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Chapter 1

INTRODUCTION TO PSYCHOLOGY

We all use the principles of psychology everyday and probably don't even realize it. When we spank our child for doing something wrong, we are utilizing the learning principle of punishment. When we get nervous right before we have to give that big speech, we are activating our autonomic nervous system. When we talk to ourselves in our heads, telling ourselves to "calm down," "work harder," or "give up," we are utilizing cognitive approaches to change our behaviors and emotions.

This text is designed to give you a general idea of what psychology is, how information is developed, what we have learned about ourselves, and how psychology is applied to help improve people's lives. The chapters are organized so that you can get a better idea of how psychology works; from basic theories and principles, through research, understanding and explaining results, to the actual application of psychological techniques.

This text is not designed to make you a psychologist. It is written in a general format so that you can gain a better idea of all of the major concepts in psychology. If you were to major in psychology as an undergraduate, each chapter would be a separate course. And, to get your doctorate, which is required to be called a psychologist in most states, you would take an additional five to seven years further studying the concepts in this text.

You will learn a lot, however, and hopefully you will increase not only your knowledge base, but also your interest in the principles of psychology. This website provides a great deal of information about the applications of psychology in a self-help format, as do many other very helpful and professional sites. Read on...learn...and improve your understanding of your greatest asset...the human mind.

What is Psychology?

Psychology is the study of cognitions, emotions, and behavior. Psychologists are involved in a variety of tasks. Many spend their careers designing and performing research to better understand how people behave in specific situations, how and why we think the way we do, and how emotions develop and what impact they have on our interactions with others. These are the research psychologists who often work in research organizations or universities. Industrial-organizational psychologists work with businesses and organizations to help them become more productive, effective, and efficient, and to assist them in working with their employees and their customers. Practitioners, typically counseling and clinical psychologists, work with individuals, couples, families, and small groups to help them feel less depressed, less anxious, become more productive or motivated, and overcome issues which prevent them from living up to their potential.

The study of psychology has five basic goals:

1. **Describe** – The first goal is to observe behavior and describe, often in minute detail, what was observed as objectively as possible

2. **Explain** – While descriptions come from observable data, psychologists must go beyond what is obvious and explain their observations. In other words, why did the subject do what he or she did?

3. **Predict** – Once we know what happens, and why it happens, we can begin to speculate what will happen in the future. There's an old saying, which very often holds true: "the best predictor of future behavior is past behavior."

4. **Control** – Once we know what happens, why it happens and what is likely to happen in the future, we can exert control over it. In other words, if we know you choose abusive partners because your father was abusive, we can assume you will choose another abusive partner, and can therefore intervene to change this negative behavior.

5. **Improve** – Not only do psychologists attempt to control behavior, they want to do so in a positive manner, they want to improve a person's life, not make it worse. This is not always the case, but it should always be the intention.

The Beginnings of Psychology: Philosophy and Physiology

While psychology did not emerge as a separate discipline until the late 1800s, its earliest history can be traced back to the time of the early Greeks. During the 17th century, the French philosopher Rene Descartes introduced the idea of dualism, which asserted that the mind and body were two separate entities that interact to form the human experience. Many other issues still debated by psychologists today, such as the relative contributions of nature vs. nurture, are rooted in these early philosophical traditions.

So what makes psychology different from philosophy? While early philosophers relied on methods such as observation and logic, today's psychologists utilize scientific methodologies to study and draw conclusions about human thought and behavior. Physiology also contributed to psychology's eventual emergence as a scientific discipline. Early physiology research on brain and behavior had a dramatic impact on psychology, ultimately contributing to the application of scientific methodologies to the study of human thought and behavior.

Psychology Emerges as a Separate Discipline

During the mid-1800s, a German physiologist named Wilhelm Wundt was using scientific research methods to investigate reaction times. His book published in 1874, *Principles of Physiological Psychology*, outlined many of the major connections between the science of physiology and the study of human thought and behavior. He later opened the first world's first psychology lab in 1879 at the University of Leipzig. This event is generally considered the official start of psychology as a separate and distinct scientific discipline.

How did Wundt view psychology? He perceived the subject as the study of human consciousness and sought to apply experimental methods to studying internal

mental processes. While his use of a process known as *introspection* is seen as unreliable and unscientific today, his early work in psychology helped set the stage for future experimental methods. An estimated 17,000 students attended Wundt's psychology lectures, and hundreds more pursued degrees in psychology and studied in his psychology lab. While his influence dwindled in the years to come, his impact on psychology is unquestionable.

