



Psychology

Extended Essay Exemplars 2009

IBO Extended Essay Exemplars - Psychology 2009

Examiner's Report 2009

What students did right & wrong according to the marking criteria.

Exemplar 1

Narcissistic personality disorder: nature overpowered by nurture effect.

Grade 33/36

Exemplar 2

The psychobiology of aggression.

Grade 26/36

Exemplar 3

Should the use of subliminal messaging in advertising be allowed?

Grade 21/36

Exemplar 4

ADHD - disease or parental deficit?

Grade 10/36

PSYCHOLOGY

Overall grade boundaries

Grade:	E	D	C	B	A
Mark range:	0 - 7	8 - 15	16 - 22	23 - 28	29 - 36

The range and suitability of the work submitted

There was a wide range of topics chosen. Encouragement to engage with less explored areas of psychology provided the best candidates with the chance to investigate new and possibly more controversial areas of psychology. As a result, there were several essays of outstanding quality. These were a pleasure to read.

There was however a wide gulf between the most and least successful essays. Often the difference between these two ends of the mark spectrum was caused by the variable degree of attention paid to the current Diploma Programme Guide for Psychology. The guide must be used as reference for an understanding of subject methodology.

Candidate performance against each criterion

A: research question

At an early stage in the Extended essay guide students are advised to “formulate a well-focused research question.” Many did just this but others did not. The latter either failed to present an identifiable research question or made the question so general and over ambitious that they had no chance of addressing it competently.

B: introduction

There were many over ambitious essays where the focus was too broad and this made it difficult to place the research question in a context. In some of the essays, the context was even ignored and it was difficult for examiners to find sufficient relevance to justify the essay as psychological in nature.

C: investigation

The best essays used a wide range of sources and were well planned. The least successful essays used a narrow range of sources and showed little evidence of planning.

D: knowledge and understanding of the topic studied

There were many essays that looked at new areas of psychology but some of these tended to lack sufficient depth of understanding, knowledge or evaluation. Often a more straight forward topic choice would have led to greater success.

E: reasoned argument

Candidates who seek to promote an argument are also expected to support claims with evidence from appropriate psychological research. There should be an outline of an academic context into which the knowledge and understanding of the essay topic can be firmly located.

F: application of analytical and evaluative skills appropriate to the subject

Candidates are expected to show analytical and evaluative skills in the reasoned argument that they present in their essays. Whilst the more able exponents of essay writing were able to use such skills effectively there were some who seemed to ignore these necessary attributes in their work. Analysis can lead to evaluation that is either negative or positive. It is rare for a psychological topic to be entirely at one end of a polarity resulting from an appropriate analysis.

G: use of language appropriate to the subject

Use of language and terminology, and clear means of communication are essential to reach the higher levels in this criterion. Candidates who were absorbed by their chosen topic showed it by their use of appropriate terminology. It was as though their growing familiarity with their subject matter had been sub-consciously absorbed and subsequently interpreted in their own writing.

H: conclusion

The best conclusions were pertinent to the research question and analysis. The weakest conclusions showed little or no connection with the research area or analysis.

I: formal presentation

Formal presentation and the creation of an abstract are among the more mechanistic of tasks required for an Extended Essay, yet both seem to present undue difficulty for candidates.

Students need to be disciplined in creating their reference and/or bibliography sections as they write their essays. Many cited psychological research in the body of their essays yet often fail to acknowledge their sources.

J: abstract

An abstract should be written after the essay has been completed; it should not refer to what will be done but what has been done in the essay. It should enable the reader to anticipate the arguments presented and the conclusion of its findings.

K: holistic judgment

The degree of enthusiasm and engagement of the student is measured in this criterion. This may come through in the essay itself but the supervisor's report is also important as it provides the examiner with invaluable background information.

Recommendations for the supervision of future candidates

Although the construction of the essay may be slightly flexible, as research proceeds it is of benefit of the student if the essay construction is in place before the.

Pay close attention to the criteria making sure that all candidates have access to them and understand their demands

This report should be read in conjunction with the May 2009 extended essay report in psychology



International
Baccalaureate

Sample A

Extended essay cover

Candidates must complete this page and then give this cover and their final version of the extended essay to their supervisor.									
Candidate session number									
Candidate name									
School number					0	0			
School name									
Examination session (May or November)			MAY		Year		2009		

Diploma Programme subject in which this extended essay is registered: <u>PSYCHOLOGY</u>
(For an extended essay in the area of languages, state the language and whether it is group 1 or group 2.)

Title of the extended essay: NARCISSISTIC PERSONALITY DISORDER.
NATURE OVERPOWERED BY NURTURE EFFECT

Candidate's declaration

If this declaration is not signed by the candidate the extended essay will not be assessed.

The extended essay I am submitting is my own work (apart from guidance allowed by the International Baccalaureate).

I have acknowledged each use of the words, graphics or ideas of another person, whether written, oral or visual.

I am aware that the word limit for all extended essays is 4000 words and that examiners are not required to read beyond this limit.

This is the final version of my extended essay.

Candidate's signature: _____ Date: 01 DEC. 2008

IB Cardiff use only:

A:

B:

Supervisor's report

The supervisor must complete the report below and then give the final version of the extended essay, with this cover attached, to the Diploma Programme coordinator. The supervisor must sign this report; otherwise the extended essay will not be assessed and may be returned to the school.

Name of supervisor (CAPITAL letters) _____

Comments

Please comment, as appropriate, on the candidate's performance, the context in which the candidate undertook the research for the extended essay, any difficulties encountered and how these were overcome (see page 13 of the extended essay guide). The concluding interview (viva voce) may provide useful information. These comments can help the examiner award a level for criterion K (holistic judgment). Do not comment on any adverse personal circumstances that may have affected the candidate. If the amount of time spent with the candidate was zero, you must explain this, in particular how it was then possible to authenticate the essay as the candidate's own work. You may attach an additional sheet if there is insufficient space here.

Please see attached comments

have read the final version of the extended essay that will be submitted to the examiner.

To the best of my knowledge, the extended essay is the authentic work of the candidate.

spent 7.5 hours with the candidate discussing the progress of the extended essay.

Supervisor's signature: _____

Date: 1/7/08

Student Name:

Subject: Psychology

Candidate Number:

Supervisor:

Exam Session: May 2009

Comments:

has presented a unique psychoanalytical and pathological question, investigating the etiology and prevalence of narcissistic personality disorder (NPD). While her Extended Essay is verbose in terms of a scientific research paper, the essay is also well organized, properly researched and cited, and analytically savvy. The most interesting aspect of her research consisted of the contradiction presented by the beneficial characteristics of NPD from the evolutionary perspective compared to the detrimental dysfunctional characteristics of the disorder. is grateful for the Extended Essay experience, since it has allowed her to establish efficient time management skills and developed proper research abilities that she will be able to utilize at the collegiate level. In conclusion, has a sufficient product and is confident she will not receive a mark lower than *Excellent*. ✓

