

I. INTRODUCTION

A. Definition of Adolescence

- Adolescence is defined as a transition between childhood and maturity, one that begins in puberty and ends with the adoption of culturally defined adult responsibilities and social roles.
- Advantages of the Definition
 - Multiple Processes. Focus on changes in a range of processes.
 - There are changes not only in biological (puberty) but also in social relations (adult social roles and responsibilities).

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A. Definition of Adolescence

- Advantages continued
 - Socio-cultural context. Focus on cultural context in becoming mature.
 - Imagine what it might be an adolescent today vs. 100years ago in Utah. Which time would it be easier?
 - Interactionist: Focus on an interaction between biological and social factors associated with adolescence.
 - The physical changes adolescents faced during puberty interact with the socio-cultural context in which they find themselves.

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- B. Theories of Adolescent Development
- These issues found in the founding mothers and fathers of adolescence: G. Stanley Hall, Sigmund Freud, and Margaret Mead.
 - To Hall, adolescents experience an evolutionarilyshaped, biologically process of storm and stress
 - Published the 2 volume book on *Adolescence* in 1904.
 - To Freud, the task of adolescence is to balance biological urges with cultural expectations.
 - Development ends in adolescence.
 - Mead identified the role of culture in minimizing adolescent disturbances found in the USA.
 - Published Coming of Age in Samoa in 1928.

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- B. Theories of Adolescent Development
- Since its founding in 1904, theories of adolescence have grown and become more interdisciplinary.
 - Theories of adolescence had employed ideas from Anthropology to Zoology.
- In its broadest sense, a theory is like a visitor's guidebook to a new city
 - The guide, like a theory, minimizes ignorance by helping you notice relevant sights, important features, and interesting places to observe

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C. Functions of Theories

- Two complementary functions of scientific theories: Explanation and prediction.
 - Explanations make use of theoretical ideas in order to understand how and why particular events and outcomes occur.
 - For example, Margaret Mead explained the storm and stress of adolescents growing up in the United States as due to their development within a discontinuous culture that requires a sudden transition to mature behavior.
 - Predictions, in contrast, are used to test theories by making use of theoretical ideas to anticipate the likelihood of particular events and outcomes in certain conditions.
 - For example, Mead's theory generates the testable prediction that adolescents growing up in discontinuous societies will experience significantly more stress than those growing up in continuous societies

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- D. Theoretical Images of Adolescents
- Theories of Adolescence are distinct in their explanations and predictions
 - But some theories shares with others certain broader assumptions about how and why adolescent behaviors emerge and change.
- These broader assumptions shared by theories are associated with an image of adolescents.
 Theories project an image of adolescents as
 - biologically immature juveniles
 - architects of their thinking and reasoning
 - cultural apprentices.

II. BIOLOGICALLY IMMATURE JUVENILES

A. Images of Immaturity

- Image of youthful enthusiasm, high energy, gawky clumsiness, and habitual foolishness.
 - Like the ugly duckling until biological processes transforms it into a mature and majestic swan.
 - The biological process of transformation is linked to evolutionary mechanism which drive changes to fit into particular contexts.
 - Images of adolescents as immature juveniles, hostage to biological processes, abound in media.
 - Teens portrayed as not responsible for being biologically incapable of resisting temptations, making good choices, controlling their emotions, or planning their futures, which are normal parts of teen functioning

II. BIOLOGICALLY IMMATURE JUVENILES B. Sources of Immaturity

- Adolescents are juvenile because of a long slow process of development.
 - Development is an evolutionary-shaped, genetically-controlled biological process of <u>adapting</u> to ones environment.
 - Adaptation produces changes in functioning, resulting in the organism becoming more suited to his or her environment (i.e., thriving and reproducing)
 - The adaptations of central importance during adolescence for all species include becoming prepared for reproduction and separated from parents (Weisfeld, 1999).

