

## **Chronology of Human Development**

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February 23, 2011

1600-1700: In Europe and America, no interest in child studies and a lack of concern for children. Children are treated as miniature adults.

17<sup>th</sup> Century: Two major philosophers changed the prevailing concepts of their times and espoused philosophies of human nature that have since been associated with two major and conflicting worldviews. A worldview is pervading ways someone has of looking at reality that is beyond empirical testing or proof that influences the specific theories that one will develop and believe. The two worldviews that we will consider are the mechanistic approach and the organism approach; they are still with us today.

Frenchman René Descartes and the 18th-century German Johann Gottlieb Fichte was the sole basis of reality. They saw the universe as existing only in the individual's knowledge and experience of it.

1690: John Locke publishes an important essay on human understanding and argues that children are born neutral and society molds them. Locke published an essay “Concerning Human Understanding,” soon to be followed by a book entitled: “Some Thoughts Concerning Education.” These books eventually revolutionized the thinking of many people concerning how humans develop and learn.

18th-Century: German Immanuel Kant, proposed two forms of ego, one perceiving and the other thinking.

1750: There was a high mortality rate, and children in much of Europe had only a one in three to one in four chance of surviving to adulthood. For example, in Paris in 1750, 33% of all children born were left in founding homes or on doorsteps; most died.

1762: Jean Jacques Rousseau, argues that children are born good and should not be corrupted by society. Rousseau published a novel, Emile, which laid out his view of human nature and child development.

- Natural state of humans at birth is good. They have inborn capacities that allow them to develop along an optimal path and to become valuable and good adult.
- Society and its agents (parents, educators, and religious leaders) usually channel and corrupt this natural developmental path to cause the problems we see in children.
- Thus, Rousseau believed that the correct obligation of society and parents was to clear out the obstacles so that children could develop at their own rate and in their own way without the biases and evils of society being thrust upon them.

- Rousseau perceived children as being far from miniature adults and not even blank slates, but perfect organisms that were well adapted to the requirements for each given age or stage of life.

1777: Some physicians, such as William Cadogen in England, published advice on parenting to try to alleviate the worst of children's suffering.

1787: Tiedemann publishes the first baby biography. The first known published account was a diary of observations by Dietrich Tiedemann in Germany. The first known published account was a diary of observations by Dietrich Tiedemann in Germany.

Early 1800's: A movement emerged that became known as the Sunday School Movement.

1800's: Oedipus complex - In psychoanalysis, a son's largely unconscious sexual attraction toward his mother accompanied by jealousy toward his father. The term *Oedipus complex*, derived from the Greek legend of Oedipus, was first used in the late 1800s by Austrian psychiatrist Sigmund Freud, the founder of psychoanalysis.

Freud thought that the Oedipus complex was the most important event of a boy's childhood and had a great effect on his subsequent adult life. Freud claimed that in nearly all cases the boy represses the desire for his mother and the jealousy toward his father. As a result of this unconscious experience, Freud believed, a boy with an Oedipus complex feels guilt and experiences strong emotional conflicts.

18<sup>th</sup>-19<sup>th</sup> Century: At the time, most geologists adhered to the so-called catastrophist theory that Earth had experienced a succession of creations of animal and plant life, and that each creation had been destroyed by a sudden catastrophe, such as an upheaval or convulsion of Earth's surface (*see* Geology: History of Geology: Geology in the 18th and 19th Centuries). According to this theory, the most recent catastrophe, Noah's flood, wiped away all life except those forms taken into the ark. The rest were visible only in the form of fossils. In the view of the catastrophists, species were individually created and immutable, that is, unchangeable for all time.

19<sup>th</sup> Century: Freud's concepts from medicine, physics, and the Darwinian Evolution theory influenced his theory. The foundation of Freud's theory was based on his concept of psychic energy and a hydraulic model for how the energy is used for adaptation.

The Pleasure Principle consists of the primary unconscious drives and the primary process thinking that accompanies the Pleasure Principle.

Freud's psychodynamic theory of development is called the psychodynamic theory because it focuses on dynamic psychological, and most unconscious processes that are constantly at work to help the individual to continually adapt to the environment and cope with conflicts.

Most psychologists today do not hold it in high regard; his concepts have become internalized into our thinking to the point that, implicitly, we have his theory with us all the time influencing our thinking about human nature. This is the reason it is seen as revolutionized psychology.

19<sup>th</sup>-20<sup>th</sup> Century: Through his clinical practice, Freud developed a very different approach to psychology. After graduating from medical school, Freud treated patients who appeared to suffer from certain ailments but had nothing physically wrong with them. These patients were not consciously faking their symptoms, and often the symptoms would disappear through hypnosis, or even just by talking. On the basis of these observations, Freud formulated a theory of personality and a form of psychotherapy known as psychoanalysis. It became one of the most influential schools of Western thought of the 20th century.

1803: Dietrich Tiedemann died.

1809: Darwin was the fifth child of a wealthy and sophisticated English family. His maternal grandfather was successful china and pottery entrepreneur Josiah Wedgwood; his paternal grandfather was well-known 18th-century physician and savant Erasmus Darwin.

1825: After graduating from the elite school at Shrewsbury in 1825, young Darwin went to the University of Edinburgh to study medicine.

1827: Darwin dropped out of medical school and entered the University of Cambridge, in preparation for becoming a clergyman of the Church of England. There he met two stellar figures: Adam Sedgwick, a geologist, and John Stevens Henslow, a naturalist. Henslow not only helped build Darwin's self-confidence but also taught his student to be a meticulous and painstaking observer of natural phenomena and collector of specimens.

1830-33: The catastrophist viewpoint (but not the immutability of species) was challenged by the English geologist Sir Charles Lyell in his three-volume work *Principles of Geology* (1830-1833). Lyell maintained that Earth's surface is undergoing constant change, the result of natural forces operating uniformly over long periods.

1831: After graduating from Cambridge in 1831, the 22-year-old Darwin was taken aboard the English survey ship HMS *Beagle*, largely on Henslow's recommendation, as an unpaid naturalist on a scientific expedition around the world.

The 22-year old Charles Darwin joined the crew of the HMS *Beagle* as a naturalist. The five-year expedition collected hydrographic, geologic, and meteorologic data from South America and many other regions around the world. Darwin's own observations on this voyage led to his theory of natural selection.

1836: After returning to England, Darwin began recording his ideas about changeability of species in his *Notebooks on the Transmutation of Species*. Darwin's explanation for how organisms evolved was brought into sharp focus after he read *An Essay on the Principle of*

*Population* (1798), by British economist Thomas Robert Malthus. He explained how human populations remain in balance. Malthus argued that any increase in the availability of food for basic human survival could not match the geometrical rate of population growth. The latter, therefore, had to be checked by natural limitations such as famine and disease, or by social actions such as war.