IB Psychology

Narcissistic Personality Disorder: Nature Overpowered by Nurture Effect

Psychology Extended Essay ✓

Session: May 2009

Word Count: 3,982

Abstract

This research paper sought to investigate the theoretical differences among the biological and sociological factors that trigger the Narcissistic Personality Disorder (NPD). As supported by research obtained from psychoanalysts and research studies, both biological and sociological factors (defined in the realm of psychology as the nature vs. nurture effect) are co-dependent of each other when it comes to the development of NPD. Yet, the pioneers in the study of narcissism such as Freud, among others, attribute the “innate” state of narcissism (as they summon up) to evolve into NPD primarily due to nurture influences. Hypothetical causes and results retrieved from longitudinal correlation studies ~~proved~~^{showed} that NPD was developed after traumatic events occurred to the participants in which exorbitant lack of care by loved ones predominated. The question then becomes, to what extent do nurture influences overpower and ~~per~~ undermine genetic vulnerability to the NPD pathology and inheritance of personality? These findings support the argument exerted in this research paper in which nurture or sociological factors involving the environment of the individual overshadow any genetic or nature influence that prompt NPD. ✓

Word Count: 179

Table of Contents

Title Page.....	1
Abstract.....	2
Table of Contents.....	3
Extended Essay.....	4-16
Works Cited.....	17-18

Narcissistic Personality Disorder: Nature Overpowered by Nurture Effect

Narcissism, defined as excessive self-love and self-admiration based on one's own ego, was first used in relation to human thought and behavior by Sigmund Freud on his 1914 essay, "On Narcissism" (Freud, 1914). This egocentric human behavior has traces dating back to the Greco-Roman society through mythology. Psychoanalysts have been intrigued by ages with the Greco-Roman society for being able to capture human intrapsychic life, evolution, and conflicts all recompiled in the art and symbol of myths (Javanbakht, 2006). The prelude to all Freudian theories on narcissism and to any clinical research leading to the classification of any pathology in relation to narcissism, lays on the myth of Narcissus. Narcissus was a Greek young man renowned for his beauty and also the son of a river god and a nymph (Nadelson, 2000). A nymph Echo falls in love with Narcissus, but he rejects her love and as consequence the gods grew angry with him. They caused him to fall in love with his own reflection in the waters of a river (Nadelson, 2000). As he gazed at his captivating but inaccessible image, Narcissus fell into the water and died (Javanbakht, 2006). While the Freudian Theory of Narcissism claims that self-love might be a component in the human psyche, Narcissus' tragic end gives light to the extreme and dysfunctional form of narcissism^{that} Heinz Kohut labels pathology through the Narcissistic Personality Disorder (NPD). NPD is a personality disorder that drives the person with NPD to have an inflated sense of their own importance and a deep need for admiration to one's self (Narcissistic Personality Disorder, 2007). The etiology of NPD is unknown and pinpointing the cause to one, diminishes its complexity. There might be a genetic vulnerability to developing NPD as suggested by Livesley et al's paper "Genetic and environmental contributions to dimensions of personality disorder"(1993), whereas there is evidence that links the cause of NPD

to a dysfunctional childhood correlated to environmental components that shape a personality, as argued by German psychiatrist Karen Horney. ✓

According to Javanbakht and many of the most renowned psychoanalysts as Horney, Kohut, and Kernberg all pioneers towards the classification of NPD, this disorder and the awe of narcissism does not lay in a shallow observance of an individual's over-exorbitance to love one's self; but rather in the factors that trigger this behavior in the psyche thus leading to debatable theories on the acquisition of NPD and the inheritability of personalities based on the nature vs. nurture effect. The myth of Narcissus was critical to psychoanalysts studying the psychosocial development theory because it proved that there is consistency in humans' behavior. This consistency alluded to a pattern that justifies the presence of certain characteristics in humans; suggesting they must be innate characteristics. As the brain matures so will these innate characteristics, sprouting slowly until each stage is grown out of through the psychosocial development. ✓

Defending a uniform behavioral pattern, Freud incorporates the biological perspective combining both physiological and psychological factors towards the projection of behavior, in his 1914 essay "On Narcissism: An Introduction". This natural inclination of self-love is regarded by Freud as primary narcissism in the Freudian Theory of Narcissism. More specifically, Freud defined primary narcissism as the complimentary sexual drive to the ego, thus ego-libido, rather than to others, object-libido. ✓ While Freud does incorporate biological components through a universal age of ego and narcissistic acquisition, the means on which an individual's ego and narcissistic value is acquired is attributed to external stimuli; thus validating social psychology ideals. Freud argued that the ego universally develops during infancy, as an individual's environment, influenced primarily by parental figures, intrudes in ^{his} primary ✓

narcissism. Through observation the individual knows the standards set-up in his surroundings and can now work to form the ideal ego, a perfect image of what the ego should aspire to be driven by instincts to survive in regards to the environment and prompted by the object-libido, love to others and love wanted from others. ✓

Yet, Freud draws attention to the disruption in his universal arousal stage of ego development and narcissistic formation, through what he calls secondary narcissism. According to Freud, the normal build-up of narcissism on the child occurs as the child constantly gives self-love to people and objects, the first of which is the mother because the exchange of self-love will be compensated by affection and caring returned to the child (Freud, 1914). In other words the object-libido compliments and replenishes the ego libido. However, a disruption in this symbiotic relationship between the exchanges of object-libido to replenish the ego-libido triggers the pathological condition as the child is only giving self-love expecting his ego-libido to be boosted when in reality there is only the lack of. The extreme form of the pathological condition of narcissism, according to Freud is when the libido withdraws completely from objects that are not the self (Pines, 1982); a complete indulgence in the individual's ego-libido and in the case of NPD the search to fuel the ego-libido with no exchange through the object-libido. ✓

A personality disorder is the term applied to a mental illness in which the course of thinking, perceiving situations and relating to others are dysfunctional. Having a personality disorder means you have a potentially self-destructive pattern of thinking. Kohut believed that after NPD was triggered by a traumatic event in relation to the disillusionment that resulted from the idealization of the parent, then NPD became a component in the development of resilience. ✓ Thus, by creating a protective shield hidden by an over-indulgence on the self, there is a self-destructive pattern of thinking as the actual ego-libido is weak and vulnerable to external stimuli.

The lack of empathy is a characteristic of NPD, and sufferers find it difficult to understand others' and their own emotional states. This makes maintaining close or intimate relationships harder (Bjorklund, 2000). Depending on the severity, some might find it difficult to perceive or admit this; as after all the level of grandiosity and arrogance vary with the person's value system and are subjective to each NPD case. Hallmark characteristics by NPD patients include: ✓

- Rationalization a justification for the self-centered behavior,
- Overreactive response to criticism,
- Exaggeration to one's own importance,
- Inventing unrealistic events to fuel exaltation to one's self,
- Seeking constant attention and positive reinforcement,
- Explosive nature,
- Arrogant and proud behavior,
- Using denial as medium to weaken inadequacies, reverse psychology; and
- Being easily jealous . ✓

The Diagnostic and Statistical Manual of Mental Disorders (DSM-IV), defines NPD as "a pervasive pattern of grandiosity, need for admiration, and a lack of empathy." (DSM, 1994) Within personality disorders, NPD falls under cluster B on the DSM-IV criteria, which are personality disorders characterized by dramatic, overly emotional behavior. The epidemiology of NPD is estimated at 1% in the general population and in the clinical population between the range of 2% to 16%. In order to be clinically diagnosed with NPD, at least five of the following must be met (DSM, 1994): ✓

- Believes that he or she is special and unique
- Having a grandiose sense of self-importance