II. BIOLOGICALLY IMMATURE JUVENILES B. Sources of Immaturity

- Adolescent immaturity can be understood in this light of evolutionarily imperatives.
 - Concerns with popularity and attractiveness may be adaptive behaviors to gain the status and attention required for mating and reproduction.
 - Novelty seeking and risk taking may also be attempts to gain status and maximizing reproductive success.
 - Critical brain changes are adaptations that support the planning and other thinking skills necessary for separating from parents and starting one's own household.

II. BIOLOGICALLY IMMATURE JUVENILES C. Genotype and Phenotype

- Adaptation requires a distinction between an individual's genotype and phenotype.
 - An individual's genotype is the exact genetic makeup—the particular set of genes—that the individual has inherited.
 - Knowledge of the genotype comes from studying the individual's DNA which genes are compose,
 - The phenotype represents all the observable physical, behavioral, and psychological traits that the individual actually develops.
 - Knowledge of the phenotype comes from studying the individual's body and behavior.

II. BIOLOGICALLY IMMATURE JUVENILES C. Genotype and Phenotype

- Although related, genotypes and phenotypes do not necessarily coincide.
 - Identical twins have precisely the same genotype, but their phenotypes—even their fingerprints—are never completely identical, and indeed become increasingly different as the twins age.
- Phenotypes are influenced by an individual's environment in addition to his or her genotype.



- II. BIOLOGICALLY IMMATURE JUVENILES C. Genotype and Phenotype
 - Darwin's natural selection is premised by the genotype-phenotype distinction
 - Individuals with phenotypes that are adapted to their particular environment (i.e., whose traits are well fitted to the environment) have an greater chance of surviving and reproducing
 - In contrast, individuals whose phenotypes are not adaptive either do not survive or are less reproductively successful.
 - The fact that the odds of survival are greater for species better fitted to their environment gave rise to the wellknown phrase, survival of the fittest.

II. BIOLOGICALLY IMMATURE JUVENILES D. Phenotype Variability and Plasticity

- Natural selection requires phenotypic variation
 - Heritable variations of particular phenotypes that have survival value for the individual and species
 - Consider the phenotypic trait of height in trees growing in a crowded forest.
 - Taller trees may get more sun than shorter trees and are therefore likely to produce more seeds (offspring). Over many generations, trees with genes for taller height will greatly outnumber those with genes for shorter height.
 - Variations of phenotypic traits that are adaptive in the existing environmental conditions will increase in the species as a whole while those that are maladaptive will quite literally die out.

II. BIOLOGICALLY IMMATURE JUVENILES D. Phenotype Plasticity and Plasticity

- The extent a phenotype is open to influence of the environment is **phenotypic plasticity**.
 - Low plasticity traits include eye color.
 - Genotype is strongly influential and the phenotype develops in a highly predictable manner, irrespective of environmental factors.
 - High plasticity traits include intellectual abilites.
 - Genotype less influential so the phenotype is affected by the environment and develops less predictably
 - Canalized traits follow a strictly defined path, regardless of most kinds of environmental and genetic variations.

II. BIOLOGICALLY IMMATURE JUVENILES E. Genes, Environments and Development

- Together, plasticity (variability) and canalization (stability) have tremendous power in organizing children's development.
 - Young adolescents adapt by being innovative, even risky in seeking out new experiences which is seen in adolescents ranging from mice to monkeys.
 - It serves to enhance status and resources all of which are important for mate selection and reproduction.
 - Such behavior is affected by both the species genotype and socio-cultural conditions resulting in variation in the degree to which risk taking is expressed in certain times and places.

- II. BIOLOGICALLY IMMATURE JUVENILES E. Genes, Environments and Development
 - The environments adolescents find themselves are partially controlled by the adolescent
 - Niche construction refers to how the behaviors, activities, and choices of individuals actively shape and modify the environments in which they live.
 - Niche construction suggests that sexual postponers and indulgers are both merely reacting to different social conditions given their evolutionary urges.
 - Harsh and unpredictable home life make teens feel that investing in their future by acquiring education or job training is impracticable, unlikely to succeed and so don't put off fulfilling the evolutionary impulse to reproduce.

