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TERMS USED IN EDUCATIONAL PSYCHOLOGY

The following terms are used in educational psychology and they do not always have the same meaning as that given in the dictionary. In order to prevent misunderstanding, these terms have been listed below with brief explanation of meaning as used in educational psychology. The page numbers given after some of the terms are references to the pages in An Introduction psychology]” by E stones where that term is explained by the author also. The abbreviation “q.v.” after ay word indicates a cross-reference to another term in the list, which should also be looked at.

ABSTRACTION: the taking away from an idea those attributes (q.v.) that refer to a concrete (q.v.) example; the abstract idea “three” refers to any three objects, it is the abstraction from the concrete examples of three elephants, three chairs, etc. (144, 161, 225).

ACCOMODATION: Piagetian concept of adjustment to new information. It is one of the ways a learner shows adaptation (q.v.) to let a new and unfamiliar situation. A small child who can usually open a door if the handle is low enough meets a door with higher handles. The child accommodates to the new situation by learning a new behavior pattern (e.g. standing on a chair). (134, 145).

ADAPTATION: the way a learner changes his behavior patterns to cope with a new situation it has two aspects: accommodation (q.v.) and assimilation (q.v.) (134).

AFFECT: feelings; emotions, desires, hopes, wants, etc. Negative affect that which the individual tries to avoid. Positive effect that which the individual seeks to obtain. (17-19, 35-36).

AFFECTIVE: the adjective formed from “affect” above concerned with feelings, emotions etc.

AIM: See OBJECTIVE

ANXIETY: an emotional state brought about by the individual’s meeting with a situation with which he cannot cope (such as a problem in mathematics). The anxiety may be caused by external pressures (the fear of

punishment) or by internal forces (the pupils equilibrium (q.v.) is disturbed, he is upset by inner feelings of not being competent) (382, 383).

ASSESSMENT: testing to see what standard has been reached by a group or individual.

ASSIMILATION: Piagetian concept of the incorporation of new information into the existing knowledge. It is one of the ways a learner shows adaptation (q.v.) to a new and unfamiliar situation. The learner recognizes that a new situation is a special case of a general rule he has already learned (134, 145).

ASSOCIATION: when two or more ideas have attributed (q.v.) in common.

ATTRIBUTE: a specific property possessed by an object (e.g.) color, shape, etc.) (Vygotsky attribute blocks p. 153).

AUTHORITARIAN: where the individual pupil is controlled by an external authority such a text-book or a teacher, as opposed to self-control. (345, 352, 353).

BEHAVIOR: those actions of an individual that can be directly observed by another person. This excludes inner feelings or affection (q.v.). (51, 52).

CHANGING: Where the response (q.v.) to one stimulus (q.v.) becomes the stimulus for the next response, as when a child is feeding himself and the removal of the food from the spoon in the stimulus for him to refill the spoon or as a person learning the alphabet, where saying becomes the stimulus for the next letter to be recalled (101).

CLASSIFICATION: the putting into different groups or classes of different objects. (115, 116).

COGNITION: Mental activity in skills.

COGNITIVE: the adjective formed from cognition above, referring to mental activity thinking recalling, etc.

COGNITIVE STRUCTURE: (also called **SCHEMA**) the whole interlocking mental picture that an individual has of his environment. It

includes all concepts (q.v.) that he has formed or attained so far, (146, 148, 199). The schema can be defined as the information that already exists in an individual's mind (Santrock, 1994). It is a cognitive structure or network of associations that organizes and guides an individual's perceptions.

CONCEPT: the abstraction (q.v.) from a class of objects those things that they have in common. The class of three books, three elephants, three chairs etc. has the concept of "threeness" in common. Concepts may be assimilated into the cognitive structure (q.v.) this is concept attainment. Concepts may alternatively have to be created afresh by the individual as he accommodates (q.v.) to a new situation: this is called concept formation. (152). A term concept is also a category used to group objects, events, and characteristics on the basis of common properties (Santrock, 1994)

CONCRETE: real, actually in distance: as opposed to imaginary or existing as a mental picture or idea only.

CONDITIONING: training an organism (q.v.) to respond to a particular way to a stimulus as M. Pavlov's experiments (54, 56).

CONSERVATION: a particular attribute (q.v.) of an object that does not change where the object is in other ways e.g. the quantity of pressure in a ball is conserved if the ball is rolled out into long sausage shape. Conservation in other words is the idea that an amount stays the same regardless of how its container changes.

Diagnostic: similar to the mental term, meaning to find out what is causing a pupil's failure to learn something.

DISCRIMINATION: Recognizing the difference between two objects that may only differ in one attribute (q.v.) e.g. to distinguish between a red circle and a yellow circle.

ENACTIVE: the first Brunerian stage representation, the concrete stage.

EQUILIBRIUM or EQUALIBRATION: the state of wellbeing of an individual who feels the environment makes sense. A new situation that cannot be immediately explained in terms of the individual's previous experience causes anxiety and upsets the equilibrium of the individual.

EVALUATION: testing to see if a system of instruction is achieving its stated objectives.

FORMATIVE: as in a test during the course of instruction to see if the pupils' progress so far is satisfactory. It does not count towards the final assessment.

GENERALIZATION: a response to one stimulus may transfer to a different stimulus, as when a child, conditioned to fear a spider also becomes afraid of flies and bees. A child who learns to apply the concept of "dog" to a dog may generalize the concept to cats as well.

HABITUATION: when equilibrium is restored after being disturbed.

HOMEOSTASIS: the well being of an organism in its environment both emotional and intellectual.

ICONIC: the second Brunerian stage of representation the formation of mental pictures.

INBITION: suppressing of certain behaviors internally.

INSIGHT: sudden realization or understanding.

INTERNALIZATION: an operation performed by the individual entirely within his mind and not externally, as when a child learns to read without mouthing the words. It is the developmental change from behavior that is externally controlled to behavior that is controlled by internal, self-generated standards and principles.

INTUITION: feeling that a certain fact or idea must be, even though it cannot be proved logically.

MATURATION: growing up. The child walks when his limbs are physically capable of walking hence training in walking is not very helpful. Maturation is also defined as the orderly sequence of changes dictated genetic blueprint.

MEDIATOR: an intermediate idea or symbol that is to learn something but which can be forgotten once that thing has been learned.

MOTIVATION: internal “drive” which causes an individual to start or to continue doing something.

MOTOR: concerned with physical activity, holding, seeing, jumping.

OBJECTIVE: goal or aim which the teacher is trying to reach during a course of instruction. Usually an ‘aim’ is general as in the ‘pupil will appreciate good music’. An objective is usually more specific and definite, the pupil will choose to listen Bee thriven rather than Blue mink.

ORIENTING: the need of the organism to explore its own environment to search for a pattern and to establish equilibrium.

PERCEPTION: awareness of the environment through the five senses. It is the interpretation of what is sensed (Santrock, 1994).

PROGRAMMING: arranging instructional material in such a way that the pupil works by himself without classroom teaching.

RECALL: remembering.

RELIABILITY: (Usually of a test) how accurately the test measures the attainment of pupils taking it.

REINFORCEMENT: strengthening a response by rewarding the individual whenever that response appears.

RESPONSE: how the organism behaves when a stimulus is presented. For a word printed on paper (stimulus), the pupil responds by reading the word.

REPRESENTATION: how the individual imagines a situation: his way of thinking about something.

ROTE: learning something by heart, even without understanding.

SCHEMA: see cognitive structure.

SCHEME: the basic unit of an organized pattern of sensori-motor functioning.

SHAPING: building up a complex behavior pattern by conditioning each part of the pattern in a sequence.

SYMBOLIC: third Brunerian stage of representation, the replacement of something by a symbol in the mind which is then manipulated independently of the “thing”

STANDARDIZATION: usually of a test rearranging the marks to give a predetermined average and spread of marks.

STIMULUS: a perceived event in the environment to which organism responds or might respond.

SUBJECTIVE: dependent upon the feelings and attitudes of the observer or, in the case of a test of the marker.

SUMMATIVE: a test given at the end of a course of instruction to determine the overall mastery of the course objectives.

TRANSFER: the generalization of learned behavior to a new situation or problem, which has not been presented before.

UNDERSTANDING: to recognize that a new situation is just a special case of general rule or principle or concept that has already been learned.

VALIDITY: (of a test), the ability of the test to measure the quantity that the examiner wants to measure.

VERBALIZATION: stating in words, (usually as an aid to understanding). ‘Mere’ verbalization is rote recall of standard phrases with no understanding of what these phrases mean.

INTRODUCTION TO EDUCATIONAL PSYCHOLOGY PSYCHOLOGY

It is that science that studies behavior and mental processes.