1838: Darwin immediately applied Malthus's argument to animals and plants, and he arrived at a sketch of a theory of evolution through natural selection. For the next two decades he worked on his theory and other natural history projects.

1839: Darwin married his first cousin, Emma Wedgwood, and soon after, moved to a small estate, Down House, outside London. There he and his wife had ten children, three of whom died in infancy.

May 6, 1856: Freud was born into a middle-class Jewish family in Freiberg, Moravia (now Příbor, Czech Republic). When he was three years old his family, fleeing from the anti-Semitic riots then raging in Freiberg, moved to the German city of Leipzig. Shortly thereafter, the family settled in Vienna, where Freud remained for most of his life.

1858: Darwin's theory was first announced in a paper presented at the same time as one by Alfred Russel Wallace, a young naturalist who had come independently to the theory of natural selection.

1859: Darwin's complete theory was published, in *On the Origin of Species*. Often referred to as the "book that shook the world," the *Origin* sold out on the first day of publication and subsequently went through six editions. Darwin's theory of evolution by natural selection is essentially that, because of the food-supply problem described by Malthus, the young born to any species intensely compete for survival.

1868-72: Darwin spent the rest of his life expanding on different aspects of problems raised in the *Origin*. His later books—including *The Variation of Animals and Plants under Domestication* (1868), *The Descent of Man* (1871), and *The Expression of the Emotions in Man and Animals* (1872)—were detailed expositions of topics that had been confined to small sections of the *Origin*.

1871: When Darwin published *The Descent of Man* in 1871, he challenged the fundamental beliefs of most people by asserting that humans and apes had evolved from a common ancestor. Many critics of Darwin misunderstood his theory to mean that people had descended directly from apes.

The reaction to the *Origin* was immediate. Some biologists argued that Darwin could not prove his hypothesis. Others criticized Darwin's concept of variation, arguing that he could explain neither the origin of variations nor how they were passed to succeeding generations.

1873: Freud decided to become a medical student shortly before he entered Vienna University. Inspired by the scientific investigations of the German poet Johann Wolfgang von Goethe, Freud was driven by an intense desire to study natural science and to solve some of the challenging problems confronting contemporary scientists.

July 26, 1875: Carl Young was born in Kesswil, Switzerland, the son of a Protestant clergyman. Young developed during his lonely childhood an inclination for dreaming and fantasy that greatly influenced his adult work.

1877: Charles Darwin publishes his child observations. After publishing the *Origin of Species*, Charles Darwin published his detailed observations of his son. Ever the superb observer, Darwin discussed the development of emotions, causal thinking, the concept of self, and other domains of development that we are still attempting to understand today.

1878: John Broadus Watson was born in Greenville, South Carolina, and educated at Furman University and the University of Chicago.

1881: After completing a year of compulsory military service, he received his medical degree. Unwilling to give up his experimental work, however, he remained at the university, working in the physiological laboratory. At Brücke's urging, he reluctantly abandoned theoretical research to gain practical experience.

April 19, 1882: Darwin was honored by burial in Westminster Abbey after he died in Downe, Kent, UK.

1882: Preyer publishes the first textbook on child development. The first child development textbook was written in the same manner by Wilhelm Preyer in Germany. Other detailed observations of a person's own children were published, one being written by Alfred Binet, who first developed intelligence testing in France.

1882: Melanie Klein (1882-1960) was born, an Austrian psychoanalyst, who devised therapeutic techniques for children that had great impact on present methods of child care and rearing. He was strongly influenced by Sigmund Freud's close associates Sándor Ferenczi and Karl Abraham, Klein after World War I began to develop methods of play therapy, showing that how children play with toys reveals earlier infantile fantasies and anxieties.

1885: Karen Horney (1885-1952), German American psychiatrist, born in Hamburg, and educated at the universities of Freiburg and Berlin. Following his appointment as a lecturer in neuropathology at Vienna University, he left his post at the hospital. Later that year he worked in Paris with French neurologist Jean Charcot.

1885: Freud was awarded a government grant enabling him to spend 19 weeks in Paris as a student of French neurologist Jean Charcot. Charcot, who was the director of the clinic at the

mental hospital, the Salpêtrière, was then treating nervous disorders by the use of hypnotic suggestion. Fascinated by the apparent success of these treatments, Freud met and studied with several of the leading figures in the field.

In 1886 Freud began private practice in neurology. Also that year Freud married Martha Bernays, to whom he had become engaged four years earlier. The first of their children was born the following year.

1887: Hall founded the *American Journal of Psychology*.

1887: René Árpád Spitz (1887 – September 11, 1974) was an American psychoanalyst of Hungarian origin who was born in Vienna and died in Denver, Colorado. From a wealthy Jewish family background, he spent most of his childhood in Hungary.

1888: Being Jewish, Freud was exposed to strong anti-Semitic prejudices in Europe, which likely colored much of his view of human nature.

He received his MD degree, and out of financial necessity, became a practicing physician rather than a neurological researcher. He seemed to have a strong motivation to have an impact on the scientific and medical community that was biased against him.

1889: G. Stanley Hall was named president of the newly founded Clark University in Worcester, Massachusetts. Under his guidance considerable work was done in educational research at the university during its first 20 years. Hall was instrumental in the development of the new science of educational psychology. His work in that field shows the influence of the American philosopher William James, with whom he had studied at Harvard.

His most famous experiments, begun in 1889, demonstrated the conditioned and unconditioned reflexes in dogs, and that they had an influence on the development of physiologically oriented behaviorist theories of psychology during the early years of the 20th century.

At the Sorbonne, he helped to found the first psychological research laboratory in France. As director of the laboratory, Binet attempted to develop experimental techniques to measure intelligence and reasoning ability. In 1895, he founded the first French psychological journal, *L'Année Psychologique* (The Psychological Year), and used it to publish the results of his research studies. Binet's most important work was in intelligence testing. With his colleague, psychologist Theodore Simon, he devised a test to measure the mental ability of children.

1892: Harry Stack Sullivan (1892-1949), American psychiatrist, noted for his theory of interpersonal relations, which holds that personality development and mental disorder are determined primarily by the interplay of personal and social forces rather than by constitutional factors in the individual. Sullivan was born in Norwich, New York, and educated at the Chicago College of Medicine and Surgery.

1892: Freud understood hypnosis to act on the side of will to subjugate the counter will, thus obliterating the symptom. The idea of conflict proposed in the 1892 paper “A Case of Successful Treatment by Hypnotism: With Some Remarks on the Origin of Hysterical Symptoms Through ‘Counter will’” was to become a fundamental principle of psychoanalysis.

