Psy 301 notes 1st exam

Psychology, Behaviorism

Developmental psychology is primarily concerned with the changes that occur during childhood and adolescence. Topics studied range from the control of movements, the acquisition of language, math and musical abilities, the formation of the self and the identity, the formation of emotional attachments, moral judgments and the development of problem solving and reasoning skills. More recently, the time span examined and compared within developmental psychology has expanded across the lifespan and now includes in some cases the changes associated with aging, even into the elderly years. Social psychology focuses on interpersonal behavior, how people (alone or in groups) think, act, feel, believe or behave based on social situations. This includes situations where they are actually being observed and interacting with others as well as when they are isolated and the observation and interaction with others is imagined or implied. Experimental psychology traditionally encompasses a wide variety of both human and animal research concerned with the general processes of sensation, perception, learning and memory. It does not necessarily concern itself with any underlying biological, chemical or neural mechanisms which support those processes and may not address those mechanisms. Physiological psychology, however, is concerned with the underlying biologically and chemically based mechanisms underlying psychological phenomena. The emphasis on function of the nervous system and hormones is so great that the term behavioral neuroscience has largely replaced the term physiological psychology. However, there is a difference between a strict neuroscientist and a behavioral neuroscientist/physiological psychologist. A neuroscientist's primary interest in the biological or

chemical mechanisms of brain function at a cellular or molecular level with often little direct interest in how these cellular or molecular functions influence larger scale phenomena such as memory or emotion or behavior. A behavioral neuroscientist/physiological psychologist's primary interest is in such things as memory or emotion or behavior and they may use cellular or molecular techniques as tools to specifically study those larger scale phenomena. Cognitive psychology studies more complex psychological phenomena such as reasoning, problem solving and creativity. There is much more of an emphasis on how any sensory input is processed, transformed, or elaborated upon rather than the more basic processes involved in basic sensation and perception. Personality psychology examines the consistency in individual's (not groups, like social psychology) beliefs, attitudes and behaviors across a variety of times, places, situations and conditions. Psychometrics is perhaps the least visible and glamorous focus of research but without it most psychology research in other areas would be greatly hampered. Psychometrics studies and develops the theory, techniques and tools of psychological measurements. Without psychometrics, almost every other field within psychology would struggle to do their research without reliable and valid tests, questionnaires, surveys and diagnostic measures to assess the psychological phenomena which they examine. B. Some Dominant Research Perspectives While we have mentioned several major foci of research in psychology, within those foci there are also different perspectives which also guide research. We can look at the perspectives as the particular points of view or positions that psychologists within a larger research focus subscribe to. The focus can be

seen as, say, a career like being a doctor or a lawyer or an accountant and the perspective can be seen as a political affiliation like Democrat or Republican or Libertarian. They are not mutually exclusive. But just like political affiliation might influence how one functions within their career, research perspective influences how a psychologist thinks about their research focus. The Phenomenological perspective, also referred to as Humanistic, was primarily based on the work of Carl Rogers and Abraham Maslow. It stands in contrast to the earlier Psychoanalytic perspective founded by Sigmund Freud. Both emphasized the importance of early childhood in the formation of the personality and later psychological well-being. However, phenomenology holds that people have inborn basic real needs for unconditional positive regard (essentially, unconditional love and acceptance) and self-actualization (reaching one's full potential, " being all you can be"). People, therefore, are basically good. And the consciousmind is in control and aware of behavior and deals with any inner conflicts. Psychoanalysis contends that people unconsciously function primarily on the pleasure principle, simply avoiding pain and approaching pleasure, and because of this people aren't by nature good. Inner conflicts take place in the unconscious mind and people are therefore unaware of the true source of emotional or psychological problems. Hence, the unconsciousmind controls behavior and inner conflicts.