-Touches almost every aspect of our lives. As society becomes more complex, psychology has assumed an increasingly important role in solving human problems.

-Psychology also affects our lives through the influence on laws and public policy. Because psychology affects so many aspects of our lives, it is important even for those who do not intend to specialize in the field to know something about its facts and research methods.

-Any action a person takes can be explained from several different points of view. Suppose for example: you walk across the street. The act can be described in terms of:

1. The firing of the nerves that activate the muscles that move the legs that transport you across the street.
2. It can also be described without reference to anything within the body: the green light is a stimulus to which you respond by crossing the street.
3. Or your action might be explained in terms of its ultimate purpose or goal: you plan to visit a friend, and crossing the road is one of the many acts involved in carrying out the plan.

There are different approaches to psychology too. However these are not mutually exclusive. There is no right or wrong approach to the study of human behavior. Most psychologists take an eclectic approach-using a combination or synthesis of several view points in explaining different psychological phenomena. There are different approaches:

1. Neurological Approach- this approach to the study of human beings attempts to relate their actions to events taking place inside the body, particularly with the brain and nervous system.
2. Behavioral Approach- a psychologist studies individuals by looking at their internal workings.
3. Cognitive Approach- cognitive psychologists argue that we are not merely passive receptors of stimuli. The mind actively processes the

information it receives and transforms it into new forms and categories. Cognition refers to those mental processes that transform the sensory input in various ways, code it, store it in memory and retrieve it for later use.

4. Psychoanalytic Approach- was developed by Sigmund Freud whose basic assumption is that much of our behavior stems from processes that are unconscious. By unconscious processes Freud meant thoughts, fears, wishes a person is unaware of, but which still influence behavior. Impulses which are forbidden or punished by parents/society are innate. Forbidding them merely drives them out of awareness into the unconscious where they remain to affect behavior. These find the expression in dreams, slip of speech, mannerisms, and symptoms or neurotic illness as well as through approved behavior as artistic, literary or scientific activity.
5. Phenomenological or Humanist approach- is concerned with the individual's own perception and interpretation of events (the individual's phenomenology). This approach seeks to understand events or phenomena, as they are experienced by the individual. We can learn more about human nature by studying people's perceptions of themselves and their world than we can by observing their actions. People behave differently in response to the same situation.

FIELDS OF PSYCHOLOGY

There are several fields of psychology:

- Experimental psychology
- Physiological psychology
- Developmental psychology
- Social psychology
- Child psychology
- Personality psychology
- Clinical psychology
- Industrial or Engineering psychology
- Comparative psychology and etc.
- But our interest is in school or educational psychology.

EDUCATIONAL PSYCHOLOGY

Definition: is that special branch of psychology concerned with the nature, conditions, outcomes and evaluation of school learning and retention.

The subject matter of educational psychology consists primarily of meaningful learning, and the retention and the influence of all significant variables such as cognitive, developmental, affective, motivational, personality and social on school learning outcomes; particularly the influence of these variables that are manipulated by the teacher.

The classroom learning is the special province of educational psychology. The subject matter of educational psychology can be inferred directly from the problems facing the classroom teacher. The teacher must:

- generate interest in subject matter
- inspire commitment to learning
- motivate pupils
- must decide what is important for pupils to learn
- Must ascertain what learning pupils are ready for, pace instruction properly and decide on the appropriate size and difficult level of learning tasks.
- Is expected to organize subject matter expeditiously, present materials clearly, simplify learning tasks at initial stages of mastery and integrate current and past learning.

THEORIES OF CHILD DEVELOPMENT

Development is an ongoing process, continuous from conception to death, with dramatic changes visible in childhood.

Heredity and **environment** both influence development. Heredity establishes the potential, environment determines how close to the individual comes.

LECTURE ONE

HUMAN DEVELOPMENT

The human organism is always in the process of developing. Physical and psychological changes occur continuously throughout the life span. The life of any human being is being shaped and reshaped, in one form or another, everyday.

Since we all have similar beginnings, it is interesting to ask what makes us all so different as we grow older. One answer is that, except in the case of identical twins, we have different heredity. Another answer is that we have different environments. There is, furthermore, a constant interplay between hereditary and environmental influences, and our physical and mental characteristics are complex results of both factors.

PRINCIPLES OF HEREDITY

-A fertilized egg cell: the fertilized ovum includes the nucleus and surrounding membrane. Cells shown on the outside belong to mother, not to the fertilized ovum.

-Each of us begins life as a simple cell smaller than the head of a pin, which later multiplies and becomes many cells. The cell results from the fertilization of a female's ovum by the male's sperm. Heredity is determined by complex organizations of chemical materials within the nucleus of the fertilized cell. These chemical materials are contained in nuclear structures which, because they were first seen as colored strands in stained cells, are known as chromosomes, or colored bodies.

-Microscopic studies have shown that there are forty-six chromosomes in every body cell. In all individuals, forty-four of these can be arranged on the basis of size and form into twenty-two pairs. The remaining are two the sex chromosomes, which result in development as a male or female. The female has a pair of x chromosomes; the male has a combination of x and y. The x and y chromosomes are called sex chromosomes because the sex of an individual depends upon whether he receives the xx and xy combination.

Genes: all of our innumerable inherited characteristics are represented in the forty-six chromosomes. Thus, early scientists assumed that different regions

of a chromosome determined different characteristics, such as eye color, skin and so forth, and that each chromosome carried many determiners. Some of these regions were located and represented on chromosome maps, but these designations were largely speculation.

Human Chromosomes - the forty-six chromosomes of a human male cell are shown. X and y chromosomes are indicated.

The heredity factors or “determiners” assumed to exist within the chromosomes were called genes. They were thought to be ‘packets of chemicals’ strung along the chromosomes like beads on the thread or peas in a pod, although no one had seen anything that might be identified as a gene.

Early in the 1940’s bacteriologists discovered that the genes of bacteria were deoxyribonucleic acid (DNA), but it was several years before geneticists realized that DNA was the basic genetic substance of all kinds of living organisms including human beings. The latter finding caused them to abandon the earlier idea that genes were proteins. Still later, in the early 1950’s, the structure of the DNA molecules as a double helix was established, and this advancement meant that genes could be studied at the molecular level, as well as through inference based upon breeding experiments (Watson, 1965). The work of geneticists in recent years has been greatly aided by the electron microscope, which provides a highly magnified view of chromosomes and genes.

Multiplication of Cells: When a cell is about to divide, its chromosomes and genes are duplicated. A complete set is passed on to each resulting cell. Through this process of replication, all cells except reproductive cells receive identical inheritance.

Sometimes, instead of remaining together as parts of a single organism, the fertilized ovum separates and forms two or more identical organisms, which is the way identical twins originate. Fraternal twins develop from separate fertilized ova, rather than from the division of one ovum. Thus, their heredity is no more alike than that of children born at different times from the same parents. Siamese twins come from an incomplete division of cells.

Reproductive Cells: Beginning at puberty, the reproductive cells in an individual undergo a kind of division different from that first described. Instead of the chromosomes being split and duplicated just prior to cell

division, one member of the pair goes to each new cell. Thus, each reproductive cells, male or female, has only half of the chromosomes, twenty-three instead of forty-six. Ova receive only half of the chromosomes which are thoroughly shuffled so that the probability of any two ova or any two sperms having exactly the set is externally small.

Fertilization re-establishes the full complement of chromosomes, but when the new individual is produced, it is again unpredictable as to which sperm containing twenty-three chromosomes from the male, will unite with which ovum, containing twenty three from the female. Thus, laws of inheritance include two unpredictable or “chance” factors:

1. the independent assortment of chromosomes within any ovum and sperm, and
2. The union of a particular sperm with a particular ovum at fertilization. The term “chance” appears in quotes because it is assumed that there are reasons why chromosomes are sorted with a particular ovum, but these reasons are not known at the present time.

Fertilization ----- Nuclei combine ----- chromosomes are formed---- chromosomes are duplicated ----- two-celled stage ----- cell divides.

Cell Division in a fertilized ovum: after the two-celled stage is reached, a similar process of division produces four cells, the eight, and so on, until billions have been produced. Even after full growth is attained, the process continues in many tissues, so that sloughed-off cells are replaced.

WHY TEACHERS SHOULD UNDERSTAND DEVELOPMENT

Of all mammals, human beings are the most immature at birth and require the longest period of development before they are capable of all the activities and skills characteristic of their species. In general, the higher on the phylogenetic scale the organism is, the more complex its nervous system and the longer the time required to reach maturity. For example, the lumur, primitive primate, can move about on its own shortly after birth and is soon able to eat adult food and fend for itself. The newborn monkey is dependent for several months. The infant baboon remains with its mother for several years. The human offspring is dependent for many years and requires a long

period of learning and interaction with others before becoming self-sufficient.

