

ΑΡΘΡΟ ΣΥΝΤΑΞΗΣ

Adolescence Across the Ages: From Homer to Hesiod to Hall to Hofmann*

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ABSTRACT

*This address seeks to characterize the classic adult views of youth based on observations of poets and writers from the works of Hesiod and Homer, to those of more modern scholars. Greek mythology is considered as a potential etiologic agent in this regard. Modern research has noted that puberty initiates the process of adolescence between 8 and 14 years of age while final brain development does not take place until the third decade of life. This address seeks to reconcile ancient observations with more modern research on youth. Patience and understanding are the best tools adults have in raising their youth to become productive citizens in their societies despite the inevitable irritations that may arise from time to time in adults of all societies as they raise their youth and as their youth raise them. (**Ann Clin Paediatr 2010, 57(4):411-416**)*

Key words: Adolescence, puberty, youth

INTRODUCTION

It has been said that the origin of “Adolescence” lies in the work of the Greek gods over millions of years ago. One satirical (“tongue-in-cheek”) theory notes that Zeus called a meeting of the Greek gods of Olympus millions of years ago. Present at this meeting of antiquity were Zeus, Hera, Poseidon, Ares, Hermes, Hephaestus, Aphrodite, Athena, Apollo, and Artemis. Zeus appointed Poseidon as Chair of a subcommittee to establish the presence of a “Teenager” who would constantly annoy the adults and provide the bored Greek gods with much needed amusement and laughter. Members of this subcommittee were Poseidon, Aphrodite, Athena, and Artemis. Poseidon and his group were charged with finding the

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species of animal life on earth that would provide the maximum amusement to the gods. Ganymedes was appointed as a special consultant to Poseidon in light of the special experiences and knowledge of youth posed by Ganymedes.

After millions of years of research, Poseidon asked Zeus for a meeting in order to present his preliminary report. In this meeting to all those at the original meeting of the gods, said to have been held 50 million years ago, it was decided that the Hominoid species on earth would be the best group of life to have the maximum problems with its youth but the exact Hominoid species was yet to be chosen. The subcommittee report concluded that more time was needed for study and research in this matter and Poseidon along with his subcommittee was granted more time. Approximately 500,000 years ago another full meeting was held of these Greek gods and Poseidon announced that *Homo sapiens sapiens* was chosen since this species would have the most adult-youth conflicts and would present the Greek gods with the most amusement of all the life on earth.

The center of this contention was that *Homo sapiens* had a most interesting developmental period called Adolescence (Teenager) that was necessary for all of these species to enter after childhood in order for the adult version to emerge. The key to this development was that this teenager would be seen as being disobedient and disrespectful to the adults of this species, causing an unending amount of conflict and anger in *Homo sapiens* adults with an unending, incessant, and seemingly unremitting amount of amusement to the Greek gods. Zeus thanked Poseidon and his subcommittee for their work and the last 100,000 years of the life of *Homo sapiens sapiens* has born out the veracity of their conclusions. The issue for my consideration today in my presentation is how this conflict was achieved so successfully.

OBSERVATIONS ON ADOLESCENCE IN HOMO SAPIENS

Pre-Greek observations

For millions of years hominoid and pre-hominoid species were in the “wandering hunter’s” milieu in which life was spent hunting prey for food and children of a species were forced to leave the “home” as soon as possible in order to reduce the competition for food. This was the rule for much of *Homo sapiens* existence on earth until approximately

10,000 BCE when agriculture was discovered as a way of preparing food instead of relying on animals for human’s only food. When *Homo sapiens* learned to grow food, it was advantageous for the children to stay longer in the primary group to help with the growing and gathering of this precious necessity—food for life. This set the stage for major conflicts between parents and their children since the offspring were with the parents for many more years than previously over thousands of years. One concern that adults have often had about children is their need to disobey parents as they exist during the adolescent years. Adults may have appreciated the extra help in growing and gathering food but certainly not the added conflicts that this increased association seemed to bring.

