\_**Edward Thorndike**\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_

American psychologist who studied trial-and-error learning, using first chickens and then cats. Observing the behavior of cats, attempting to escape from enclosed “puzzle boxes,” he noted that responses that produced satisfaction – escape from the box and subsequent feeding – were “stamped in” and more likely to be repeated in the future, while responses that led to failure, and thus dissatisfaction, ended to be “stamped out.” He termed this observation the “law of effect”.

1. \_\_\_\_\_\_\_\_\_\_**Wilhelm Wundt**\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_

German psychologist and philosopher who founded experimental psychology. He evolved from a physiologist to a psychologist and showed how the methods of natural science could be used in psychology. In 1879 he founded the first psychological laboratory in the world at the University of Leipzig and became the “Father of Psychology”.

1. \_\_\_\_\_\_\_\_\_\_\_**Paul Broca**\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_

French medical doctor and anthropologist known for his role in the discovery of specialized functions in different areas of the brain. In 1861, he was able to show, using post-mortem analysis of patients who had lost the ability to speak, that such loss was associated with damage to a specific area of the brain. This area, located toward the front of the brain’s left hemisphere, was eventually named after him. His findings addressed questions concerning the ability to produce speech and the evolution of language.

1. \_\_\_\_\_\_\_\_\_**Albert Bandura**\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_

American psychologist who has been the single most important figure in building a solid empirical foundation for the concept of learning through modeling, or imitation. His work, focusing particularly on the nature of aggression, suggests that modeling plays a highly significant role in determining thoughts, feelings, and behavior. He claimed that anything that can be learned by direct experience can also be learned by modeling.

1. \_\_\_\_\_\_\_\_\_\_\_\_**Ivan Pavlov**\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_

Russian physiologist who observed that normal healthy dogs would salivate upon seeing their keeper, apparently in anticipation of being fed. This led him, through a systematic series of experiments, to formulate the principles of the conditioned response, which he believed could be applied to humans as well as to animals.

1. \_\_\_\_\_\_\_\_\_\_\_**Abraham Maslow**\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_

American psychologist who received his Ph.D. from the University of Wisconsin-Madison. Rejecting the determinism of both the psychoanalytic and behaviorist approaches, his theory of motivation emphasized developing one’s full potential. Instead of basing his psychological model on people with mental and emotional problems, he used as his point of reference a collection of exceptionally dynamic and successful historical and contemporary figures whom he considered “self-actualizers” including Thomas Jefferson, Abraham Lincoln, Albert Einstein, and Eleanor Roosevelt. In addition to drawing up a list of the common traits of self-actualized individuals, he placed self-actualization at the peak of his hierarchy of human motivations, the concept for which he is best known today.

1. \_\_\_\_\_\_\_\_**Franz Anton Mesmer**\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_

German physician whose theories and practices led to modern-day hypnotism. His unorthodox methods of treating illness were highly popular with his patients, and emphasized min-over-matter treatment of illness. His trance-like practices eventually led to the word “mesmerize,” which means to hold one’s attention. These practices evolved into hypnosis, which today is recognized by many as a valid and highly effective means of treating certain conditions.

1. \_\_\_\_\_\_\_\_\_**Hermann Ebbinghaus**\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_

German psychologist whose work resulted in the development of scientifically reliable experimental methods for the qualitative measurement of rote learning and memory. Using himself as both sole experimenter and subject, he embarked on an arduous process that involved repeatedly testing his memorization of nonsense and words devised to eliminate variables caused by prior familiarity with the material being memorized. He created 2,300 one syllable consonant-vowel-consonant combinations, and recorded the average amount of time it took him to memorize these lists perfectly. The results of his work showed the existence of a regular forgetting curve, which is best characterized by a steep initial decline in memory.

1. \_\_\_\_\_\_\_\_\_**John Watson**\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_

American psychologist who is best known as the founder of behaviorism. The significance of childhood and child-study for behaviorism is summed up in his most famous statement: “Give me a dozen healthy infants…and my own specified world to bring them up in and I’ll guarantee to take any one at random and train him to become any type of specialist I might select…regardless of his talents, penchants, tendencies, abilities, vocation, and the race of his ancestors.” In one of the most controversial experiments in all of psychology, he conditioned eleven-month-old “Little Albert” to fear furry objects; this case was for him proof that complex behavior develops by conditioning out of simple unlearned responses. He encouraged parents to approach childrearing as a professional application of behaviorism.

1. \_\_\_\_\_\_\_\_\_**Noam Chomsky**\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_

American linguist who established a relationship between linguistics and psychology. He argued that linguistics should be understood as part of cognitive psychology. He opposed the traditional learning theory basis of language acquisition. In doing so, he expressed a view that differed from the behaviorist view of the mind as a tabula rasa (blank slate). His theories were diametrically opposed to the ideas of BF Skinner, the foremost proponent of behaviorism. In his view, certain aspects of linguistic knowledge and ability are the product of a universal innate ability, or “language acquisition device,” that enables each normal child to construct a systematic grammar and generate phrases.