- Requires excessive admiration
- Worries about fantasies of infinite power, success, or beauty
- Believes in a sense of privilege
- Is interpersonally abusive
- Lacks empathy
- Is envious of others, or contradictory believes others are envious of him
- Displays arrogant or conceited behavior ✓

NPD is an uncommon personality disorder affecting less than one percent in the United States. It affects more men than women. NPD usual age of onset is during early adulthood. Although some adolescents may seem to have traits of narcissism, yet this is normal and regarded as healthy narcissism. Healthy narcissism exists in all individuals. Freud says that healthy narcissism is the original state from which the love object is developed and an essential part in normal development. The feeling of greatness and satisfaction come as product of healthy narcissism in which structural truthfulness of the self is achieved (Mayo Clinic, 2008). ✓

Personality is the combination of thoughts, emotions and behaviors that makes an individual, individual. It is the medium to view, understand and relate to the outside world or external stimuli, as well as introspectively. Although there are several hypothetical causes to NPD such as: an oversensitive temper at birth, overindulgence and overvaluation by parents, excessive admiration that is never balanced with constructive criticism, and severe emotional childhood abuse; there are only two main strong causes that have been correlated to NPD and these are inherited tendencies and the environment. Inherited tendencies or a person's genetics, embodies the aspects of personality passed on my parents, and it is the nature aspect of the nature vs. nurture debate. ✓ The environment is the surroundings and individual grows up in, events that

took place, and personal relationships with family members and other social interactions. For the most part its influence on triggering NPD focuses on the type of parenting such as abusive or loving; this is the nurture part of the nature vs. nurture debate. This supports Kohut's theory that an ideal parent figure is essential in the development of narcissism or the self-esteem development of an individual. If any traumatic event occurs at this stage then damage occurs in this psyche characteristic, and thus exerts influence to the degree that narcissism becomes and outgrown characteristic and permanent in the ego. ✓

The findings published by Livesley et. al (1993), concluded that NPD had a 64% heritability rate and thus was a common inherited trait when compared to the other personality disorders being assessed through a standardized test, the Dimensional Assessment of Personality Pathology. The subjects from the sample population were 175 volunteer twin pairs from the general population, of which 90 were identical twins and 85 fraternal. Yet, the validity of this study is undermined when there is no consistency in the subjects tested using both fraternal and identical twins; and thus this study fails in delivering the inheritance probability accurately with respect to pathological personality disorders. In addition, the journal article published does not mention if the subjects had any personality disorder or if their parents had any personality disorder. As well, a standardized test might fail to control all external variables and thus increase the margin of error. Thus, this study cannot assert validity to the biological component in the inheritance of personality or personality disorders; thus it is not enough to support the nature component of the nature vs. nurture debate. ✓

ref. article p. 17/18

Contrary to the Freudian Narcissism Theory, Karen Horney a German psychiatrist began to develop her own theory of psychoanalysis in the late 1930s. Although she acknowledged Freud's work and respected him considering him the founder of psychoanalysis, she was very

tentative and critical of his work arguing that opposed to unconscious drives in the psyche, personality is shaped mainly by social, cultural and environmental factors. Horney felt Freud was wrong to assume the relationships, attitudes and feelings common in his culture, thus local and not generalized, were driven by biological factors and applied universally. Thus, Freud and Horney embody a nature vs. nurture conflict in which Horney did not posit or address a primary narcissism but saw the narcissistic personality as the product of a certain kind of early environment acting on a certain type of temperament (Paris, 1994). For her, narcissistic needs and tendencies are not inherent in human nature but rather develop as the role of praise is furthered in the life of a child; positive reinforcement. ✓ Although Freud argues that narcissism is highly correlated to biological or nature stimulus, Horney argues that environmental factors thus nurture exert greater influence on narcissism which I believe is true. Environmental factors thus nurture exert greater influence in NPD than do biological factors, as environmental factors will inhibit individual's from growing out their narcissistic outlook and thus any trauma during Freud's argued "critical periods" will those lead to an intensification in the present characteristics to the point of achieving NPD and thus Horney does corroborate Freud's theory. ✓

Supporting the nature stimulus of NPD, and furthering Freud's perspective, is Heinz Kohut a Viennese physician and psychiatrist. Best known for his development of Self Psychology, that introduces a psychoanalytic theory within the psychodynamic field, he said that a child will tend to fantasize about having grandiose self and ideal parents (Kohut, 1966). Kohut extended his idea by theorizing that as we mature, grandiosity gives way to self-esteem, and the idealization of the parent become the framework for core values. But, as Freud asserted, when trauma disrupts this process the most primitive and narcissistic version of the self remains unchanged. Kohut was the one to call this condition NPD (Kohut, 1966). Likewise to Freud,

Kohut claims that there is a relationship and connection between the ego's formation and external stimulus that is natural in human beings and that one is suppose to grow out of, yet individuals that don't may develop NPD. Yet, Kohut is more specific in noting the external stimulus as a child's grandiose fantasy of the ideal parents. In this process the parents exert the greater stimulus on the child's self-esteem rather than in itself, as Freud suggested, because the parent serves and functions as a protective shield to the child. Yet, by stating this both Kohut and Freud indirectly to admit that although narcissism can be a natural characteristics we are all born with and present in the psyche, there must be a stimulus that according to its degree of severity, will harm the individual by inhibiting to grow out of or overcome narcissism. Such stimulus may be highly affected and altered by nurture components that thus give the nurture perspective a higher degree of spur towards the potential of developing NPD. Kohut supports nurture's influence by acknowledging narcissism being part of a stage in normal development, in which caregivers provide a strong and protective presence for the child to identify with and reinforce his growing sense by seeking a figure to mirror his good qualities. If the caregiver fails to provide this adequately, the individual's self-concept is flawed (Kohut, 1966). ✓

In accordance to Kohut's point of view, Otto Kernberg a psychoanalyst believes that narcissism refers to the role of self in the regulation of self-esteem. He regarded normal, infantile Narcissism to be dependent on the affirmation of others and the acquisition of desirable and appealing objects, which should later develop into a healthy and mature self-esteem (Consollini, 1999). Once more, referring to the idea of children learning empirically, through observations, Kernberg emphasizes that a healthy narcissism is only such when dependent upon an integrated sense of self, that incorporates images of the internalized affirmation of those close to us and such is regulated by the super ego and ego ideal, internal mental structures that assure and ✓

individual's value of its own worth and respect. Kernberg claims that when infantile narcissism fails to develop in a healthy adult form, it becomes pathological (Siniscalco, 2001). Although the overall layout of Kohut's idea and Kernberg match, they differ in that Otto Kernberg states that there are three types of narcissism: normal adult narcissism, normal infantile narcissism, and pathological narcissism. Pathological narcissism is further divided into three types: regression to the regulation of the infantile self-esteem, narcissistic choice of object, narcissistic personality disorder, with narcissistic personality disorder being the most severe of all. Although both focused on narcissistic, borderline, and psychotic patients, the focus and content of their theory and treatment has been considerably differentiated. Their major diversities emerged in response to their conceptualizations regarding the relationship between Narcissistic and Borderline personalities, normal vs. pathological narcissism, their ideas about narcissistic idealization and the grandiose self, as well as the psychoanalytic technique and the Narcissistic transference (Consolini, 1999). In synthesis, all these psychoanalysts, whether they directly identify the fuel of narcissism as biological or social stimuli, they do seem to agree that any trauma at the time period where he or she will have a transition into maturing the degree of narcissism, will result in forms of damage to the individual's ego and may develop into forms of narcissistic disorders.

