

# Psychology short essay



**ASSIGN  
BUSTER**

## INTRODUCTION

The study of the way people think and behave is called psychology. The field of psychology has a number of sub-disciplines devoted to the study of the different levels and contexts of human thought and behavior. Social psychology, for example, deals with human thought and action in a social context, while physiological psychology is concerned with thought and behavior at the level of neurology. Another division of psychology, comparative psychology compares the thought and behavior of humans with that of other species.

Abnormal psychology studies atypical thought and action. Psychology is an interdisciplinary science. Social psychology, for example, involves both sociology and anthropology. Abnormal psychology has much in common with psychiatry, while physiological psychology builds on the techniques and methods of neurology and physiology.

It is evident that psychological methods are being increasingly used in daily events. Employment for example, in Europe more companies are subjecting potential personnel to psychological profile checks and psychological tests during interviews. Even our social lives are becoming affected. People who are seeking the right partner are using psychological techniques to establish the emotional state of their potential partners.

As psychology becomes more and more accessible and understandable to more people, I feel that it will begin to influence our lifestyles more.

From a personal stand point, this has been a very difficult exercise. This is a new area for me, so I have been unable to write from a professional or work experience perspective only from a purely academic view. PSYCHOLOGY. ‘ Psychology’ literally means ‘ study of the mind’. Psychology as a separate discipline is usually dated from 1879 when Wundt opened the first psychology laboratory, devoted to the analysis of conscious thought into its basic elements, structuralism.

It is understood that ‘ structuralism’ was founded by Wilhelm Wundt. What made this ‘ new’ psychology different from philosophy was the emphasis on measurement and control. The application of some of the basic scientific method to the study of the mental process. For psychology to become a natural science, it must confine itself to what is observable and measurable by more than one person, namely behaviour, Behaviourism was established. This movement was formally initiated by John Broadus Watson in a famous paper, “ Psychology as the Behaviourist Views It” published in 1913. At the time when behaviourism was becoming prominent in America a group of German psychologists began to discredit the principles of structuralism and behaviourism.

They argued that it was not possible to break down psychological processes. This theory, demonstrated that our perceptions are highly organised and have immediate, vivid qualities that cannot be explained in terms of piecing together basic elements. The psychologists had the opinion that our perceptions are inherently configurational, meaning that the elements making up the perception could not be separated from the way in which those elements were combined as a whole. This now popular theory is known

as ' Gestalt' taken from the German word for " configuration" The expression of the third force movement known as " humanistic psychology" is an eclectic grouping of American psychologists who advocated various interpretations of human personality. The term humanistic reflects the focus on defining a human psychology with emphases on individual existence, focusing on the role of free choice and our ability to make rational decisions on how we live.

During the 1950s and 1960s, many psychologists began to look to the work of computer scientists in trying to understand the more complex behaviour which, they felt, learning theory or conditioning had oversimplified. This behaviour was referred to by early psychologists as ' mind' or mental processes, which has become cognition or the cognitive process. The cognitive psychologist sees the person as an information processor and cognitive psychology , along with artificial intelligence, linguistics, philosophy, anthropology and neuroscience now form part of cognitive science, which emerged in the late 1970s. How can we divide up the work that psychologists do?

There is much more under the heading of ' psychology' than the theories and principles of famous and leading psychologists of our time. There are psychologists in all areas, specialising in a number of fields. Physiological psychology is concerned with the neurological and physiological events that underlie human thought and action.

Some physiological psychologists are concerned with mapping the functions of various parts of the brain. Others study both the transmission of electrical

information in the brain and the neurotransmitters that facilitate or inhibit such transmissions. Physiological psychologists study the effects of drugs on human behavior. Conditioning and learning are concerned with how experience modifies thought and behavior.

Initially devoted to the investigation of principles of learning among all species, the field now includes specific types of learning for different species. Other areas of interest in the field include maladaptive learning, such as learned helplessness, and learning in traditional settings such as in the classroom and on the job. Cognitive psychology applies to the study of thinking, concept formation, and problem solving. Work in this field has been much influenced and aided by the use of computers.

Computers are used to present problems and tasks to subjects and to model the thinking and problem-solving processes. The impact of computers on cognitive psychology is also evident in the theories used to describe human thought.

For example, such terms as short-term memory and long-term memory parallel the two types of memory that are available on computers. Social psychology looks into all facets of human social interaction. Among the problems studied by social psychologists are such matters as the development of friendship, the nature of romantic attachment, and the relative effectiveness of cooperation and competition on achievement. In recent years social psychology has included the study of attribution. Attribution theory recognizes that psychological perceptions of events do not

always correspond to objective realities. Abnormal psychology is the study of maladaptive behaviors.