The Cognitive perspective, (not the same thing as the cognitive research focus) studies how people perceive, remember, reason, decide, think and the attitudes they hold to find the causes of behaviors and even psychological disorders. For instance, if a person were to be depressed, a therapist with a

cognitive perspective might try to determine if the patient held any ideas or views which might be triggering the depression, such as an unreasonably high expectation of perfection on their job or in a personal relationship. Demanding nothing short of perfection from one's self would set the individual up for certain failure and feelings of failure may then lead to depression. By convincing the individual that perfection is not a reasonable attainable standard and replacing that notion with a more realistic one, the root source of the depression would be corrected.

The Evolutionary perspective views human mental and psychological traits as the result of natural selection during the course of human evolution. Such mental and behavioral traits that enhanced reproductive success and survival would have been selected for in the distant past and passed on to offspring. Therefore, the evolutionary perspective argues that modern humans carry these traits, even if they may not confer any advantages today. The Behavioral perspective holds that behaviors themselves and their repetition are the foundations of learning, adaptation and psychological states. For instance, if someone was shy and had difficulty making friends a therapist from a behavioral perspective would emphasize having the person perform the behaviors that a friendly and outgoing person would do, even if the shy person felt uncomfortable. Initially, the person might be encouraged to practice the behaviors in a safe environment with family members or the therapist or in a group with other shy patients. As the behaviors become easier the patient might then be encouraged to continue to practice and perform those behaviors in other environments and situations, such as at work or while shopping, until the behaviors become so

habitual and effortless that they become part of the individual normal way of life. From this perspective, " doing" leads to " being." In the Biological perspective, the physiological activity of the brain and genetics are the source of psychological traits and phenomena such as anxiety, intelligence, aggression, mental illnesses, etc. This perspective is strongly supported but it is important to illustrate that it does have limitations. For example, identical twins have the same DNA and shared their mother's womb. If one identical twin has schizophrenia, a disorder that we know is inherited genetically and runs in families, the chance of the second identical twin exhibiting the disorder is 50%. If biological and genetic factors were the only ones responsible, then 100% of the second identical twins should exhibit schizophrenia, but that is not the case. However, the random incidence of schizophrenia in the general population is less than 1% and 50% is a tremendous increase over random chance, so biology and genetics is clearly very powerful. And that is what you should remember. Biology is the single most important influence on behavior and psychological traits. However, it is not the only influence and under some conditions its influence can be overruled. The relationship between focus and perspective can be illustrated with an example: Six developmental psychologists with different research perspectives can be in a room examining the interaction between a father and a young child. The psychologist with a phenomenological perspective may be investigating evidence for the child's need for unconditional positive regard. The one with a psychoanalytic perspective might notice the child's behaviors which seem to act on the principle of seeking pleasurable stimuli and avoiding of unpleasant or punishing stimuli.

From a cognitive perspective another might interpret the child's behavior as showing that the child's intellectual understanding of the world around him. An evolutionary perspective would suggest that the behaviors observed in parent and child had helped our ancestors successfully raise their offspring and adapt to their environment. A developmental psychologist with a behavioral perspective would make note of the successful performance of age and situation appropriate behaviors by the child and parent. A biologically oriented researcher might see evidence for the maturing and developing brain in the behaviors and actions of the child. One research focus, child development, but the events seen through six different perspectives. C. A Rough Historical Timeline The first significant signpost in psychology occurs before it formally began during the days of the psychophysicists, when Gustav Fechner published the book, Elements of Psychophysics, in 1860. It was this book that described the methods and techniques which the first psychologists used for their first experiments which were rooted in psychophysics. Those first psychologists conducted their research in physiology and philosophy departments
until 1879 when Wilhelm Wundt founded the first psychology laboratory at the University of Leipzig in Germany. Wundt found a school of thought referred to as Structuralism which sought to break down the mind's conscious experience into its most basic elemental structural components in order to understand how the mind assembled those parts into our mental experience. It relied on psychophysical approaches and the subjective introspective responses of experimental subjects. This school of thought was eventually challenged by Functionalism which proposed the study of

