

# Human Development: Counseling the Ever-Changing Person in Context

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In reflecting on one's own life, readers may recognize many examples of physical, psychological, social, and cognitive development that are shared by nearly all. The facts of birth and death and constant change are central to the processes of human development. Without constant change, how could one develop? To develop, something must leave a current form and transition to a new one, even if the change is imperceptibly small. Ask yourself, how different from my present form was I at the time of my first explicit memory? Explicit memories are long-term recallable images and words from earlier periods in life. How have your physical body, mental capabilities, or identity changed since that time?

Both context and time are important to developmental change. If one examined deeply to find a way in which a person has developed without dependence on anything else, there would be no evidence. From a simplistic view we are reliant on air, water, and the many influencing physical systems of life. But if we are not isolated, meaning we are not in some type of developmental vacuum, then an individual is who he is because of the context he is embedded in. Because the world is different as a totality at each moment, each of us is also unique at each given time because of this embedded quality. For example, what changes do you notice in yourself and your context from 1 hour ago, 1 day ago, 1 month ago, 1 year ago? The greater gap between two comparative times makes it easier to recognize the differences accumulated by change, the differences that have cascaded from one time of life to another.

Each time period of a person's life is unique, and, at the same time, one can notice commonalities shared with other time periods. As this chapter will also explore, some changes are unique and personal, whereas others are shared as a

result of sociocultural, historical, hereditary, and environmental influences. There are also certain qualities or characteristics about development itself as a change process. This chapter will explore how development is continuous, discontinuous, multidimensional, multidirectional, and plastic. In addition to examining growth, maturation, and learning as critical developmental processes, this chapter will examine key points for how counselors can approach human development across the lifespan.

## ORIENTATION TOWARD THE STUDY OF HUMAN DEVELOPMENT FOR COUNSELORS

As a convenient definition, human development is the physical, cognitive, emotional, and social changes that occur in a person's life. Readers should note three important ways that human development occurs. First, what aspects of development are universal in nature? Another way to word this question is what aspects of human development can be generalized across humanity with some level of accuracy and consistency? Counselors must understand universal aspects of development. Because of the high similarity of genetic makeup between humans and other species, some of those universal aspects can be understood as part of the web of life.

Second, at a more differentiated level than the universal level, counselors must examine what elements vary by culture, race, and ethnicity. Do people in Papua New Guinea vary from one another because of difference in ethnicity (i.e., there are many variations in culture in Papua New Guinea)? How might they vary from those in Chile across the Pacific Ocean? Because humans are highly social and place a lot of awareness and attention on social cues and conditions, the assumption might be that there is a great difference between cultures. However this may seem, modern research efforts, such as the Human Genome Project from 1990 to 2003, have suggested that cultural differences, though important in making us unique, represent fractional differences between groups (Chial, 2008). "Chimpanzees and humans share 99.0% of the same genes, and humans share 99.9% of the same genes with each other" (Berninger, 2015, p. 173).

Genetic variation demonstrates fractional differences between different world ethnic groups. "Modern humans (*Homo sapiens*) are a recently appearing and homogenous species regardless of ancestral geographic origins. Admixture, even among and between highly isolated populations, has resulted in widespread, worldwide distribution of genes and thus human variation" (American Anthropological Society, 1997, p. 1). There are just as great, if not greater, differences within as between groups; for example, there is greater genetic variation found within all women than between men and women. Furthermore, "the proportion of human genetic variation due to differences between populations is modest, and individuals from different populations can be genetically more similar than individuals from the same population" (Witherspoon et al., 2007, p. 352).

Third, counselors must understand development that is unique and personal to the individual. As this chapter will examine, development of the individual is marked by nonnormative influences. The way that each person traverses through life creates a unique footprint. The following box better illustrates the connection between what is person specific, what is cultural, and what is universal.

### **BOX 1.1 THE HAND AS AN ILLUSTRATION OF DEVELOPMENT**

The hand provides an illustration of the different levels of development. The hand is universal. Universal does not mean that all people have hands, however; it is our genetic inheritance. Looking at various hands, one can see different sizes as a result of genetic variation and stages of growth (e.g., the size of an infant's hands compared with an adult's) and different skin pigmentations reflecting diversity of genetics. Some hands will reveal sociocultural variation because of wedding bands, decorative nails, or jewelry, suggesting some type of status. The hand has nonnormative features, such as scars, which signify the wear and tear from hard work. Fingers and fingertips are universally part of the hand, but each fingerprint is unique to the person. Finally, you get to determine what to do with those hands.