Structuralism Becomes Psychology's First School of Thought

Edward B. Titchener, one of Wundt's most famous students, would go on to found psychology's first major school of thought. According to the structuralists, human consciousness could be broken down into much smaller parts. Using a process known as introspection, trained subjects would attempt to break down their responses and reactions to the most basic sensation and perceptions.

While structuralism is notable for its emphasis on scientific research, its methods were unreliable, limiting, and subjective. When Titchener died in 1927, structuralism essentially died with him.

The Functionalism of William James

Psychology flourished in America during the mid- to late-1800s. William James emerged as one of the major American psychologists during this period and the publication of his classic textbook, *The Principles of Psychology*, established him as the father of American psychology. His book soon became the standard text in psychology and his ideas eventually served as the basis for a new school of thought known as functionalism.

The focus of functionalism was on how behavior actually works to help people live in their environment. Functionalists utilized methods such as direct observation. While both of these early schools of thought emphasized human consciousness, their conceptions of it were significantly different. While the structuralists sought to break down mental processes into their smallest parts, the functionalists believed that consciousness existed as a more continuous and changing process. While functionalism is no longer a separate school of thought, it would go on to influence later psychologists and theories of human thought and behavior.

Psychoanalysis: The Psychology of Sigmund Freud

Up to this point, early psychology stressed conscious human experience. An Austrian physician named Sigmund Freud changed the face of psychology in a dramatic way, proposing a theory of personality that emphasized the importance of the unconscious mind. Freud's clinical work with patients suffering from hysteria and other ailments led him to believe that early childhood experiences and unconscious impulses contributed to the development of adult personality and behavior.

In his book *The Psychopathology of Everyday Life*, Freud detailed how these unconscious thoughts and impulses are expressed, often through slips of the tongue and

psychology
dreams. According to Freud, psychological disorders are the result of these unconscious conflicts becoming extreme or unbalanced.

The Rise of Behaviorism: The Psychology of Pavlov, Watson, and Skinner

Psychology changed dramatically during the early 20th-century as another school of thought known as behaviorism rose to dominance. Behaviorism was a major change from previous theoretical perspectives, rejecting the emphasis on both the conscious and unconscious mind. Instead, behaviorism strove to make psychology a more scientific discipline by focusing purely on observable behavior.

Behaviorism had its earliest start with the work of a Russian physiologist named Ivan Pavlov. Pavlov's research on the digestive systems of dogs led to his discovery of the classical conditioning process, which demonstrated that behaviors could be learned via conditioned associations.

An American psychologist named John B. Watson soon became one of the strongest advocates of behaviorism. Initially outlining the basic principles of this new school of thought in his 1913 paper *Psychology as the Behaviorist Views It*, Watson later went on to offer a definition in his classic book *Behaviorism* (1924), writing: "Behaviorism... holds that the subject matter of human psychology is the behavior of the human being. Behaviorism claims that consciousness is neither a definite nor a usable concept. The behaviorist, who has been trained always as an experimentalist, holds, further, that belief in the existence of consciousness goes back to the ancient days of superstition and magic.

The impact of behaviorism was enormous, and this school of thought continued to dominate for the next 50 years. Psychologist B.F. Skinner furthered the behaviorist perspective with his concept of operant conditioning, which demonstrated the effect of punishment and reinforcement on behavior.

While behaviorism eventually lost its hold on psychology, the basic principles of behavioral psychology are still widely in use today. Therapeutic techniques such as behavioral modification and token economies are often utilized to help children learn new skills and overcome maladaptive behaviors, while conditioning is used in many situations ranging from parenting to education.

Humanistic Psychology: The Third Force in Psychology

While the first half of the twentieth-century was dominated by psychoanalysis and behaviorism, a new school of thought known as humanistic psychology emerged during the second half of the century. Often referred to as the "third force" in psychology, this theoretical perspective emphasized conscious experiences.

American psychologist Carl Rogers is often considered the founding father of this school of thought. While psychoanalysts looked at unconscious impulses and behaviorists focused purely on environmental causes, Rogers believed strongly in the power of free will and self-determination. Psychologist Abraham Maslow also contributed

to humanistic psychology with his famous hierarchy of needs theory of human motivation.

Contemporary Psychology: The Psychology of Today

As you have seen in this brief overview of psychology's history, this discipline has seen dramatic growth and change since its official beginnings in Wundt's lab. The story certainly does not end here. Psychology has continued to evolve since 1960 and new ideas and perspectives have been introduced. Recent research in psychology looks at many aspects of the human experience, from the biological influences on behavior to the impact of social and cultural factors.