what the mind does rather than conscious experience and its structure. While these two schools of psychology were competing over the value of studying consciousness, in 1900 Sigmund Freud published The Interpretation of Dreams which argued for the value of the study of role the unconscious mind, particularly in the treatment of mental disorders. Very shortly thereafter, in 1905, Alfred Binet and Theodore Simon founded the field of psychometrics by creating the first intelligence test. They were commissioned by the French Ministry of Education upon the occasion of the national legal requirement for all French children to attend school. Theirs was the first objective test to measure a psychological trait. At this point there is a metaphorical fork in the road in the development of psychology. In 1912 Max Wertheimer founded the Gestalt school in part to oppose structuralism and its emphasis on studying consciousness and the mind by trying to break it down to simple processes. He argued that the mind often didn't build our sensory experiences from simple components so it made no sense to try to break our complex sensory experiences into smaller simpler components.; that our mind imposes structure often where there may be none; that we automatically see complex sensory events as whole rather than as a collection of simple elements that we make an effort to connect together. However, at roughly the same time, in the United States, John Watson published Behaviorism in 1913 also to oppose structuralism. But Watson was strongly influenced byfunctionalism. Rather than dispute how the conscious mind should be studied he argued that consciousness was too problematic and objective observations of overt behavior we the only fit subject for psychological study. Behaviorism eventually became the

dominant psychological theoretical perspective and continued to be so for 60 years and emphasized that stimuli and responses could be linked through rewards in complex chains through what may be termed habit. While it was dominant, there were some challengers, notably E. C. Tolman. In 1932, Tolman published Purposive Behavior in Animals and Men which cited instances of learning which could not be explained by simple rewarded stimulus-response habits, but suggested that even rats formed mental maps of their environment when in search of food. However, by 1938 the work of B. F. Skinnerreinvigorated behaviorism when he published as The Behavior of Organisms, as well as his work in developing automated animal testing chambers, called Skinner boxes by many. While behaviorism would remain dominant until the 1970's, by 1951, Carl Rogers, one of the founders of phenomenological psychology, published Client-Centered Therapy, which argued that the patient has a conscious capacity to be in control of their behavior. Not long after that, Noam Chomsky published Syntactic Structures in 1957 which suggested that language and grammar is an innate capacity of the human brain rather than a behavior learned by simple behavioral habit. These non-behavioristic points of view began the shift away from behaviorism and towards more cognitively based models of psychology. III. Some Philosophical Views Which Shaped Science As previously mentioned, after the Dark Ages concluded there was a rediscovery of ancient Greek philosophical works which shaped thinking and influenced the development of science and philosophy during the Renaissance. Eventually, these schools of thought also influenced the development of early psychology as well: A. Determinism Determinism is

the view that every event is determined by a sequence prior events, each one causing the one that follows. Therefore, it is possible, by observing events and chains of cause and effect today, to infer or reason what must have occurred in the past to bring about any event or situation we see now. Also, if our understanding of cause and effect is correct we can predict what will happen in the future by carefully observing events and conditions today. B. Positivism Positivism holds that knowledge should be based on the objective observation of the properties of the world around us either by sensory experience or instruments. Subjective judgments are invalid and unreliable. Theoretical or speculative interpretations of events must be verified by objective observations or be discarded. C. Materialism Materialism states that everything can be explained or is caused by the physical materials of the universe and laws of nature. In the end, physical matter is the only basis of all reality. D. Reductionism Reductionism asserts that all complex things or problems can be understood by breaking them down simpler or more fundamental components. Solving those smaller simpler problems and then unifying the individual solutions will solve the complex problems. In essence, the whole is just the sum of the parts. E. Empiricism Empiricism holds that the only valid knowledge of the world can be gained through observation and sensory experience and discounts any valid role of intuition or mystical revelation. Observation is also held to be superior to using reason or logic alone to understand the world. IV. Some Major Figures and Movements in Psychology A. Philosophical Roots 1. Descartes Born in 1596, Rene Descartes was a French mathematician anatomist and philosopher. Descartes believed in duality, that the mind and

