As Anna Freud, Erikson, Margaret Mahler, and others were formulating their developmental models, other theorists were specifically elaborating on the role of social relationships and parenting behavior upon a child's developmental progression. Object relations theory and related theories of attachment are developmental models concerned with the effect of caregiving relationships upon a range of emerging cognitive and emotional capacities. Object relations models of development as put forth by D. W. Winnicott, Ronald Fairbairn, Melanie Klein, and others suggest that the self exists in relation to objects, that is, other individuals, who may be experienced as external to the self or internal to it and mediated by mental representations. Internal objects are the representations of external objects from early interactions with parents or other significant caregivers that have become internalized in psychic reality.

The first three years of life are characterized by the establishment of a close (symbiotic) relationship to the primary caretaker and the subsequent dissolution of that relationship through separation (differentiating oneself from the caretaker) and individuation (establishing one's own skills and personality traits). The object relations theorist distinguishes between the physical and the psychological birth of an individual. An individual's psychological birth occurs over the first three to five years of life and only through social relations with caregivers. The psychological development of the child is a reciprocal process of adjustment between child and caretaker: Both must learn to be responsive to the needs and feelings of the other, beginning with the parent who is initially most responsible for understanding and interpreting the infant's needs and feelings. During this time, certain capacities such as the ability to walk or to use words develop in proportion to the presence of good object relations. In other words, the quality of these relations affects the quality of an individual's development across a number of domains, including motor, cognitive, and linguistic capacities. Winnicott suggests that for the infant to individuate in a "good enough" way, the parent must be emotionally available to the child in a consistent, reasonably conflict-free relationship. The parent must also have the ability to enjoy the sensual and emotional closeness of the relationship without losing a sense of separateness and without developing a narcissistic overinvestment in the child as a mere extension of him- or herself.

According to object relations theory, the process of separation begins around six months and continues through the second year of life. During this time, the child experiences both pleasure and frustration as motor and cognitive skills develop along with the corresponding awareness of one's limitations. Through exploration, the child experiences his or her separateness and returns to the parent for emotional refueling and reassurance of safety. The presence of an enduring, safe relationship with the parent provides the child with the sense of security contingent for progressively longer separations, exploration, and greater cognitive and emotional development. As object relations theorists postulate, the child's first significant relationship—most often with a parent or caregiver—will be internalized into a mental representation that persists into adulthood and continues to influence psychic reality.

In conclusion, psychoanalytic developmental theory began as a strictly stage-based theory implicitly assuming that the trajectory of maturation progressed upon constitutional givens while being shaped by environmental experiences. Subsequent theory elaborated on these implicit assumptions of development in multiple directions as direct observation of children contributed considerable data about changes in a child's social, cognitive, motor, and linguistic abilities over time. Later, and current, models introduced the notion that developmental capacities and mental structures emerge in the context of caregiving relationships: Not only does environment shape developmental trajectories, but also more specifically, capacities are contingent upon parental care and relationships in order to develop. Finally, current psychoanalytic developmentalists have made a significant contribution to the understanding of maturation by describing how individuals can shift in and out of normative or maladaptive modes of development throughout the course of a lifetime depending on both internal and external stressors. Linda C. Mayes and Prakash K. Thomas

SEE ALSO: Erikson, Erik H(omburger); Freud, Anna; Freud, Sigmund; Klein, Melanie (Reizes); Oedipus Conflict; Personality; Psychoanalytic Perspectives

SOCIAL CONTEXTUAL THEORIES. Social contextual theories, despite the name, are not theories that hold that either the social world or context is the determining factor in how children develop. Instead, these theories take a dialectical position on development, a position that cannot be reduced to either aspects of the individual or aspects of the context, but focuses on the synergistic effects of both.

Stephen Pepper, a philosopher of science, first wrote about different worldviews, otherwise known as paradigms or basic belief systems about the world, in World Hypotheses: A Study in Evidence (1942), and his ideas have been used by many authors to show that all theories of psychology or child development fit within one of three different paradigms: mechanism, organicism, and contextualism. The latter two paradigms both involve a view of human development that stresses the interrelated role of individual characteristics and the broader social context. Contextualist theories differ from organicist theories, however, in that the former do not define some ideal end point to development and hold that what counts as appropriate development is likely to vary according to both historical time and context. In other words, what people in a single culture believe is ap-
appropriate development will vary over the course of history, and people living in different cultures are likely to have different ideas about how they want their children to develop. Although there are a number of scholars of human development, particularly those who work in the area of cultural psychology, whose research qualifies as social contextual, in that they describe the interrelated influences of individuals and the broader context within which they are developing, there are two major theories that fit best under the heading social contextual: L. S. Vygotsky’s cultural-historical theory and Urie Bronfenbrenner’s bioecological theory.