Adult behavior and personality characteristics are influenced by events that occur during the early years of life. The saying reflects the continuity between childhood and adulthood. Thus to understand the psychological processes of human adults- their perceptions, patterns of thinking, motives, emotions, conflicts, and ways of coping with conflicts-we need to know how these processes originate and change over time.

On the first day of school year, a teacher (you) look over a sea of faces. That well-scrubbed youngster in the neat clothes looks as though she might be a good student. The tall handsome boy, a head taller than his friends should be mature and capable. The quiet girl in the corner is probably a day dreamer; you may have to work hard to capture her attention. It is possible that these are all 7-years? 17-year-olds?

You know that children come in different sizes and shapes, that two 7-year-olds or two 17-year-olds, can be very different in height, weight, maturity, ability. How did they get that way? And what connection, if any, is there among these characteristics? Is the tall child necessarily academically able? The able always socially mature? What, if anything, does outward appearance tell you about ability to learn? About maturity? About the kind of behavior you can reasonably expect? Once you understand the principles of development, you will be less likely to confuse new acquaintances, with old friends, less likely to leap to conclusions about your students. You will have a better idea of which clauses are valid and which should be ignored. You will understand some of the real differences among children, and you will be able, therefore, to evaluate your students in terms of:

1. the general developmental level of children of their age and
2. the ability and readiness to learn of the individual child.

Centuries ago, children were looked at simply as small-scale adults. Today we know that childhood is a distinct stage of life that children become adults through a gradual process of physical, social, emotional, moral and mental growth. As they grow they have ways of understanding, of reacting, and of perceiving that are appropriate to their years, to what psychologists call their stage of development. To teach children successfully, therefore, you should understand children-how they develop, how they think, how they respond.

Child development, stage a child has reached when he or she faces you in your classroom, plays a significant role in the child's readiness to learn. If the child has not developed to point where what you are teaching can be learned, your effort is wasted.

(a). SIGNIFICANCE OF MATURATION

Maturation means, simply, the changes which take place as a result of physical growth, of biological change, rather than those which take place through experience. In early childhood much of development results from maturation: learning to walk, to talk, to control toilet functions. These are phylogenetic behaviors- behaviors common to human species. Later, more of development results from experience: learning to do arithmetic, to play baseball, to hold down a job. These are ontogenetic behaviors-behaviors which are individually learned, on an individual time-table. A child who is not taught to walk will nevertheless begin to do so when strength and ability permit: it is a natural consequence of human maturation. But a child who is capable of the physical skill necessary to swing a bat or write a word will not be able to do so unless show how.

It will do little good to demonstrate batting or writing to a child who has matured to the point of being able to coordinate the muscles to perform actions. Physical skills can be taught much more quickly and easily to a child who is at the appropriate developmental level. In a classic study, Gessell (1929) trained a 46-week-old girl in the fine art of climbing stairs with daily instruction over six-week period. At age 55 weeks, after only two weeks of instruction, her identical twin performed just as well. Three times as much training was obviated by the advantage of added age.

Human learning- both physical skills like climbing stairs and mental skills like abstract reasoning- depend on a combination of maturation and experience. This combination produces readiness to learn.

B. READINESS

A teacher is constantly faced with questions about readiness. Are these children ready to learn to read? Can 10-year olds with questions about readiness. Are these children ready to learn to read? Can 10-year old understand abstract concepts like justice and democracy? Why do some of

my physics students have difficulty learning the abstract thinking behind physical principles?

The whole question of readiness sparks heated argument. Some feel that child must reach an appropriate developmental level for a particular learning. The Swiss psychologist Jean Piaget, for example, whose carefully formulated theory of cognitive development we will examine more closely in chapter 2, holds that children progress through invariable stages of mental development. They cannot skip stages, Piaget believes, or be pushed through them at an accelerated pace. You cannot, in this view, teach abstract concepts to young children.

Other psychologists, however, believe that you can stimulate children's interest, make them ready. They believe, Harvard psychologist Jerome Bruner (1990, p.33) put it, that any subject can be taught effectively in some intellectually honest form to any child at any stage of development".

We will discuss both theories in greater detail in chapter 2. Meanwhile, what do you think? Can you teach calculus, in some form, to a 7-year old? Can you teach fractions to a 5-year old? Can a 13-year old learn the logic of scientific inquiry? Can a preteen understand the passage of time in human history?

Whatever you decide, an understanding of child development will help you to face the question of readiness. It will also help you to understand student behavior, to understand why children are sometimes co-operative and sometimes aggressive, sometimes pleasant and sometimes unbearable.

C. PRINCIPLES OF DEVELOPMENT

(i). Development is a Never-Ending Process

Human beings continue to develop, to change, to be affected by experience throughout life. Yet the most dramatic growth, most noticeable change, takes place in childhood. After all, the energetic enthusiastic boy that you see before you in a first-grade classroom started life just about 6 years earlier as an infant perhaps 7½ pounds in weight and 19 inches long, an infant unable to communicate except through cries, unable to get about on his own. Look at him 6 years later: a noisy package of energy, much happier racing about the play ground than contained in a classroom seat, talking a mile a minute, full of eager curiosity, soaking up knowledge. A look at this first-grader

makes it easy to see why some observers believe that the rate of development is higher in these first few years than in any other period of life. Adolescence is another period of intense and than in other period of life. Adolescence is another period of intense and noticeable change. Yet humans of all ages continue to grow, to learn, to change.

(ii). Each child is an individual, Developing at His or Her Own Rate.

While we can say all this about the typical 6 year old, we must also say that not all 6 year old, at the same stage of development, exhibit the same traits, or are equally ready to learn. One may be ready to read, another may not. Both are normal. The range of statistically normal behavior and ability, in every area, is a very wide range indeed. Teachers must understand averages and norms, therefore, but see children as individuals-see each child as unique package of emotional, mental and physical traits.

A child may show spurts of growth in one area before another; the timetable of development does not always evenly spaced starts and stops. The clumsy and not very well coordinated toddler may become the fifth-grader showing off batting skill, but that same fifth-grader may be socially immature, ill at ease with his or her classmates off the baseball diamond. The young child who comprehends only visible objects may become a teenager arguing abstract philosophical concepts, the meanings of life and love, all-night rap sessions-but the same teenager may not demonstrate this conceptual grasp in the classroom.

(iii). All growth is Related

Yet, overall, despite occasional time lags, physical, emotional and mental growths are related. The belief that bright children are physically weak is a myth. In fact, children who are ahead of their classmates in mental development are also likely to be taller than average, stronger than average, and more mature than average (Terman and Oden, 1951). These children often prove to be natural leaders. Those who are physically advanced are also consistently mentally advanced (Tanner, 1974).

Every aspect of human growth influences every other aspect. There is positive correlation, a direct relationship, among physical, social, emotional and mental development.

If children are under par physically, if they are ill or fatigued, they may not be able to concentrate on their studies. Improvement in physical status improves self concept (McGowan et al, 1974), and positive self-concept is related to academic achievement (Rychlak, 1970). And social development influences behavior as well: a youngster who is out of step, who has few friends, may withdraw from contact, refuse to participate in class, and may even deliberately attract attention by aggressive behavior.

Teenagers are especially aware of physical development, especially concerned with social relationships. The adolescent years are of great physical change. But the change takes place over an extended period of time, with girls, on the average, completing physical development two years before boys (Tanner, 1974). Thus you may well find in a single classroom, among students very close in age, a range of development from preadolescence to virtual maturity (Tanner, 1974). The range has marked effect on social relationships, with the early bloomers tending to dominate the classroom scene. The youngsters who develop more slowly, on the other hand, may worry about the likelihood of catching up and, absorbed in this problem, fall behind academically. An alert teacher, understanding the principles of development, can try to help such a student realize that normal growth is uneven, that he or she will probably catch up. Meanwhile, an extra dose of understanding may be in order.

(iv) Development has direction.

While each human being develops at an individual rate, there are predictable sequences: each does go through the same stages. Babies usually, crawl, then stand, then walk. Most children can draw circles before they can copy squares. Each stage, each task successfully mastered, makes the next stage, the more complex task, possible.