At its most basic level, the study of human development across the lifespan must first help the practitioner more accurately describe human development. In addition to being able to take inventory and name phenomena through description, it is important for a counselor to consider the context of human development. Part of being able to explain human development, or why X phenomena happen, is to explain human development from a systemic perspective. Counselors need to be able to move beyond Cartesian or linear understandings of development to systemic understanding of human development. As the field gains greater understanding of human development in general, and as the counselor works with a client and gains an understanding of the client as embedded in a context, the clinician can help modify development trajectories and improve subjective and objective outcomes through various modalities of learning. Counselors can also help clients adapt and transition through the ever-changing landscape of life. For example, a client at any age will process grief and loss due to the death of a close person, but the counselor will understand how development has impacted cognitive and behavioral understandings and responses to grief and loss. Finally, as a profession, our study of human development includes research to help better predict human development.

## CONCEPTUALIZING HUMAN DEVELOPMENT

This chapter covers some of the fundamental concepts about human development and describes key themes about the nature of human development. Many of the concepts for deliberation show up in how clients come to examine their own problems and life experiences. Some of the concepts will promote the integration of theoretical concepts discussed later in the text.

### Continuity Versus Discontinuity

The continuity or discontinuity of development has been a longstanding field debate. Continuity refers to successive lifespan development, where development in childhood and adolescence are formative and relate to outcomes in later life (Schulenberg & Zarrett, 2006, p. 150). Consider how the forming of bones, healthy parental attachment, or progression from gross to fine motor skills early in life emerge in a relatively predictable trajectory toward long-term skeletal strength, a host of biopsychosocial benefits from stable attachments, and better coordination in adulthood. Theorists who focus on continuity in child development point to research focused on the impact of early environmental enrichment with later life outcomes.

Discontinuity refers to significant shifts in development. Early developmental scientists suggested that development was discontinuous because sudden shifts in development would vault an individual out of a period of relative stability, such as at puberty. From this perspective, some shifts might come in noticeable stages that one may or may not mature through—for example, the stages related to the developmental theories of such theorists as Erikson, Piaget, and Kohlberg (covered in chapters 2 and 3 and infused throughout this book).

That continuity versus discontinuity is placed in dynamic tension using the word *versus* may be misleading since these two do not need to be exclusive. Others have used continuity *and* discontinuity, rather than *versus*, to suggest that the two seemingly antithetical qualities can be observed and even play off each other. The subtle changes and the sudden changes are complementary.

#### Multidirectional

Discontinuity also is noticed when early developmental trends are reversed or disrupted or do not follow the previously causal developmental course. The ability for development to increase and decrease at different stages points to the multidirectional quality of development. For example, a major transformation of a person's life at a key life stage might redirect preceding course of development. When considering the lifespan, what comes to mind as evidence for discontinuous development?

#### Critical Periods

With an examination of early childhood development in such areas as language acquisition, attachment, and brain development, researchers examined *critical*

*periods*, of which there are various definitions. “One definition is the period in which a subject is particularly susceptible to damage (i.e., ‘period of susceptibility’). Another definition of critical period is the restricted period in which recovery or a flexible response occurs (i.e., a ‘period of plasticity’ or ‘sensitive period’)” (Uylings, 2006, p. 69). Harsh environments, for example, might deny important touch and warmth necessary for long-term social attachment. In addition, critical periods provide an opportunity to maximize development. For example, a pregnant woman would want to refrain from harmful influences such as drugs, alcohol, and tobacco and would want to enhance prenatal care by exercising, getting enough sleep, having regular medical visits, and taking prenatal supplements.

Counselors also consider interventions that are developmentally possible and appropriate for clients. For example, an adept counselor would not try to discuss psychological concepts with a 5-year-old because they require abstract thinking skills that will not be available until a later stage due to brain development. A counselor working with the late adult population would understand and normalize that, in general, older adult goal setting is geared toward loss prevention, unlike with younger adults, who are oriented toward growth (Ebner, Freund, & Baltes, 2006). Interestingly enough, Ebner and colleagues found that “orientation toward prevention of loss correlated negatively with well-being in younger adults” (p. 666). Interventions should be culturally appropriate to the stage.

## Nature Versus Nurture

Another dynamic theme in developmental science is nature versus nurture, also expressed as genetics versus environment. It can be challenging to determine what is genetic and what is environmental since children receive 50% of their genes from parents but also are *embedded* in the environment strongly mediated by the family. The word *embedded* is often used because it more adequately describes the interdependence of a person with the environment. This is similar to Heidegger’s (1962) descriptions of people as being in the world, a mutuality where the individual being is continually making, changing, and influencing the world and conversely the environment is making, changing, and influencing the individual. The environmental–genetic interaction is hard to pull apart because the two things are not separate. For example, in addictions treatment, primary and secondary are tightly connected. As another example, connection between parent behavior and child behavior (i.e., anxious parent and anxious child) may just as readily reflect a “genetic transmission as well as or instead of an environmental affect” (McAdams et al., 2014, p. 1139).