Such behaviors range from the simple habit disorders (thumb sucking, nail biting), to the addictions (alcohol, gambling and so on) to the most severe mental disturbances the psychoses.

Abnormal psychology investigates the causes and dynamics of mental and behavioral disorders and tests the effectiveness of various treatments.

Vocational psychology is the study of how specific personality traits contribute to success in different vocations. In one approach the characteristics of people already working in a specific vocation are studied. If a personality pattern emerges, tests can then be constructed to measure the traits and interests of people in the field. Other individuals who exhibit the same traits and interests can be counseled to consider the field as a possible vocational choice.

Vocational psychologists also look for traits and aptitudes that contribute to success in a vocation. Industrial psychology concerns the physical and psychological conditions of the workplace and how these factors contribute to an efficient work environment. Industrial psychologists are also concerned about the design of manufactured products. Some industrial psychologists, for example, are involved in the design of such items as dashboards, which are used in airplanes and automobiles.

Their aim is to apply a knowledge of human capabilities and limitations to the design of instrumentation that is to be used by humans.

Business psychology, a relatively recent branch of psychology, is the study of the effectiveness of interpersonal relations in the workplace. Some business psychologists set up training workshops to improve executives' management skills. They also evaluate prospective job applicants and evaluate individuals being considered for promotion. They employ the full range of psychological tests as well as interview procedures. Instruments are often designed for specific types of evaluations.

Experimental psychology encompasses many different fields of psychology that employ experimental procedures. Traditionally it has been regarded as the study of the basic sensory mechanisms: vision, hearing, taste, touch, and smell. The classical problems of experimental psychology are determining reaction times and reaction thresholds (the amount of stimulation needed to produce a response for any given sense) as well as developing psychological scales for physical stimuli, called psychophysics. Hot and cold, for example, are psychological scalings of temperature stimuli for which such physical measures as degrees Fahrenheit provide only physical units.

Much experimental psychology today is closely tied with physiological psychology.

Animal psychology includes several different disciplines. One is comparative psychology, which explores animal behavior in comparison to human behavior. Comparative psychologists, for example, might present different species with comparable tasks, to see how their performances differ. Animal psychologists also study animals to gain insight into human behavior. For

example, the effects of drugs and tobacco on animals are observed to determine the effects these substances have on humans.

Developmental psychology is concerned with the growth and development of individuals. Once concerned primarily with the growth and development of children, the field has expanded to include the growth and development of individuals throughout their lives. Developmental psychologists explore changes associated with mental, social, and emotional development. They also look at the evolution of friendships and parent-child relationships. How children learn both in and outside school is another focus of developmental research.

Clinical psychology has undergone rapid growth in recent years and is now the largest sub-discipline within psychology. Clinical psychologists work in hospitals, in clinics, and in private practice. Their main concerns are the diagnoses and treatment of learning and emotional problems. Many conduct psychological research along with their applied work. The goal of psychology must be to further understand behaviour.

This has to be done through theories. Good psychological theories generate hypotheses about how human behaviour should respond to given conditions. Psychology has to develop and comprehend the behavioural attitude of not only humans but animals, and establish more relevant theories as the science of psychology advances. Methods of Psychology.

Psychologists use a number of research methods to study behaviour. These include surveys, observation, case studies, correlation method and experimental methods.



Performing a survey is one of the most widely used methods of psychological research. Representative groups are questioned either face to face or by being given formal questionnaires to complete. There are limitations to surveys.

There can easily be a bias within the groups questioned. For example, gender, social or economic differences etc. This can give a limited insight as to the true attitude of the group surveyed. It can also make considerable difference as to how the questions are composed. Any question can be written with a critical or creative style which can determine the way the person taking part in the survey will answer. The only way to take a poll or survey is to guarantee that the individuals surveyed (a sample) will be representative of the whole group you are interested in.

In a random sample, every individual in the population has an equal chance to be in the sample. Observational research methods can either be in a controlled environment or subjects can be observed in their normal day to day habitat, known as naturalistic observation.

The most critical feature of naturalistic observation is that 'the act of observing someone must not interfere with how the person behaves'. When people know they are being watched, they are likely to try and look as good as they can. The advantage of naturalistic observations is that they are made under real life conditions.

