

Introduction to the Science of Human Development- The Life-Span Perspective by Rafael Mendez

Developmental psychology is the scientific discipline devoted to understanding how and why people change throughout life, from conception to death. *Traditional developmental* scientists seek not only to describe patterns of change, but also to explain the *causes and mechanisms* underlying them. There's another way of thinking about development called *activity theory*. Instead of just describing what people do, it aims to actually promote growth, helping us change how we experience our lives and how we 'perform' them day to day. This course will attempt to present both. They are complementary. Your task is to understand the difference and learn to use them both.

The Life-Span Perspective as an Organizing Framework

The core of the traditional *life-span perspective* is a theoretical orientation that emphasizes development as:

1. **Multidirectional** – Development does not proceed in one linear direction; instead, certain capacities grow while others may decline, and gains and losses can occur simultaneously. For instance, cognitive abilities may increase in midlife even as physical performance declines.
2. **Multi-contextual** – Development is shaped by multiple contexts, including historical, cultural, economic, and ecological environments. These contexts define the settings in which people live and interact, each altering developmental pathways over time.
3. **Multicultural** – Human development cannot be understood without recognizing the influence of culture, ethnicity, and social norms. Cultural frameworks shape people's expectations, opportunities, practices, and values across the lifespan.
4. **Multidisciplinary** – No single discipline can fully explain human development; insights from biology, psychology, sociology, neuroscience, anthropology, and other fields converge to build a fuller understanding of how humans grow and change.
5. **Nueroplasticity** – Plasticity refers to the capacity for change throughout life. Individuals and their traits are not fixed; experiences, environments, and interventions can alter developmental trajectories, though the degree of plasticity may vary across individuals and ages.

Taken together, these principles remove development from a simple sequence of stages, instead portraying it as dynamic, contextually embedded, and subject both to continuity and change.

Central Debates and Concepts

Nature and Nurture

A classic debate is between *nature* (genetic inheritance/biological predispositions) and *nurture* (environmental influences, including family, culture, education, and experience). Rather than

posing the question as an either/or dichotomy, Development arises from *interaction* between genetic potentials and experiential contexts. The fundamental question is how each impacts and influences. This is indeterminant and differs from person to person. Newer research says some people are simply more genetically sensitive to their surroundings than others. We are uniquely different.

Deficits vs Differences

Deficit theories presume a method of seeing people as if there is something wrong with them: they are retarded, mentally ill, or have a personality or conduct disorder. Progressive theories recognize that we are all very different from each other, yet we are so much alike. Different cultures value quiet and talkative kids differently. Neither is wrong, it just depends on what the culture teaches about when to speak and when to listen. Seeing this helps us avoid assuming that people who act differently are ‘less than’, has a deficit.

Continuity and Discontinuity in Development

I will distinguish between two patterns of development: Discontinuity (stages of development) from Continuous development (activity theory)

- **Discontinuity** (stages, like Freud, Piaget, Erikson) sees development as abrupt, qualitative shifts (e.g., walking, talking, puberty, menopause).
- **Continuity** sees development as gradual, continuous, quantitative changes (e.g., vocabulary growth, learning new skills, managing new careers).

This distinction in perspectives means different parts of a person’s development can change in their own ways, sometimes through natural maturation, sometimes slowly through learning, and sometimes in sudden jumps. Recognizing the theoretical distinctions helps in understanding a particular theory’s intent: to describe or promote development. This distinction will become clearer as we go through the course material.

A Case Study of David

David's mother, contracted rubella (also known as German measles) early in her third pregnancy, in 1967. The disease was not diagnosed until David was born blind and dying.

Heart surgery two days after birth saved his life, but he needed eye surgery at 6 months to remove a cataract, which activated the virus and destroyed that eye. Malformations of his thumbs, ankles, teeth, feet, spine, and brain became evident. David did not walk, talk, or even chew, throughout his early years.

Early diagnosis and predictions projected David to have a limited life span and a limited quality of life. David is now a productive adult and happy. When questioned about his life, he said, "I try to stay in a positive mood.... And I usually succeed". Neuroplasticity has been repeatedly evident in David's life; again and again, he has made developmental transformations. His listening skills continue to be impressive. He now says:

"I am generally quite happy, but secretly a little happier lately, especially since November, because I have been consistently getting a pretty good vibrato when I am singing, not only by myself but also in congregational hymns in church. A vibrato is when a note bounces up and down within a quartertone either way of concert pitch, optimally between 5.5 and 8.2 times per second". David loves to sing in the church choir.

Neuroplasticity does not undo a person's genes, early abuse, or permanent damage, from adverse childhood experiences. However, one can grow from beyond perceived limitations and psychological damage. David had a loving family, but his prenatal brain damage remains. He is better at translating technical material, but not emotional nuances. At age 54, he still lives with his mother. But his temperament, past learning, and current abilities continue to keep him functioning and happy. When his father died in 2014, David comforted the rest of his family saying "Dad is in a better place".

David developed strengths and copes well with his lifelong impairment. All five of the characteristics of the life-span perspective are evident in David's life, as summarized in Table 1.3. All five are evident in every life.

Five Characteristics of Development – Applied to David’s Story

Characteristic	Description	Application in David’s Story
Multidirectional	Change occurs in every direction; gains and losses, predictable growth, and unexpected transformations happen.	David’s development sometimes seemed static—or even regressive (early surgery damaged one eye)—but accelerated each time he entered a new school or college.
Multicontextual	Human lives are shaped by multiple contexts: historical, economic, and family environments.	High family SES allowed daily medical and educational care; his two older brothers provided protection and support.
Multicultural	Development is influenced by many cultures, including within nations.	In David’s Appalachian community, collectivistic cultural values supported him and other community members.
Multidisciplinary	Insights from multiple academic fields (psychology, medicine, education, etc.) contribute to understanding development.	Medicine (surgery and health care) saved his life and improved functioning; education (special educators) guided him and his parents.
Plastic	Individuals and traits can change at any point in life; change is ongoing but not random or easy.	David’s IQ increased from ~40 to ~130, and his physical disabilities became less limiting as he matured.