Today, the majority of psychologists do not identify themselves with a single school of thought. Instead, they often focus on a particular specialty area or perspective, often drawing on ideas from a range of theoretical backgrounds. This eclectic approach has contributed new ideas and theories that will continue to shape psychology for years to come.

Fields of Psychology

The subject matter of psychology is very broad. There is an astoundingly diverse range of issues with which psychologists are concerned and settings in which American psychologists work. Let's look at the various subfields of psychology, keeping in mind that within each subfield, psychologists can engage in many different activities. Most conduct research, teach, and/or apply psychological principles to the solution of the real life problems of individuals and society. Psychologists in some major subfields within psychology are described in the booklet, "Psychology: Careers in the 21st Century" (APA, 1997, free):

Biopsychologists: take a comparative and ontogenetic perspective in the experimental analysis of basic psychological processes as they relate to the many ways in which animal species adapt, survive, reproduce and evolve.

Child Psychologists: See Child Clinical Psychologists, Developmental Psychologists, School Psychologists, and Social Worker.

Child Clinical Psychologists: have about the same preparation as clinical psychologists; in addition, they have the responsibility of becoming acquainted with the developmental characteristics of preadolescent.

Clinical Psychologists: are concerned with the diagnosis and treatment of psychological disturbances. After graduate preparation in an accredited university or school of professional psychology, supervised postdoctoral experience, and licensure or certification by the state, some clinical psychologists enter independent practice/consulting roles. Others find themselves responsible for a complete range of psychological services in public settings. Their responsibilities range from administering and scoring psychological tests, to engaging in therapy, to supervising the training of graduate students in the delivery of mental health services, to administering a community mental health program. Some clinical psychologists obtain faculty positions

in a college or university where they perform research and train graduate students. Others serve as adjunct (or part-time) faculty, while maintaining independent clinical practices. Many serve as consultants. Ph.D. or Psy.D. needed.

Cognitive Psychologists: are concerned with what organisms know and how they come to know it. They study how people perceive objects and events, how they can store past events in memory, how they transform and manipulate knowledge by thinking, and how they analyze their experience to emerge with new and abstract notions.

Community Psychologists: are concerned with the application of concepts, tools and skills from the fields of counseling, guidance and rehabilitation psychology. Community psychologists are trained to counsel, treat and/or refer outpatients and to assist in the development of community resources for their clients.

Counseling Psychologists: are concerned with counseling, teaching, consulting research, and/or administration. In their work, they are particularly concerned with the role of education and work in an individual's functioning, and with the interaction between individuals and the environments in which they live. Typically, counseling psychologists work with normal or moderately maladjusted persons, individually or in groups. This work includes use of traditional counseling interview methods, interest, ability and personality tests, and educational and occupational information. Most counseling psychologists are employed in educational settings and most of those in colleges or universities. A minority are employed in hospitals, (e.g., the VA), community mental health or rehabilitation centers, industry, government, or in private or community counseling agencies.

Developmental Psychologists: are concerned with growth and development from conception through death. All aspects of the animal or human organism (physiological, biological, physical, cognitive, emotional, social, cultural) may be studied.

Educational Psychologists: are concerned with a range of activities from initial design through development and evaluation of both materials and procedures for education and training. Such positions exist in public schools, in the military, in private research and development companies, and in industrial concerns. They may deal with analyzing education and training needs, with developing materials for instruction in various media, with designing the best conditions for instruction, and with evaluating the effectiveness of instructional programs.

Engineering Psychologists: are concerned with designing and using environments and systems with which human beings live and work. Their job is to improve the interaction between people and their environments. They may help design work areas, equipment, and human-machine systems, as well as the training devices, aids, and requirements needed to prepare people to make such systems function. They work in many different settings, such as the aerospace industry, communications and transportation industries, the military, and other governmental, commercial and industrial enterprises.

Experimental Psychologists: a general title applied to a variety of psychologists who are trained in designing and conducting research in specific basic areas like learning,

sensation and perception, human performance, and motivation and emotion. A research oriented doctoral degree (Ph.D.) is usually needed.

Health or Medical Psychologists: are concerned with understanding how psychological factors can affect physical health. -Some representative issues: how certain attitudes and behaviors may cause heart disease; how the state of physical health affects one's psychological well-being; and how living with cancer can affect one's attitude and behavior. They also study the psychology of how people can better cope with physical disease

Industrial / Organizational Psychologists: are concerned with the relation between individuals and work. They are employed in business and industry, in government, and in colleges and universities, and may perform a variety of jobs. An industrial/organizational psychologist working in industry may study how work is organized; suggest changes to improve the satisfaction of employees, the quality of the organization's services, and productivity; consult with management on the development of effective training programs for employees; design programs for the early identification of management potential; administer career counseling and preretirement counseling programs; develop affirmative action programs; recommend changes in job definition; design a system of performance evaluation. A master's degree in industrial/organizational psychology is a minimum requirement for a position as a psychological associate but a position as a psychologist requires a Ph.D.