The main disadvantage is that we can seldom say with certainty why people behaved as they did because we do not have any control over the circumstances in which they were behaving. Most data-gathering procedures

in psychology collect a limited amount of information from a large number of people, the aim of a case study is to obtain large amounts of information about an individual or small group. Detail of this kind can help the psychologist understand complex relationships and behavioral patterns. Among the disadvantages of case studies is the potential for observer bias and the lack of proper sampling opportunities. A list of facts and figures of the kind that may be obtained from any of the previous research methods can only provide a limited insight into the nature of behaviour.

A useful strategy is to look for relationships among the various measures obtained.

Studies with this purpose are described as correlational. Correlational studies may use a number of different research methods to obtain the data. The distinctive feature of a correlational study is not the method used to gather the data but the questions the data is designed to answer. The difficulty with correlational studies is not that they fail to suggest causal relations but that they suggest too many.

The experiment is the only method by which science can establish causal relations. In experimental research the conditions under which observations are made are arranged so the number of possible causes can be controlled and specified. All experiments have one or more independent and dependent variables.

The independent variable is the set of conditions established by the experiment. The dependent variable is that aspect of the subjects' behaviour

measured by the experimenter and which could possibly be influenced by the independent variable.

Naturally the limitation of any experimental research is the artificial surroundings in which they are performed. Psychology makes extensive use of statistics. These methods have two broad functions in the analysis of data: descriptive and inferential. The aim of descriptive methods is to provide a summary of data so that important features are more readily apparent. Inferential methods are used to evaluate the extent to which data supports a hypotheses or can be generalised beyond the particular study being analysed.

The controlling influence over all of these research methods is of course ethics. Ethics considerations arise with both human and animal subjects. To help researchers, as well as safeguard the welfare of the subjects, ethical guidelines exist in many countries.

**THE NERVOUS SYSTEM.** The nervous system of humans and other vertebrates consists of two major parts: the central nervous system (CNS) and the peripheral nervous system (PNS) The CNS consists of the brain and the spinal cord. It occupies the commanding position in the nervous system, as it coordinates and integrates all bodily functions.

The PNS, which transmits messages to and from the CNS. has two divisions: somatic and autonomic. Autonomic nerves are motor nerves only. They regulate a great variety of bodily functions. Cerebral Cortex.

The very elaborate cerebral cortex is layered sheet some 2.5mm thick of literally billions of nerve cells that go over and around the brain. It covers the upper and outer portions of the brain called the cerebrum. This is why it is called the cerebral cortex. The cortex is wrinkled and folded.

This convoluting greatly enlarges the surface area available, compared to a similarly sized smooth cortex. The cerebrum is divided down the middle from front to back into two halves: the right and the left cerebral hemispheres.

Each hemisphere controls the activities of the opposite side of the body that is, the left cerebral hemisphere controls the right side of the body and the right hemisphere controls the left side. Although in many ways the two hemispheres are mirror images of one another, there are functional distinctions between them. In most people, the areas that control the development and use of language are located in the left hemisphere, while areas that govern three-dimensional visualization and musical and artistic creation are located in the right hemisphere.

Each hemisphere of the cerebrum is divided into four sections: the frontal, parietal (top rear), temporal (lower), and occipital (rear) lobes. The back part of the frontal lobe contains areas that govern movement of the opposite side of the body.

Damage to this region results in paralysis. In front of this region is an area of the frontal lobe called the premotor cortex, where complex movements are controlled.

Still farther forward is the prefrontal cortex, which exerts an inhibitory control over actions. Such distinctly human abilities as foreseeing the consequences of an action, exercising self-restraint, and developing moral and ethical standards depend on the normal functioning of the prefrontal cortex. The parietal lobe, the part of the hemisphere that lies behind the frontal lobe, contains the primary sensory cortex the part of the brain. It receives sensory information from the opposite side of the body. Below the frontal and parietal lobes is the temporal lobe, which is involved with hearing and memory.

Behind the temporal lobe is the occipital lobe, the visual center of the brain. Here the signals that come to the brain from the eyes are put through very complex transformations in a process of analysis and integration. Cranial nerves are a group of 12 pairs of sensory, motor, or mixed (having separate sensory and motor fibers) nerves that connect with the brain stem and the lower parts of the brain.

The Endocrine System. Endocrine glands secrete onto adjacent tissue where the hormone is picked up by the blood, lymph system, or nerve cells and transported to the target organ. The adrenals, thyroid, parathyroid, pituitary, hypothalamus, pineal, and ovary are endocrine glands.

