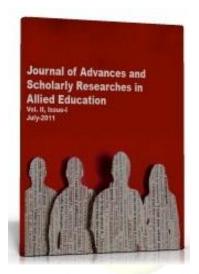# Adolescence: The Human Development between Child and Adult

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ABSTRACT

The developmental processes of children and adolescents have intrigued theorists and researchers for centuries. Prior to the time of John Locke and Jean-Jacques Rousseau, during the late 17th and early 18th centuries, most people viewed children as miniature adults. During the Middle Ages children as young as six years of age were often sent off to work as apprentices in professions such as farming, blacksmithing, and carpentry. However, toward the end of the Middle Ages, the economic situation dramatically shifted; many occupations switched from requiring manual labor to necessitating academic skills. Thus, the treatment of children became refocused, away from integration with adults and toward educational instruction. In the present paper an attempt has been made to better understand that how children and adolescents are not miniature adults but unique, intriguing beings.

Keywords: Psychology, adolescence, adolescents, adults, puberty, development

INTRODUCTION

When does childhood end and adulthood start, there are no hard-and-fast answers to these questions. Rather, every culture decides for itself just where the dividing line falls. In many countries, however, the transition from child to adult takes place more gradually during a period known as adolescence. Adolescence has traditionally been viewed as beginning with the onset of puberty, a rapid spurt in physical growth accompanied by sexual maturation, and as ending when individuals assume the responsibilities associated with adult life- marriage, entry into the work force, and so on.

The transition from childhood to adolescence also sees adolescents spending less time with family, and more with peers. As such, adolescents seek to gain independence from their parents, establish their individuality, and replace their parents as their primary attachment figures. Simultaneously, adolescents are trying to define themselves amidst physiological, emotional, and intellectual changes which may render their childhood self-concepts obsolete. Personal identities become salient during this time, and with maturing cognitive abilities

adolescents are able to conceptualize themselves in an increasingly complex, and abstract manner. This involves formulating of identities not only on the basis of physical characteristics, but also based on psychological characteristics (e.g., traits, thoughts, beliefs, and values), and with respect to their social relationships.

Adolescence goes through following various developments:

PHYSICAL DEVELOPMENT

Much of the physical growth and development that occurs in childhood is a continuation of earlier growth patterns seen in infancy. As was the case in infancy, development continues on the cephalocaudal (i.e., a pattern of physical and motor growth from head to tail) and proximodistal (i.e., a pattern of physical and motor growth from the center of the body outward) track. In other words, physical and motor development begins with the head, chest, and trunk and then follows with the arms and legs, ending with the feet and hands. When children enter the adolescent period this growth pattern reverses, with hand and foot growth followed by that of the trunk or upper body. Much of the physical growth that occurs in childhood and adolescence is coordinated by endocrine glands through the release of hormones. The process of adolescent physical growth begins and ends earlier for girls than for boys.

Because of the dramatic hormonal, physical, and emotional changes that occur during adolescence, researchers have traditionally recognized this time as a period of "storm and stress." This concept, although originally recognized by influential philosophers (e.g., Aristotle and Socrates) and theorists (e.g., Rousseau), was explicitly described by G. Stanley Hall. Hall believed that humans experienced a tumultuous time during which they transition from being children to becoming adults. During this turbulence, researchers saw adolescents as engaging in conflict with their parents, experiencing mood fluctuations and disruptions, and engaging in risk-taking or reckless behavior. Interestingly, Jeffrey Arnett revisited the concept of storm and stress in light of more recent research and found that although great individual differences exist within the experience of storm and stress, most adolescents do experience variations of the three components. He also noted that culture has a significant influence over the extent and experience of storm and stress.