Some of the major directions of development are listed below:

1. **Cephalocaudal and Proximal-distal** – Humans develop from the head of the feet and from the center of the body toward the extremities in other words, the head develops first (look at an infant child and notice how large the head is in comparison to the rest of the body), the trunk, then the arms and legs, the hands and feet. Large muscles develop before small ones (Gesell, 1952), Thus you can expect a first

- grader to be far more skillful with large muscles than with small, to be more adept at running than at holding a pencil
2. **Structure Precedes Functions** – children cannot use their bodies until the body is capable of being used; muscles must be ready before they can be taught to perform specific functions, whether eye muscles for reading or the fine finger control necessary for penmanship.
 3. **Differentiation** – development proceeds from the general to the specific. It moves in the direction of reduced confusion, increased precision of responses, and fine discrimination. The distinctive features of objects are generally differentiated (Gibson, 1969). Young children see only the whole until they mature enough to be able to focus on parts of the whole, a skill essential for reading.
 4. **Concrete to abstract:** Mental growth proceeds from an ability to think only about things that are physically present to an ability to visualize things that are not there, to conceptualize and to understand cause and effect. The small child may be entranced by blowing leaves but does not know why they blow. The older child can tell that gusts of wind are propelling the leaves across the lawn. The young child solves a mathematics problem by counting beads or fingers; the older child no longer needs such concrete aids. In the early grades historical time sequences are more easily understood with visible devices, such as a poster board time line around the room. Older students can understand the idea of time in an abstract sense, expressed in words alone. We will discuss this mental development more fully in chapter 2.
 5. **Egocentrism to Perspectivism:** a very young child sees himself or herself as the center of the universe, sees events as related only to his or her needs. The young child cannot sympathize with any one else, even to the extent of keeping the noise level down when someone has a headache; because the child does not have a headache, the headache is not real. As the child grows and interacts with people, he or she can begin to see things from another's point of view and, then, from the perspective of abstract principle. Young children see something as wrong when they are punished for doing it- if they are not punished (because, perhaps, they were not caught), then they did no wrong. Somewhat older children feel remorse only if someone was hurt as a result of the misbehavior. And still older children absorbed the principles of right and wrong which they have been taught, and should no longer need external punishment or the knowledge of an injury to

- know when they have misbehaved. Moral development is discussed in greater detail in chapter 3.
6. **Outer control to Inner control:** Young children are dependent on others not only for physical care but for values and principles. They feel guilty “on command” as toddler, when an adult tells them they did wrong, and they grow to develop their own value system, their own conscience, their own set of inner controls. These inner controls develop in a parallel course with growth toward perspectivism, toward the ability to see things from others points of view.
 7. **Absolutism to Relativism:** the young child sees everything as absolute, rules as unchangeable. The older child knows that there can be exceptions to rules, that rules can in fact, be changed to meet specific situations.
 8. **Spiraling** – the same task is mastered, at varying degrees of complexity, at different stages of development. Independence, for example, is asserted differently at different stages and alternates with dependence. The young child will try to eat without assistance-whether or not the spoon can be managed-and then may insist on being cuddled. A 12-year-old may pull away from parents by demanding independent choice of clothes, but rely on parental advice in other areas. An adolescent’s drive for independence shows up in arguments over curfews and choice of friends, but adolescents, although reluctant to admit it, also rely on adult support. “The course of development is uneven (in some children more than in others). It zigzags, and sometimes it spirals backwards in a way which suggests retreat and regression. But if the child is normal, the ultimate and all-over trend is toward a higher level of maturity. Development is like a stream; it carve, the best possible channel; it flows onward; it reaches a goal”

(V). Development proceeds in stages

While psychologists differ in describing the number and kind of life’s stages, they will agree that there are stages, that there is a range of normal development associated with a given period of life. As we learn more about development, in fact, we are able to see additional clearly distinct stages. Rather than talk only about infancy and childhood and adolescence, for example, we might speak of prenatal stage of conception to birth, infancy (birth to 2 years), early childhood (2 to 6 years), middle childhood (6 to 10 years), late childhood or preadolescence (10 to 12 years), adolescence (13 to 18 years),

and so on. Some psychologists are extending stages right through adult life, speaking of the “thirties” the way others peak of the “twos”.

However, choose to break life into distinct stages, none is precisely and absolutely associated with age. There are no “typical” children at any age – we cannot say that every 3 – year old will do thus and so or that every teenager possesses certain characteristics. However certain developmental traits are generally found at particular stages; these are called age-level characteristics. Age-level characteristics reflect a range of normally acceptable development within a time span. Some infants walk at 9 months, others at 18 months; both are normal.

Furthermore, the stages overlap one another, and are continuous. A person does not stop being a child one day and become an adolescent the next; there is no one single day on which we can say we are adult. Life is a continuous process. We may turn one day and realize that we are, indeed, adult, but the moment of transition (because there is no single moment) passes unnoticed.

DEVELOPMENT IS INFLUENCED BY BOTH HERADITY AND ENVIRONMENT

In the 1920s there was heated arguments between psychologists who believed that heredity alone determined what a person could and would become, and those who believed that a child was born as a blank slate, a tabula rasa, on whom environment would write all that there was to say. It is an important argument. If a human being is indeed defined by heredity, schools would have little reason to exist, and there would be little cause to believe that education could be a positive influence. If, on the other hand, a child is blank slate, to be defined only by his experience, the responsibility on the shoulders of educators is overwhelming.

Anold Gesell was psychologist who believed that heredity is paramount. He believed that maturation is a primary factor inn determining the process of learning, that the child learns what it is ready to learn when it is physiologically and psychologically ready. The environment provides setting for development, Gesell wrote in 1929, but physiology and maturation alone provide framework. Growth is determined only from within, with maturation controlling the pattern of development. “the heredity endowment of the individual plays a primary role in shaping his overall pattern and style of growth.

John Watson, one of the first psychologists, on the other side of this early debate, believed that the environment is the primary factor in learning. He believed that virtually any desired goal could be achieved through a controlled environment. Watson was firmly convinced of the relative unimportance of heredity and the importance of environment that he could produce any kind of person—scientist, athlete, and politician— if he could just control their surroundings from birth. He did not, however, have the opportunity to prove his theory. (see Watson, 1924).

The arguments were intense while they lasted. Today, most psychologists agree that it is not all a question of either or when it comes to heredity and environment. Rather both elements play an important role in development, interacting in complex ways. An intensive study conducted by Nany Bayley for National Institute of Mental Health (1965) found that mental and motor development proceeds in 1 to 15 month old infants without regard to sex, race, birth order, geographical location, or parental ability. Scores on mental tests after age 3 or 4, however, are correlated with such variables. “Evidently, the period between one and four years of age is an important one in the development of mental and motor functions. This age should be studied closely” (Bayley, 1965, p. 409).

Research on Heredity and Environment

Selective Breeding: when dog breeders deliberately mate animals to exhibit the characteristics desired by dog show judges, when scientists deliberately breed rats to perform well in laboratory mazes, they are because it is ethically permissible (or very practical, despite Huxley’s *Brave New World*) to selectively breed human populations, much of what we know comes from studies of laboratory animals. In a classic study by R.C. Tryon (1940), rats who were dull at running mazes were interbred and those who were bright in the maze game were interbred. By the ninth rat generation the least bright rats was performing better in mazes than the brightest of the dull rats. Genetic factors were clearly at work.

But it is difficult to generalize these results to human beings; choice of a marriage partner is seldom determined by genetic analysis. Furthermore, when it comes to human beings, people who differ genetically, who are perhaps, noticeably more or less intelligent, are treated differently, so that environmental forces reinforce and exaggerate the original genetic distinctions.

TWIN STUDIES

Twin studies have been relied on for comparable information on humans. Since identical twins share the same genetic blue print, differences between them can be assumed to be environmental. Studying identical twins that have been separated and raised in different homes is advantageous to researchers; the relative impact of heredity and environment is then clearly evident. In one such study, where identical twins had been separated before they were 2 weeks old, Barbara S. Burks (1942) found that the similarities between the separated twins, in personality and interests, grew and grew as they became older. The environmental influence became less and less important as the girls outgrew parental dominance, and their common heredity became more and more obvious. More recently, long range Louisville Twin study has confirmed the importance of heredity, demonstrating that it requires markedly unusual environmental conditions- such as severe illness- to interfere with genetic blueprint for mental development.

Identical twins, regardless of the environment in which they are reared, are far more alike in IQ scores than fraternal twins who, in turn, are more alike than non-twin brothers and sisters. Of course, no two children, even twins, are reared in exact same environment. Parents react differently to different children, thereby creating a unique environment for each.

Combined effect of Heredity and Environment

The environment modifies the basic genetic endowment. Social class, educational level of the parents, quality of care, parental love and acceptance all influence the course of development,. In fact, retarded infants in homes of low socio-economic status are likely to appear more retarded in later years than equally retarded children brought up in middle class homes (Willerman et al, 1970).

Despite what psychologists now see as a very complex interaction between heredity and environment, we do know certain facts. We know that human beings are less genetically programmed than other species, more susceptible to the effects of the environment. Human behavior is not governed solely by fixed unchangeable instinctual reactions. Although birds, for instance, fly south for the winter out of instinct, human beings who head for Florida in the cold months are acting out of experience, the learned knowledge that

they will be more comfortable in a warmer climate. Human ability to learn from experience makes us able to adapt, to survive.