II. BIOLOGICALLY IMMATURE JUVENILES E. Genes, Environments and Development

- The *adolescent as biologically immature juvenile* focuses on phenotypic development.
 - The emerging social, cognitive, emotional and physical changes across the adolescent years constitute phenotypic expressions of genotypes that have been shaped by evolution.
 - These emerging changes are also affected by the socio-cultural context into which adolescents live and adapt their evolutionary-shaped genotypes.
 - Understand the both the genory and the evironent are keys to understanding adolescence fro this perspective.

III. ARCHITECTS OF THINKING & REASONING A. Image

- Image of adolescents designing their development like architects designing a building.
 - Explaining adolescents' behavior and development requires an appreciation of their perspectives,
 - This includes their personal understandings of themselves and the world above and beyond evolutionary-based biological factors and features of the social environment.
 - Personal understandings shape adolescents' activities in the world and become a springboard for them to construct new understandings when the old ones become inadequate and needs revision.

III. ARCHITECTS OF THINKING & REASONING

- B. Process
- The process of development in personal understandings and actions in the world is a dynamic one related to biological changes.
 - Old ways of understanding oneself and relating to one's parents are quickly recognized as inadequate as adolescents cope with the physical and sexual changes associated with puberty.
 - New sexual interests and active niche construction creates new views of self and tension with parents.
 - The physical changes create conditions in which adolescents must work out new understandings of self and relationships with parents.

III. ARCHITECTS OF THINKING & REASONING B. Process

- Adolescents design who they become by their role in understanding and initiating behavior, and revising such understanding and initiating.
 - From this perspective, immature adolescent behavior is seen as malleable and alterable by the developmental process over which adolescents have control and responsibility.
- Adolescent architects need not be consciously aware of directing their development
 - Rather the search for maximally effective activities in the world has the consequence of improving their understandings.

III. ARCHITECTS OF THINKING & REASONING

- C. Piaget's Constructivism
- The process of adolescent (or adults, children and infants for that matter) playing a direct role in designing their cognitive development is called **constructivism**.
 - The best known constructivist account of cognitive development was by the Swiss psychologist, philosopher and biologist Jean Piaget.
 - His theory was been considered so important that Jean Piaget was voted among the 100 Most Important People of the 20th century (Time Magazine, 1999)

III. ARCHITECTS OF THINKING & REASONING

- C. Piaget's Constructivism
- Piaget's theory focuses on the development of general cognitive structures; mental organizations by which the world is understood.
 - Equilibration is Piaget's process to account for the development of cognitive structures
 - This process triggered by environmental information which is not completely understood (that is, assimilated or incorporate into already existing mental structures).
 - Some alteration to the existing structures is necessary so that assimilation is possible (that is, accommodation of already existing structures to fit in new information).
 - These processes operate until a balance or equilibration is achieved between assimilation and accommodation.

III. ARCHITECTS OF THINKING & REASONING

- C. Piaget's Constructivism
- Biological and social processes are not the direct causes of cognitive development.
 - They are indirect factors that promote the equilibration process which results in the developmental changes.
 - The operation of the equilibration process transforms cognitive structures from simple systems underlying the sensory and motor actions and reactions of infants to more complex systems underlying the abstract, hypothetical, and local thinking of adolescents
 - These constitute stages of cognitive development.

III. ARCHITECTS OF THINKING & REASONING

- D. Extensions of Piaget's Constructivism
- Piaget's constructivist account has been extended to other domains of development.
 - Larry Kohlberg (1971) extended constructivism to adolescents' development of moral understanding.
 - His theory suggested that adolescence is a time they can acquire principled moral standards, which were the basis for characterizing them as moral philosophers.
 - Others adopt a constructive account of changes in adolescents' understanding themselves and others
 - Understanding self and others has lead to the characterization of adolescents as theorists about themselves, their friends, and others (Elkind, 1967; Marcia, 1980; Selman, 1980).