Counselors should cautiously examine assumptions when making causal attributions for a client issue on either the nature or nurture side. Are Martha’s eating disorder and her academic giftedness due to heredity or the environment? How much is Harry’s heart attack due to “bad” genes or “bad” health behaviors? Counselors examine the evidence-based material and realize that problems have

biopsychosocial origins and solutions. Whole sections on fitness, psychology, and nutrition attest to the consumer's intrinsic motivation to develop in some way. Consider that many people never learn to read, swim, play the piano, sing in tune, cook, and accurately draw without books or instruction on reading, swimming, music, voice, cooking, and drawing. Our heredity comes with capacities for wonderful skills, but they must be nurtured by the environment.

## Multidimensional and Systemic

Human development is multidimensional and systemically oriented. Depending on how one conceptualizes the nature of humanity, there are many dimensions to human development. A teacher once suggested that there are many ways to slice a tomato, equating this to the idea that there are innumerable ways to examine a person's life or the nature of reality (Carlson, personal communication). For example, this book is organized around four dimensions: physical, emotional, social, and emotional. One could also examine the biopsychosocial label, which suggests that human development is a combination of biological, psychological, and social elements. Within specific dimensions, there are yet other developmental dimensions. These dimensions appear different at distinct periods of life from infancy to late adulthood.

For counselors, it is most helpful to view the developing self and lived experience from a systemic perspective. Development is influenced by circular causality. Beyond linear cause and effect notions, circular causality suggests that development happens in a contextual and cyclical manner. Most often, counselors consider that A (e.g., pregnant teen abuses alcohol) causes B (e.g., fetal alcohol syndrome), or that A can cause B, which will keep having repetitive effects over time, or that A causes B, which causes then causes C (e.g., child is socially bullied for strange facial features and outbursts of anger), which then causes D (e.g., poor self-esteem when she grows up as a pregnant teen) in a chain of cause and effect. Additionally, clients grasp that A causes more of B and then B causes more of A (the child with fetal alcohol syndrome might continue the pattern of alcohol abuse in adolescence). A *positive feedback loop* is where the pattern promotes the pattern at greater intensity levels. *Negative feedback* is the process by which the system does not circularly reinforce some particular phenomenon.

Adept counselors go beyond linear models of causality and see the reciprocal and multidimensional interactions of development. Counselors can inadvertently overfocus on certain dimensions to the detriment of the systemic view. This can happen with a patterned approach or narrow lens toward the issue. To further explain this point, the examination of the definition of mindlessness is useful. Mindlessness is an attention to a subset of contextual cues that “trigger various scripts, labels and expectations, which in turn focus attention on certain information while diverting attention away from other information” (Nass & Moon, 2000, p. 83). Such overfocus does not mean lack of awareness; it means the focus is limited.

Not only is development multidimensional, but also these dimensions are interrelated. Like a ball of knotted yarn, how can one pull a string from one side without untying another part? One aspect of development influences other aspects of development, so in classic coming-of-age stories one sees the physical transitions of the person arising with or causing emotional, cognitive, and social blossoming; noted by self-consciousness and interpersonal insecurity the desire to move toward independence from family, and beginnings of existential contemplations and angst.

Development is systemically interrelated across dimensions and is also related to other processes of development. An individual's development over time is interrelated to the development of families, groups, or species (Badcock, 2012). Development also relates to previous development, suggesting that the interrelationship spans time. Development in one area might speed or slow the development in other areas, suggesting that timing and severity are connected in development. Where do you notice or not notice this?

The process of mutual selection reinforces the person and environment interdependence. The process of selection is subject to reinforcing feedback loops; Schulenberg and Zarrett (2006) suggested that “through a process of niche selection, individuals select available environments and activities on the basis of personal characteristics, beliefs, interests, and competencies; selected ecological niches then provide further opportunity for socialization and further selection” (p. 140).

## Plasticity

Plasticity is the ability of an organism, in this case the developing human or some part of an organism (e.g., brain), to change in response to positive and negative environmental experiences. Environments influence the biopsychosocial dimensions of self, and people influence their environment. Plasticity occurs across multiple dimensions of development and throughout the lifespan (e.g., personality; Mroczek, 2014). As an example, neural plasticity is the “ability of the central nervous system to change in response to experience” (Vida, Vingilis-Jaremko, Butler, Gibson, & Monteiro, 2012, p. 357). Despite older notions of a peak to decline brain development scenario, researchers began to discover that the physical regions of the brain exhibited lifelong plasticity (e.g., brain synaptic organization; Kolb & Teskey, 2012). Counselors can help clients learn to take advantage of the person–environment relationship. Neuroscientific research has shown structural brain changes as a result of behavior modification; for example, Kang and colleagues (2013) found that “meditators, compared with controls, showed significantly greater cortical thickness in the anterior regions of the brain, located in frontal and temporal areas, including the medial prefrontal cortex, superior frontal cortex, temporal pole and the middle and interior temporal cortices” (p. 27). Plasticity is also demonstrated through the process of compensation.