Humans mature more slowly than other species, permitting maximum time for learning from the environment, learning language, learning social relationships, learning to survive.

The genetic blueprint drawn at the moment of conception determines the characteristics a child inherits from both parents: blue eyes, height, a tendency toward diabetes, and so on. The genetic blueprint sets outer limits on the way in which the individual develops.

The environment in which the child grows- the physical, social and emotional surroundings- determines how well the child expresses the genetically determined potential, whether the outer limits will be reached. The child of tall parents, for example, will usually be tall; if, for some reason, the environment has not permitted an adequate diet, the child may not reach the potential for height which the genes would otherwise permit. Expectations- the emotional environment- play a role in overall development too. Unusually tall children may be emotionally dependent if, because they were tall for their age, too much was expected of them too soon and they were not allowed to be children. On the other hand, depending on the particular environment, the attitudes of parents, they may be unusually mature.

On an intellectual level the same can be said: the child with a reasonable natural endowment of intelligence, capable of at least grade-level achievement, might never produce to capacity if the parents do not particularly value academic achievement.

Acquired characteristics cannot be passed on by heredity. If you had your teeth straightened your children are not more likely to inherit than if parents had left you alone. Similarly, you cannot on education. But the environment you provide can make a difference to your children: your willingness to have their teeth fixed, or to provide with books and education, can make a big difference in their development.

LECTURE TWO

THEORIES OF CHILD DEVELOPMENT

Piaget, the Swiss psychologist has made the most intensive study of children's cognitive development. After many years of careful observation, piaget has developed a theory of how cognition develops through a series of stages as children mature.

Piaget defines intelligence as the ability to adapt to the environment adaptation takes place through accommodation, with the two processes interacting throughout life in different ways according to the stage of mental development.

In assimilation, the individual absorbs new information, fitting features of the environment internal cognitive structures.

In accommodation, the individual modifies those internal cognitive structures to conform to the new information and meet the demands of the environment. A balance is maintained through equilibrium, as the individual organizes the demands of the environment in terms of previously existing cognitive structure. Equilibrium is an active process that involves constant interaction between the individual and the environment. A child moves from one stage of cognitive development to another through the process of equilibration, though understanding what has happened in a given situation and understanding can be applied to new situations. Equilibrium is a balance between assimilation and accommodation.

Piaget describes mental development in terms of operations, the ordering of objects and events. Operations take place, first in concrete terms, then by symbolic representation, as individuals learn to classify and thereby understand objects and events in the environment. Piaget divides mental development into major periods, roughly related to age:

1. the sensori-motor stage (birth to about 2 years)
2. the preoperational stage (2 to 7 years)
3. the concrete operations stage (7 to 11 years)
4. the formal operation stages (12 years and beyond).

The precise ages of each stage vary in different cultures and in different circumstances, but the sequence of stages remains the same everywhere for

every child. The child, says piaget, moves from one stage to the next through the interaction of four factors; in addition to equilibrium, the factors include:

- Maturation
- Experience with physical objects and
- Social interaction

Each stage is characterized by a particular style of thought. But piaget emphasizes: “it is not the stages that are important; it is rather what happens in the transition. There is no static stage as such. Each is the fulfillment of something begun in the preceding one and the beginning of something that will lead to the next”.

1. SENSORY-MOTOR STAGE (Birth to 2 years)

There are enormous differences between a newborn infant and a two year child. Totally dependent, preverbal newborns become, by the age of 2, children who can communicate, although they understand far more than they can say, and who get on their own two feet. But the difference are masked by the similarities.

During this entire two-year period, behavior is dictated by the senses and by motor-activity; the child’s impression of the world is formed by the perceptions of his or her senses and by his or her increasing manipulation of the environment. The infant who knows nothing outside his or her own self becomes, through sensory-motor experiences, a 2 year old aware of the larger external world, a 2 year old beginning to exert some control over that world. This is the period, according to piaget, when children begin to develop some notion of **object permanence**. Babies, knowing only themselves, believe that objects exist only if they can actually see them. “**out of sight: Out of mind**” in the early months. For a tantalizing toy, once hidden, is no longer tantalizing.

Try this experiment; show the baby a bright rattle, capture her/his attention, then remove it from sight. The baby wont even look for it. By the time the child is a year old, however, she/he will not lose interest and will continue trying to find the hidden object. At this point the game of peekaboo becomes endlessly fascinating- at least to the baby- as a familiar face disappears and reappears.

Object permanence, once understood, means that the child knows that things exist independently of the child, that mother is important when she is not in the line of sight. It is the beginning of understanding the larger world.

Another milestone is the baby's beginning comprehension of causality, of the fact, unknown to the newborn, that the hand can grasp the rattle and move it to the mouth. Understanding of this principle, that events can be caused, sets the stage for later cognitive development. At this point the child's mental development is equal to that of intelligent animals: the dog who bangs its empty water dish against the wall when it is thirsty, the chimpanzee who will use a stick to reach food beyond each of its hand. But the animals will develop no further; the human child has a long way to go.

2. PRE-OPERATIONAL STAGE

By about one and half to two years of age, children begin to use language. Words, as symbols, can represent things or groups of things. And one object can represent (symbolize) another. Thus, play a three year old may treat a stick as if it were a horse and ride it around the room; a block of wood can become a car; one doll can become a mother and the other a baby.

Although three and four year olds can think in symbolic terms, their words and images are not yet organized in a very logical way. Piaget calls the two to seven years of cognitive development preoperational, because the child does not yet comprehend certain rules or operations. An operation is a mental routine for transposing information, and it is reversible, every operation has its logical opposite. Cutting a circle into four equal pie-shaped wedges is part of an operation because we can reverse the procedure and put the pieces back to form a whole. The rule that we share the number 3 to get 9 is part of an operation because we reverse the operation and take the square root of 9 to get 3. In the pre-operational stage of cognitive development, the child's understanding of such rules is absent or weak. Piaget illustrates this deficit by some experiments on the development of what he calls conservation.

As adults we take conservation principles for granted; the amount (mass) of a substance is not changed when its shape is changed or when it is divided into parts; total weight of a set of objects will still remain no matter how they are packaged together; and liquids do not change in amount when they are poured from a container of one shape to that of another. For children,

however, attainment of these concepts is an aspect of intellectual growth that requires several years.

In a study of the conservation of mass, a child is given some dough to make into a ball equal to another ball of the same material; the child declares them to be “the same”. Now, leaving one for reference, the other, is rolled out into a long sausage shape while the child watches. If the child is about four years old, he or she no longer considers the two objects to contain the same amount of clay: the longer one contains more. Not until the age of seven do the majority of children reach the stage where the clay in the longer object is perceived to be equal in amount to that in the reference ball.

The same kind of experiment can be used to study the conservation of weight. For example, children who know that equal things will balance on a scale (they can test this with the two balls to begin with) are asked whether the sausage-shaped form will keep the scale arm balanced as did the original ball. Conservation of weight is more difficult concept to conceive than conservation of mass, and it comes a year or so later in development.

Children younger than seven have difficulties with conservation concepts because thinking is still dominated by visual impressions. A change in perceptual quality of the clay mass means more to them than subtle qualities, such as the volume of clay occupies regardless of its shape. The young child’s reliance on visual impressions is made clear by somewhat different conservation experiment. If a row of black checkers is matched one for one against a number of each. If the black checkers are brought closer together to form a cluster, the five-year-old says there are now more red ones- even though no checkers have been removed. The impression of the length of the row of red checkers overrides the numerical equality that was obvious when the objects were matched. In contrast, seven-year-olds assume that if the number of objects was equal before, it must remain equal. At this age, numerical equality is more significant than visual impression.

The conservation of quantity

If a child of about five or six is shown two identical glasses, A and B, which are equally full of liquid, the child will acknowledge that the glasses have the “same to drink”. If the liquid from glass A is poured into the taller and narrower glass C, the liquid reaches a higher level. The child is then asked whether there is the same amount to drink in the two differently shaped

glasses B and C. Most children younger than six respond that C, the tall, narrow glass, has more liquid. Since the preoperational children center on height and ignore width, they cannot deal with this transformation. In the next stage, that of concrete operations, the child comes to recognize that the amount of the liquid is the same, regardless of differences in shapes of the containers. Piaget referred to this ability as the conservation of quantity, an ability that is usually achieved between six and eight years of age.

STAGE OF CONCRETE OPERATIONS (7-11years)

Toward the end of the pre-operational period children began to hesitate, to be less insistent that the sizes are different, as they become flexible enough in their thinking to see that if they concentrate on only **one dimension, one physical** attribute, at a time.