COGNITIVE DEVELOPMENT

Our understanding of cognitive development comes, in large part, from the research and theory of Jean Piaget. Piaget developed his theory of cognitive development based upon observations of his own and other children. It is important to understand the underlying assumptions. First, although Piaget recognized the probability of individual differences in development, he believed in an invariant sequence of developmental stages that were qualitatively different. Second, Piaget's theory is constructivist; children are not simply waiting for development to occur or maturation to take place, they actively construct the experiences they have and make sense of the environment. Third, under normal circumstances there should be no stage regression. That is, the knowledge and skills gained in each stage build upon one another and, barring unforeseen circumstances; individuals should not regress in their cognitive abilities.

Piaget's observational research allowed for an understanding of how children gain and refine their knowledge (thought patterns or schema) of the world. Children are born into this world with very little knowledge and only a set core of reflexes, but as they mature and interact more with their environment, they begin to integrate and change their existing knowledge. There are two processes by which children deal with new information. One such way is called assimilation—an attempt to integrate new information into what they already know. For example, as children are learning the different sounds animals make, they may have a clear understanding of the sound a cow makes, "moo." When confronted with new information, they will likely rely on their old knowledge to make sense of the world. So, when the child sees a horse for the first time, and you ask what sound a horse makes, he or she may respond "moo!" Clearly, at some point children learn that horses do not "moo." Piaget explained this shift in understanding as accommodation—altering existing knowledge to incorporate new information. So, a child's learning that a horse "neighs" is an example of accommodation of knowledge and new schemes developing. Piaget described our cognitive process as being in a state of balance or equilibrium. However, when we are

confronted with information that does not fit, we are thrown into a state of disequilibrium and must reorganize our thinking to fit new information and achieve equilibration. Piaget is most well-known for his four stages of cognitive development: sensorimotor, preoperational, concrete operational, and formal operational.

Piaget is very well known and respected for his research and theory. Still, to understand cognitive development, it is important to consider at least one other influential theorist. **Lev Vygotsky** is known for his sociocultural theory of cognitive development. Whereas Piaget's theory focuses on the child interacting with the environment in somewhat of a self-guided process, Vygotsky's focus for cognitive development is on the benefit of social interaction that children have with adults and others. Vygotsky believed that through social interaction, children are able to master tasks and skills that they would not be able to accomplish if left to their own devices. He called this the Zone of Proximal Development, the differential range of working by oneself versus working with the assistance of a skilled peer or adult.

For the interaction between child and another to be successful, or for a child to be successfully pushed to the higher end of his or her Zone of Proximal Development, two important factors must be involved. First, there must be intersubjectivity—the child and others begin a task with different understandings or knowledge of the situation, but by the completion of the task, they have come to a shared agreement. During the process of intersubjectivity, the adult must work to share his or her knowledge in a manner that is understandable to the specific child.

The second important factor for successful interaction is the process of scaffolding—adults (or skilled peers) change the quality of social interaction by adjusting the amount of assistance they provide to the child. Early in a child's learning a task, the adult may engage in more direct instruction and heavily guide the child's actions; however, as the child gains greater insight into the problem or task, the adult begins to withdraw the extra assistance to the point at which the child is able to do the task alone. For example, when a child is first learning how to make her bed, her parent may offer several direct commands and physically show the child how to do the task. However, as the child becomes more knowledgeable, the parent offers less direction but more "helpful hints" and has the child doing the task alone.

Vygotsky also described how children guide their own behavior using private speech—self-directed speech that children engage in as a means to guide their own thoughts and behavior. When children are small, it is not uncommon to hear them talking themselves through a task (e.g., washing their hands, tying a shoe, buttoning a button, etc.). Research has suggested that children will engage in more frequent private speech when the task is difficult, if they have made an error, or if they are uncertain or confused about how to proceed with a problem. However, as we age, this self-direction becomes internalized and private speech becomes more of a thought process than outward expression. Vygotsky was a firm believer in the connection between language development and thought processes. He suggested that as we develop language, there is a profound shift in our thinking processes.