**Vygotsky’s Cultural-Historical Theory**

Vygotsky is probably best known in the United States for his concept of the zone of proximal development (the difference between a child’s independent developmental level and the level she can achieve with social support), a concept useful for describing the way in which children learn skills and concepts by engaging in them with someone more competent. The broader context is represented in part by the person with whom the child is interacting; however, competence can only be defined with reference to the cultural group at some particular historical period. The types of skills children need to learn will clearly be different in a hunter-gatherer group, a rapidly industrializing society, a society at war, and so on.

However, as a contextualist theorist, Vygotsky did not focus solely on context but also described the ways in which individuals are partially responsible for shaping their context. Interactions within the zone of proximal development do not involve the more competent individual deciding on the appropriate level of help or instruction and providing it, although the concept has sometimes been represented this way. Rather, Vygotsky argued that zones of proximal development were created in the course of collaboration between the individual and someone more competent. In the course of this collaboration both individuals have the chance to change, and the resulting changes cannot be simply attributed to the more competent person.

Vygotsky went further, however, arguing that even what appears to be the identical context will be experienced in quite different ways by the same individual at different ages and that every context is changed by the ways in which it is experienced by the individual. In other words, Vygotsky’s theory exemplifies the dialectical nature of a contextualist theory.

**Bronfenbrenner’s Bioecological Theory**

Like Vygotsky, Bronfenbrenner described the interrelated influence of individuals, activities, and interactions and the broader contexts (both spatial and temporal) in which individuals are situated. At the center of Bronfenbrenner’s theory are what he termed proximal processes, which serve as the “engines” of development. Proximal processes are the typically occurring everyday activities and interactions in which individuals engage. Children’s play; looking at books; typical interactions with their parents, siblings, friends, and teachers; their involvement in caring for younger siblings or other forms of work; their bedtime routines and rituals; and anything else that they are involved in on a regular basis all count as examples of proximal processes. Proximal processes drive development, in Bronfenbrenner’s theory, because what people typically do, how they typically do the things that they do, in the company of and/or with the support of other people with whom they generally spend significant amounts of time will heavily influence, among other things, what they come to think of as important to do, what they become skilled at, and how they think that individuals should relate to one another.

The activities and interactions that are the essence of proximal processes may be the engines of development, but it is impossible to know what sorts of activities and interactions typically occur without knowing about two key elements: the characteristics of the individuals involved in the activities and interactions and the context (both spatial and temporal) in which those activities and interactions occur.

Bronfenbrenner described three categories of individual characteristics, labeled demand, resource, and force characteristics. Demand characteristics are those aspects that are immediately visible to others: Age, physical appearance, and sex are among the most visible and, if not visible, the source of questions. Resource characteristics encompass those abilities, knowledge, and experiences that individuals bring to any activities and interactions in which they are involved. Force characteristics involve such things as persistence level, self-esteem, and beliefs about what one can and cannot accomplish. Despite being termed individual characteristics, each of these types of characteristics develops as the result of the complex interplay of biology and the social world and so should be thought of as constructed characteristics.

Individuals who have developed different demand, force, and resource characteristics will clearly experience the same environment, engage in activities, and interact with others in quite different ways. Proximal processes, in other words, are profoundly influenced by the developing individual’s personal characteristics. Simultaneously, of course, they are also highly influenced by the personal characteristics (demand, resource, and force) of the other individuals who are commonly in that environment. Proximal processes are thus necessarily influenced by the context.

This context—the microsystem, or any context in which the developing individual spends a good deal of time—is just one of several different layers of context, according to Bronfenbrenner. Microsystems for children include the home, child care, school, and the peer group. Proximal processes, or the typical ways in which activities and inter-
actions occur, vary in different microsystems; the ways in which children act and interact at home differ from the ways they act and interact at school. And what typically happens in one microsystem influences what happens in another, as when children's good or bad behavior at school influences the way their caregivers deal with them at home. Bronfenbrenner referred to these mutually determining influences across different microsystems as mesosystem influences.

The final two layers of what is referred to as spatial context in Bronfenbrenner's theory consist of the exosystem and macrosystem. Unlike the microsystem and mesosystem, in which developing individuals engage directly in the activities and interactions that make up proximal processes, exosystem and macrosystem influences are experienced indirectly. Exosystem influences are those that stem from a microsystem in which the developing individual of interest is not situated and are experienced indirectly because of their effects on one or more people with whom that individual interacts. For example, a parent comes under great stress at work, but they do so because of their mother's changed behavior at home. The children do not experience directly the problems at work, but they do so because of their mother's changed behavior at home.