He began to employ hypnosis in his own practice, publishing articles on the subject. Freud came to understand hysterical neurotic symptoms as the product of a conflict between opposing mental forces. Conscious forces representing “will” were balanced by unconscious opposing forces representing “counter will.” He understood hypnosis to act on the side of will to subjugate the counter will, thus obliterating the symptom.

1895: The concept of the unconscious was first developed in the period from 1895 to 1900 by Sigmund Freud, who theorized that it consists of survivals of feelings experienced during infantile life, including both instinctual drives or libido and their modifications by the development of the superego. According to the Swiss psychoanalyst Carl Jung, the unconscious also consists of a racial unconscious that contains certain inherited, universal, archaic fantasies belonging to what Jung termed the collective unconscious.

Freud and Breuer published the case and several others under the title *Studies on Hysteria*. Their view was summed up in the statement “Hysterics suffer mainly from reminiscences.” They proposed that when faced with emotionally traumatic memories, hysterics subjugate them from conscious appreciation to prevent the unbearable emotional pain and suffering that they cause. Rather than being driven out of the mind, however, these memories are driven into an area of the mind that is unconscious and inaccessible.

Freud’s family would become complete with the birth of Anna in 1895, who herself would become an important psychoanalyst

August 9, 1896: Jean Piaget (1896-1980) was born in Neuchâtel, Switzerland. A Swiss psychologist, best known for his pioneering work of the development of intelligence in children. His studies have had a major impact on the fields of psychology and education.

He wrote and published his first scientific paper, on the albino sparrow, at the age of ten. He was educated at the University of Neuchâtel and received his doctorate in biology at age 22. Piaget became interested in psychology; he studied and carried out research first in Zürich, Switzerland, and then at the Sorbonne in Paris, where he began his studies on the development of cognitive abilities.

Dr. Harter's research in the area of socio-emotional development focused on the self-system, broadly defined. One focus has been the development of a theoretically derived model of the causes and consequences of self-esteem.

1893-1902: Dr. Harter's work builds upon the conceptual formulations of James (1893) who postulated that self-esteem reflected competence in areas where success was deemed important, and of Cooley (1902), for whom self-esteem was the incorporation of the attitudes that significant others held toward the self.

The findings reveal that self-esteem is a direct function of competence in domains of importance as well as the approval of significant others. Important consequences of self-esteem have also been identified, for example, affect along a dimension of cheerful to depress. Those with low self-esteem are invariably depressed, and among many adolescents, such depression, in turn, leads to thoughts of suicide, an issue of clinical significance. Most recently, this work has demonstrated that there are multiple pathways to depression, representing different combinations of feelings of inadequacy and lack of support (e.g., from peers versus parents).

1895-1900: The concept of the unconscious was first developed during this period by Freud, who theorized that it consists of survivals of feelings experienced during infantile life, including both instinctual drives or libido and their modifications by the development of the superego. According to the Swiss psychoanalyst Carl Jung, the unconscious also consists of a racial unconscious that contains certain inherited, universal, archaic fantasies belonging to what Jung termed the collective unconscious.

1896: Lev Vygotsky (1896–1934) was born in Orhsa, Byelorussia (now Belarus). He was a Soviet psychologist, whose work on language, and linguistic development is based on his supposition that higher cognitive processes are a product of social development.

1899: Freud introduced his new theory in *The Interpretation of Dreams* (1899), the first of 24 books he would write. The publication of *The Interpretation of Dreams* detailed his technique of isolating the source of psychological problems by examining a patient's spontaneous stream of thought.

20<sup>th</sup> Century: Ethology theory first emerged from the work of three European naturalists: Karl Von Frisch, Nikko Tinbergen, and Konrad Lorenz.

Ethology theory is a general approach to studying animal behavior and development in which the focus is on how behaviors that have adaptive importance and evolutionary significance have evolved in a given species. The ethologists carried out detailed systematic observations of different species to describe how certain complex behaviors worked to bring about his adaptation, and they tried to explain why certain behaviors would have evolutionary significance.

Certain complex action patterns or instincts would accomplish this adaptation at certain critical periods in an individual's life. A critical period is defined as a time in the course of development (for a given species) when the individual is particularly sensitive to certain environmental cues and primed to respond to them. Outside this critical period, an individual may not respond the



same way. Thus certain skills or reorganizations of the neural systems are likely to occur during critical periods.

1900: Erich Fromm (1900-1980) was born in Frankfurt am Main, Germany, and educated at the universities of Heidelberg and Munich and at the Psychoanalytic Institute in Berlin. American psychoanalyst, best known for his application of psychoanalytic theory to social and cultural problems.

During the first two decades of the 1900s, Freud concentrated on modifying and improving his theory of psychoanalysis. He defined a number of principles and described a model of personality development. In 1902, Freud was appointed professor of neuropathology at the University of Vienna, a post he held until 1938.

1923: Freud reformulated his ideas in a structural model of the mind that postulated the existence of the id, the ego, and the superego. He developed cancer of the jaw. Although repeated operations and prosthetic appliances in his mouth made his life most uncomfortable, he continued working incessantly until his death.

1934: Erich Fromm was immigrated to the United States and subsequently became a citizen. Fromm was recognized as an important leader of contemporary psychoanalytic thought (*see* Psychoanalysis).

According to his views, specific personality types are related to specific socioeconomic patterns. He broke away from biologically oriented theories to see humans as products of their culture. He also felt that attempts should be made to create harmony between the drives of the individual and the society in which the individual lives.

Swiss psychiatrist Carl Jung began his studies of human motivation in the early 1900s and created the school of psychoanalysis known as analytical psychology. A contemporary of Austrian psychoanalyst Sigmund Freud, Jung at first collaborated closely with Freud but eventually moved on to pursue his own theories, including the exploration of personality types. According to Jung, there are two basic personality types, extroverted and introverted, which alternate equally in the completely normal individual.

1902: Erikson is born.

1902: Carl Jung, after graduating in medicine from the universities of Basel and Zürich, with a wide background in biology, zoology, paleontology, and archaeology, began his work on word association, in which a patient's responses to stimulus words revealed what Jung called “complexes”—a term that has since become universal.

1902-1918: Cooley's great reputation as a sociologist rests chiefly upon three works: *Human Nature and the Social Order* (1902), *Social Organization* (1904), and *Social Process* (1918). Cooley developed a theory of social relations in which neither the individual nor the group was

given precedence, but in which both were seen as indispensable and complementary to one another. Cooley is known for his theories regarding the self, human nature, and the “primary groups” in which human nature is developed, the interaction of leaders and the masses in public opinion, and the social significance of financial value.

1902: Erik Erikson (1902-1994) was born in Frankfurt, Germany. An American psychoanalyst, who made major contributions to the field of psychology with his work on child development and on the identity crisis.