LANGUAGE DEVELOPMENT

Language development can be understood by highlighting the sequential process of its development and then explaining that process using recognized theories. When examining the process or stages of human language development, we find a path that is fairly universal in nature. All infants begin the communication process with reflexive crying that, although unintentional, clearly sends messages about hunger, pain, or discomfort. The hunger cry is lower in pitch and intensity, whereas the pain cry is high in pitch and intensity. Infants do not have to think about what type of cry they'd like to express; it occurs naturally. Also, although there is some debate as to whether adults can recognize the different types of cries infants express, one can argue that, given enough time with an infant, the adult will quickly pick up on the messages being sent.

Even though there can be great variation and individual differences in the rate of language development, most researchers recognize that the foundation for language begins around the age of two months with vowel-like noises called cooing. Common cooing consists of "oo" sounds. Cooing is an oral expression of sounds that the infant can make. At approximately four months of age, as infants develop greater muscle control over their tongue

and mouth, they will begin to add consonant-vowel combinations, typically heard in strings. These combinations are called babbling. An example of babbling from the English language consists of phrases like "bababababa" and "nananana." It is during this stage of language development, at around seven months of age, that infants begin specialization within their own language. Interestingly, individual maturation and exposure to language within the environment influence the age at which infants truly begin to babble. For babies who are hearing impaired, vocal babbling will most often be delayed, and for deaf babies, completely absent. However, researchers **Petitto and Marentette** have found that when infants who are deaf are exposed to sign language within their environment, they will babble similarly with their hands as hearing babies do with their voice.

The third stage of language development is known as one-word utterances. At about one year, infants are expressing their first words. Common first words in the English language include phrases like "mama" and "dada," but it is important to recognize the influence of the infant's language environment on his or her first word. The first 50 words a child learns tend to happen rather slowly, but after those first 50 a language explosion occurs. This rapid connection between words and objects or events, called fast mapping, occurs so rapidly that children cannot reasonably understand all possible meanings of the words.

The next stage of language development is called two-word utterances. At about two and one-half years, children begin stringing words together. In their early sentences, children's language is described as telegraphic speech because, as is the case with telegrams, children use only the important or necessary words to communicate meaning. At about three to five years, children enter the last stage of language development and start using what is called basic adult sentence structure. By this age, they have a basic understanding of the way that words are ordered (syntax) and have become quite sophisticated communicators. Sometimes children of this age will misapply grammatical rules to words that are exceptions to those rules. This error is called overregularization and is exemplified by adding an inappropriate -s to make a word plural. For example, a child may say "mouses" instead of "mice." Another error is inappropriately adding -ed to make the past tense of an irregular verb: "I goed to the store today."

How can we explain children's phenomenal ability to acquire language? As is the case with most aspects of development, one theory argues nature's role in language development, and another suggests the predominant importance of nurture. Beginning with the nurture side, most recognized is an application of **B. F. Skinner's** operant Conditioning. Theorists who argue operant conditioning as the explanation of language development would look at how parents reinforce an infant or child through smiles and verbal praise for making different sounds. Another learning approach, **Bandura's** social learning theory, explains language development by examining how children imitate what they hear in their environment. Learning theories give some insight into how language develops, and one would be remiss to ignore the impact of the environment on language development, but taking a nurture stance alone is not enough to explain how and why children develop language. Linguist **Noam Chomsky** is best known for arguing that language is the result of innate processes. Chomsky explains that parents and teachers cannot directly teach language organization and grammatical/syntactical rules. Yet, we see children understanding basic syntax and attempting to apply grammatical rules. Thus, he reasoned, language development must be guided by an internal process. Specifically, he suggested that humans are born with a language acquisition device (LAD). The LAD is innate and allows the child to arrange language in a grammatically logical fashion. Chomsky argued that within the LAD exists what he called universal grammar, a store of grammatical rules that apply to language. Another well-known linguist, **Steven Pinker**, suggests that it is not that anyone language is within our genes; rather, the ability to arrange and produce language is innate. Nativists like Chomsky and Pinker do acknowledge that children must have at least a limited amount of exposure to language within their environment to prompt the innate process; however, they do not agree with learning theorists that parents or adults must deliberately work with or teach children language. Most theorists and developmental psychologists recognize the importance of both nature (e.g., LAD) and nurture (conditioning of language) in an attempt to understand how language develops.