There are various types of narcissism, all of which Freud, Horney, Kohut, and Kernberg do not limit their theories to. Yet, through Horney's and the support of certain assets other? psychoanalysts point out, NPD will be proven to be essentially stimulated by social factors that surround an individual to drag it into to the point of forming a pathology, as Kernberg points out. Although it is true that narcissism is a characteristic in the human psyche present as socializing is a natural feature in humans, such can be affected to various degrees upon the surroundings of the individual influencing the individual's extent of social interaction from extrovert to introvert.

Likewise, narcissism is driven and stimulated by biological aspects which Freud points stating that it "is the libidinal compliment to the egoism of the instinct of self-preservation" or simply the go not matured in individuals, the raw form or ego in other words; but such is greatly affected by nurture aspects more than nature, and thus NPD is affected more by the overexposures or lack of exposure to certain interactions as child's, thus ^{showing} ~~proving~~ correct the theory that the environment in which one interacts with affects the individual's interaction and development. ✓

As clinical experiences have revealed in the research of NPD, pathological narcissism occurs in a spectrum of severity. As Dr. Elan Golomb asserts in her study, NPD results from a person's belief that he or she is flawed in a way that makes the person fundamentally unacceptable to others. This belief is withheld below the individuals conscious awareness, thus in its unconscious driving the individual to deny such response if questioned. From Golomb's study, it was perceived in the participants that in order to protect themselves against the intolerably painful rejection and isolation they imagine would occur if others became aware of their supposed defective nature, then such people would try to manipulate others' view of them and their behavior to them. In general psychologists believe that pathological narcissism results from impairment in the quality of the person's relationship with their primary caregivers, ✓ supporting the nurture perspective in psychology further(more) than Karen Horney extends her argument. Usually NPD parents were unable to form a healthy, empathic attachment to(them)? Because of this, the child perceives himself as unimportant and unconnected to others, and they have this approach of finding themselves with faulty personalities making them unvalued and unwanted. ✓

According to Dr. Rappoport, NPD patients as parents may demand certain behavior from their children because they see the children as extensions of themselves, and feel the need for the children to represent them in the world in ways that meet the parents' emotional needs. In his article "Co-Narcissism: How we adapt to narcissistic parents:", he claims the example of "X" narcissistic father. This father was a lawyer, and his son who has always been treated with favoritism, demands his son to enter the legal profession. When the son chose another career, the father reacted in rejecting him (Rappoport, 2005). There is no importance or special relationship with the example portraying males, since studies have not conclusively proven any ethic, social, cultural, economic, genetic, or professional predilection to NPD. Yet, evidence for heritability greater to other personality disorders has been reported. Some narcissistic traits are common and a normal developmental phase. When these traits are compounded by a failure of the interpersonal environment and continue into adulthood they may intensify to the point where NPD is diagnosed. ✓

It has been suggested by many psychologists that NPD's severity may be increased by the onset of aging and the physical, mental, and occupational restrictions it imposes (American Psychiatric Association, 1994). To avoid such situations, narcissistic people withdraw socially and may pretend modesty or humility. There is a broad continuum of pathologically narcissistic personalities, styles, and reactions; from the very mild, reactive and transient, to the severe and inflexible NPD. Though individuals with NPD are often ambitious and capable, the inability they present to tolerate setbacks, disagreements or criticism, along with lack of empathy, make it difficult for such individuals to work cooperatively with others or to maintain long-term professional achievements (Golomb, 1992). With NPD, the person's perceived fantastic grandiosity, often coupled with a hypomanic mood, is typically not commensurate with his or her ✓

real accomplishments. Hypomanic mood is a feature of NPD, characterized by persistent and pervasive elated or irritable mood and thoughts and behaviors that are consistent with such as mood state. It is distinguished from obsession or mania by the absence of psychotic symptoms and by its lower degree of impact functioning. Thus, the exploitation, sense of entitlement, lack of empathy, disregard for others, and constant need for attention inherent in NPD, adversely affects interpersonal relationships. Individuals with NPD frequently select as mates, and engender in their children, “co-narcissism” meaning a co-dependent personality style that organize themselves around the needs of others. They feel responsible for others, accept blame readily, are eager to please, defer to others’ opinions, and fear being considered selfish if they act assertively (Rappoport, 2005).

The nature vs. nurture argument, supported under the field of social psychology, will be interpreted differently from previously mentioned psychoanalysts. When social psychology implements scientific references into its field, it refers to the empirical method approach of investigation. Thoughts, feelings and behaviors are psychological variables that are measurable in a human being through scientific bases. The nature versus nurture characteristics, study the relative importance of an individual’s innate and biological qualities, thus the nature perspective as with nativism, philosophical empiricism, innatism; opposed to personal experiences and one’s environment, or the nurture perspective (Allport, 1985). In this case nurture is the primary influence that causes differences in the physical state and in the behavioral interactions an NPD subject sustains, as claimed by Karen Horney. This argument introduces the theory of a “tabula rasa” or blank state, which was considered to be a division of developmental influences, but since both types of factors are known to play such interacting roles in development, many modern psychologists consider the question and argument to be naïve, representing an “outdated

state of knowledge" (Ridley, 2003). In very few cases are traits due almost entirely to nature, or almost entirely to nurture. There are diseases there is actual higher leniency? for the causes to be almost entirely nature as with Huntington's diseases being 99.9% genetic. Yet traits, as one's native language, are entirely environmentally determined. Research by linguists has proved that any child, as long as the child is capable of learning any language at all, can learn any human language with equal facility. ✓

Difficult to follow

As in all psychological traits though, there is a transitional mix of nature and nurture, and opinions about the relative importance of each will often vary widely. Nature in the area of linguistics brings in factors as Wernicke's and Broca's area, and the left cerebral hemisphere. Concrete behavioral traits that patently depend on content provided by the home or culture, which language one speaks, which religions one practices, which political party one supports, are not heritable at all; but rather are drawn from our own perceptions or instilled in us through the indirect or direct influence of others. But traits that reflect the underlying talents and temperaments, for example: how proficient with language a person is, how religious, how liberal or conservative, are partially heritable (Pinker, 2004). Just like NPD and the state of narcissism in general, there is not one specific trigger whether biological or social, whether nature or nurture, that is responsible for not growing out of this innate characteristic (that is primarily biological during the normal childhood stage). Yet, as Karen Horney and Heinz Kohut claim and as supported by my essay, the primary component that leads to NPD, are high levels of nurture influences in the psyche of the individual. ✓

Word Count: 3,982

This complex essay makes several incisive points. The essay is drawn from a commendable number of relevant sources and in general a sound argument is produced. Occasionally the sentence construction is flawed and is made difficult for the reader to follow.