## BOX 1.2 COMPENSATION

Early notions of development held that development was a straight trajectory to a peak point, at which a developmental skill or quality was at its optimal state and thereafter would decline over time. Though compensation has been viewed and studied by various scientific disciplines, generally it is the ability to use a resource to diminish the impact of a decline in an area of performance. For example, one error in seeing this as a linear peak to valley experience is that it misses the dynamic quality of humans. Compensation may help a person who has functional impairment by employing new and novel strategies or perhaps by employing assistance from additional brain regions to perform tasks lost as a result of damage (Vida et al., 2012).

## PROCESSES OF HUMAN DEVELOPMENT

When examining the biopsychosocial development of a person over a lifespan, a counselor will note the variation of influences that have affected development. The key processes related to development are growth, maturation, and learning. In some ways, the aspects of human development that are most shapeable are key to the counselor's job because clients come to counseling in efforts to change their lives. Counselors must have expertise, defined as complex, domain-specific skills. Expertise, or complex and rich knowledge in an area or domain, allows one to add to and adapt the knowledge and skills of that area of expertise more rapidly (O'Byrne, Clark, & Malakuti, 1997; Skolvholt, Rønnestad, & Jennings, 1997).

Experts are able to more easily add new information and make sense of how it fits into the larger picture of that domain of knowledge. Consider that, compared with an intern, an experienced heart surgeon better understands how a new tool on the table might be used. Another key characteristic of being an expert is that experts are more easily able to sort and understand the value of information within their areas of expertise, for example, rapidly determining and acting confidently on intake data in a crisis situation. In addition, expertise allows professionals to sort between relevant and irrelevant materials and stimuli (O'Byrne et al., 1997; Skolvholt et al., 1997). Consider how developing assessment skills can be likened to developing the skill base of being a professional taster. Professional tasters, whether with mustard, wine, cheese, soda, or potato chips, are able to distinguish variations in quality and characteristics because they (a) have increased domain-specific knowledge (variations in mustard), (b) have heightened awareness on the domain (i.e., mindfulness of color, taste, texture, smell), and (c) use a mechanism to categorize and quantify data. Time and time again, people fail taste tests with beverages they drink on a daily basis, often because they have never spent time developing expertise. This may be similar to how some of your clients experience their interpersonal and intrapersonal mental health.



One area where counselors-in-training often need help is during intake. Without expertise in the field, they often probe for less relevant material, which has an impact on the counseling and the client. On the flip side, beginners can find a fresh, out-of-the-box idea because they may be less biased toward certain solution possibilities. For example, sometimes seasoned workers in social settings may overly adhere to protocols because they have learned from difficult experience and mistakes not to break such protocols; however, there are often clients who would grow more and have better outcomes if protocols were not adhered to. To help the counselor sort between the most relevant materials, the counselor will want to know how key processes of development are at play in the context of a client's life. Three processes discussed in this chapter are growth, maturation, and learning.

## Growth

Growth is the process of physical development, often specifically related to the quantifiable measurement of growing larger. For example, Baby Zander is born at Humanity Hospital and comes in for regular pediatric checkups where height and weight are measured. The medical team often communicates the results in relation to age-related norms and discusses any implications with the family. At the 1-month checkup, Dr. Wayum assures the family that Zander is within developmental range for height and weight and is growing appropriately: he has grown 1.5 inches since birth and is now 21 inches long, he has gained about 1 ounce per day in weight, and he has added 1 inch in head size.

Counselors and other health professionals examine growth because research has correlated cognitive and learning deficits and other important life variables with stunted stature. For example, deficits in growth may signal an examination of malnutrition or the presence of disease or disorder. For example, McCoy, Zuilkowski, and Fink (2015) studied 2,711 Zambian 6-year-olds and found that height for age, which they used as a proxy for overall health and nutritional status, was predictive of children's cognitive skills. Across the globe, some of the key elements that affect growth in the early years are malnutrition, poverty, sickness, and parenting practices that do not respond to a child's needs for development. School counselors and teachers often know that when children are sick, hungry, or dealing with family problems they just don't have the energy and attention to focus on learning. Whether one is examining growth, maturation, or learning, counselors examine how they those areas of development impact and are impacted by well-being and health.

## Maturation

*Maturation* is at times used synonymously with *growth*; however, from a human development studies perspective, maturation is different from growth because it refers to physical, intellectual, and psychological development. Counselors are concerned with maturation, which may occur across dimensions and mutually influencing phenomena. For example, when Kiasha comes of age, her physical,

cognitive, social, and emotional self goes through a maturation process. This is noted by physical changes like breast development and menstruation; by the ability to think in abstract ways; by concern about world affairs, social justice, and women in politics; and by increased attention to peer input and romantic “love” while pushing for independence from parents.

## Learning

Much time is spent discussing the importance of and process of learning in human development. To realize developmental capacity, people need opportunities for learning. This has been the major call to action of the equality and justice movement. Given the same relative capacities, the development of two people will vary based on what resources a person is provided. Generally speaking, people must be exposed to and taught to read to harness the capacity for written language. Other skills may be present in a person’s life, but without learning, level of proficiency and mastery are limited. Consider what it takes to move a person from basic knowledge and skills in cooking, music, woodworking, caregiving, or computer use to becoming a master chef, great composer, high-end furniture maker, psychiatric nurse, or a securities software programmer.