1903: Conrad Zacharias Lorenz was born in Vienna and earned a medical degree and a PhD in zoology (1933) at Vienna University. Lorenz (1903-1989), Austrian zoologist and Nobel Laureate, was instrumental in the founding of ethology (*see* Animal Behavior).

1904: B. F. Skinner (1904-1990), American psychologist. Burrhus Frederic Skinner was born in Susquehanna, Pennsylvania, and educated at Harvard University where he received (1931) a PhD degree. His work on the physiology of the digestive glands won him the 1904 Nobel Prize in physiology or medicine. Publication, the *Psychopathology of Everyday Life*.

Freud came to understand the mind as a series of layers, with the most superficial layers in conscious appreciation and the deeper layers containing repressed memories and remaining unavailable to conscious thought. He termed this the topographical model and likened it to an iceberg, a small part of which is visible above the surface while the greater submerged part remains obscured from view.

1905: French psychologist Alfred Binet and colleague Theodore Simon devised one of the first tests of general intelligence. The test sought to identify French children likely to have difficulty in school so that they could receive special education. An American version of Binet’s test, the Stanford-Binet Intelligence Scale, is still used today.

The Binet-Simon scale first appeared in 1905. It was made up of problems designed to measure general intelligence, and items were graded according to age level. The child's score, based on the number of correct answers, yielded the child's mental age. His pioneering work on intelligence measurement remained influential among psychologists in other countries. In the United States, great importance was attached to intelligence testing, and the Stanford-Binet Scale, an adaptation of Binet's original test, was widely used for many years.

1906: A small number of pupils and followers had gathered around Freud, including Austrians William Stekel, Alfred Adler, and Otto Rank; American Abraham Brill; and Eugen Bleuler and Carl Jung from Switzerland. Other notable associates, who joined the circle in 1908, were Hungarian Sándor Ferenczi and Briton Ernest Jones.

1907: John Bowlby was born. John Bowlby (1907–1990), an English psychologist, and author of *Child Care and the Growth of Love* (1953), in which he argued that a home environment for

children is preferable to an institution, and stressed the value of the bond between mother and child. Bowlby is considered the primary founder of “attachment theory,” which has led to thousands of scientific studies and changes in important policies of child care, including how children are treated in hospitals and even changes in childbirth procedures.

He was a physician and child psychiatrist who worked in the Freudian psychoanalytic tradition; however, he became dissatisfied with Freudian theory, especially as he tried to explain how the attachment develops. He found psychodynamic theory inadequate in dealing with real relationships in child’s life. Instead, Bowlby used the newly developed ethology theory to explain why we need strong attachment system and how it develops.

1908- 1920: Watson was professor of psychology and director of the psychological laboratory at Johns Hopkins University. Watson is noted as the founder and leading exponent of the school of psychology known as behaviorism, which restricts psychology to the study of objectively observable behavior and explains behavior in terms of stimulus and response. His writings include *Animal Education* (1903), *Behavior* (1914), *Behaviorism* (1925; revised ed., 1930), and *Psychological Care of Infant and Child* (1928).

1909: The pioneers of the growing psychoanalytic movement assembled at Clark University in Worcester, Massachusetts, to hear lectures by Sigmund Freud, the founder of psychoanalysis. The group included A. A. Brill, Ernest Jones, Sandor Ferenczi, Freud, Clark University President C. Stanley Hall, and Swiss psychiatrist Carl G. Jung. Freud’s visit, the only one he made to the United States, broadened the influence and popularity of psychoanalysis.

1910: Increasing recognition of the psychoanalytic movement made possible the formation of a worldwide organization called the International Psychoanalytic Association. As the movement spread, gaining new adherents through Europe and the United States, Freud was troubled by the dissension that arose among members of his original circle. Most disturbing were the defections from the group of Adler and Jung, each of whom developed a different theoretical basis for disagreement with Freud’s emphasis on the sexual origin of neurosis. Freud met these setbacks by developing further his basic concepts and by elaborating his own views in many publications and lectures.

After finishing his medical studies in 1910 Spitz discovered the work of Freud. Increasing recognition of the psychoanalytic movement made possible the formation of a worldwide organization called the International Psychoanalytic Association. As the movement spread, gaining new adherents through Europe and the United States, Freud was troubled by the dissension that arose among members of his original circle.

October 18, 1911: Binet died in Paris.

1912-1916: With the publication of *Psychology of the Unconscious* (1912; trans. 1916), however, Jung declared his independence from Freud’s narrowly sexual interpretation of the

libido by showing the close parallels between ancient myths and psychotic fantasies and by explaining human motivation in terms of a larger creative energy. He gave up the presidency of the International Psychoanalytic Society and cofounded a movement called analytical psychology.

1913: Mary D. Salter Ainsworth (December 1913 – 1999) was born in Glendale, Ohio in 1913, eldest of three sisters. She was a Canadian developmental psychologist known for her work in early emotional attachment with "The Strange Situation" as well as her work in the development of Attachment Theory. Mary Ainsworth, first working independently of Bowlby, then in conjunction with him, influenced attachment theory to such an extent that she became cofounder of the theory and some of its primary research methods.

1913-39: Among his later writings are *Totem and Taboo* (1913), *Ego and the Id* (1923), *New Introductory Lectures on Psychoanalysis* (1933), and *Moses and Monotheism* (1939).

1914-1918: After the onset of World War I, Freud devoted little time to clinical observation and concentrated on the application of his theories to the interpretation of religion, mythology, art, and literature.

October 1, 1915: Jerome Seymour Bruner was born. An American psychologist who has contributed to cognitive psychology and cognitive learning theory in educational psychology, as well as to history and to the general philosophy of education. Bruner's ideas are based on categorization: "To perceive is to categorize, to conceptualize is to categorize, to learn is to form categories, to make decisions is to categorize." Bruner maintains people interpret the world in terms of its similarities and differences. He has also suggested that there are two primary modes of thought: the narrative mode and the paradigmatic mode.

In narrative thinking, the mind engages in sequential, action-oriented, detail-driven thought. In paradigmatic thinking, the mind transcends particularities to achieve systematic, categorical cognition. In the former case, thinking takes the form of stories and "gripping drama." In the latter, thinking is structured as propositions linked by logical operators.

A true instructional designer, Bruner's work also suggests that a learner (even of a very young age) is capable of learning any material so long as the instruction is organized appropriately, in sharp contrast to the beliefs of Piaget and other stage theorists. (Driscoll, Marcy). Like Bloom's Taxonomy, Bruner suggests a system of coding in which people form a hierarchical arrangement of related categories.

1919: Stack Sullivan began psychiatric work at Saint Elizabeth's Hospital in Washington, D.C.