Now they can conserve. They can resist control by their perception, by the way things look, and understand that just because something appears to be bigger or longer it is necessarily so. They can not apply this understanding to weight or to volume until they are older still (about 9 to 10 for weight and 11 or 12 for volume).

But once they understand about the age of 6, that number remains constant and that sizes do not shift, they have entered the stage of concrete operations. In the COS, which covers roughly the ages from 7-11 years, the child becomes capable of various logical operations, but only with concrete things.

An operation: is a type of action- a manipulation of objects or their mental representation.

It calls for transforming information so that it can be used more selectively. Operations make trial and error unnecessary because the child can think through the possibilities of certain actions and results of actions.

Operational thought replaces the impressionistic leaps from data to conclusions with a series of small-scale, reversible steps, each of which can be judged as unreasonable.

If information is concrete, comparisons can be made accurately thus the child is not taken in by changed beaker shapes as liquid is poured back and forth.

He can imagine operations and anticipate results. E.g. until this stage is reached, a child cannot tell you with any conviction what the other side of the moon is like. But in the stage of concrete operations he can, in his mind manipulate the moon by turning it around and will tell you that it probably looks just like this side of the moon.

FORMAL OPERATIONAL STAGE (12 YEARS AND BEYOND)

Not until the final stage of cognitive development, the operational stage, which begins around age 11 or 12, are youngsters able to reason to purely symbolic terms.

In one test for formal operational thinking, the subject tries to discover what determines the period of oscillation of simple pendulum. The subject is presented with a length of string suspended from a hook and several weights that can be attached to the lower end. He or she can vary the length of the string. Change the attached weight, and alter the height from which bob is released.

Children still in the concrete operational stage will experiment changing some of the variables, but not in a systematic way. Adolescents of even average ability will set up a series of hypotheses and proceed to systematically test each one. They reason that if a particular variable (weight) affects the period of oscillation, then the effect will appear only if they change one variable and hold all other constant. If the variable seems to have no effect on the time of swing, they rule it out and try another. Considering all the possibilities, working out the consequences for each hypothesis, and confirming or denying these consequences is the essence of what piaget calls formal operational thought.

This ability to conceive of possibilities beyond what is present in reality-to think of alternatives to the way things are-permeates adolescent thinking and is tied in with adolescents' tendency to be concerned with metaphysical and ideological problems and to question the way in which adults run the world.

LECTURE THREE

ANOTHER VIEW OF COGNITIVE DEVELOPMENT

JEROME BRUNER'S SYSTEMS OF REPRESENTATION

Jerome Bruner, a Harvard psychologist, defines cognitive growth as:

- First, the development of internal systems of representation to deal with information.
- Second, the application of those systems to the organization of newly acquired information.

As development and information is organized, children become increasingly capable of abstract thought, applying theories to solve problems. Bruner (1966) lists several bench marks of intellectual growth:

1. the ability to act independently of the nature of the immediate situation, to maintain the same response in the face of changing stimuli or to alter response when the environment remains the same.
2. the ability to build mental models of the world which enable the child to go beyond the information given, to hypothesize, and to predict events.
3. the ability to express oneself in language, to report own activities, and bring order to the environment.
4. the ability to interact with other people, to learn from others.
5. the ability to deal with several alternative simultaneously to meet the complex demands of the realm world.

The abilities do not occur all at once, they are developed as children progress through stages of intellectual growth. Although Bruner agrees with piaget that there are distinct stages of cognitive growth, he does not agree that mental development proceeds in fixed and unalterable sequences.

“Three systems of processing information by which human beings pass in the acquisition of cognitive ability until, in the end, they use all three.”

THE STAGES OF REPRESENTATION

1. REPRESENTATION THROUGH ACTION OR INACTIVE REPRESENTATION

In this, children represent reality by doing, by motor responses, the stage is comparable to Piaget's sensory-motor and pre-operational stages together. Objects are defined in terms of actions taken towards them: A rattle is to shake and a ball is to roll. "An object is what one does to it" Bruner, (1966). A teacher working with children on this level would enhance their learning by allowing them to handle physical objects, to find solutions to problems through the manipulation of things.

2. REPRESENTATION THROUGH IMAGERY OR ICONIC REPRESENTATION

Principles of perceptual organization are in force during this stage as children think pictorially, in images, in a stage comparable to that of Piaget's concrete operations. The child need no longer manipulate objects, but learning is enhanced by seeing demonstrations or pictures. Children on this level are not yet ready to learn efficiently solely through verbal representation.

3. REPRESENTATION THROUGH LANGUAGE OR SYMBOLIC REPRESENTATION.

Now the individual thinks in symbols, can think about things that are not present, can use language to hypothesize and to beyond the information given. This level, in language is used as "an instrument of thinking compares to Piaget's stage of formal operations. The teacher can present material verbally and expect students to reason abstractly.

At the highest level, all three systems are in use. Although Bruner's stage appear very similar to Piaget's, there are two major differences:

1. because people use all three systems of representation, Bruner believes that teachers, at any grade level, will get much better results by combining concrete pictorial and verbal or symbolic representation to get ideas across. Young children need all three; so do some older students.

In one supporting study Austin (1972) found that even college students do not learn as well both the active and the pictorial stages are skipped-when they are presented solely with verbal discussion of the subject and no charts, diagrams or graphs. (this was a lesson on probability and statistics).

3. Bruner believes that intellectual skills are transmitted by culture. Because the outside environment including education, has a major influence, Bruner believes that cognitive development can be accelerated-if the proper materials are presented to children especially materials they can explore for themselves.

Bruner has said: “any subject can be taught effectively in some intellectually honest form to any child at any stage of development.

Question: Discuss and contrast with Piaget’s views.

LECTURE FOUR

THEORIES OF CHILD DEVELOPMENT

- (a). The Psychoanalytic Theory: Sigmund Freud
- (b). The Psychosocial Theory: Erik Erikson.

*Both emphasize that development occurs by passing through a series of stages.

*In summary these are the stages:

FREUD

1. Oral stage 0 – 1 year
2. Anal stage 1 – 3 years
3. Phallic stage 3 – 5 years

4. Latency stage 5 – 12 years
5. Genital stage 12 – 18 years

ERIKSON

1. Trust vs Mistrust 0-1 year
2. Autonomy vs. Shame/Doubt 2-3 years
3. Initiative vs. Guilt 4-5 years
4. Industry vs. Inferiority 6-12 years
5. Identity vs. Role confusion 13-18 years
6. Intimacy vs. Isolation 19-35 years
7. Generativity vs. Stagnation 36-40 years
8. Ego integrity vs. Despair 40+ years

A. PSYCHOANALYTIC THEORY

Basically, Freud was a developmentalist; he believed that psychological change is governed by inner forces especially biological maturation. But Freud thought that maturation brings with it unruly sexual and aggressive energies, which societies must harness. Thus, social forces also play a powerful role in Freud's theory. But first things first, who is Freud?

Freud was born in Freiberg, Moravia (now part of Czechoslovakia). He was the first child of a 20-year-old mother and 40-year-old father, although his father also had two grown sons from a previous marriage. The father was a wool merchant who never became very successful in business, and financial troubles forced the family to move twice when Freud was young first to Leipzig, and then, when Freud was four, to Vienna, where Freud lived until the last year of his life.

As a boy Freud was a brilliant student, and the family encouraged his studies. His parents made sure that he had an oil lamp to study by, while the other family members had only candles. Freud's intellectual interests covered a wide variety of topics; and when he was old enough to enter the University he had difficulty deciding on an area to study. With some reluctance, he chose medicine, primarily because it gave him an opportunity to do research. Between the ages 26 and 35, Freud restlessly searched for a field in which he might make some important discovery. He continued to do

research in established areas of neurology, but he was excited by other possibilities. For a while, he thought he might find revolutionary uses of cocaine, a drug to which temporarily he seemed addicted. Freud also visited Charcot's laboratory in Paris where Charcot was investigating the mysteries of hysteria. The study of this disorder became the starting point of Freud's great contributions. As Freud built his theory, he speculated that only hysterics and other neurotic patients suffer this kind of internal conflict. We all have thoughts and desires that cannot admit to ourselves. In neurosis, repression and conflict became particularly intense and unmanageable, and symptoms. Freud continued to develop and revise his theory until the end of his life, the last 16 years of which he spent in pain from cancer of the jaw. In 1933 the Nazis banned his books in Berlin, and 1938 he had to leave Vienna for London, where he lived his last year and died at the age of 83. Now let us turn to Freud's theory explaining how we human beings achieve our psycho-sexual development.