Personnel Psychologists: Compared to industrial/organizational psychologists, personnel psychologists focus more specifically on the hiring, assignment, and promotion of employees. Such a psychologist may be involved in the continued development and validation of assessment tools for selection, placement, classification and promotion of employees. Although positions as test administrators and interviewers are available for those with B.A.'s and M.A.'s, a Ph.D. is a general prerequisite for a position as a psychologist.

Psycholinguists: are concerned with discovering the psychological significance of the properties of language, of linguistic organization, the meaning of words, syntax and how children acquire language.

Psychometric (Quantitative) Psychologists: are directly concerned with the measurement of behavior (mostly through the use of tests) and the design of research investigations. Such a psychologist may be analyzing complex sets of data; designing, developing pilot testing, or validating versions of intelligence, personality, or aptitude tests; or deriving new statistics with which to analyze data. The psychometric psychologist is typically well-trained in mathematics, statistics, and in the programming and use of computers.

Psychotherapists: A very broad term. Generally, anyone can call him or herself a "Psychotherapist", but ONLY a person with a Ph.D. in Psychology and a license can use the term "Psychologist". Psychotherapists can include anyone without a Ph.D. who tries to help people deal with their problems. Counselors and Social Workers are psychotherapists, but not Psychologists.

School Psychologists: are concerned with increasing the effectiveness of schools in improving the intellectual, social and emotional development of children. They may also serve as consultants in education for the handicapped, mentally disturbed or mentally retarded; or in developing special programs in adult education. They typically function in various roles within the school system. They may assist in implementing and evaluating special education programs, may serve as leaders of in-service training programs for teachers, or as consultants to teachers regarding specific teaching or classroom related problems. They may also help to treat children's psychological and educational problems that influence problems in school. They may also administer tests and interpret their results. An M.A. and certification by the State Board of Education are generally required, and a Ph.D. may be required for supervisory positions.

Social Psychologists: study the ways in which the social context affects the behavior of the individual and groups in the real world and the laboratory. Social psychologists focus on topics such as social roles, attitude formation and change, affiliation, interpersonal attraction and interaction, conformity, and group processes.

Influence of Research on Psychology

Psychology is not an absolute science and is often referred to as a 'Social Science' or a 'Soft Science.' This is because it deals with human thoughts, feelings, and behavior, and as we are all aware, humans are not always predictable and reliable. Instead, we interact with our environment in ways that alter how we behave, how we think, and how we feel. Change one thing and the domino effect can change everything else.

Nevertheless, research plays an extremely important role in psychology. Research helps us understand what makes people think, feel, and act in certain ways; allows us to categorize psychological disorders in order to understand the symptoms and impact on the individual and society; helps us to understand how intimate relationships, development, schools, family, peers, and religion affect us as individuals and as a society; and helps us to develop effective treatments to improve the quality of life of individuals and groups.

In this sense, psychological research is typically used for the following:

1. Study development and external factors and the role they play on individuals' mental health
2. Study people with specific psychological disorders, symptoms, or characteristics
3. Develop tests to measure specific psychological phenomenon
4. Develop treatment approaches to improve individuals' mental health

In the following sections, you will learn about how research is conducted and the different types of research methods used to gather information.

Experimental Methods

Starting from the general and moving to the more specific, the first concept we need to discuss is Theory. A theory can be defined as a "general principle proposed to explain how a number of separate facts are related." In other words, a theory is an "idea about a relationship." In order to test whether a theory is correct or not, we need to do

research. Theories are stated in general terms, so we need to define more accurately what we will be doing in our experiment.

To do this, we need to define the variables in our theory so that they are testable, and every experiment has two types of variables:

Independent Variable (IV) – the variable that is manipulated by the experimenter (input variable)

Dependent Variable (DV) – the outcome variable (results of the experiment)

By defining our variables that we will use to test our theory we derive at our Hypothesis, which is a testable form of a theory.

As an example of this, let's say that we have a theory that people who drive sports cars are more aggressive in their interactions with others. Our independent variable would be the type of car you drive (sports, sedan, SUV, etc.). Our dependent variable, the outcome of our research, would be aggression. We would need to further define aggression so that it is something we can test such as speeding or cutting other people off in traffic. We now have the basics of our very simple experiment and can write our Hypothesis: People who drive sports cars drive over the speed limit more frequently than people who drive other types of cars.