The macrosystem consists of a group of people who share values, beliefs, practices, institutions, access to resources, and a sense of shared identity. A macrosystem can thus be an entire society, when thinking about American values, beliefs, practices, institutions, and identity in comparison to Japanese values, beliefs, and so forth. It can also constitute a within-society group, when contrasting different ethnic/racial groups or social-class groups within the United States, for example. As is the case with exosystem effects, macrosystem effects are always experienced within the microsystems in which the developing individuals of interest are situated. American children learn to become Americans, rather than Japanese, to the extent that their parents share American (rather than Japanese) values and beliefs and put those values and beliefs into practice in the course of their everyday activities and interactions with their children. The same is true of groups within any society that can be differentiated in terms of their values, beliefs, practices, identities, and so forth. As always, proximal processes are key to the ways in which children develop to become members of their group because these everyday practices are the means by which children are influenced by all levels of context, whether directly or indirectly. At the same time, of course, children influence those contexts because of what they bring to these activities and interactions.

The final aspect of Bronfenbrenner's theory is time. Just as two societies or two subcultures within any society can be distinguished in terms of their values, beliefs, practices, access to resources, and institutions, so too can the same society at two different historical periods. Values, beliefs, practices, institutions, and access to resources clearly change over time, in part because the younger generation never simply imitates or accepts what the older generation does or wants it to do and in part because each new generation faces new challenges. Bronfenbrenner also argues that development can only be studied by following research participants over two or more points of time.
DEVELOPMENTAL DELAYS. The development of a child from infancy to adulthood unfolds in a fascinating sequence, remarkably ordered from one child to another. Early in the 20th century, Arnold Gesell began studying children’s development from infancy. He defined the order sequence of skill acquisition and categorized these skills into areas of gross motor and fine motor skills, adaptive skills (visual-motor problem solving), language skills, and social/daily living skills. The Gesell Developmental Schedules, first published in 1940, gave parents and professionals a measure by which they could determine a child’s developmental level across these skill areas and better define aberrant or delayed development. If a child’s abilities fell at an age younger than his chronological age, he was considered to have developmental delay.

The degree of delay is often designated as a developmental quotient, the ratio of the age equivalent of the child’s abilities (mental age) over the child’s chronological age times 100. Early intervention programs often use such quotients to determine service eligibility, generally using a 25% or 33% delay as a cutoff—that is, a developmental quotient of 75 or 66. The developmental quotient should not be confused with the intelligence quotient, or IQ. An IQ is the standard score that an individual achieves on a standardized test, normed to a particular age group. Thus the age equivalent indicates at what level of functioning the child is currently, and an IQ would tell you where that child ranks compared to same-age peers. By definition, the average IQ score is 100, and 1 standard deviation below and above the mean 85 and 115, respectively, and 2 standard deviations below and above the mean 70 and 130, respectively. Thus, a child with an IQ of 85 is functioning at the 15th percentile relative to other children her age. Developmental delay is a term reserved for children younger than school age. Developmental delays are often the first indicator of intellectual disability (low IQ) or learning disabilities.

Concerns about development can arise at any stage, but more severe deficits typically present within the first two years of life. When a child’s behavior or development deviates from normal, further evaluation should be undertaken to determine which areas are delayed and the degree of delay as well as the quality of skills exhibited. Neurological and genetic evaluation should be considered to investigate etiology of delay.

Children may have global developmental delay—that is, delays in all areas—or have focal delays—that is, delays isolated to one or two areas. At any single visit, the examiner is getting a snapshot of what the child can do. Children’s performance can vary widely day to day, so one must use caution in making definitive judgments based on a single assessment. One needs a series of evaluations to get a better picture of development across time. When these serial assessments show persistent delays, then they represent neurodevelopmental deficit or disorder. The degree of delay must also be considered, as delays occur along a continuum from mild to severe. Cutoffs defining distinct levels of abnormality are arbitrary. Generally, the lower the developmental quotient—that is, the bigger the delay—the more likely that a delay will persist across time. Children with global delays of 50% or more are at high risk for future intellectual disability (formerly known as mental retardation). Formal diagnosis of intellectual disability is made either when it is clear that the child has severe global developmental delay across time or when standardized testing at age 8 shows an IQ below 70 (at the second percentile for age) associated with significant functional impairment.

Focal developmental delays, limited to one or two areas, are common. In the general population of children, the incidence of isolated language deficit is 5% to 10%; nonverbal cognitive deficits, 0.5% to 1%; and social deficits (autism spectrum), 0.6%. The degree of dysfunction caused by focal impairment depends on the severity of the delay and the demands placed on the child. For example, a subtle language delay may not cause significant problems until a child enters school, when the demands for complex language surpass the child’s language abilities. Focal impairment can be an early sign of later learning disabilities. The degree of disability caused by focal delays or impairments in development depends on how pivotal those delayed areas are to everyday demands. For example, children with autism spectrum disorders who otherwise have normal intelligence can experience significant morbidity from their deficits in social and communication skills.

Developmental delay can be caused by genetic abnor-