Homo sapiens emerged from antiquity over 60,000 years ago¹. Thousands of years characterized by this conflict between adults and youth resulted in adults seeking ways to force obedience from their young. One of the earliest reflections of this concern can be found in the Code of Hammurabi (1796 to 1750 BC) that states: “Cut off the hand of a son if he slaps the father”. Further examples of this concern can be found in various verses of the Old Testament. For example, Leviticus 20:9 (1500 BC) states: “If anyone curses his father or mother, he must be put to death...”. Leviticus 24:13-23 relates the death of a youth from stoning because he cursed. Indeed, the Greek gods must have been quite amused by such anger between society and these parents with their youth!

Ancient Greek observations

The great blind Greek poet, Homer, commented on adolescence in both his classic works, *Iliad* and *Odyssey*: “Youth is quick in temper, but weak in judgment (*Iliad*, 800 BC). He also noted that “It is shameful for the young to question their elders (*Odyssey*, 800 BC). This deep and pervasive concern with the teenager as created by Poseidon continued with the words of the great Greek poet, Hesiod (700 BC) who lamented: “I see no hope for the future of our people if we are dependent on the frivolous youth of today...for certainly all youth are reckless beyond words”². Hesiod, in a view consistent with future generations of adults, also noted that “when I was a boy, we were exceedingly wise”. Such a lament reflects the classic position of adults that their youth are hopeless though they were fine as youth—a lament again adding to the enjoyment of Zeus and

his colleagues on Mount Olympus. By the time of the early Greek civilization, one can see through the “eyes” of its classic poets that the subcommittee’s work was being realized to great perfection.

Perhaps nothing added more to Olympian gods’ laughter than the persistent concern of human adults with the sexuality of their youth. The revered Father of Western medicine, Hippocrates (460 to 377 BC) from the island of Cos taught that excessive sexual activity (including masturbation) was a serious problem for Greek teenagers of his day^{3,4}. The great Greek philosopher of antiquity, Plato (427 BC to 347 BC) complained about youth in his classic work, *The Republic*, that “The son feels equal to his father, he has no respect for his parents anymore...all he wants to be is free...students insult their teachers...and on top of this situation, in the name of liberty and equality, sex is everywhere”. In Plato’s work, *Laws*, he noted that “youth” was synonymous with “passion” and that adolescents or youth were strong willed and easily sexually excited; he warned the Greek society of his day to keep wine away from youth, because it was like adding “fire to fire”⁴. This concern with the uncontrolled sexual behavior of adolescents has been a constant worry of adults as also reflected in the Plato’s great pupil, Aristotle (384-322 BC) who noted in his classic, *Rhetorica*, that: “The young are in character prone to desire and ready to carry any desire they have into action...in regard to sexual desire, they exercise no restraint”.

Observations of Galen

Claudius Galen (130-210 AD) was the revered Greek physician of the gladiators and upper class of ancient Rome and he linked many diseases to the practice of masturbation in youth. In 130 AD Galen solemnly warned adults to prevent youth from masturbating — “watch carefully over this young man, leave him alone neither night nor day; at least sleep in his chamber. When he has contracted this fatal habit (i.e., masturbation), the most fatal to which a young man can be subject, he will carry its painful effects to the tomb — his mind and body will always be enervated”⁵. This observation has influenced Western medicine for the past two millennia inciting masturbation as the cause for a wide variety of medical and psychological disorders, including epilepsy, acne, depression, and many more⁵. Again, one can see how well Poseidon and his group accomplished their assigned task from Zeus!

The dark ages

The fall of the Roman Empire in the fifth century AD plunged Western civilization into a millennium of limited, inactive desire for new scientific knowledge and progress. The persistent concern of adult society with the disobedience and sexuality of youth continued, much to the delight of the observing Greek gods. A textbook (*De Myliarium Passioni-bus*) authored in 1050 AD by Trutula (known as the wife of John Platearius) noted that teenagers had problems with sexuality that caused medical problems⁶. Treatment included that one should tie their hands behind their backs and forcing them to drink hot water—a method also recommended by Bernard, the Provençal in 1155 AD⁶.