### BOX 1.3 SOME KEY TYPES OF LEARNING THAT INFLUENCE DEVELOPMENT

*Behavioral learning:* People develop through behavioral conditioning that relates to environmental incentives and consequences.

*Social learning:* Development occurs through interactions with others. One can learn from peers, those that are slightly more developed in an area, or someone with a novel approach.

*Cognitive learning:* Through cognitive processing and inherent biological mechanisms for complex cognitive skills, people can grow through cognitive learning.

*Mirror-neuron copy process learning:* Through a perception–action coupling mechanism, mirror neurons help people see a skill and copy it (see Turati et al., 2013).

*Scaffold learning:* Learning is built on previous learning and development.

## Scaffolded Learning

Because learning enhances development, scaffolded learning is important. Just as one might climb a scaffold, a type of ladder, a person creates new learning

by building off previous learning. Counselors and educators alike are alert to the developmental importance of scaffolded learning (Belland, Kim, & Hannafin, 2013). For example, emotion-focused therapy (EFT) and emotional intelligence rest on the notion that individuals can develop into more sophisticated emotional beings. An emotion-focused therapist might scaffold learning over the course of therapy to help clients learn how to bring awareness to emotions in session; then identify emotions; experience emotions that have been avoided; understand about emotional schemes; examine the idiosyncratic nature of emotional response; understand primary adaptive, secondary reactive, and instrumental emotions; then work with dysfunctional themes; and so on (Goldman & Greenberg, 2015). As another pertinent example, researchers have found that to work with depressive thoughts within cognitive therapy, one can increase the skills of metacognition through watching thoughts (Kerr, Sachhet, Lazar, Moore, & Jones, 2013). A person can cognitively work with depression much better by first leaning the skill of mindfulness to increase awareness of depressive thoughts (i.e., metacognition around depressive thoughts). If you are a counselor-in-training, consider how your learning toward working with clients will be scaffolded.

### **BOX 1.4 SCAFFOLDED LEARNING EXERCISES FOR COUNSELORS-IN-TRAINING**

#### **How will the previous learning step help with the subsequent steps?**

1. Read about it.
2. Examine cases.
3. Formulate ideas and write responses to written cases.
4. Watch video recordings of practicing counselors and therapists.
5. Understand the behaviors and processes of therapy.
6. Apply learning by role playing.
7. Work with clients in practicum and internship under supervision.
8. Record and transcribe sessions for review in individual supervision.
9. Process cases together under group supervision.
10. Counsel clients and learn from mistakes, ruptures, and successes in session.
11. Teach and supervise others in counseling.

## **INFLUENCES ON DEVELOPMENT**

The many qualities that mark the nature of change over a lifespan provide a window into how development is influenced and how, as a professional, a counselor can influence the maturation and learning of a person. In the middle

of a counselor's work, there is a paradox: the client and counselor have to accept circumstances while also cultivating change; the person has to accept himself or herself while changing to be successful. This brings up another contrasting theme in the study of human development: passivity versus activity of the person. This tug-of-war has been captured throughout literature, for example, in Virgil's *Aeneid*, where fate versus will or the will of the gods were juxtaposed (Virgil, 2003). Client narratives may resemble the stories of protagonists in age-old stories because the human themes reflect key existential struggles. From a scientific standpoint, developmental influences are often viewed as falling into the following categories: hereditary, normative history graded, normative age graded, normative sociocultural graded, nonnormative, and environmental-contextual.

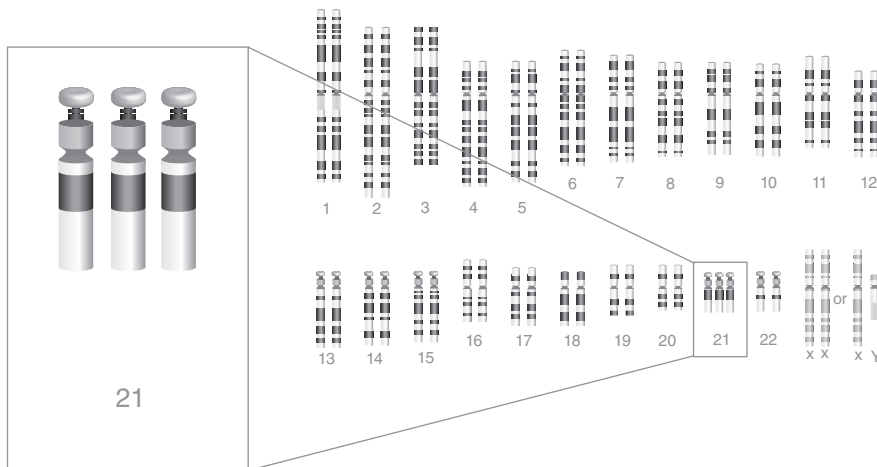
### BOX 1.5 VARIOUS INFLUENCES IN VICKI'S LIFE