The secretions of endocrine glands are called hormones. Mixed exocrine and endocrine glands, which secrete in both ways, include the liver, testes, and pancreas. Endocrine glands release extremely small amounts because hormones are powerful substances. The activities of the endocrine glands form one of the most complex systems in the body.

Although each gland has its own unique function, the glands are interdependent, and the function of one depends on the activity of another. The hypothalamus produces several hormones, including those that regulate pituitary activity. The pituitary produces its own hormones that regulate growth and stimulate other endocrine glands.

The adrenals, thyroid, testes, and ovaries are dependent upon pituitary stimulation. The hormones these glands produce govern metabolism, blood pressure, water and mineral balance, and reproductive functions, and they help defend against injury.

The term hormone is derived from a Greek word meaning ‘stir up’. Drugs Affecting Behaviour. Many kinds of drugs are prescribed for anxiety, sleeping and nervous disorders. Several types of sedative drugs induce sleep and cause intoxication. These drugs although prescribed for sleep disorders and anxiety problems, can also cause physical and psychological dependence.

These include ethyl alcohol, barbiturates, methaqualone, and many others.

There are of course everyday drugs that are consumed in enormous quantities by millions of people. Caffeine, nicotine and alcohol are used daily by a large number of people, to the extent where they could be classed as addictive. Alcohol addiction is by far one of the most common addictions globally. While there appears to be little evidence that using alcohol in moderation does any damage, but excessive drinking is a major problem in many countries causing many man hours of lost work, social and domestic violence problems. Repeated heavy drinking can cause serious medical problems, liver damage and irreversible brain damage in some cases.

## SENSORY PROCESSES.

The term sensation refers to the process of receiving information in the form of energy (light, heat, sound etc.) from the world outside and sorting it out into the proper sense – vision, touch, hearing. Once that information has been received, we interpret it and arrive at an understanding of what it means, a process referred to as perception. Sensation and perception make up an extensive information gathering system. Each sense has its own receptors that constantly monitor our environment.

All sensory systems have certain characteristics: The sensory system must be selective, which means that only certain types of incoming information are processed. For example, we have more than one kind of receiver for touch. One which responds to changes in temperature and one which responds to damaged cells. The sensory system must have an adjustable speed.

Nerve fibres to the ear respond in less than a thousandth of a second because sudden noise does not require analysis, as it does a speedy response. However, the visual system will respond quickly to a blur as something comes towards us, a potential danger, yet it will take its time when analyzing a complex scene.

The system must also be sensitive, but not too much. If our ears were too sensitive we would hear blood running through artery at the base of the ear. Sensory measurement must be reliable. Reliability comes from comparing incoming stimulus with the conditions around us. Vision. The optic nerve delivers its impulses to a special area of the brain called the visual center .

This is where people “ see” objects in the sense of recognizing and reacting to what their eyes look at. In other words, seeing always involves the brain’s visual center. Here sensation turns into perception. The brain must learn by experience to analyze correctly the impulses it receives from the eyes. For instance, the lens system of the eye, like that of a camera, transmits its light pattern upside down.

The brain has to learn that the impulses received from the upper part of the retina represent the lower part of the object sighted and vice versa. In the brain also are located the centers that control all the eye’s muscular movements, such as the opening and closing of the iris, the focusing of the main lens, and the movement of the eyeball. The eyeball’s movement is voluntary. Other eye adjustments are reflexes. Most individuals use both eyes to see an object.

This type of sensory perception is known as binocular vision. Thus two images of the object are formed one on the retina of each eye. Impulses from both images are sent to the brain. Through experience these impulses are interpreted as two views of the same object. Because the eyes are about 2 inches apart from pupil to pupil and therefore are looking at the object from different angles, the two views are not exactly alike.

This is known as the stereoscopic effect. If the object is far away, the difference between the images is slight. If it is a few inches away, the difference is very great. The brain makes good use of this phenomenon. It learns to judge the distance of an object b y the degree of difference



between the images it receives from the two eyes. In the same way the brain perceives what is called perspective.

### The Eye.

The retina is a soft, transparent layer of nervous tissue made up of millions of light receptors. The retina is connected to the brain by the optic nerve. All of the structures needed to focus light onto the retina and to nourish it are housed in the eye, which is primarily a supporting shell for the retina. When light enters the eye it passes through the lens and focuses an image onto the retina.