Observations of the English

Geoffrey Chaucer (1340-1400 AD), one of the great poets of the English language, referred to youth as frivolous beings (similar to Hesiod’s lament) who were obsessed with negative non-adult traits such as playing musical instruments, singing, and ignoring the future. In his classic, *Prologue to Canterbury Tales*, he laments that teenagers are wild, out-of-control sexual beings (in the vein of Plato) that “so hot, he (youth) loved that at nighttime, he slept no more than does a nightingale”^{7,11}. Sir Thomas More (1478-1535) was an English scholar who noted in his classic work, *Utopia*, (1516), that a smooth period of adolescence could be induced by providing a good education and parenting that avoided the often stated advice of badgering youth to behave⁷. Sir More advised females to marry at age 18 (shortly after their menarche) and advised males to marry around age 22 years⁸.

This negative description of youth was continued by William Shakespeare (1564-1631). For example, in his *Henry the IV, King Henry* blames his son’s negative actions on his being a teenager. Shakespeare’s *Romeo and Juliet* describes the expected impulsivity and out-of-control behavior of teen love while linking the impulsivity and obsession with love to teen suicide⁷. Much to the delight of the Greek gods, in his classic, *A Winter’s Tale*, Shakespeare continues the lament of the ages: “I would that thee were no age between ten and three and twenty or that youth would simply sleep out the rest; for there is nothing in-between but getting wenches with child, wronging the ancestry, stealing, and fighting”⁹.

George Chapman was a Welsh poet, orator,

and Anglican priest, whose classic work, *All Fools* (1605), concluded that “Young men think old men are fools, but old men know young men are fools.” Lord Byron (1788-1824) was an English poet and major figure of the period called Romanticism. He was a Greek hero who fought in the Greek war of independence and died in Greece in 1824. In one of his classic works, *Beppo* (1818), he opined: “What would youth be without love?” Robert Browning (1812-1889) was a major English poet and playwright of the Victorian Era and noted in agreement with Lord Byron: “Youth means love”¹⁰. John A. Symmonds was an English poet and literary critic whose classic work, *Gaudeamus Igitur* (1881) celebrated youth with the time-honored refrain:

*“Let us live then, and be glad
While young life’s before us
After youthful pastime had,
After old age hard and sad,
Earth will slumber over us”*¹¹.

This observation about youth can be found in writers of other countries, such as the German essayist, Heinrich Heine (1797-1856) who noted:

*“Gone are the games of childhood,
And gone forever is youth;
And gone is the world that was kind to us,
And love, and faith, and truth”*¹².

Robert Lewis Stevenson (1850-1894) was a famous Scottish novelist, poet, and travel writer whose long hair as a teenager and rejection of his parents’ religion caused much consternation in his family, much like many youth of today and all ages. Stevenson lamented:

*“What a curse I am to my parents,
My father said: You have rendered my whole life
a failure!
My mother said: You are the heaviest affliction to
befall me!
And love, and faith, and truth”*¹³.

Stevenson also noted described the glories of being young:

*“Youth is the time to go flashing,
From one end of the world to the other
Both in mind and body,
To try the manners of different nations;
To hear the chimes at midnight”*¹³.

Observations of the Americans

Henry Wadsworth Longfellow (1807-1882) was a

well-known American poet and educator whose classic work, *Morituri Salutamus* (1875) exalted:

*“How beautiful is youth!
How bright it gleams
With its illusions, aspirations, and dreams!
Book of beginnings, story without end!
Each maid a heroine, each man a friend!”*¹⁴

Joseph Conrad, in his classic work, *Youth*, notes:

*“I remember my youth, and the feeling
That will never come back anymore...
The feeling that I could last forever,
Outlast the sea, the earth, and all men!”*¹⁵

James Russell Lowell (1819-1891) was an American poet, critic, editor, and diplomat who as a youth was often in trouble with the adult society of his time. In an oration in 1886 entitled, *Cambridge Address*, he noted: “If youth be a defect, it is one we outgrowth only too soon!”