Age Graded	History Graded	Sociocultural	Nonnormative
Late adulthood			
Middle adulthood 2000–current	2008 recession	Children boomerang	Develops cancer Earns bachelor's degree
Menopause			
Young adulthood 1979–1999	Gulf War	Marriage/divorce	Enters counseling 1995
Career launch			
Adolescence 1972–1978	Vietnam War ends	Graduates high school with cohort	Posttraumatic stress disorder from sexual assault
Puberty			
Middle childhood 1966–1971	Hippie movement	Enrolls in public school	Mother leaves father and church
Early childhood 1962–1965	Equal rights movement Kennedy assassination	Irish Catholic Boston	Grandparents live in the house, provide nurturing additional child care
Birth and infancy 1959–1961		Low socioeconomic status	Born with cleft palate
<b>Victoria "Vicky" Long, born 1959</b>			

## Heredity

Human development is influenced by heredity. Species *heredity* is the genetic inheritance that we have in common as a human species. Humans are uniquely upright in posture, hairless creatures that blush and have remarkable brains that allowing for advanced cognitive skills. “We speak language, routinely cooperate with others to reach complex shared goals, engage in abstract reasoning and scientific inquiry, and learn a rich set of sophisticated cultural behaviors from others” (Rosati, Wobber, Hughes, & Santos, 2014, p. 449). Species heredity influences which traits are universal to all humans as compared with other species. Just as there is plasticity in the individual, the species can influence and be influenced by the environment. Will the changes in climate influence heredity of the human species on physical, social, cognitive, and psychological levels? What are examples of plasticity as climate change science begins to unfold a picture of a changing landscape?

The understanding of individual heredity is intimately tied to the multidisciplinary study of genetics. With a high-powered microscope and the introduction of dye, one can view chromosomes along with other fundamental building blocks. Humans have two pairs of 23 chromosomes (22 autosomes with one pairing linked to sex, either XY male or XX female), totaling 46 chromosomes (Berninger, 2015). Missing chromosomes, extra chromosomes, and chromosomal abnormalities are among the variations in chromosomes that are correlated with various syndromes important to mental and physical health. For example, Down syndrome is associated with an extra 21st chromosome (Figure 1.1). Each chromosome has hundreds



**Figure 1.1** Extra chromosomes associated with Down syndrome.

Courtesy of National Human Genome Research Institute and the Smithsonian National Museum of Natural History.

of genes that provide instructions for how a person will develop. *Genotype* is a term used to describe the inherited genes that make up the underlying possibility for expression. *Phenotype* is a term used to describe the genetic manifestation, or how genes are expressed. Phenotypes are influenced though not dependent on genes. As an example, a person's genetic heredity may include schizophrenia, but it may not be expressed in that person's life. "Genotyping allows the maximum of structural and functional properties, but the eventual outcome is under the influence of the environment in positive or negative directions" (Uylings, 2006, p. 16). Development of the human cortex may be maximized by prenatal care and a healthy mother but may be negatively influenced by prenatal drug use (Silva, Villatoro Velázquez, Oliva Robles, Hynes, & de Marco, 2014), environmental toxins, disease, ill health, and malnutrition. In addition, some genes are regulatory genes and control the developmental activation and deactivation of other genes, a process that impacts the developmental onset of critical periods and events in development (Berninger, 2015).

### **Normative History Grade Influences**

Certain influences impact development for the individual and his or her cohort. A cohort is a group that shares a specific set of circumstances over time. When a cohort shares certain historical circumstances or events that influence development, we call these influences *normative history grade influences*. Consider how development might be influenced by surviving the Chernobyl nuclear disaster in 1986. How would this be different from someone exposed to radiation in a university lab? Consider how being part of a civil war and genocide event (e.g., Rwanda), living with drug wars along the border between the United States and Mexico, or the great 2008 recession might impact different people within those historical cohorts. Even when members of a cohort share historical circumstances, there are variations in how the circumstances are experienced and influence development for its members.

Social science researchers categorize groups (cohorts) into variously defined normative historical influences. Consider the generational categorization of the silent generation (1925–1945), baby boomers (1946–1964), Generation X (1965–1981), and millennials, also referred to as Generation Y (1982–present). Generations share years of birth and therefore similar social and historical atmospheres, such as wars, catastrophes, and technological innovations (Amayah & Gedro, 2014). These labels are associated with eras of American history; for example, baby boomers were born at the tail end of WWII and matured in the Vietnam War and equal rights movement era. As other examples, consider the categorization of digital natives, or those who grew up with widespread digital technology, computers, and mobile smartphones, versus a digital immigrant, or someone born before this type of technology was pervasive (Kirk, Chiagouris, Lala, & Thomas, 2015). How does exposure to technology or lack thereof affect development in positive and negative ways? It is important to note that the literature has cautioned against the use of generational stereotypes promoted in popular culture (Amayah & Gedro, 2014).