PERSONALITY AND SOCIAL DEVELOPMENT

Sigmund Freud was one of the earliest theorists to attempt to explain the root causes for personality development and differences. He viewed personality development as involving five stages that consist of internal biological needs that are the focus of interactions between child and parent. According to Freud, at each stage there is an erogenous zone, or area of the body that is the focus for libidinal energy and gratification. He also believed that if our gratification needs were not met appropriately (i.e., over- or undermet) during the early stages, fixation could occur. Fixation is a process whereby the child would show characteristics of that stage in behavior and personality later in life. Freud also believed there were three separate, but interacting, elements of the mind that guide thoughts and behavior: the id (pleasure seeking), superego (an internal sense of right and wrong or conscience), and ego (the part of the mind grounded in reality that must appease the id and superego).

James Marcia built upon Erikson's adolescent stage of development, recognizing that there can be different identity statuses that result during this questioning or search for identity. Some adolescents do not actively engage in the questioning process, and also have not committed to any personal set of beliefs and values. Marcia describes these individuals as identity diffused. If adolescents do not question who they are and what they believe, but readily accept what others define for them, Marcia suggests they are identity foreclosed. Adolescents who are active in the questioning process but have not yet committed to any set of beliefs or values are labeled as experiencing an identity moratorium. Finally, Marcia notes that the ideal situation is one in which an individual has actively questioned beliefs and values and ultimately commits to a core identity. These individuals are described as identity achieved.

It is clear that the relationships that children have with their parents influence subsequent personality development. From other research and theories we also know that personal characteristics of children (i.e., temperament) can influence the relationships they have with parents and others.

Through research examining behavioral patterns and responsivity, physicians Alexander Thomas and Stella Chess have helped us better understand individual differences in temperament that children exhibit. Because these behavioral response patterns are seen very early in life, researchers suggest that temperament is biologically based and perhaps consists of inherited traits. Based on their observations, Thomas and Chess note that children fall roughly into three categories of temperament:

- **Easy Children** (approximately 40 percent of American children fall into this category). These children are very easygoing, are adaptable to change, have a positive demeanor, and are not fearful in approaching new situations.

- **Slow-to-Warm-Up Children** (approximately 15 percent of American children fall into this category). These children are less adaptable to change and can have intense or negative reactions to new situations. They are slow to warm up to new situations and changes in routine, but they can ultimately (with repeated exposure) adapt to change.

- **Difficult Children** (approximately 10 percent of American children fall into this category). Difficult children are prone to persistent negative mood patterns, do not adapt to change well, and behave in inconsistent patterns.

If you sum the percentages, it is clear that not all children fit into one of these three prescribed categories. Thomas and Chess found that the remaining 35 percent of children are a combination of the three categories. Again, because of early behavioral patterns, heredity is thought to be a possible explanation in individual differences in temperament; however, it is important to recognize the early interaction between parent and child as influencing behavioral patterns as well. For a better understanding of parent-child interaction, attachment theory must be investigated.

Moral Development

Moral development is an area that is influenced greatly by many of the previously discussed topics. Obviously we must have physical maturation and cognitive development to achieve moral reasoning. We also use our language to express and explain our moral reasoning. Without question, our personality and social surroundings influence our reasoning and justification for our moral decisions.