It was G. Stanley Hall (1844-1924) who stimulated the actual study of youth as a credible research topic. Hall was the first PhD in psychology in the United States and wrote a two volume treatise called *Adolescence* (1904)¹⁶. He coined the classic German phrase “*Sturm und Drang*” to emphasize that youth can go through a difficult time called “storm and stress”, noting that teenagers may have a difficult time before emerging into adults¹⁶. His work stimulated the interest of others in this topic in the 20th century. His work also revealed that many youth have an altruistic nature seeking to help others. Such a positive attribute did not please the Greek gods as they were looking for negativity and such positivity! The Greek gods were very good at elevating perceived “negative” aspects of youth that seemed to drown out their very positive sides! It is said that Poseidon felt that Ganymedes’ guidance was invaluable in this regard!

The first medical clinic for college students in the United States was in 1918 at Stanford University in California. The first medical clinic for adolescents in the United States was developed in 1954 in Boston, Massachusetts, USA by an internal medicine specialist, J.R. Gallagher MD; he was also the senior editor of the first English textbook of Adolescent Medicine (*Ephibiatics*) that had three editions: 1960, 1966, and 1976¹⁷⁻¹⁹. He is honored as the Father of the field of Adolescent Medicine in the USA and he, in the spirit of Hippocrates, emphasized the technique of observations of patients (adolescents for Gallagher) that included direct interviews of

teenagers in contrast to the physician standard of only talking with parents.

The next major figure in adolescent medicine in America was Adele D. Hofmann MD, a Professor of Pediatrics from New York University who published the next textbook of adolescent medicine that also had three editions: 1983, 1989, and 1997²⁰⁻²².

Professor Hofmann, in her first edition, noted that "Adolescent Medicine is comprised of that body of knowledge and set of skills necessary to meet the primary health care needs of young people from the onset of puberty to the acquisition of autonomous adulthood, or approximately from 10-21 years of age. The parameters of this discipline encompass a broad range of issues varying from the biological to the psychosocial and from prevention to remediation of specific health problems"²⁰. An additional edition was published in 2006 dedicated to her spirit and contributions in adolescent medicine²³. Supplementing this development as adolescent medicine as a recognized discipline was the monumental work by the US National Institutes of Mental Health Longitudinal Brain Imaging Project utilizing brain scans from 1989 to the present to demonstrate the change of the brain from childhood to adolescence to adulthood²⁴.

CONCLUSIONS

Poets have observed actions and behaviors of adolescents for thousands of years. Research of the 20th and now 21st centuries have allowed increased understanding of why youth behave the way they do and in a manner that irritates adult society. We have learned that adolescence is the critical process in which the individual leaves the dependency of childhood and enters a period in which dramatic changes occur, eventually resulting in what society calls adulthood²³. It is a complex developmental time which involves profound sociological, psychological and physiological issues. It is a unique bridge which accepts the achievements of childhood and sets in motion the changes necessary to establish adulthood. Since the goal of this period is to develop an adult who is autonomous and capable of functioning at intellectual, sexual, and vocational levels which are acceptable to society, anyone interested in children or adults should be interested in adolescents even if not agreeing with all of the actions of youth.

In early adolescence the brain undergoes significant changes under the influence of pubertal

hormones, as estrogen and testosterone. There is considerable growth of the brain, including central nervous system areas which control impulse control and social behavior. Other parts of the body also undergo profound change. Hormonal changes may intensify between ages 10 and 14 years of age inducing changes in physical and psychological growth. In early adolescence (ages 10-13), while the process of puberty is intense, proliferation of gray matter in the brain occurs, concrete thought process is dominant, youth seeks out peers over their parents, and the process of becoming an adult has really started—often to the objections of poets and parents of all civilizations! High risk behavior becomes common in many youth—behavior often lamented by poets from Hesiod to Homer to Plato to Shakespeare!

In Middle Adolescence (14 to 17 or 18 years of age), secondary sexual characteristics become advanced, height is finishing, unnecessary brain cells die in a process called pruning or sculpturing, abstract thought develops, and a sense of omnipotence ("magical thinking") occurs in which the youth seeks high risk behavior while believing that no harm will result. There is also a sense of altruism in many youth as noted before. The concepts of abstract thought process was developed by Jean Piaget (1896-1980) based on pioneering work of Comenius (1592-1670) and John Locke (1632-1704)⁸. Parents and poets alike become even more concerned with such behavior that is actually normal for most youth. Eventually an adult-like individual appears in Late Adolescence (ages 18 to 21) who eventually takes his or her place in society. Many potential problems, medical and/or psychological, await this youth as s/he heads toward adulthood and independence.