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Assessment form (for examiner use only)

Candidate session number	0	0							
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Assessment criteria		Achievement level		
		First examiner	maximum	Second examiner
A	research question	2	2	
B	introduction	2	2	
C	investigation	4	4	
D	knowledge and understanding	4	4	
E	reasoned argument	3	4	
F	analysis and evaluation	3	4	
G	use of subject language	4	4	
H	conclusion	2	2	
I	formal presentation	4	4	
J	abstract	2	2	
K	holistic judgment	3	4	
Total out of 36		33		

Name of first examiner: _____
(CAPITAL letters)

Examiner number: _____

Name of second examiner: _____
(CAPITAL letters)

Examiner number: _____



International
Baccalaureate

Sample B

Extended essay cover

<i>Candidates must complete this page and then give this cover and their final version of the extended essay to their supervisor.</i>										
Candidate session number					0	0				
Candidate name										
School number					0	0				
School name										
Examination session (May or November)				MAY		Year		2009		

Diploma Programme subject in which this extended essay is registered: <u>PSYCHOLOGY</u>	
(For an extended essay in the area of languages, state the language and whether it is group 1 or group 2.)	
Title of the extended essay: <u>THE PSYCHOBIOLOGY OF AGGRESSION</u>	
Candidate's declaration	
<i>If this declaration is not signed by the candidate the extended essay will not be assessed.</i>	
The extended essay I am submitting is my own work (apart from guidance allowed by the International Baccalaureate).	
I have acknowledged each use of the words, graphics or ideas of another person, whether written, oral or visual.	
I am aware that the word limit for all extended essays is 4000 words and that examiners are not required to read beyond this limit.	
This is the final version of my extended essay.	
Candidate's signature: _____	Date: <u>1- DEC. - 2008</u>

IB Cardiff use only:

A: _____

B: _____

Supervisor's report

The supervisor must complete the report below and then give the final version of the extended essay, with this cover attached, to the Diploma Programme coordinator. The supervisor must sign this report; otherwise the extended essay will not be assessed and may be returned to the school.

Name of supervisor (CAPITAL letters) _____

Comments

Please comment, as appropriate, on the candidate's performance, the context in which the candidate undertook the research for the extended essay, any difficulties encountered and how these were overcome (see page 13 of the extended essay guide). The concluding interview (viva voce) may provide useful information. These comments can help the examiner award a level for criterion K (holistic judgment). Do not comment on any adverse personal circumstances that may have affected the candidate. If the amount of time spent with the candidate was zero, you must explain this, in particular how it was then possible to authenticate the essay as the candidate's own work. You may attach an additional sheet if there is insufficient space here.

Please see attached comments

I have read the final version of the extended essay that will be submitted to the examiner.

To the best of my knowledge, the extended essay is the authentic work of the candidate.

I spent 3.5 hours with the candidate discussing the progress of the extended essay.

Supervisor's signature: _____

Date: 1/7/08

Viva Voce

Student Name:

Subject: *Psychology* ✓

Candidate Number:

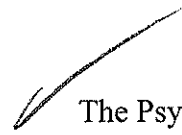
Supervisor:

Exam Session: May 2009

Comments:

_____ has investigated a highly important psychological question, investigating what contributes individuals to be aggressive. Overall, _____ Extended Essay is well structured, properly researched and cited, and analytically sound. Through the Extended Essay process, he is grateful to have discovered effective ways to research primary and secondary resources, established a strong foundation in the developmental process of writing a scientific paper, and will be able to utilize these newly acquired skills at the collegiate level. Correlating animal research on aggression to human explanations of aggression posed the biggest challenge, while his discovery and profound understanding of the neurological complexities involved with aggression was his most cherished acquirement. In conclusion, _____ has a sufficient product and is confident he will not receive a mark lower than *Good*. ✓

IB Psychology



The Psychobiology of Aggression

Psychology
Supervisor:
2 December 2008
Word Count: 3653

Abstract

Nature versus nurture is one of the most fundamental arguments in the field of psychology. Are our behaviors governed by nature, our heredity and our biology, or are they governed by nurture, our surroundings and our environment? In this paper, I will examine these opposing views as they relate to aggression. From the early stages of my paper I believed that aggression was more rooted in biology than in environment. But exactly how is aggression linked to biological factors and to what extent is aggression a heritable trait? ✓ R G

I have concluded that biology controls 75% of aggression, while environment controls the other 25%. My research has supported my initial hypothesis that biology is indeed the prominent factor influencing aggression. This research consists primarily of articles retrieved from SIRS Knowledge Source database and Academic OneFile database, including esteemed scientific and academic journals such as the *Harvard Mental Health Letter* and *Johns Hopkins Magazine*. Specifically, said research has shown that low serotonin levels and abnormalities in the frontal lobe of the brain correlate with high instances of aggression. In addition, at the molecular level, certain genes have provided surprising and possibly groundbreaking results regarding aggression in rats. ✓

Whereas understanding aggression must be our ultimate goal, we must be wary of the possible consequences that this can have. With this knowledge, we could theoretically “cure” aggression, but at the same time, those with bad intentions could take advantage of the biological mechanisms of aggression for darker purposes. This is why ethics must always be taken into consideration when dealing with these sensitive topics. As I examine aggression and its implications, I will periodically look back to the APA Ethics Code in this manner throughout the paper. ✓

Table of Contents

Title Page.....	1
Abstract.....	2
Table of Contents.....	3
The Psychobiology of Aggression.....	4-15
Biological Aspects of Aggression.....	5-8
Environmental Aspects of Aggression.....	8-11
The Genetics of Aggression.....	11-14
Conclusions.....	14-15
References.....	16-17



The Psychobiology of Aggression

“Virginia Tech Shooting Leaves 33 Dead...in what appears to be the deadliest shooting rampage in American history” (Hauser & O’Conner, 2007). One cannot watch the news or read a newspaper without seeing a report of violence. It seems that we have grown far too accustomed to carnage in our everyday lives. If it’s not a crazed gunman in Virginia, it’s a deranged football player in Tennessee or some John Doe somewhere on the 5 o’clock news.

Are aggressive individuals a product of the world we live in, or are they are victim of their own biological makeup? This argument falls under the domain of one of the most prominent psychological issues since the introduction of the discipline, nature versus nurture. As is the case with virtually every argument of this type, the answer is not simply one or the other, but it is an amalgamation of both. The real mystery of aggression has to do with varying degrees. To what degree is aggression nature, or biological? Equally, to what degree is aggression nurture, or environmental?

This paper asserts that while aggression is widely regarded as the product of a competitive environment, overt aggressive behavior is dictated by heredity and biological factors more so than by environmental factors. The relationship can best be expressed as a 3:1 ratio, or 75% nature and 25% nurture. But before examining the primary biological and environmental roots of aggression, one must define aggression. Aggression is any behavior intended to intimidate or harm. It can be verbal or physical. It can be aimed at another or aimed at oneself. The Harvard Mental Health Letter says that, “Aggression includes several kinds of behavior with different motives--protection of oneself, defense of a child, revenge, impulsive anger, and intimidation to gain social status or material goods” (Violence I, 2000). Now that we have a

functional definition of aggression, we can examine the neurological, biochemical, and environmental aspects that influence aggression. ✓