III. ARCHITECTS OF THINKING & REASONING

- E. Alternatives to Piaget's Constructivism
- Piaget's has been challenged by other constructivists who adopt the viewpoint of adolescents as architects.
 - Neo-Piagetian theories (Fischer, 1980; Case, 1992; and Pascual-Leone, 1970) retained much of Piaget's constructivism but identify biological and cognitive constraints in the constructivist process
 - Information Processing theories (Siegler, 1998; Klahr & Wallace, 1983) challenge constructivist view of broad-based general cognitive structures and focus instead on adolescents' acquiring new capacities, abilities, knowledge, and strategies,

III. ARCHITECTS OF THINKING & REASONING

- E. Alternatives to Piaget's Constructivism
- Abilities for metacognition and executive function are a critical change to NeoPiagetian and Information Processing psychologists
 - Developments call the ability to become aware of one's thinking metacognition
 - The ability to control one's thinking executive function.
 - Constructivists highlight that the process of the emergence of metacognition and executive function requires practice and exercise, implicating adolescents as designers of their own development.

III. ARCHITECTS OF THINKING & REASONING

- E. Alternatives to Piaget's Constructivism
- Constructivism suppose adolescents improve in contemplative and automatic process.
 - Adolescents can be more thoughtful and systematic and more intutive and automatic.
 - They improve in analytically and systematically or intuitively and automatically evaluating ideas
 - This is another constructive approach, labeled as Dual Process theories.
 - It holds that adolescent development involves the growth of two processes and skills to regulate or coordinate them so that the appropriate responses is made in a given situation.

III. CULTURAL APPRENTICES

A. Image

- The adolescent as apprentice image is related to someone learning a trade or craft
 - Such learning occurs through practical, hands-on experiences, with the guidance of a skilled mentor, for the purpose of training new practitioners.
 - Apprenticeships include the following features:
 - Activities that occur on-site, in trade-specific contexts
 - Learning that involves close observation of, and guided assistance by an "expert"
 - The mastery of specialized "tools of the trade"
 - The trades or crafts acquired are valued by and contribute to the larger community

III. CULTURAL APPRENTICES

B. Process

- As apprentices, adolescents learn and develop towards cultural definitions of adulthood through a social process under the guidance of experts.
 - Learning about culturally appropriate way to be mature involves direct instruction in some skills and indirectly adoption of cultural norms, roles, values, and knowledge.
 - In etither case, the process involves transmission of knowledge about the cultural modes of maturity from a social external sources to an internal psychological one.

III. CULTURAL APPRENTICES

B. Process

- Adolescents' apprenticeship are influenced by cultural agents and institutions
 - Agents include anyone in the adolescents' life who has a particular cultural role to play – parent, teacher, religious leader, coach, etc.
 - Institutions include any organization frequented by adolescents which expresses cultural values – schools, media, etc.
 - As adolescents interact with cultural agents n cultural institutions they are molded by the experience to develop in particular directions.

III. CULTURAL APPRENTICES

C. Cultural Tools

- The apprentice image has its roots in the sociocultural theory of Vygotsky (1896-1934),
 - Vygotsky was Russian scholar who studied the development of complex thinking and reasoning.
 - His focused was on higher mental functions: The exercise of voluntary control over thoughts, emotions, and behavior through the use of *cultural tools*, mainly language-based: written languages, number systems, signs (memory supports), and symbols (gestures).
 - The tools both integrate the mind into the culture and culturally transform the mind's operation.
 - These cultural tools extend one's mental capacities to control one's behavior.

III. CULTURAL APPRENTICES

C. Cultural Tools

- Cultural tools include the following:
 - Tying a knot in a handkerchief in order to remind oneself of something
 - Setting the alarm on a cell phone to remind us of an appointment
 - Gesturing to remember a phone number.
 - Listening to music to create a certain mood
 - Using a spread sheet to organize data,
 - Using social networking programs to communicate with friends
 - Following an instruction manual to install a new car stereo system.

III. CULTURAL APPRENTICES

D. Internalization

- Extensive experience with a particular cultural tool results in internalization.
 - A process leading to the tool is no longer being required to achieving the funtional control or regulate behavior.
 - For example, if you were to get a job installing car stereo systems, it is likely that your need to use the instruction manual would diminish over time, as you internalized the directions and became increasingly capable of working without them.
 - This internalization process brings the cultural tool into the mind and reorganizes the mind, affecting our thinking, feelings, values and beliefs.