1920: Erikson was an artist and teacher in the late 1920s when he met the Austrian psychoanalyst Anna Freud. With her encouragement, he began studying at the Vienna Psychoanalytic Institute, where he specialized in child psychoanalysis.

John Watson becomes the “father of behaviorism.” At John Hopkins, he took the earlier work of Pavlov in Russia and developed a theory that came to dominate all of American psychology, as well as approaches to child development. His theory was called behaviorism and can be traced back to the mechanistic approach of John Locke and forward to the work of B.F. Skinner and Albert Bandura.

Behaviorist theory stressed the influence of the environment on a child, who as blank slate, could be made into anything one wanted. It also changed the view of psychology. Psychology now became the study of observable behavior, rather than the study of intellectual and psychological processes.

1920-1930: It was within this research context that the Dionne Quintuplets were studied over a three-year period by Dr. William Blatz and his team from the Toronto child study center, which was called St. George's School of Child Study (SGSCS) in the 1920s and 1930s.

1924: G Stanley Hall died.

April 1935 to Feb. 1938: From the time the children were 11 months old until they were 44 months, they were also the focus of William Blatz's research program. The studies consisted of descriptions of the physical, intellectual, social, emotional, and language development of the girls over a period of almost three years, in the context of a nursery education system adapted from St. George's Nursery School in Toronto.

The team aimed to determine the extent of differences in development among the Quintuplets, and the differences between the Quintuplets and other children. The results of the research were unspectacular and were largely ignored by the scientific community, despite their promotion in a special conference hosted by Blatz at the Dionne Quintuplets' expense. Nonetheless, in the contemporary view, the girls were ideal research subjects.

1920 - 1940: Arnold Gesell writes about his maturational stage theory; Freud's theory competes with behaviorism for dominance in child development; ethologists (Tinbergen, von Frisch, and Lorenz) do comparative animal research in Europe.

1921: He published a major work, *Psychological Types* (trans. 1923), in which he dealt with the relationship between the conscious and unconscious and proposed the now well-known personality types, extrovert and introvert. He later made a distinction between the personal unconscious, or the repressed feelings and thoughts developed during an individual's life, and the collective unconscious, or those inherited feelings, thoughts, and memories shared by all humanity. The collective unconscious, according to Jung, is made up of what he called “archetypes,” or primordial images.

1921: Swiss psychiatrist Hermann Rorschach created his famous test. The test is projective, in that the subject states perceptions of a series of inkblots. The subject is asked what the inkblot

makes them think about. The interpretation is carried out by a trained psychologist, who asks the subject to expand verbally on his or her responses.

1923: Freud reformulated his ideas in a structural model of the mind that postulated the existence of the id, the ego, and the superego. Freud gave the name “id” to unconscious drives. The id knows nothing of morality or reality. It seeks only to gratify the instinctual drives, and it operates solely according to the pleasure principle. Freud held that the biological drives of a young person are often frustrated by delays and restricted by the demands of parents and other older members of the family.

1923-1930: Sullivan was involved in clinical research at Sheppard and Enoch Pratt Hospital in Towson, Maryland. Subsequently he taught psychiatry at the medical schools of the University of Maryland and Georgetown University.

1925: Albert Bandura is born.

1928: John H. Flavell (born 1928) is an American developmental psychologist specializing in children's cognitive development. Through the discovery of new developmental phenomena and analysis of the theories of Jean Piaget, Flavell shifted the direction of developmental psychology in the United States.

1928-70: Among Piaget's many books are *The Language and Thought of the Child* (1926), *Judgment and Reasoning in the Child* (1928), *The Origin of Intelligence in Children* (1954), *The Early Growth of Logic in the Child* (1964), and *Science of Education and the Psychology of the Child* (1970).

1929: Jerome Kagan was born in Newark, New Jersey, USA to Joseph and Myrtle Kagan. He earned a B.S. Degree from Rutgers University in 1950, and is one of the key pioneers of developmental psychology. He is Daniel and Amy Starch Research Professor of Psychology, Emeritus at Harvard University, and co-faculty at the New England Complex Systems Institute. He has shown that an infant's "temperament" is quite stable over time, in that certain behaviors in infancy are predictive of certain other behavior patterns in adolescence. Kagan was listed as the 22nd most eminent psychologist of the 20th Century, just above Carl Jung.

While at Fels, Kagan did extensive research on personality traits beginning with infancy and continued through adulthood. During this time Kagan conducted longitudinal studies to which he followed multiple subjects into adulthood, specifically looking at their personality traits. Upon reexamining the subjects, later into adulthood, Kagan found little evidence to support his behaviorist theory and began to take notice of a possible biological influence. Kagan and colleague Howard Moss later published these findings in *Birth to Maturity*.

1929: Charles Horton Cooley died.

1929-39: Ainsworth enrolled in honors program in psychology at the University of Toronto in the fall of 1929. She earned her BA in 1935, her MA in 1936, and her PhD in 1939, all from the University of Toronto.

1933: Erikson immigrated to the United States, first joining the faculty of the Harvard Medical School and then moving to Yale University. During this period Erikson became interested in the influence of culture and society on child development. He studied groups of Native American children to help formulate his theories.

1934: Vygotsky dies.

1934-43: Sullivan served as director of the William Alanson White Foundation during this period.

1934-41: After serving as associate director of the Chicago Institute for Psychoanalysis for two years, Ainsworth taught at the New York Psychoanalytic Institute.

1935: In spite of his opposition to Communism, Pavlov was allowed to continue his research in a laboratory built by the Soviet Government in 1935. Pavlov is noted for his pioneer work in the physiology of the heart, nervous system, and digestive system.

1936: Ivan Pavlov died.

1936-47: Sullivan served as a professor at the Washington School of Psychiatry. Influenced by the American psychiatrist William Alanson White, Sullivan contributed greatly to the development of psychoanalytic techniques for treating psychotic patients, such as those with schizophrenia.

1938: When the Germans occupied Austria, Freud was persuaded by friends to escape with his family to England.

September 23, 1939: Freud died in London.

1932: In *The Psychoanalysis of Children*, she showed how these anxieties affected a child's developing ego, superego, and sexuality (*see* Psychoanalysis) to bring about emotional disorders. Through her methods she attempted to relieve children of disabling guilt by having them direct toward the therapist the aggressive and oedipal feelings they could not express to their parents.

1932: Spitz left Austria, settled in Paris for the next six years and taught psychoanalysis.

1933: Erikson was concerned with the growing threat of Nazism; he immigrated to the United States and became the first child psychoanalyst in Boston. In his professional career, he worked at Harvard University, then Yale, then UCLA at Berkeley; he finished his career back at

Harvard. Although Erikson described the stages of development based on Freud's sexual connotations, his stages quickly took on a social focus reflective of the ego psychologists.