## Normative Age-Graded Development

Age-graded developments are influences shared by people across times but at a particular stage in life; for example, this book focuses on the following age-graded periods: birth and infancy; early childhood; middle childhood; adolescence; young adulthood; middle adulthood; and late adulthood. When considering the life of your extended family, what developmental changes occurred for each member during infancy?

Counselors regularly treat client stress or grief and loss connected to age-graded milestones that are not achieved by clients or the members of a client's family. For families with members who have lifelong developmental disabilities, grief and loss are common when there are delays or blocks to some type of development (Carroll, 2013; O'Brien, 2007). Inasmuch as some age-graded developments have been prized, others have been taboo. As an example, consider how menopause was not often discussed in American culture, although this period clearly is critical for the developing middle adult woman.

## Normative Sociocultural-Graded Influences

Normative sociocultural-graded influences are shared by others of the same sociocultural group. Consider the impact that cultural rites of passage or even socioeconomic status have on a person's ongoing development. The quinceañera has been traditionally held in Latin America as a coming-of-age event celebrated on the 15th birthday, which marks a transition for girls from childhood into womanhood. Many such sociocultural rituals are marked by change in adult responsibilities, the ability to do religious ceremonies, and often the start of coupling and marriage. Other examples of coming-of-age ceremonies are Jewish bar mitzvahs and bat mitzvahs, Sikh amrit sanchar, the Catholic sacrament of confirmation, the Hindu ritushuddi, and kovave in Papua New Guinea. Depending on the culture, it may signify a change in dress and haircut, may mark a physical maturation, or may change where one sleeps at night. Regardless, these influence development and affect those of a similar sociocultural cohort.

In the United States and Canada, counselors often pay attention to the influence of socioeconomic status on individual development. So how does being raised in an affluent home compare with growing up with few economic resources? Decades worth of research in the United States suggests that socioeconomic status and socioeconomic adversity can affect the development of children. Enriching environments, caregiver time and energy, and early investment such as preschool attendance may mediate the negative effects of socioeconomic adversity (McCoy et al., 2015). Also consider other types of groups that share normative sociocultural-graded influences on development (e.g., immigrant, refugee).

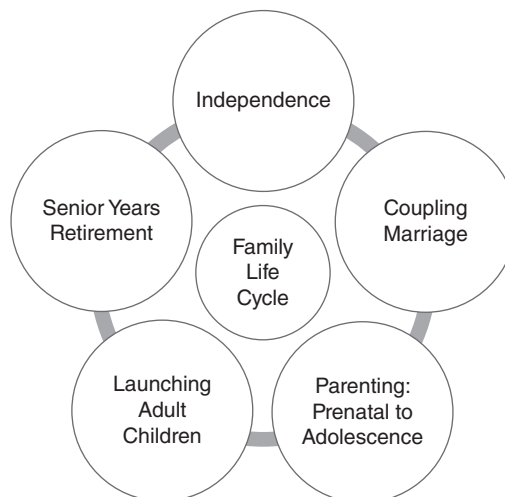
### Family Life Cycle

Family culture is one of the primary sociocultural influences. Family development is directly tied to the nature and composition of the family (Del Corso & Lanz,



2013). When discussing the family, counselors who work in mental health, family, school, and rehabilitation settings refer to family based on the reality of family composition in today's society. This goes beyond ideal notions of the family and includes same-sex-parented families, single-parent families, blended families, families headed by grandparents, and other close social groups where family care, responsibility, and identity reside regardless of blood relations. The family life cycle examines development of the family as a unit moving through key developmental periods (Figure 1.2). The family life cycle is systemically connected to the individual's development. When success, harm, loss, change, and maturation happen to one member or subgroup of the family, they influence the development of the rest of the family. Some transitions in family are more challenging than others. The family life cycle model first introduced by Carter and McGoldrick (1980) in their seminal work *The Family Life Cycle: A Framework for Family Therapy* suggested that families can get stunted when transitioning through stages of the cycle and that counselors can directly help families make sense of and negotiate a functional way forward.

Some family transitions come with increased stress and also with expanded opportunities. Just as with individual development, counselors help clients sort between distress and eustress. Eustress is stress that is seen as necessary and part of maturation. What stressors did you experience as an adolescent as being beneficial to your life? Challenges and mistakes can be converted to positive outcomes. Counselors help clients sort through and walk through the fear and discomfort of making positive developmental gains that are frightening. These feelings can at times emotionally and physically present in a similar way to real threats to safety and self-esteem. For example, a person may have an upset stomach, increased psychomotor agitation, and clammy palms when sharing deep convictions with a new group or when robbing a store.



**Figure 1.2** The family life cycle (basic).

Consider the challenges for a middle-aged couple launching their last child during his or her early adult years. What struggles might they face in their own development? Or consider Felicia and Jen, a married couple in their late 30s who have matured in their psychosocial development. Up until now they have been aunts to many nieces and nephews, and they are now looking to start a family. Felicia is now pregnant through a close family donor process. How might this life cycle change for this new family provoke individual development on multidimensional biopsychosocial levels?