1. \_\_\_\_\_\_\_\_\_**BF Skinner**\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_

American psychologist and advocate of behaviorism, his most successful and well-known apparatus, known as the operant chamber, was a cage in which a laboratory rat could, by pressing on a bar, activate a mechanism that would drop a food pellet into the cage. Another device recorded each press of the bar, producing a permanent record of results without the presence of a tester. He analyzed the rats’ bar-pressing behavior by varying his patterns of reinforcement (feeding) to learn their responses to different schedules. Using this box to study how rats “operated on” their environment led him to formulate the principle of operant conditioning.

1. \_\_\_\_\_\_\_\_**Stanley Milgram**\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_

American experimental social psychologist known for his innovative experimental techniques, he carried out influential and controversial experiments that demonstrated that blind obedience to authority could override moral conscience. His early studies on conformity were the first experiments to compare behavioral differences between people from different parts of the world. His most surprising finding was that 65% of his subjects would inflict what they believed to be painful electrical shocks on others, simply because they were told to do so.

1. \_\_\_\_\_\_\_\_**William James**\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_

American philosopher and psychologist who published The Principles of Psychology, he taught the first psychology course offered at an American university and in the same year (1875) received funding for the first psychological laboratory in the United States. His book was a seminal work in the field of psychology, and served as a basis for a school of thought known as functionalism.

1. \_\_\_\_\_\_\_\_\_**Albert Ellis**\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_

American psychologist who developed Rational-Emotive Therapy (RET), which was based on the idea that psychological problems are caused by self-defeating thoughts (such as “I must be loved or approved by everyone” and “If I don’t find the perfect solution to this problem, a catastrophe will result”). Once such thoughts are changed, emotional and behavioral changes will follow. The therapist’s task is to help the client recognize illogical and self-destructive ways of thinking and replace them with healthier, more positive ones. He believed that the therapist should continually challenge the client’s illogical and self-destructive ideas in a dynamic and provocative manner.

1. \_\_\_\_\_\_\_\_\_**Solomon Asch**\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_

American psychologist who devised a “line-test” conformity experiment showing that approximately three-fourths of subjects tested knowingly gave an incorrect answer at least once in order to conform to the group. This study helped to show the power of unanimity of opinion, as even one dissenter decreased the incidence of conformity markedly. Individuals are much more likely to diverge from a group when there is at least one other person to share the disapproval of the group.

1. \_\_\_\_\_\_\_**Phineas Gage**\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_

American railroad foreman who was injured in a freak accident near Cavendish, Vermont on September 13, 1948, and since has been written into virtually every introductory psychology textbook as a landmark case in our understanding of the brain’s role in behavior. Although an iron rod blew through his head like a javelin and landed some 50 feet away, miraculously, he survived. His intelligence, memory, speech, and ability to learn new information seemed intact, however, there was a profound change in his personality. The previously friendly, competent, and responsible man became stubborn, ill-tempered, profane, and unreasonable.

1. \_\_\_\_\_\_\_**Carl Wernicke**\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_

German neuroanatomist, pathologist, and psychiatrist who made fundamental discoveries about brain function. In 1873j, he studied a patient who had suffered stroke. Although the man was able to speak and his hearing was unimpaired, he could barely understand what was said to him. Nor could he understand written words. After this man died, he found a lesion in the rear parietal/temporal region of the patient’s left brain hemisphere. He concluded that this region, which is close to the auditory region of the brain, was involved in speech comprehension. He named this syndrome sensory aphasia, although now this type of aphasia is name after him, along with the affected brain area dealing with speech comprehension.

1. \_\_\_\_\_\_\_\_**Leon Festinger**\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_

American psychologist who developed the concept of cognitive dissonance. He found that the level of cognitive dissonance would decrease as the incentive to comply with the conflict situation was increased. The reason was simple: where an incentive is involved, people felt less conflict. Where little or no incentive was involved, people need to justify or rationalize their actions, and often changed their opinion to match their actions.

1. \_\_\_\_\_\_\_\_**Martin Seligman**\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_

American psychologist who designed a simple experiment to demonstrate the phenomena of learned helplessness. He arranged dogs into groups of three. The first dog received shocks that it could escape by pushing a panel with its nose. The second dog was “yoked” to the first and received the same number of shocks. However, nothing the second dog did could stop the shock-they stopped only if the fist dog pushed the panel. The third dog was the control, and got no shocks at all. The first and third dogs quickly learned to jump over the barrier when the floor became electrified. But the second dog, the one that had learned that nothing it did would stop the shock, made no effort to jump over the barrier. The dog had developed the cognitive expectation that its behavior had no effect on the environment, it had become passive and learned it was helpless.