Erikson's writings were highly influential on the thinking of many developmentalists. He was not accepted by some, in part because of his sensual professional development and lack of an advanced degree.

May, 1934: The girls were born in a farmhouse near Callandar, Ontario, a rural northern community. Their parents were French-Canadian, and poor, and there were already five other children in the family. Soon after the birth of the Quintuplets the government of Ontario assumed guardianship of the children. This unusual move was precipitated by an agreement between an American promoter and the Quintuplets' father to permit their exhibition at the Chicago World's Fair.

April 1935 to Feb. 1938: From the time the children were 11 months old until they were 44 months, they were also the focus of William Blatz's research program. The studies consisted of descriptions of the physical, intellectual, social, emotional, and language development of the girls over a period of almost three years, in the context of a nursery education system adapted from St. George's Nursery School in Toronto. The team aimed to determine the extent of differences in development among the Quintuplets, and the differences between the Quintuplets and other children.

1935: Spitz turned to the area of child development. He was one of the first researchers who used child observation. Not only disturbed children found his interest, but he also focused on the normal child development. He pointed out the effects of maternal and emotional deprivation. This became the field of his greatest contributions.

1937-60: From early research into the rules and development of tool-use and sign-use behavior, Vygotsky turned to symbolic processes in language. He focused on the semantic structure of words and the way in which meanings of words change from emotive to concrete before becoming more abstract. His major works include *Thought and Language* (1937), *Selected Psychological Studies* (1956), and *Development of the Higher Mental Processes* (1960).

1938: When the Germans occupied Austria, Freud was persuaded by friends to escape with his family to England. At the British Broadcasting Corporation interview, Freud recounted the early resistance to his ideas and later acceptance of his work. Freud's speech is slurred because he was suffering from cancer of the jaw. He died the following year.

1939: He immigrated to the United States.

1940: His theory is summarized in Freud's last book, *An Outline of Psychoanalysis*, published, after his death. In contrast to Wundt and James, for whom psychology was the study of



conscious experience, Freud believed that people are motivated largely by *unconscious* forces, including strong sexual and aggressive drives.

Freud likened the human mind to an iceberg. The small tip that floats on the water is the conscious part, and the vast region beneath the surface comprises the unconscious. Freud believed that although unconscious motives can be temporarily suppressed, they must find a suitable outlet in order for a person to maintain a healthy personality.

1940-43: He worked as a psychiatrist at the Mount Sinai hospital during this period.

Spitz served as a visiting professor at several universities before settling in Colorado. He based his observations and experiments on psychoanalytic findings, developed by Freud. We still find some of Freud's ideas in our present contemporary developmental thinking. Where Freud did psychoanalytic studies in adulthood, Spitz based his ideas on empirical research in infancy.

Horney founded a neo-Freudian school of psychoanalysis based on the conclusion that neuroses are the result of emotional conflicts arising from childhood experiences and later disturbances in interpersonal relationships. Horney believed that such disturbances are conditioned to a large extent by the society in which an individual lives rather than solely by the instinctual drives postulated by Freud.

1941-1973: Fromm's many publications include *Escape from Freedom* (1941), *Man for Himself* (1947), *The Forgotten Language* (1951), *The Sane Society* (1955), *The Art of Loving* (1956), *Sigmund Freud's Mission* (1956), *Beyond the Chains of Illusion* (1962), *The Heart of Man* (1964), and *The Anatomy of Human Destructiveness* (1973).

1942: German-American psychiatrist Karen Horney helped establish the American Institute for Psychoanalysis before becoming a professor at New York Medical College in 1942. She developed a neo-Freudian approach to psychoanalysis, and believed that humans have a basic need for love and security.

Martin E. P. Seligman was born, in Albany, New York) an American psychologist and author of self-help books. His theory of "learned helplessness" is widely respected among scientific psychologists. He is the director of the Positive Psychology Center at the University of Pennsylvania. According to Haggbloom's study of the most eminent psychologists of the 20th century, Seligman was the 13th most frequently cited psychologist in introductory psychology textbooks throughout the century, as well as the 31st most eminent overall.

1942-45: Horney stayed to teach for a few years before joining the Canadian Women's Army Corp in 1942 in World War II, reaching the rank of Major in 1945.

1945: Spitz did research on hospitalism in children in a foundling home. He found that the developmental imbalance caused by the unfavorable environmental conditions during the

children's first year produces a psychosomatic damage that cannot be repaired by normal measures.

October 17, 1946: Carol S. Dweck was born. She was a professor at Stanford University and a social psychologist. Dweck graduated from Barnard College in 1967 and earned a PhD from Yale University in 1972. She taught at Columbia University, Harvard University, and the University of Illinois before joining the Stanford faculty in 2004.

1948: Skinner joined the Harvard faculty in 1948 and became the foremost exponent in the U.S. of the behaviorist school of psychology, in which human behavior is explained in terms of physiological responses to external stimuli. He also originated programmed instruction, a teaching technique in which the student is presented a series of ordered, discrete bits of information, each of which he or she must understand before proceeding to the next stage in the series. A variety of teaching machines have been designed that incorporate the ideas of Skinner.

1948-1978: Among his important works are *Behavior of Organisms* (1938), *Walden Two* (1948), and *The Technology of Teaching* (1968). In *Beyond Freedom and Dignity* (1971). Skinner advocated mass conditioning as a means of social control. Later works include *Particulars of My Life* (1976) and *Reflections on Behaviorism and Society* (1978).

1949: Harry Stack Sullivan died.

1950-1960: Behaviorism and learning theory dominate in child development.

1950: Ainsworth joined Bowlby for the first time, with an accompanying interchange of ideas and influences on each other's theory. Throughout the rest of her life, she repeatedly reconnected with Bowlby in developing further theoretical ideas and sharing data. After the WWII, Ainsworth moved to Uganda, where she completed intensive studies of mother child interactions and discovered three main patterns of attachment.

1950: Studies enabled Erikson to correlate personality growth with parental and societal values. His first book, *Childhood and Society* (1950), became a classic in the field. As he continued his clinical work with young people, Erikson developed the concept of the "identity crisis," an inevitable conflict that accompanies the growth of a sense of identity in late adolescence.

1952: Spitz recorded his research on film. The film *Psychogenic Disease in Infancy* (1952) shows the effects of emotional and maternal deprivation on attachment. The film was the cause of major change, especially in childcare sections of institutes, homes and hospitals, due to the fact that people gained knowledge about the impact of deprivation on child development.

1952: Karen Horney died.