Lawrence Kohlberg and Carol Gilligan are two noted theorists in this area. Kohlberg's theory of moral development, based largely on Piaget's thoughts of moral reasoning, stems from his longitudinal research (i.e., research spanning several years with the same group of participants) with adolescent boys. To best understand how his participants morally reasoned, Kohlberg posed moral dilemmas that had no clear right or wrong answers, asking the participants what would be the right thing to do, and why. He was more interested in the reasoning behind participants' answers than the answers themselves. Based on his research, Kohlberg developed a theory with three levels and six stages to explain moral reasoning development; he did not give specific age ranges for his stages and levels, but assumed that as we age, we become more sophisticated in our reasoning, and thus progress in an invariant sequence:

1.   **Preconventional level:** Moral reasoning at this level generally is guided by external forces.

•   **Stage 1: Obedience Orientation.** Children look to authority figures for determining right from wrong and use punishment as a determinant for moral reasoning. If someone is punished for an act, the act must be wrong. For example, children are told by authorities (e.g., parents, teachers) that stealing is wrong, and thus believe that a person who steals is committing a wrongful act. Also, people who are caught stealing are punished, so stealing must be wrong.

•   **Stage 2: Instrumental Orientation.** Individuals are concerned about their own personal well-being, gain, and needs. Right and wrong are often determined by some exchange of favors that directly benefit the self. For example, a child may reason that it is not wrong to report a friend for stealing candy because the friend shared the candy.

2.   **Conventional level:** Moral reasoning is guided by society's norms.

•   **Stage 3: Interpersonal Norms.** This stage is also known as the "good boy/good girl stage." Individuals are concerned with the perceptions of others, and use that concern to determine right from wrong. For example, people who steal are often seen as "bad" people by others, thus stealing must be wrong. However, if, for example, parents steal food because they have no money to buy it for their children, perhaps the parents would be seen as "good," and stealing may be justified in this case.

•   **Stage 4: Social Systems Morality.** Stage 4 is also known as the "Law and Order" stage because individuals who reason at this stage firmly believe that there are laws in society to maintain order and promote good within society, and breaking those laws would likely lead to chaos or anarchy.

3.   **Post conventional level:** Generally at this level, moral reasoning stems from a personal moral code.

•   **Stage 5: Social Contract.** Individuals who reason using Stage 5 principles believe that laws are based on an agreed-upon contract that is meant to benefit the members within society. However, if those laws are unjust to the society's members, there may be cause for breaking them.

•   **Stage 6: Universal Ethical Principles.** Individuals rely upon abstract principles such as justice and equality to guide their moral reasoning. They also recognize that their personal moral beliefs may, at times, conflict with societal expectations, but they take ownership and responsibility for their reasoning and beliefs.

Kohlberg's theory, although supported by his and others' research and widely accepted, falls short, according to researchers, such as Carol Gilligan, who point to the limitation of Kohlberg's sample (i.e., only including boys/men as participants). Gilligan also argued that Kohlberg's theory bases moral decisions on the notion of justice,

and whereas justice may be the guiding focus for boys and men's moral reasoning, she suggests that women reason using the notion of care.

In response to Kohlberg's theory, Gilligan devised a three-level theory. At the preconvention level, Gilligan notes that there is an emphasis on caring for the self. Thus, self-preservation influences decisions about right and wrong. At the conventional level, women shift their focus of care and concern from themselves to others. Finally, at the post conventional level, the focal point for moral reasoning is care for self and others in an interdependent manner.

Although there has been research support to suggest that girls and women use a "care" model in determining right from wrong, there has also been research to suggest that some men also use a similar model of "care," and some women use a model of "justice," as proposed by Kohlberg. Hence, sex may not be the sole explanation for these different approaches to moral reasoning; other factors such as family upbringing may contribute to how we determine right from wrong.

CONCLUSION

Childhood and adolescence is a very exciting and vital time frame of development that sets the foundation for who we will ultimately become when we reach adulthood. Although we have examined various topics, it is essential to understand that none of these aspects of development occurs in isolation; each is dependent on the others, and their combination can greatly influence the course of development for the person. Without question, we know that children and adolescents are not simply miniature adults-they are fascinating creatures, unique in and of themselves.

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