III. CULTURAL APPRENTICES

D. Internalization

- To Vygotsky higher mental functions emerge as a consequence of the child's participation – apprenticeship – in social interactions and cultural life.
 - The development of the adolescent is social, through their use and mastery of the "tools" of their cultures as apprentices.
 - They are actively participating in their culture and being systematically exposed to a variety of cultural agents and institutions the cultural tools they available.
 - This is a completely different view of the process of development than individualist constructivism.

III. CULTURAL APPRENTICES

- E. Key Concepts
- A central concept to Vygotsky is the Zone of Proximal Development (ZPD).
 - The difference between what a learner can do alone, without help and what he or she can do with others, and the cultural tools they offer.
 - This concept reflects Vygotsky's law of the development of higher mental functions.
 - According to this law, each higher mental function appears twice in the course of development: First as shared or carried out by an individual jointly with other people-intersubjective (social)—and then as appropriated or internalized by this individual and used independently-intrasubjective (psychological).

III. CULTURAL APPRENTICES

E. Key Concepts

- Building on the ZPD, Barbara Rogoff introduced the concept of guided participation.
 - GP refers to the new responsibilities and roles that kids and teens learn as they participate in, and are guide by values and practices of their communities
 - From selling girl scout cookie to practicing religious rituals, kids and teens learn by their guided participation in those cultural practices.
 - GP involves practical, hands-on experience, undertaken with the assistance of an "expert" and requires the mastery of specific "tools of the trade" which results in learning that is valued by, and contributes to the cultural community.

IV. RELATING THE IMAGES

A. Image Compatibility

- Although different in critical ways, the images should not be considered incompatible.
 - I count myself among developmental theorists, who study adolescence, as looking for ways to synthesize theories associated with each approach.
 - All contemporary theories of adolescence share the assumptions of adolescents as biologically influenced, socially-molded, and active agents.
 - The commonalities are a basis to think that the images and the theories on which they are based are just different lens with which to see adolescents not incompatible theories.

IV. RELATING THE IMAGES

B. Biologically Influenced

- The beginning of adolescence is marked by puberty.
 - It is an evolutionarily-shaped and biologically-influenced event that is readily acknowledged in each of the three approaches.
 - The similarly shaped and influenced neurological changes in later adolescence, central to the juvenile account of adolescent development, are similarly important in the architect account of adolescents as the neurological changes makes possible adolescents authoring new more powerful cognitive structures.
 - Similarly, gene-environment models emphasize the potential biological significance of social context relevant to the apprentice account of the socio-cultural shaping of adolescent development.

IV. RELATING THE IMAGES

- C. Socially Molded
- Adolescents as socially-molded suggests that they are shaped by social and cultural forces.
 - This idea can be traced to the founders of the study of adolescence and is in in each approach.
 - The parents, peers, teachers, and others who populate the worlds of adolescents hold beliefs about and expectations for adolescents and a responsibility to direct their development.
 - This is relevant to the apprentice and juvenile accounts, as the agents create social contexts to which adolescents must adapt, into which they must participate, from which they construct of new cognitive processes.

IV. RELATING THE IMAGES

D. Active Agents

- Contemporary theories of adolescence recognize adolescents as active agents who are intentional and purposeful with respect to their own goals.
 - Adolescents, like children, are readily recognized as being deliberate in initiating actions and interpreting the meaning and significance of those actions.
 - Although central in the architect account with its focus on adolescents as designers of their own development, it is also relevant in the juvenile perspective when adolescents are creating their physical and social niches.
 - It also applies to the apprentice approach with its assumption that adolescents are molded by their active participation in critical cultural processes.

IV. RELATING THE IMAGES

E. Last Word

- One central goal of the seminar is to try to appreciate this commonality in the study of adolescent development.
 - In your presentations I will want you to try to review papers from at least two perspectives and try to combine these perspectives in proposing the next best study.
 - To do so, remember to look at the adolescent from each perspective, according to each image. This applies to all phenomena, from complex theoretical ideas to mundane research procedures. Use the images as a guide to understand why adolescents behave they way that they