1954: Mary Ainsworth left Tavistock Clinic to do research in Africa, where she carried out her longitudinal field study of mother-infant interaction. She and her colleagues developed the

Strange Situation Procedure, which is a widely used, well researched and validated, method of assessing an infant's pattern and style of attachment to a caregiver.

1955: Piaget became director of the International Center for Epistemology at the University of Geneva and later was co director of the International Bureau of Education.

In his work Piaget identified the child's four stages of mental growth:

1. Sensor motor stage occurs from birth to age 2, the child is concerned with gaining motor control and learning about physical objects.
2. Preoperational stage occurs at ages 2 to 7, the child is preoccupied with verbal skills. At this point the child can name objects and reason intuitively.
3. Concrete operational stage occurs at ages 7 to 12, the child begins to deal with abstract concepts such as numbers and relationships.
4. Formal operational stage occurs at ages 12 to 15, the child begins to reason logically and systematically.

1955-94: Flavell obtained a PhD in psychology from Clark University. He was recognized with an Award for Distinguished Scientific Contributions from the American Psychological Society in 1984, and was elected to the United States National Academy of Sciences in 1994. He is currently an emeritus professor of developmental psychology at Stanford.

Flavell has conducted extensive research into meta-cognition and the child's theory of mind. One of his most famous contributions to the field is his work on children's developing understanding of the distinction between appearance and reality. These studies assessed young children's ability to acknowledge that a given object is really one kind of thing, yet appears to be another kind of thing, or that a given piece of material is really one color, yet appears to be another color under particular circumstances.

The appearance-reality paradigm, along with the false-belief task, is widely used as diagnostic of theory of mind development during early childhood. Flavell's other work has addressed children's developing understanding of perception, perspective-taking, and their introspective insight into their own subjective experiences.

1956: Ainsworth went to John Hopkins University and carried out an intensive investigation of mothers and children in that city. She used the classification discovered in Uganda and found that they apply to the American families, as well. Ainsworth begins studies with the strange situation.

1957: Bowlby published his first paper layout his theory. He was greatly influenced by the independent theoretical work of Ainsworth. It is now difficult to separate entirely which parts of attachment theory came from which theorist.

1959: Robert White publishes his theory of mastery motivation.

1960: Bandura publishes his first studies on imitation and aggression.

1960-1970: Piaget's theories led to other approaches to the study of child development. British psychologist John Bowlby and American psychologist Mary Ainsworth introduced the concept of attachment. They proposed that infants and young children form emotional bonds to their caregivers because, throughout human evolutionary history, close attachments to adults promoted the survival of defenseless children.

June 6, 1961: Carl Jung died in Küsnacht, Germany.

1963: Erikson publishes *Childhood and Society*, laying out his eight stages. His first full description on his eight stages was published in his most influential book, *Childhood and Society*-second edition. In Erikson's view, human development is primarily driven by a strong need for the individual to deal with certain problems that occur at different times in his or her life and require the individual to gain mastery in solving the problems or resolving the issues. Most important in this theory is the individual continually seeks to understand who he or she is and to develop a coherent identity or sense of self.

1963-66: Lorenz proposed in *Das sogenannte Böse* (1963; *On Aggression* 1966) that human fighting and warfare had genetic origins in the kind of behavior observed in lower animals when defending a territory. The theory gained popularity but evoked sharp criticism by authorities in many fields.

1966: Bruner, in his research on the development of children, he proposed three modes of representation: enactive representation (action-based), iconic representation (image-based), and symbolic representation (language-based). Rather than neatly delineated stages, the modes of representation are integrated and only loosely sequential as they "translate" into each other.

The general overlapping waves theory of cognitive development, described by Siegler in his 1996 book "Emerging Minds," has proven useful for understanding the acquisition of a variety of math skills and concepts, including arithmetic, proportionality, mathematical equality, decimal fractions, number conservation, and estimation.

1969: Bowlby publishes the first book of his trilogy on attachment theory.

1969-1980: Bowlby published a trilogy books on attachment, separation, and loss. These books have become his most important publications on this theory and research.

1970: Vygotsky's writings are first published in English.

Ainsworth devised a procedure, called A Strange Situation, to observe attachment relationships between a caregiver and child. In this procedure of the strange situation the child is observed playing for 20 minutes while caregivers and strangers enter and leave the room, recreating the flow of the familiar and unfamiliar presence in most children's lives. The situation varies in

stressfulness and the child's responses are observed. She developed the following procedures to treat inadequacies in child human development:

**Secure attachment:** A child who is securely attached to its mother will explore freely while the mother is present, will engage with strangers, will be visibly upset when the mother departs and happy to see the mother return. However, the child will not engage with a stranger if their mother is not in the room.

**Anxious-resistant insecure attachment:** A child with an anxious-resistant attachment style is anxious of exploration and of strangers, even when the mother is present. When the mother departs, the child is extremely distressed. The child will be ambivalent when she returns - seeking to remain close to the mother but resentful, and also resistant when the mother initiates attention.

**Anxious-avoidant insecure attachment:** A child with an anxious-avoidant attachment style will avoid or ignore the caregiver - showing little emotion when the caregiver departs or returns. The child may run away from his caregiver when they approach and fail to cling to them when they pick him up. The child will not explore very much regardless of who is there. Strangers will not be treated much differently from the caregiver. There is not much emotional range displayed regardless of who is in the room or if it is empty.

**Disorganized/disoriented attachment:** A fourth category was added by Ainsworth's colleague Mary Main and Ainsworth accepted the validity of this modification. A child may cry during separation but avoid the mother when she returns or may approach the mother, then freeze or fall to the floor. Some show stereotyped behavior, rocking to and fro or repeatedly hitting themselves.

**Critique of the Strange Situation Protocol:** Michael Rutter describes the procedure in the following terms in 'The Clinical Implications of Attachment Concepts' from the Journal of Child Psychology and Psychiatry. "It is by no means free of limitations (see Lamb, Thompson, Gardener, Charnov & Estes, 1984). To begin with, it is very dependent on brief separations and reunions having the same meaning for all children. This may be a major constraint when applying the procedure in cultures, such as that in Japan where infants are rarely separated from their mothers in ordinary circumstances.

**Ecological validity and universality of Strange Situation attachment classification distributions.** With respect to the ecological validity of the Strange Situation, a meta-analysis of 2,000 infant-parent dyads, including several from studies with non-Western language and/or cultural bases found the global distribution of attachment categorizations to be A (21%), B (65%), and C (14%). This global distribution was generally consistent with Ainsworth et al (1978) original attachment classification distributions.

**1970-1980:** Piaget's theory dominates child development. It dominated the research and thinking in developmental psychology throughout the world. The sixth last phase of the history of child study can be called the phase of contemporary diversity.