Research Biases

Now we've got a hypothesis which is the first step in doing an experiment. Before we can continue, however, we need to be aware of some aspects of research that can contaminate our results. In other words, what could get in the way of our results in this study being accurate. These aspects are called research biases, and there are basically three main biases we need to be concerned with.

Selection Bias – occurs when differences between groups are present at the beginning of the experiment.

Placebo Effect – involves the influencing of performance due to the subject's belief about the results. In other words, if I believe the new medication will help me feel better, I may feel better even if the new medication is only a sugar pill. This demonstrates the power of the mind to change a person's perceptions of reality.

Experimenter Bias – The same way a person's beliefs can influence his or her perception, so can the belief of the experimenter. If I'm doing an experiment, and really believe my treatment works, or I really want the treatment to work because it will mean big bucks for me, I might behave in a manner that will influence the subject.

Controlling for Biases

After carefully reviewing our study and determining what might effect our results that are not part of the experiment, we need to control for these biases. To control for selection bias, most experiments use what's called Random Assignment, which means

assigning the subjects to each group based on chance rather than human decision. To control for the placebo effect, subjects are often not informed of the purpose of the experiment. This is called a Blind study, because the subjects are blind to the expected results. To control for experimenter biases, we can utilize a Double-Blind study, which means that both the experimenter and the subjects are blind to the purpose and anticipated results of the study.

Standardization

We have our hypothesis, and we know what our subject pool is, the next thing we have to do is standardize the experiment. Standardization refers to a specific set of instructions. The reason we want the experiment to be standardized is twofold.

First, we want to make sure all subjects are given the same instructions, presented with the experiment in the same manner, and that all of the data is collected exactly the same or all subjects. Second, single experiments cannot typically stand on their own. To really show that are results are valid, experiments need to be replicated by other experimenters with different subjects. To do this, the experimenters need to know exactly what we did so they can replicate it.

Types of Research

What we've focused on is called Experimental Methods, the true experiment. It involves randomized assignment of subjects, standardized instructions, and at least one IV and one DV. There are several other types of research that are not as rigorous, but that you need to be aware of.

Perhaps the simplest form of research is Naturalistic Observation.

Observing behavior in their natural environment

Often involves counting behaviors, such as number of aggressive acts, number of smiles, etc.

Advantages: Behavior is naturally occurring and is not manipulated by a researcher and it can provide more qualitative data as opposed to merely quantitative information.

Limitations: Even the presence of someone observing can cause those being observed to alter their behavior. Researcher's beliefs can also alter their observations. And, it is very difficult to coordinate multiple observers since observed behaviors must be operationally defined (e.g. what constitutes an aggressive act)

* Case Study

Following a single case, typically over an extended period of time

Can involve naturalistic observations, and include psychological testing, interviews, interviews, interviews with others, and the application of a treatment or observation

- Social worker -
- psychologist - Interview 10
- psychiatrist - Test results

Advantages: Can gather extensive information, both qualitative and quantitative and it can be helpful in better understanding rare cases or very specific interventions

Limitations: Only one case is involved, severely limiting the generalization to the rest of the population. Can be very time consuming and can involve other problems specific to the techniques used, including researcher bias.

Survey

Everyone has probably heard of this and many of you have been involved in research involving surveys. They are often used in the news, especially to gather viewer opinions such as during a race for president

Advantages: Can gather large amounts of information in a relatively short time, especially now with many surveys being conducted on the internet.

Limitations: Survey data is based solely on subjects' responses which can be inaccurate due to outright lying, misunderstanding of the question, placebo effect, and even the manner in which the question is asked

Correlational Studies

Correlation means relationship, so the purpose of a correlational study is to determine if a relationship exists, what direction the relationship is, and how strong it is.

Advantages: Can assess the strength of a relationship. Is popular with lay population because it is relatively easy to explain and understand.

Limitations: Can not make any assumptions of cause and effect (explain how third a variable can be involved, or how the variables can influence each other).

Psychological Testing

Utilizing testing to gather information about a group or an individual

Advantages: Most tests are normed and standardized, which means they have very reliable and valid results. Popular with businesses looking for data on employees and with difficult or specific therapy cases

Limitations: Tests which are not rigorously normed and standardized can easily result in inaccurate results.

- Hypothesis
- Sample
- Analysis
- Interpretation
- Conclusion

1 VC
2 VC
3 VC

Intelligence
personality ?