Changes in the central nervous system are finalized in the 3rd decade of life even though puberty begins in the 2nd decade of life. Final brain development does not occur until the 3rd decade of life in which Homo sapiens is capable of avoiding high risk behavior. The Prefrontal Cortex has an executive function and tells the individual to avoid high risk behavior. This area of the central nervous system is responsible for rational, executive brain functions that allow logical control of behavior to organize thoughts, weight consequences of actions, assume responsibility for actions, and interpret emotions. Parents and society are left in a state of disbelief at the negative behavior of youth who must wait 10 to 15 years for brain development to catch up with

hormonal development resulting in much consternation among the adults of Homo sapiens and surely much amusement among the Greek gods. The request of Zeus certainly was fulfilled!

*O Youth with sorrows laden,
Go not go quickly by,
Have pity and remember,
How soon they roses die*
(O W Peach)

*Who loves not knowledge?
Who shall rail against her beauty?
May she mix with men and prosper!
Who shall fix her pillars? Let her work prevail.*
(In Memoriam, CXIV, Tennyson)¹

REFERENCES

1. *Magner LN*. A History of the Life Sciences. 3rd Ed. NY: Marcel Decker, page 502, 2002.
2. *Hare EH*. Masturbation insanity: The history of an idea. *J Ment Sci* 1962; 108:1.
3. *Greydanus DE*. Adolescent sexuality: An overview and perspective. *Pediatr Ann* 1982; 11:714-26.
4. *Violato C*. "History of adolescents" In: Friedman SB, Fischer M, Schonberg S (eds): *Comprehensive Adolescent Health Care*. St Louis (MO): Quality Medical Publishers 1992; 3-6.
5. *Greydanus DE, Geller B*. Masturbation: historic perspective. *NY State J Med* 1980; 80:1892-6.
6. *Park R*. An Epitome of the History of Medicine. Philadelphia, PA: FA Davis, 1897.
7. *Violato C, Wiley AJ*. Images of adolescence in English literature: the Middle Ages to the modern period. *Adolescence* 1990; 25:253-65.
8. *Ares P*. Centuries of childhood. NY: Vintage Publishers, 1962.
9. *Shakespeare William*. A Winter's Tale, 1602.
10. *Browning R*. The Ring and the Book, 1868.
11. *Symmonds JA*. Gaudeamus Igitur, 1881.
12. *Heine H*. Mein Kind, Wir waren Kinder, 1827.
13. *Stevenson Robert Lewis*. Virginibus Puerisque, 1881.
14. *Longfellow Henry Wadsworth*. Morituri Salutamus (1875).
15. *Conrad, Joseph*. Youth, 1902.
16. *Hall, Stanley G*. Adolescence: its psychology and its relationship to physiology, anthropology, sociology, sex, crime, religion, and education. NY: D. Appleton and Company, two volumes, 1904.
17. *Gallagher JR*. Medical Care of the Adolescent, First Edition. NY: Appleton-Century-Crofts 1960.
18. *Gallagher JR*. The origins, development, and goals of adolescent medicine. 1982; 3:57-63.
19. *Gallagher JR, Heald FP, Garell DC (Eds)*. Medical Care of the Adolescent, Third Edition. NY:Appleton-Century-Crofts 1976; 774.
20. *Hofmann AD*. Adolescent Medicine. Menlo Park, CA: Addison-Wesley Publishing Co 1983; 448.
21. *Hofmann AD, Greydanus DE*. Adolescent Medicine, 2nd Edition. Stamford, CT: Appleton & Lange 1989; 631.
22. *Hofmann AD, Greydanus DE*. Adolescent Medicine. Stamford, CT: Appleton & Lange, 1997;913.
23. *Greydanus DE, Patel Dr, Pratt HD (eds)*. Essential Adolescent Medicine, NY: McGraw-Hill Medical Publishers, 2006; 805.
24. *Evans AC & the Brain Development Cooperative Group*. The NIH MRI study of normal brain development. *NeuroImage* 2006; 30 (1):184-202.