An American psychologist, Urie Bronfenbrenner, sought to describe child development in terms of ecological and cultural forces. In his model, environmental influences on the child extend well beyond the family and peer group and include schools and other community agencies, social institutions such as the media, political and economic conditions, and national customs.

1971: After accepting his current position with Harvard University, Kagan spent a year conducting field research in a small Indian village in Guatemala. During this time, Kagan discovered that biological factors play a huge role in development and an even larger part in child development. Specifically, Kagan discovered key developmental milestones that children reach during their first two years of life. Another finding was children are highly adaptive to their circumstances and situations regardless of how favorable or unfavorable they may be, and even through this their biology still endorses successful and stable development.

Kagan was primarily focused on children's fear and apprehension. It was during this time that Kagan discovered children as having one of two types of temperament: inhibited and uninhibited.

Inhibited temperament, also known as highly reactive, can best be described as a child being more reserved, guarded, and introverted.

Uninhibited, or low reactive, children tend to be more outgoing, extroverted, and are very comfortable in social situations. As a result of his ground breaking work on temperament, we know that these characteristics have the ability to influence later behavior depending on how they interact with the environment.

Kagan rejects "attachment theory," British psychiatrist John Bowlby's notion that the bond between caregiver and infant is crucially influential in later emotional and even intellectual growth. He has also criticized Judith Rich Harris's theory that peer groups matter more than parents in influencing the personality of children. He believes that both sides in the nature/nurture debates were too rigid, and that the development of personality is still not well understood.

1972: Carol S. Dweck graduated from Barnard College in 1967 and earned a PhD from Yale University in 1972. She taught at Columbia University, Harvard University, and the University of Illinois before joining the Stanford faculty in 2004.

1972-90: He was a consultant in mental health for the World Health Organization for this period. "Among the most significant development of psychiatry during the past quarter of a century has been the steady growth of evidence that the quality of parental care which a child receives in his earliest years is of vital importance to his future mental health."

1973: Austrian zoologist Conrad Lorenz won the 1973 Nobel Prize in physiology or medicine. One of the founders of the science of animal behavior, Lorenz theorized that many animal and human tendencies are based on latent genetic patterns and are triggered by events in the environment. He became well known for his efforts to identify what he called fixed action patterns, which he believed were genetically determined and elicited, or released, by the particular environment of an animal species.

1985-89: After many other academic positions, she eventually settled at the University of Virginia in 1975, where she remained the rest of her academic career. Ainsworth received many honors, including the Award for Distinguished Contributions to Child Development in 1985 and the Distinguished Scientific Contribution Award from the APA in 1989.

Biography of Dr. Robert S. Siegler, National Mathematics Advisory Panel

Robert Siegler is Teresa Heinz Professor of Cognitive Psychology at Carnegie Mellon University. His research focuses on children's thinking, particularly mathematical and scientific thinking.

1974: Since coming to Carnegie Mellon in 1974, he has published more than 200 articles and chapters, written 8 books, and edited 5 others. His books have been translated into numerous languages, including Japanese, Chinese, Korean, German, French, Greek, and Portuguese. Dr. Siegler's current research focuses on the development of estimation skills and how children's basic understanding of numbers influences their estimation and overall math achievement. The research examines not only how children's understanding changes with age but also why some children within a given grade are so much more proficient than others at math.

The general overlapping waves theory of cognitive development, described by Siegler in his 1996 book "Emerging Minds," has proven useful for understanding the acquisition of a variety of math skills and concepts, including arithmetic, proportionality, mathematical equality, decimal fractions, number conservation, and estimation.

September 11, 1974: René Árpád Spitz died.

1976: Ainsworth moved to the University of Virginia and stayed there until her retirement. Her later work focused on attachments beyond infancy and into adulthood. While in England, she joined the research team at Tavistock Clinic investigating the effects of maternal separation on child development. Comparison of disrupted mother-child bonds to normal mother-child relationship showed that a child's lack of a mother figure leads to "adverse development effects."

1978: Ainsworth, with some of her students, published an influential book, "Patterns of Attachment," which lays out the most important points of her theory and research.

September 17, 1980: Piaget dies in Geneva.

1980: Bandura developed his self efficacy theory.

1987: Brumer was awarded the Balzan Prize for Human Psychology "for his research embracing all of the most important problems of human psychology, in each of which he has made substantial and original contributions of theoretical as well as practical value for the development of the psychological faculties of man" (motivation of the Balzan General Prize Committee).

1989-1999: Nancy Julia Chodorow is a feminist sociologist and psychoanalyst. She has written a number of influential books, including *The Reproduction of Mothering: Psychoanalysis and the Sociology of Gender* (1978); *Feminism and Psychoanalytic Theory* (1989); *Femininities, Masculinities, Sexualities: Freud and Beyond* (1994); and *The Power of Feelings: Personal Meaning in Psychoanalysis, Gender, and Culture* (1999).

She is widely regarded as a leading psychoanalytic feminist theorist and is a member of the International Psychoanalytical Association, often speaking at its congresses. She spent many years as a professor in the departments of sociology and clinical psychology at the University of California, Berkeley. Chodorow sees gender differences as compromise formations of the Oedipal complex. She begins with Freud's assertion that the individual is born bisexual and that the child's mother is its first sexual object.

Chodorow, drawing on the work of Karen Horney and Melanie Klein, notes that the child forms its ego in reaction to the dominating figure of the mother. The male child forms this sense of independent agency easily, identifying with the agency and freedom of the father and emulating his possessive interest in the mother/wife.

1990: Bowlby dies.

1990: Vygotsky's influence on development in context and on education and becomes prevalent; Robert Siegler does research on developing cognitive strategies.

1992: Tiffany Field, PhD established the Touch Research Institutes (TRI) at the University of Miami School of Medicine, with a start-up grant from Johnson & Johnson. Before TRI, no other organization was focused only on the study of touch.

The research that put Tiffany and TRI, on the map showed that massage caused premature infants to gain more weight than their non-massaged peers—thereby improving the infants' health and potentially saving millions of dollars each year in health-care costs. That study was published in 1988.

1994: Erikson dies in Massachusetts. He never knew his father and learned only in adolescence that his parents had never married.

1998: Sigler was named to the "40 in 40" list of distinguished alumni from SUNY at Stony Brook's first 40 years. Dr. Siegler also has been invited to give keynote addresses at more than



20 conferences, including ones in England, Scotland, France, Germany, Italy, Belgium, Japan, Chile, Brazil, and Australia.

Seligman was elected President of the American Psychological Association by the widest margin in its history and served in that capacity during the 1998 term. He is the founding editor-in-chief of Prevention and Treatment Magazine (the APA electronic journal), and is on the board of advisers of Parents.

1999: Ainsworth dies.