STAGES OF PSYCHOSEXUAL DEVELOPMENT

In Freud's theory, the term for one's sexual energy is **LIBIDO**, any part of the body on which this energy becomes focused is called an **Erogenous Zone**. Almost any part of the body can become an erogenous zone, but in childhood three most important zones are the mouth, the anus and genital area. These zones become the center of the child's sexual interests in a specific stage sequence:

1. THE ORAL STAGE

This is the child's interest's center on the mouth. Freud said that if the infant could express itself, it would acknowledge undoubtedly that the act of sucking at its mother's breast is far and away the most important thing in life. Sucking is vital, of course, because it provides nourishment; the baby must suck to stay alive. But, as mentioned above, Freud thought that sucking also provides pleasure in its own right. This is why babies suck on their thumbs, they do not direct their impulses towards others but find gratification through their own bodies.

Beginning about six months, babies begin to develop a conception of another being, especially the mother, as a separate, necessary person. They become anxious when she leaves or when they encounter a stranger in her place.

At the same time another important development is taking place; the growth of teeth and the urge to bite. At this point, Karl Abraham (1924) pointed out, the babies dimly form the idea that is they, with their urge to bite and devour, who can drive their mothers away. Life at this stage, then, becomes increasingly complex and troubling. It is little wonder that we may often unconsciously wish to return to the earlier oral stage, when things seemed much simpler and more gratifying.

According to Freud, we all go through the oral stage as well as every other stage of psychosexual development.

However, also can develop a **FIXATION** at any stage; which it means that no matter how far we have advanced beyond it, we maintain a lasting preoccupation with the pleasures of and issues of their stage. For example, if we are fixated at the oral stage, we might find ourselves continually preoccupied with food; or we find that we work comfortably when we are sucking or biting on objects such pencils; or we gain the most pleasure from oral sexual activities; or we find ourselves addicted to smoking or drinking partly because of oral pleasure involved.

2. ANAL STAGE

During the second and third years of the child's life, the anal zone becomes the focus of the child's sexual interests. Children become increasingly aware of the pleasurable sensations the bowel movements produce on the mucous membranes of the anal region. As they gain maturational control of their sphincter muscles, they sometimes learn to hold back their bowel movements until the last moment, thereby increasing the pleasure of the final release. Children also frequently take interest in the products of their labors and enjoy handling and smearing their feces.

It is at this stage when children are first asked to renounce their instinctual pleasures in a fairly dramatic way. Few parents are willing to permit their children to smear and play with feces for very long. Most parents, as well-socialized individuals, feel certain repugnance over anal matters and soon get children to feel the same way. As soon get their children ready, if not sooner, parents train them. Some children initially fight back by deliberately soiling themselves. They also sometimes rebel by becoming wasteful, disorderly, and messy-traits which sometimes persist into adulthood.

3. THE PHALIC OR OEDIPAL STAGE

Between the ages of about three and six years, the child enters the phallic or oedipal stage. Freud understood this stage better in the case of the boy than in the case of the girl, so we might begin with the boy.

THE BOY'S OEDIPAL CRISIS: The crisis begins when the boy starts to take an interest in his penis. This organ, which is so easily excitable and changeable, and so rich in sensations fires his curiosity. He wants to compare his penis to those of other males and of animals, and he tries to see sexual organs of girls and women. He may also enjoy exhibiting his penis and more generally, imagines the role he might play as an adult, sexual person. He initiates experiments and spins fantasies in which he is an aggressive heroic male, frequently directing his intentions toward his primary love-object, his mother. He may begin kissing mommy aggressively, or want to sleep with her at night, or imagine marrying her.

The boy soon learns, however, that his most ambitious experiments and plans are considered excessive and improper. He learns that he can not after all, marry mommy or engage in any sex play with her. He can not even touch, hug or cuddle with mommy as much as he would like since he is now a big boy. At the same time, he notices that Daddy seems to kiss and hug mommy at will, and he sleeps with her all night long. Thus father is the rival for the affection of the mother. At 5 to 6 the child realizes that their same sex parent might punish him for his incestuous wishes. To reduce this conflict the child identifies with the same sex parent, striving to be like him or her. If the conflict is not resolved, though, the individual may become fixated at the phallic stage. The crisis for boys is also known as the Oedipus complex which in a nutshell is just the Freudian concept in which the young child develops an intense desire to replace the parent of the same sex and enjoy the affections of the opposite-sex parent.

THE GIRLS ECTRAL COMPLEX

Freud thought, there was an Oedipus complex for the little girl too, but he admitted that here our material- for some reason we do not understand- becomes far more shadowy and incomplete. Freud's view on this topic, in broad outline, was as follows: He noted that the girl, by the age of five years or so, becomes disappointed in her mother. She feels deprived because her no longer gives her constant love and care that she as a baby, and if new

babies are born they get the attention she deserves. Furthermore, she is increasingly irritated by the mothers prohibitions, such as that on masturbation. Finally, and most upsetting, the girl discovers that she does not have a penis- a fact for which she blames the mother, who sent her into the world so insufficiently equipped.

The little girl's genital disappointment is illustrated by a anecdote from Ruth Munroe, a psychologist who said that she was skeptical about Freud's theory until one day she observed her four year old daughter in a bathtub with her brother. The daughter suddenly exclaimed, "my wee wee (penis) is all gone" –apparently comparing herself with her brother for the first time. Munroe tried to reassure her, but nothing worked, and for some weeks she objected violently even to being called a girl. Thus, this little girl felt what Freud called Penis envy. The wish to have the penis and to be like a boy.

The little girl does however, recover her feminine pride. This happens when she begins to appreciate the attentions of her father. The father may have not paid any special attention to his daughter when she was in diapers, but now he may begin to admire her cuteness and growing femininity, calling her his little princess and flirting with her in other ways. Thus inspired, she begins to spin romantic fantasies involving herself and her father. At first her thought involve the vague wish for his penis, but this soon changes into a wish to have a baby and give it to him as a present.

As with the little boy, the little girl discovers that she lacks sole rights to her new love- object. She realizes that she cannot, after all, marry Daddy, nor can she cuddle, hug or sleep with him as much as he would like. Hover, the mother seems to be able to do these things, so she becomes the rival for his affections. Freud said that his oedipal situation might be called the Electra complex.

What most puzzled Freud about the girls Oedipus complex was the motivation for its resolution. In the case of the little boy, the primary motivation seemed clear: the boy is frightened by the threat of castration. But the girl cannot fear castration, for she has no penis to lose. Why then does she renounce her oedipal wishes at all? In one essay, Freud said that he simply did not know the answer, but his best guess was that the girl resolves the oedipal crisis because she fears the loss of parental love. Thus she does after all repress her incestuous desires, identify with her mother, and institute a superego to check her against for bidden impulses and wishes. Still,

lacking castration anxiety, her motivation to erect strong defences against oedipal feelings must be weaker, and as a result she must develop a weaker superego. Freud knew that this last conclusion would anger the feminists, but this was where his reasoning led and he argued that women in fact are less rigid about moral issues. Like a boy, then, little girl entertains and then abandons rivalrous and incestuous fantasies. In some ways, the later consequences of the oedipal experience would seem similar to those for the boy. For example, the girl too may carry within her the dim knowledge that her first attempt at rivaling a woman for a man's love failed, and she may therefore doubt her future prospects. At the same time, though, the girl's oedipal experiences differed from the boy's so the effects may differ as well. She had less need to resolve the Oedipus crisis, so her oedipal desires may be more open and transparent later in life. Furthermore, just before she entered into oedipal rivalry, she experienced a deep disappointment over being female. This feeling, Freud felt, may lead to a masculinity complex, in which the woman may avoid intimate relationships with men, since these only remind her of her inferior state, and instead, try to out do men by becoming aggressive and assertive.

4. THE LATENCY STAGE

With the establishment of strong defences against oedipal feelings, the child enters the latency period, which lasts from about age six to seven years. As the name suggests, sexual and aggressive fantasies are now latent; they are kept firmly down, in the unconscious. Freud thought that the repression of sexuality at this time is quite sweeping; it includes not only oedipal feelings and memories but oral and anal ones as well. Because dangerous impulses and fantasies are now kept underground, the child is not excessively bothered by them, and the latency period is one of relative calm. The child is now free to redirect his or her energies into concrete, socially acceptable pursuits, such as sports and games and intellectual activities. In general, the latency –age child possesses a new composure and self control.

PUBERTY (GENITAL STAGE)

The stability of the latency period, however, does not last. At puberty, which begins at about age 11 for the girls and 13 years for boys, sexual energy wells up in full adult force and threatens to wreck havoc with the established defences. Once again, oedipal feelings threaten to break into consciousness, and now the young person is big enough to carry them out in reality.