Biological Aspects of Aggression

Aggression is one of the most fundamental behaviors of any organism, and it is truly multifaceted. The complex nature of aggression is reflected in the fact that its origins are complex as well. The biological factors of aggression include the breakdown of neurotransmitters as well as the highly specialized brain structures and their functions, which together underline the abnormalities of the atypically aggressive person. The neurotransmitter serotonin regulates many behaviors in humans and animals alike and research has shown that there is a strong correlation between serotonin levels and aggression. “Low serotonin levels [are associated] with the irritability that leads to impulsive, uncontrolled, reckless, aggressive, violent, or suicidal behavior” (Sylwester, 1997, p. 75). Serotonin is a versatile compound that manages several functions of the body, but its role in aggression is still vague. “People who commit impulsive arson, suicide, and homicide have lower than average levels of the serotonin metabolite (breakdown product) 5-HIAA in their spinal fluid” (Violence I, 2000). Examining the brain directly is invasive and highly dangerous, and ethical considerations dictate that patients should not be subject to physical or emotional harm. (American Psychological Association [APA], 2003) However, by examining the spinal fluid of these subjects, we can get a good idea of the brain chemistry of perpetrators without jeopardizing their safety. ✓

Our growing knowledge and understanding of the role of serotonin in aggression can possibly be put to good use in the future to treat patients with impulsive aggression. Low serotonin levels might be treated with the use of SSRIs, selective serotonin reuptake inhibitors. SSRIs work by blocking the reuptake of serotonin therefore increasing the stimulation of

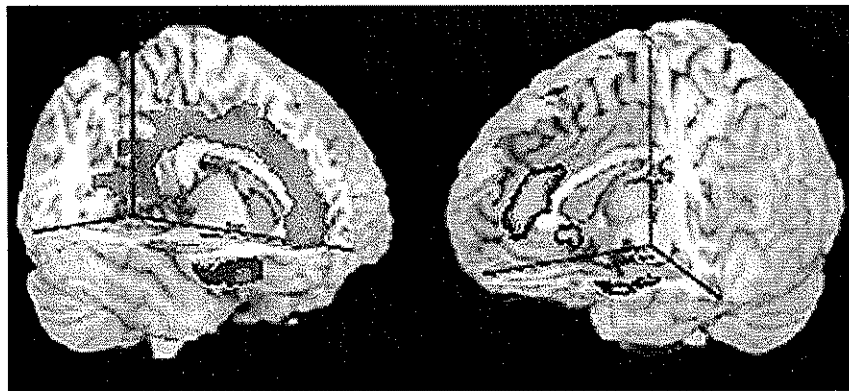
✓

serotonin receptors in neurons. (National Library of Medicine, 2007) This form of drug therapy would, in effect, bring a chemical balance to patients with low serotonin levels. It has been documented that, "The selective serotonin reuptake inhibitors (SSRIs) seem to reduce the risk of violence associated with post-traumatic stress" (Violence II, 2000). Whether or not this would translate into a reduction of all forms of aggressive behavior is debatable, however.

In addition to the breakdown of serotonin, several brain structures contribute to the behavior of aggression. The amygdala is part of the limbic system which is found in the frontal lobe of the human brain. (Merriam-Webster's Medical Dictionary, 2008) "The amygdala . . . governs or mediates the expression of rage and fear. The surgical removal of this region makes aggressive wild rhesus monkeys docile and lethargic, unable to respond to threats or even to recognize them" (Violence I, 2000). Obviously, without the amygdala these monkeys would not be able to defend themselves and would die out. Therefore, from an evolutionary standpoint, the amygdala's role in regulating aggression is vital to many organisms' survival.

Another area of the frontal lobe that regulates aggression is the prefrontal cortex. A recent study by Monte Buchsbaum examined the brains of 41 convicted murders who pleaded insanity. Many of the murderers did in fact have legitimate psychological disorders, and their brain scans were compared to the brain scans of a control group. In some particular areas of the brain, the murderers were found to have less nerve cell activity than the control group. "The key difference...was in the prefrontal cortex, the bundle of white matter behind the forehead" (Monmaney, 1998). The frontal lobe has a strong correlation with aggression. The amygdala and prefrontal cortex are both found in the frontal lobe, and together they influence a wide range of behaviors, including aggression. The anterior cingulate cortex, the ACC, regulates aggression as well. It is also found in this brain region, connected to the prefrontal cortex.

Reduced activity of the anterior cingulate cortex has been found to be correlated to aggressive behavior. A study conducted by researchers Andreas Meyer-Lindenberg and Daniel Weinberger of the National Institutes of Health (NIH) looked at the MRIs, magnetic resonance imaging, and fMRIs, functional magnetic resonance imaging of 97 subjects. The subjects were divided into two groups, one for each variant of a common enzyme monoamine oxidase-A (MAO-A). This enzyme breaks down neurotransmitters, primarily serotonin. The fMRIs looked at brain activity as the subjects performed a task: matching emotionally suggestive pictures of angry and scared faces. The NIH (2006) researchers drew some interesting conclusions: ✓



Source: NIMH Clinical
Brain Disorders Branch

Structural (left) and functional (right) MRI scan data shows that subjects with the violence-related version of the MAO-A gene (MAOA-L) had reduced volume and activity of the anterior cingulate cortex, which is thought to be the hub of a circuit responsible for regulating impulsive aggression. ✓

The three major brain areas mentioned: the amygdala, the prefrontal cortex, and the anterior cingulate cortex are all located in the frontal lobe and are all interconnected. Together they regulate the complex behavior of aggression in humans. By knowing the functions of these three ✓

brain areas, we could possibly use technology to identify and treat people who have a predisposition to excessive aggression. In the future, perhaps MRIs and fMRIs can point of atypically aggressive people, who would then be medicated with SSRIs. We are still far from achieving this, however it seems as though in the future, aggression may be treatable.

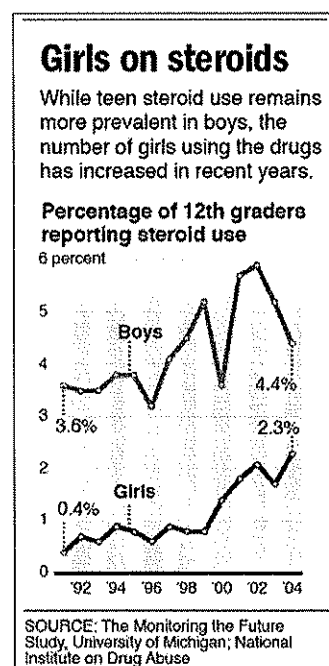
Environmental Aspects of Aggression

The biological aspects of aggression comprise only 75% of aggression, so what about the other 25%? Environment plays a lesser but still significant role in aggression. Living in a poor neighborhood or growing up as a gang member may influence one's aggressive behavior, but these phenomena are not observable. The only overt environmental factors that influence aggression come in the form of steroid abuse.

Steroids today are very much a part of our culture. Steroids have forever tainted the game of baseball. The 2006 Tour de France winner Floyd Landis was stripped of his title when it was discovered that he was using steroids. Olympic medalists Justin Gatlin and Marion Jones were given lengthy suspension after the steroid incidents; Jones was also stripped of every medal won since the year 2000. (Associated Press, 2007) Steroids not only mar an athlete's reputation, but they also pose serious health risks. "Anabolic steroids can lead to early heart attacks, strokes, liver tumors, kidney failure, and serious psychiatric problems. In addition, because steroids are often injected, users...are at risk for contracting dangerous infections, such as HIV/AIDS and hepatitis B and C," says the National Institute on Drug Abuse [NIDA] (2006). The rewards are few and the risks are many, but some athletes feel that taking steroids is the only way they can keep up in our competitive environment. "Scientific evidence indicates that anabolic steroid abuse among athletes may range between one and six percent" (NIDA). This number may seem surprisingly low, however many cases of steroid abuse go unreported and unrecognized.