1. \_\_\_\_\_\_\_\_**Elizabeth Loftus**\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_

American psychologist who is one of the most widely recognized authorities on eyewitness testimony and the reconstructive nature of human memory. She has not only conducted extensive research in this area, but has also testified in many high-profile court cases. She and her colleagues have demonstrated that both the wording of a question and misleading information can lead to inaccurate reports (memories).

1. \_\_\_\_\_\_\_\_\_**Ernest Hilgard**\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_

American psychologist who conducted pioneering work in hypnotism. One of the most interesting aspects of his research into hypnosis is the concept of what he calls the “hidden observer”. For example, a person undergoing hypnosis to manage pain, feels no conscious pain. That does not mean the pain is not here, however; nor does it mean that the patient’s subconscious is not registering the pain. In one of his experiments, subjects were hypnotized and told they would feel no pain or discomfort when an arm was placed in ice water. The subjects reported no pain or discomfort during this procedure. When their “hidden observers” were tapped into, however (usually a prearranged sign or suggestion from the experimenter), there were reports of pain and discomfort (although not necessarily as severe as would be expected). In subjects particularly susceptible to the hypnotic suggestion – those who could be rendered hypnotically deaf or blind, for example-the “hidden observer” could recall “heard” or “seen” objects.

1. \_\_\_\_\_\_\_\_\_**Michael Gazzaniga**\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_

American psychologist who has conducted split-brain research with epileptic patients who have had their corpus callosum severed. In his research, he used a special projection screen where visual information to the right of the midpoint is projected to the person’s left hemisphere, and visual information to the left of the midpoint is projected to the person’s right hemisphere. On the basis of his research, we now know that – in most people – the left hemisphere is superior in language abilities, speech, reading, and writing. In contrast, the right hemisphere is more involved in nonverbal emotional expression and visual-spatial tasks.

1. \_\_\_\_\_\_\_\_\_\_**Benjamin Whorf**\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_

American researcher who claimed that language actually determines how we can think, a process called linguistic determinism. He noted, for example, that Inuit Eskimos have several different words for “snow” and proposed that this feature of their language should lead to greater perceptual ability to discriminate among varieties of snow.

1. \_\_\_\_\_\_\_\_\_**Sigmund Freud**\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_

Austrian neurologist and the founder of psychoanalysis. He constructed a comprehensive theory on the structure of the psyche, which he viewed as divided into three parts. The id, corresponding to the unconscious, is concerned with the satisfaction of primitive desires and with self-preservation. It operates according to the pleasure principle and outside the realm of social rules or moral dictates. The ego, associated with reason, controls the forces of the id to bring it into line with the reality principle and make socialization possible, and channels the forces of the id into acceptable activities. The critical, moral superego – our conscience – developed in early childhood, monitors and censors the ego, turning external values into internalized, self-imposed rules with which to inhibit the id. He viewed individual behavior as the result of the interaction among these three components of the psyche.

1. \_\_\_\_\_\_\_\_**Edward Tolman**\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_

American psychologist who studied the importance of cognition in learning, and challenged the prevailing behaviorist model that a reward must be presented in order for an organism to learn. He believed that rats running through a maze were capable of constructing a cognitive map of the maze – a mental representation of its layout. He concluded that learning involves the acquisition of knowledge rather than simple changes in outward behavior. To describe learning that is not immediately demonstrated in overt behavior, he coined the term latent learning.

1. \_\_\_\_\_\_\_\_\_**Kitty Genovese**\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_

28-jyear-old New York woman who was murdered on Friday, March 13, 1964, and has since been written into nearly every introductory psychology textbook as a classic case of bystander intervention. Police investigators learned that a total of 38 people witnessed her murder – a murder that involved three separate attacks over a period of 35 minutes.

1. \_\_\_\_\_\_\_\_**Homonculus**\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_

Fictional man who lies across the primary motor cortex and the somatosensory cortex to represent the proportion of the cortex that is devoted to each body part. Touch, temperature, pressure, and pain sensations for different areas of the body occur at distinct locations on the parietal lobe’s somatosensory cortex. Similarly, the initiation of movement for different parts of the body occurs at distinct locations on the frontal lobe’s primary motor cortex. The area of the cortex devoted to each body part is determined by that parts mobility (motor cortex) or its sensitivity (somatosensory cortex). If the size of each body part were directly related to the amount of cortex devoted to that body part – all humans would look like this fictional man.

1. \_\_\_\_\_\_\_\_**Philip Zimbardo**\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_

American psychologist who conducted the Stanford Prison Experiment. Psychology students might best know this psychologist as the narrator of a video series title *Discovering Psychology.*