Freud said that from puberty on ward the individual's great task is freeing himself from his parents. For the son, this means releasing his tie to the mother and finding a woman of his own. The boy must also have resolve his rivalry with his father and free himself of his fathers domination of him. For the daughter, the tasks are the same; she too must separate from the parents and establish a life of her own. Freud noted, however that independence never comes easily. Over the years we have built up strong dependencies upon our parents, and it is painful to separate ourselves from them. For most of us, the goal of genuine independence is never completely attained.

AGENCIES OF THE MIND

We have now reviewed the stages of development. Freud's theory contains many other components, and we cannot review them all. However, an introduction to Freud does require a look at one other cluster of concepts, those pertaining to the agencies of the mind. Freud was continually revising his ideas o this topic, but his best-known concepts are those of the id, ego and superego.

A). THE ID

The id is the part of the personality that Freud initially called the **UNCONSCIOUS**. It is the most primitive part of the personality, containing the basic biological reflexes and drives. Freud likened the id to a pit full of seething excitations, all pressing for discharge.

In terms of motivation, the id is dominated by the **PLEASURE PRINCIPLE**. Its goal is to maximize pleasure and minimize pain. In general, the id tries to remove all excitation and to return to a quite state- namely, that of deep, peaceful sleep.

At first the baby is almost all the id. Babies worry about little besides bodily comfort, and they try to discharge all tensions as quickly as possible. However, even babies must experience frustration. For example, they must sometimes wait to be fed. What the id does them is to hallucinate an image of the desired object and in this way it temporarily satisfies itself.

In the course of life, many impressions and impulses are repressed into the id, where they exist side by side with basic drives. The id then contains basic drives ad reflexes, along with images and sensations that have been

repressed. The also contains aggressive with pain or tension should be instantly destroyed. It does not matter to the id that one may be wishing for the destruction of someone's needs and loves. The id simply wants a reduction in disturbing tensions immediately.

B). THE EGO

If we were ruled by the id, we would not live for long. To survive, one cannot act solely on the basis of hallucinations or simply follow one's impulses. We must learn to deal with reality. For example, a little boy soon learns that he cannot just impulsively grab food from wherever he sees it. If he takes it from a bigger boy, he is likely to get hit. He must learn to consider reality before acting. The agency that delays the immediate impulse and considers reality is called **EGO**.

Freud said that whereas the id stands for the untamed passions, the ego stands for reason and good sense. Because the ego considers reality, it is said to follow the **REALITY PRINCIPLE**. The ego tries to forestall action until it has had a chance to perceive reality accurately to consider what has happened in similar situations in the past, to make realistic plans for the future.

Freud emphasized that although the ego functions somewhat independently from the id, it also borrows all its energy from the id. He likened the ego's relation to the id to that of the rider on a horse. The horse supplies the locomotive energy, while the rider has the privilege of deciding on the goal and guiding the powerful animal's movement. But only too often there arises between the ego and the id the not precisely ideal situation of the rider being obliged to guide the horse along the path by which it itself wants to go.

c). THE SUPEREGO

The ego is sometimes called one of the control systems of personality. The ego controls the blind passions of the id to protect the organism from injury. We mentioned how a little boy must learn to inhibit the impulse to grab food until he can determine whether it is realistically safe to do so. But we also control our actions for other reasons. We might also refrain from taking things from others because we believe such actions are morally wrong. Our standards of right and wrong constitute the second control system of the personality, the superego.

We referred earlier to Freud's view on the origin of the superego: it is a product of the oedipal crisis. Children introject parental standards to check themselves against the dangerous impulses and fantasies of this period as well. Children continue to identify with other people, such as teachers and religious leaders and adopt their moral standards as their own.

Freud wrote the superego as if it contained two parts. One part is sometimes called the **CONSCIENCE**. It is punitive, negative, critical part of the superego that tells us what NOT to do and punishes us with feelings of guilt when we violate its demands. The other part is called EGO IDEAL; this part consists of positive aspirations. For example, when a little boy wants to be just like a famous football player, the athlete is his ego ideal. The ego ideal may also be more abstract. It may include our positive ideals, such as the wish to become generous, courageous, or dedicated to principles of justice and freedom.

LEVELS OF AWARENESS OF THREE ANGECS

The id, ego, and superego function at differing levels of awareness as Freud tried to show by means of a diagram reproduced below:

The id at the bottom the drawing, is completely removed from the region labeled pepts, from consciousness and reality; it is part of the id that develops in order to deal with external world. The ego, you will note, largely inhabits a region labeled preconscious. This term refers to the functioning that is below awareness but can be made conscious with relative little effort. The ego is also partly unconscious; for example, it represses forbidden thoughts in a completely unconscious way.

The superego is drawn on top of the ego, illustrating its role of criticizing the ego from above. The superego, too, is partly unconscious although we are sometimes aware of our moral standards; they also frequently affect us unconsciously. For example, we might suddenly become depressed without any idea why, because our superego is punishing us forbidden thoughts.

LECTURE FIVE

STAGES OF PSYCHOSOCIAL DEVELOPMENT: ERIKSON

We have noticed the psychoanalytic theory by Freud is based on instinctive biological drives; that personality develops through stages governed by those drives.

Erikson's psychosocial is based on Freudian theory but is concerned with instinctual drives as they are modified by society. Erik Erikson identifies eight (8) stages of personality development as a series of crises, and has focused on the adolescent crises. Erikson argues that a crisis is a time of increased vulnerability to a particular psychosocial problem:

- Each crisis is related to the others.
- Each exists in some form before the decisive moment for its resolution arrives.
- Each, as it is positively resolved contributes the ultimate strength of the growing personality.

Through Erickson's theory, you learn how youngsters develop trust, autonomy, initiative and identity. Erickson also explores how in the wrong circumstances miss trust, shame, guilt, inferiority, and a confused identity can be outcome in early years and of adolescence. The post adolescence years have also been added for examination for their problems and potential only. Erickson based his description of personality development on the epigenetic principle. In fetal development certain organs of the body appear at specified times and eventually combined to form a child. The personality, says Erickson develops in a similar way: "Anything that grows has a ground plan, and out of the ground plan the arise, each part having its times of special ascendance until all parts are arisen to form a functioning whole."

Erikson hypothesizes that just as the parts of the body develop in interrelated way where in the human organism is in the uterus, the personality of an individual forms as the ego progresses through a series of interrelated stages. All these ego stages exist in the beginning in some form but each has a critical period of development.

The following designation, age ranges and essential characteristics of the stages of personality development are proposed by Erikson childhood and society:

1. TRUST Vs MISTRUST (BIRTH TO 1 YEAR)

The basic psychological attitude to be learned by infants is that they can trust their world. Trust is fostered by consistency, continuity, and sameness of experience, in the satisfaction of the infant's basic needs by the parents. The quality of the maternal relationship is more important than absolute quantities of food or demonstration of love. If the needs of infants are met and if the parents communicate genuine affection, children will think of their world as safe and dependable. If care is inadequate, inconsistent or negative, the children will approach their world with fear and suspicion.

2. AUTONOMY Vs SHAME & DOUBT (2- 3 YEARS)

Just when children have learned to trust (or mistrust) their parents, they must exert a degree of independence. If children are permitted and encouraged to do what they are capable of doing at their own pace and their own way.- but with judicious supervision by the parents and teachers- they will develop a sense of autonomy. If parents and teachers are impatient and do too many things for the children, they will doubt their ability to deal with the environment. Furthermore, adults should avoid shaming children for unacceptable behavior, since this is likely to contribute to feelings of self-doubt.

3. INITIATIVE VERSUS GUILT (4- 5 YEARS)

The ability to participate in many physical activities and to use language sets the stage for initiative, which adds to autonomy the quality of understanding planning and attacking a task for the sake of being active and on the move. If children are given freedom to explore and experiment and if parents and teachers take time to answer questions, tendencies toward initiative will be encouraged. If children are restricted and made to feel their activities and questions as pointless or a nuisance, they will feel guilty about doing things on their own.

4. INDUSTRY Vs INFERIORITY (6- 11 YEARS)

A child entering school is at a point of development when behavior is dominated by intellectual curiosity and performance. He now learns to win recognition by producing things- he develops a sense of industry. The child's danger at this stage lies in a sense of inadequacy and inferiority. If the child

is encouraged to make and do things, allowed to finish tasks, and praised for trying, industry results. If the child's efforts are unsuccessful or if they are derided or treated as bothersome, inferiority results.

5. IDENTITY VS. ROLE CONFUSION (12 – 18 years)

As young adults approach independence from parents and achieve physical maturity, they are concerned about what kind of person they are becoming. The growing and developing youths, faced with (a) physiological revolution within them and with tangible adult tasks ahead of them are now primarily concerned with what they feel they are. (in their search for a new sense of continuity and sameness, adolescents have refight of the