The largest steroid scandal ever was in the sport of baseball. An intriguing fact about steroid use in baseball is that Latin American players were guilty in largely disproportional numbers. "Seven of the 12 American and National League players who were caught taking steroids during major league baseball's first season of mandatory testing were Latin American." To make sense of this data, consider that, "They made up just 24.6 percent of the 829 players on active rosters and disabled lists on opening day of the 2005 season" (Contreras, 2006, pp. 44-46). This means that the 25% Latin American population was accountable for over 58% of the steroid cases. Twelve people may not be enough to draw conclusive data, but a subsequent report indicates that, "Of the 30 major- and minor-league ballplayers who had tested positive for steroids as of mid-August, fully 22 hail from Venezuela, the Dominican Republic and Colombia" (Contreras, 2006, pp. 44-46). Assuming that the Latin American population is roughly the same, these numbers show that Latin Americans account for over 70% of all steroid cases.

Baseball players are not the only ones using steroids however. "There's been a substantial increase [in steroid use] for girls during the 1990s...Overall, up to about 5 percent of high school girls and 7% of middle-school girls admit trying anabolic steroids at least once, with use steadily rising since 1991." The majority of these girls use steroids to enhance their image, rather than their performance. Steroids can be an alternative to dieting or more dangerous practices such as drug abuse and anorexia. At the same time, the rising trend in steroid use can be attributed to recent increases in girls' participation in sports (Johnson, 2005).



With the data on Latin American and high school girls' steroid use, we have seen the

cross-cultural and cross-gender impacts of steroids. Steroids are not limited to American athletes. They are not limited to male athletes. In fact, they are not limited to athletes at all. Because this potentially dangerous substance is becoming more and more widespread, steps must be taken to deter steroid abuse. Issuing suspensions and stripping athletes of their medals is a start, but what about the thousands of others who illegally use steroids everyday? The government needs to crack down on these steroid users and treat them for what they are, drug abusers. ✓

The association between steroids and aggression in humans is tenuous at best. Very few studies have been conducted to test this relationship, and even those results were contradicting and controversial. Athletes make up the majority of steroid users and there is some evidence of an association between athletes and aggression:

In 1998, a University of Massachusetts study looked at statistics for sexual assaults at 20 Division I college campuses between 1991 and 1993 and found male student athletes made up 3.3 percent of the male population at the schools surveyed yet were accused of 19 percent of the sexual assaults on campus (Kiefer, 2007).

This phenomenon cannot be attributed to steroids however, because there are countless extraneous variables that must be taken into consideration. ✓

In animals however, we can see a clear trend between steroid administration and aggression. "Male Syrian hamsters (*Mesocricetus auratus*) treated with moderately high doses (5.0mg/kg/day) of anabolic/androgenic steroids during adolescence display highly escalated offensive aggression" (Fischer, S. G., Ricci, L. A., & Melloni, R. H., 2007, pp. 77-79). There is a positive relationship between steroid administration and aggression in this case. Steroids increase the amount of testosterone in its user and while steroid administration increase aggression, the reverse is also true. "In mice, castration reduces the probability that a male will attack a rival" ✓

(Huntingford, F., & Turner, A., 1988, pp. 44-47). While steroids and aggression have no evidential connection in humans, in animals there is some degree of correlation between the two variables. Nonetheless, it is apparent that the biological side of the argument makes a stronger case for the origins of impulsive aggression than the environmental side. ✓

The Genetics of Aggression

Groundbreaking animal research is continually paving the way to a greater understanding of aggression in both animals and humans, and it is obvious that this research has powerful implications for the field of psychology. Because of ethical and practical considerations, researchers must use animals to test the associations between aggression and different variables. ✓ Complex variables such as aggression must be tested under controlled conditions, namely in a laboratory. These controlled conditions require that only one variable be tested at a time; aggression and steroids, aggression and serotonin, etc. Because humans cannot be harmed or exploited under the American Psychological Association ethical code, it is impossible to manipulate them in laboratory settings. (APA, 2003) In addition, the fact that the environment and heredity vary so widely in humans makes animal studies a valuable alternative. ✓

Impulsive aggression has been linked to specific neurotransmitters, predominantly serotonin. A famous case study exhibited a Dutch family whose men exhibited, "Impulsive aggression, arson, attempted rape, and exhibitionism. The investigators pinned the syndrome on a mutation in the gene for monoamine oxidase A (MAOA), an enzyme that helps metabolize serotonin and norepinephrine" (Hendricks, 1996). This gene, which codes for MAOA, is also found in mice. Scientists took advantage of this genetic parallel to truly assess the role of this gene in aggression through animal studies. ✓

“A French team reported it had created a mouse model of MAOA deficiency. Like the Dutch men, the mice were overly aggressive” (Hendricks, 1996). By now, the connection between MAOA has been well established by this and subsequent studies. One such study was conducted by Jean C. Shih, a neuroscientist for the University of Southern California. Shih has created a Tg8 strain mouse which displays high levels of aggression. “Shih has found that [Tg8] male mice lack a gene for the enzyme called monoamine oxidase A, which breaks down serotonin and other neurotransmitters. When this gene is missing, animals act in an aggressive and hyperactive manner” (Krieger, 2001). ✓

But how do scientists create mice with genetic anomalies like the ones we have just examined? The process of gene mutation is a long and complex process that involves a relatively new technique called gene knock-out. “The lengthy technique, which can take a year or more, involves deleting, or knocking out, a single gene in mouse embryos, plus subsequent stages of interbreeding to get baby mice that lack the gene” (Hendricks, 1996). ✓ In the case of the Tg8 mice, gene knock-out was employed to delete the gene coding for MAOA, resulting in a fierce and aggressive subject. Other genes have had similar effects on aggression, suggesting that aggression may be more biologically based than initially thought. ✓

One such gene was recently tested, again using mice. The researchers used gene knock-out to produce mice missing a specific gene. Using control mice, those who did have the nNOS gene, and knock-out mice, those who did not have the nNOS gene, Randy Nelson and Solomon Snyder of Johns Hopkins University observed the behavior patterns of both and compared the two groups in their displays of aggression. The scientists concluded, “Genetically, these mice are like other laboratory mice except for the missing gene. In appearance and behavior, they are the same as other mice too, except that they are extremely violent and sexually aggressive.” In fact, ✓

“In a 15-minute period, knock-out mice also bit, wrestled, and chased each other twice as often as control mice did” (Hendricks, 1996). These findings clearly demonstrate that the nNOS gene has a strong influence over aggression in mice. ✓

After recording their data, Nelson and Snyder came up with the following conclusions for the experiment:

Their theory is that NO somehow inhibits aggressive behaviors. Because their brains cannot produce NO, the knock-out mice are uninhibited in terms of aggression. Further testing demonstrated that the mice are normal in other respects that might have accounted for their aggressive behavior. For example, they have only normal levels of testosterone, the male hormone that plays a well-established role in aggression (Hendricks, 1996). ✓

This is an important point to note. By assuring that the other variables are normal, we can say with reasonable certainty that the change in behavior was brought about by the missing nNOS gene. Also, “The gene in question, which codes for an enzyme called neural nitric oxide synthase (nNOS), is ‘virtually identical in humans and in mice.’ And neurons, where the enzyme is produced, are also ‘virtually identical in mice and humans’” (Hendricks, 1996). Because of the parallel between mice and humans for this gene, this experiment can give us a more thorough understanding of the impact of this gene on human behavior. If mice can be “cured” using gene therapy, perhaps humans can also be “cured” in the same manner. ✓