## Nonnormative Influences

Nonnormative influences do not adhere to a particular time frame, nor are they common across a predictable cohort. Because illness is often unpredictable, it often falls into this category of developmental influences. For example, Jose could contract malaria at age 5, 15, or 65. Regardless of the age at which malaria is contracted, but especially during a critical development period, Jose's development path would be influenced in both positive (e.g., shapes career toward helping the ill and vulnerable) and negative ways (e.g., loss of hearing from treatment).

### BOX 1.6 HOW WOULD YOU CATEGORIZE EACH ONE OF THESE INFLUENTIAL EVENTS?

- Death of a close family member
- Marital separation
- Serve on a 2-year religious mission abroad
- Injured at work
- Marriage at age 18
- Retirement at 65
- Family member contracts terminal illness
- Pregnancy at age 40
- Selected to carry on family business
- Bankruptcy
- Imprisonment
- Foreclosure of mortgage or loan
- Significant change in responsibilities at work
- Youngest child leaves home for college
- Graduation from school
- Eviction
- Increase to unhealthy body mass index
- Cohabitation with partner
- Hurricane destroys neighborhood
- City police prejudice, profiling, and excessive force with minorities
- Change in schools
- Move to new residence
- Riots disenfranchise neighborhood
- Develop anorexia

## Environment

A cohort may be affected by environmental influences on development (e.g., shared neighborhood, workplace, presence of wild areas, quality of resources). For example, in a study of 3,965 middle-age Australians, Van Dyck, Teychenne, McNaughton, De Bourdeaudhuij, and Salmon (2015) found that mental health-related quality of life was not only associated with social support for physical activity from family and neighborhood social cohesion, but also with the neighborhood physical activity environment and personal safety.

## KEY COUNSELING POINTERS FOR HUMAN DEVELOPMENT

- The counseling relationship is dynamic and influences the development of clients. Because of the irreversible quality of time, counseling is strongly tied to the behaviors, thoughts, communications, and feelings that occur in session with the client (Salvatore & Tschacher, 2012).
- Counselors must think in a multidimensional and systemic way, but most people do not habitually view the world in a systemic way. As a mental practice, examine the systems and subsystems of your current circumstance as a habit so it becomes natural when working with clients.
- Popular ideas of development suggest that development is static and only growth related. Counselors who want to serve clients well will be versed in human transition, grief, and loss. Death is a developmental process (Kubler-Ross, Kessler, & Shriver, 2014).
- During critical periods, counselors must be as concerned about maximizing developmental outcomes as they are about minimizing stunting or unnecessary decline.
- Because learning is so important to a variety of developmental steps and outcomes, counselors need to be aware of how people learn differently and how disability can influence the process of learning. Instruction, process work, and psych education in the counseling setting should fit with a person's optimal learning format.
- Whether development reflects continuity or discontinuity, clients often look for coherence through meaning making and life narratives. For children, global narratives are not present, but as a person moves into adolescence and again into young and middle adulthood, life narratives become helpful to a host of life processes (Köber, Schmiedek, & Habermas, 2015). Life review has been shown to be of particular use to older adults (Lewis, 2001).
- Advocacy is important so people can get the opportunities and resources to develop to capacity. Learn how to advocate for clients and how to help clients advocate for themselves on microsystemic (e.g., individual) and macrosystemic (e.g., institutional, societal) levels.
- When examining nonnormative influences, use stressful events inventories such as the 43-point Social Readjustment Rating Scale by Holmes and Rahe (1967).

- The competencies endorsed by the American Counseling Association in the realms of (a) multicultural counseling, (b) advocacy, (c) cross-cultural counseling, (d) LGBTQQ, and (e) working with multiracial clients are each vital guides and aspirational motivators for counselors.

## SUMMARY

Human development as a study, like human life, is ever-changing. Some key concepts that apply to human development were explored in the chapter, and these set the stage for other chapters in this book. Development is continuous, discontinuous, multidimensional, multidirectional, and plastic. Modern science has uncovered important findings about how humans change over a lifespan and how some changes are unique and personal, whereas others are shared in common as a result of sociocultural, historical, hereditary, and environmental influences. There are also human development processes that are important to counseling: growth, maturation, and importantly, learning.

## USEFUL WEBSITES

Human Connectome Project

<http://www.humanconnectome.org/>

Smithsonian: National Museum of Natural History

Genome: Unlocking Life's Code (Smithsonian: National Museum of Natural History)

<http://www.unlockinglifescode.org>

Counseling Today Articles: Human Development Across the Lifespan

<http://ct.counseling.org/tag/topic-ct-human-development-across-the-lifespan/>

American Counseling Association Counselor Competencies Page

<http://www.counseling.org/knowledge-center/competencies>

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