The retina has several layers, one of which contains special cells named for their shapes rods and cones. Light-sensitive chemicals in the rods and cones react to specific wavelengths of light and trigger nerve impulses. These impulses are carried through the optic nerve to the visual center in the brain. Here they are interpreted, and sight occurs. Light must pass through the covering layers of the retina to reach the layer of rods and cones.

There are about 75 to 150 million rods and about 7 million cones in the human retina. Rods do not detect lines, points, or color. They perceive only light and dark tones in an image. The sensitive rods can distinguish outlines or silhouettes of objects in almost complete darkness.

They make it possible for people to see in darkness or at night. Cones are the keenest of the retina's receptor cells. Hearing. In hearing the basic energy form is sound waves.

Sound waves form at various speeds, or frequencies. The frequency of any given tone is measured in terms of the number of cycles per second. Sound travels slowly compared to light at anything from 20-20, 000 cycles per second. The sounds we hear have three basic characteristics.

Pitch, which is the frequency of the sound. Timbre, determines the tonal quality . The loudness or intensity of the sound wave is measured in decibels. The human ear can pick up sounds just above ‘ 0’ decibels, otherwise there would be complete silence. Decibel Table.

Decibels Noise Threshold 40 Quiet office Normal 60 Normal conversation  
Normal 75 Road Traffic Noisy 100 Subway Train Potential Damage 130 Rock  
Concert Human Pain Threshold 140 Aircraft Taking-off Human Pain Threshold  
The Structure of the Ear.

The ear has three separate sections the outer ear, the middle ear, and the inner ear. Each section performs a specific function, related to either hearing or balance. The three parts of the outer ear are the auricle (also called the pinna), the external auditory meatus (or ear canal), and the tympanic membrane (or eardrum).

The pinna collects sound waves from the air. It funnels them into a tube, the external auditory meatus. This is a curved corridor that leads to the tympanic membrane. The eardrum separates the external ear from the middle ear. The middle ear is an irregular-shaped, air-filled space.

A link of three tiny bones, the ossicles, spans the middle ear. When sound waves strike the outer surface of the eardrum, it vibrates. These vibrations

are mechanically transmitted through the middle ear by the ossicles, to the opening. This opening is the round window. Like the eardrum, the round window's membrane transmits vibrations.

It directs vibrations into the inner ear, where they enter a fluid that fills a structure called the cochlea. This is a coiled tube that resembles a snail's shell.

Within the cochlea is housed the true mechanism of hearing, called the organ of Corti. It contains tiny hair-like nerve endings anchored in a basilar membrane, which extends throughout the cochlea. The unattached tips of these nerve endings are in contact with an overhanging membrane, called the tectorial membrane. When vibrations pass into the inner ear, they cause waves to form in the cochlear fluid.

Receptor nerve cells in the organ of Corti are highly sensitive to these waves. Other specialized nerve cells send the electrochemical impulses produced by the wave motion into the cochlear branch of the acoustic nerve. This nerve carries the impulses to the brain, where sound is identified. Taste.

It is widely accepted that there are four basic taste qualities, salty, sour, sweet and bitter. It was originally thought that there was a sensory path for each of these tastes. However it appears that there is a pattern of activation in a number of different fibres providing the required sensory input to the brain to distinguish these different tastes.

The papillae on the surface of the tongue are the receptors for these taste sensations. Smell.

Deciphering the sensory information for the sense of smell is not dissimilar to that of taste. In the olfactory area the nerve endings grow through the mucous membrane which act as receptors to determine odors present in the air we breathe. Touch. The skin or cutaneous sense has some 5 million sensors of at least 7 types throughout the human body. The three major types are Meissner's corpuscles which sense touch. The Pacinian corpuscle's which determine movement and vibration and the Krause end bulbs which sense changes in temperature.

Equilibrium and Proprioception. Proprioception (kinesthesia), establishes the position of limbs and underlies the ability to assume and maintain posture, to move about in the environment, to manipulate objects and to be coordinated.

These senses did not figure prominently in the traditional account of senses because they have no external sources of adequate stimulation. They do have identifiable and understood sensory receptors.

Both play an important role in maintaining posture and balance.

PERCEPTION. Perception is the primary process by which we obtain knowledge about the world. It involves the activity of our senses in responding to external stimulation. Perception is a skill or set of skills, not simply the passive reception of external stimulation. The process of structuring these stimuli into objects we can perceive is called perceptual organisation.

There are a number of principles to perceptual organisation. Figure and Ground. Gestalt psychologists identified the tendency to differentiate

between figure and ground. The figure being the part of an image which we notice prominently, opposed to the background, the ground.