body were two separate and distinct entities. Based on his anatomical dissections he agreed with the views of Galen that the body operates essentially like a hydraulic machine, with fluid moving from chambers in the brain and spinal cord, down nerves and into muscles and organs. However, he had noticed that there was one structure in the brain that was unusual. All structures seemed to have a right and left twin on each side of the brain except for one structure called the pineal gland. It was located along the centerline of the brain and directly above the large fluid filled chambers of the brain called ventricles. Descartes proposed that the soul interacted with the body through the pineal gland, controlling the flow of fluid and hence the movement of the body. Descartes was also a nativist, believing that some ideas or information are present at birth and proposed his doctrine of ideas. Under this doctrine, all knowledge can be seen as eitherinnate (present or planted at birth) or derived (acquired through sensory experience). Some of the ideas Descartes held to be innate include God, perfection, geometric axioms and infinity. 2. Locke Born in 1632, John Locke was a prominent British physician and philosopher. He was an empiricist, and in contrast to Descartes view believed that all human knowledge was acquired through sensory experience. He borrowed a term from the Greek philosopher, Aristotle, and suggested that we are born a tabula rasa, a blank slate, which is written on by our experience. That experience could come from our senses directly or from our mental activity alone, our thoughts or reflections. B. Physiology & Psychophysics 1. Von Helmholtz Hermann von Helmholtz (born in 1821) was mentored by Johannes Muller in psychophysics and went on to make numerous contributions in the fields of sensation and

perception, including the perception of colors and auditory tones. He was the first to accurately measure the speed of a nerve impulse. By demonstrating that the conduction of a nerve impulse was measurable and not instantaneous, it became clear to psychologists that thought and movement were not simultaneous. However, despite his contributions to psychological research he was uninterested in psychology itself, only in psychophysical measurements. He was a physiologist at heart. 2. Fechner Gustav Fechner (born in 1801) had an active academic career of over 70 years. He began as a physicist and physiologist but as a psychophysicist he made his most enduring contributions. In 1860 he published The Elements of Psychophysics which laid out the methods used by the later structuralist psychologists. However, like Helmholtz, he is not considered a psychologist though he originated many of the techniques. The reason for this distinction is that he also was more interested in making measurements and not interested in promoting or organizing the endeavors of others into what would become a new science. C. Psychology: Structuralism 1. Wundt Wilhelm Wundt began writing on psychology and psychophysics as early as 1858, even though he did not found his laboratory until 1879. Unlike Fechner he was very concerned with the actual founding of an independent science of psychology. Wundt believed that beyond psychophysical measurements, the conscious experience was a fit topic for study and believed that the mind built up our conscious experience from simple elemental experiences he called immediate experiences (such as the experience of " red") which were assembled together to from mediate experiences (such as the experience of a rose). His view was to eventually

determine the structure of the conscious mind (hence, the eventual coining of the term structuralism by his student E. B. Titchener, see below) by analyzing the introspective self-reports of subjects and their immediate experiences in the laboratory. His hope was to create a mental equivalent if chemistry's periodic table of the elements where by the nature and properties of psychological processes could be understood and their interactions predicted. 2. Stumpf Carl Stumpf was Wundt's chief competitor. Stumpf's expertise was in the auditory perception of tones and because of the esteem with which he was held by the prominent psychophysicist von Helmholtz, who also worked on auditory tones, Stumpf won a prestigious professorship at the University of Berlin. One of Stumpf's graduate students, Oskar Pfungst, was credited with solving the apparent mystery of Clever Hans, a horse that appeared to respond appropriately to questions, among other things, about mathematics, by tapping his foot. Pfungst demonstrated that the horse was actually responding to subtle unconscious cues that his owner was unintentionally broadcasting to begin tapping and stop tapping. Pfungst's report also influenced John Watson's development of his ideas on behaviorism. 3. Titchener E. B. Titchener founded the department of psychology at Cornell University in 1893, bringing a very modified version of Wundt’s psychology which he now formally labeled structuralism. However, had abandoned Wundt's emphasis on immediate experience and had shifted the focus to mediate experience. He also departed radically from his mentor in the techniques used in introspection by his subjects. His departures from Wundt's vision ultimately

led to criticisms which accelerated the development and acceptance of behaviorism.