With the documented evidence of both the MAOA gene and the nNOS gene, it is obvious that genetics plays a large role in the regulation of aggression in animals. It is not yet apparent, however, whether these relationships exist in humans. Either way, because of the genetic similarities between mice and men for the two genes, we can conclude that genetics plays some

sort of role in the regulation of aggression in humans, though we do not specifically know the extent of that role as of yet. ✓

Conclusions

Are aggressive individuals a product of the world we live in, or are they are victim of their own biology? Biology and environment work collaboratively to regulate aggression and that aggression is inextricably linked to both. Aggression is hard-wired into every individual's being. Certain people have a predisposition to behave aggressively, just like certain people have a predisposition for heart disease or diabetes. The extent of their aggressive behavior depends somewhat on their environment. Someone with a predisposition to aggression, whether it is low serotonin levels, an abnormal brain structure, or a missing gene, might not be aggressive if he were raised in a favorable environment. On the other hand, had that same person grown up in a harsh and unfavorable environment, he would almost certainly become aggressive. ✓

To learn more about aggression and its etiology, additional research must be done. Specifically, the association between steroids and aggressive must be further evaluated. Our knowledge on that subject is far too scarce. Twin studies would most benefit the study of aggression in regards to environment, As stated earlier, two children with the same biological makeup that grew up in different environments would display different levels of aggression. Because ethics protect against the invasion of privacy, a functional way to measure aggression ? must be agreed upon to compare the twins. (APA, 2003) If twin studies were able to be conducted under this scenario, we could truly assess the role of environment in aggression. ✓

So what does this mean for the future? As we learn more about aggression and its origins, will our newfound knowledge be used for the betterment of humankind or for its destruction? First, imagine if aggression could be treated. People who could not control their violent behavior

could take a pill and they would no longer feel the need to act aggressively. Aggression could be treated like any other disease is treated and meaningless massacres and crime might come to an end. Now imagine if aggression could be exploited. Governments could genetically engineer super soldiers for war or super athletes for sports. We are still far from knowing everything we need to know about aggression, but it is apparent that understanding aggression has serious implications for the future. Whether this knowledge is used for good or for evil, however, is up to us.

✓

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Assessment form (for examiner use only)

Candidate session number	0	0						
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Assessment criteria		Achievement level		
		First examiner	maximum	Second examiner
A	research question	2	2	
B	introduction	2	2	
C	investigation	3	4	
D	knowledge and understanding	3	4	
E	reasoned argument	3	4	
F	analysis and evaluation	2	4	
G	use of subject language	3	4	
H	conclusion	1	2	
I	formal presentation	3	4	
J	abstract	2	2	
K	holistic judgment	2	4	
Total out of 36		26		

name of first examiner: _____
(CAPITAL letters)

Examiner number: _____

name of second examiner: _____
(CAPITAL letters)

Examiner number: _____



International
Baccalaureate

Sample C

Extended essay cover

Candidates must complete this page and then give this cover and their final version of the extended essay to their supervisor.

Candidate session number

0

0

Candidate
name

School number

0

0

School name

Examination session (May or November)

MAY

Year

2009

Diploma Programme subject in which this extended essay is registered: Psychology

(For an extended essay in the area of languages, state the language and whether it is group 1 or group 2.)

Title of the extended essay: Should the use of Subliminal Messaging
in Advertising be allowed?

Candidate's declaration

If this declaration is not signed by the candidate the extended essay will not be assessed.

The extended essay I am submitting is my own work (apart from guidance allowed by the International Baccalaureate).

I have acknowledged each use of the words, graphics or ideas of another person, whether written, oral or visual.

I am aware that the word limit for all extended essays is 4000 words and that examiners are not required to read beyond this limit.

This is the final version of my extended essay.

Candidate's signature:

Date: 19.02.09

IB Cardiff use only:

A: 45028 B: ✓

Supervisor's report

The supervisor must complete the report below and then give the final version of the extended essay, with this cover attached, to the Diploma Programme coordinator. The supervisor must sign this report; otherwise the extended essay will not be assessed and may be returned to the school.

Name of supervisor (CAPITAL letters)

Comments

Please comment, as appropriate, on the candidate's performance, the context in which the candidate undertook the research for the extended essay, any difficulties encountered and how these were overcome (see page 13 of the extended essay guide). The concluding interview (viva voce) may provide useful information. These comments can help the examiner award a level for criterion K (holistic judgment). Do not comment on any adverse personal circumstances that may have affected the candidate. If the amount of time spent with the candidate was zero, you must explain this, in particular how it was then possible to authenticate the essay as the candidate's own work. You may attach an additional sheet if there is insufficient space here.

The candidate was not my student. She came to me with her topic already chosen and the research question in place. We discussed appropriate choices of resources and the approach to the question in four brief meetings, during which Karin exhibited control over the direction in which she was heading. During the meetings we also focused on clarity of expression and mechanics, with which Karin, being a 2nd language user of English, initially encountered some problems. I felt her knowledge of the topic was very good, although she may have improved on her arguments and analysis.

I have read the final version of the extended essay that will be submitted to the examiner.

To the best of my knowledge, the extended essay is the authentic work of the candidate.

I spent 3 hours with the candidate discussing the progress of the extended essay.

Supervisor's signature:

Date: February 23'0

Should the use of Subliminal Messaging in Advertising be allowed?

School:
Supervisor

candidate number:

Word Count: 3,690 ✓
27-01-09

Abstract

The aim of this investigation was to seek an understanding of the use of subliminal messaging in advertising and what kind of effects it has on human behavior. The use of subliminal messaging has been a debatable issue for over a century. Some say it has little to no effect, and others disagree and say they feel as if their unconscious is being intruded. To gain an eclectic view of the issue, I gathered a range of sources from both sides and analyzed their arguments as well as their evidence. I also gathered a large number of case studies and experiments conducted on this issue, then picked the ones with the strongest and weakest outcome and evaluated their methodologies and conclusion. After thorough research, the investigation came to the conclusion that it is in fact not the subliminal messages that are infiltrating the brain and causing undesirable behavior, but it is the people's stubbornness to blame external factors for their undesirable behavior. In fact, subliminal stimuli are too weak to influence a human to the extent that the person acts involuntarily. These findings can be applied to people who work with advertising, as they can see that subliminal messaging is not an effective technique as some insist it is. It also supports how humans tend to hold on to old beliefs, no matter the new evidence. In addition, it would be interesting to investigate further how occupations other than advertising use subliminal messaging, i.e. the government. ✓

Word Count: 246

Table of Contents

Abstract	1
Table of Contents	2
Introduction	3-4
Arguments for the use of subliminal messaging	4-5
Arguments against the use of subliminal messaging	5-7
Conclusion	7-8
Appendixes	9-11
Bibliography	12-13

✓

Introduction to Subliminal Messaging

The word *Subliminal* derives from *Latin*; *Sub* meaning beneath, *liminal* as in *Limes* meaning sensory threshold. Therefore, the common definition of Subliminal Messaging is stimuli that appeal to the five senses but are not registered at the conscious level. Instead, they are captured on a sub or unconscious level and are believed to influence human behavior. ✓

According to Freud, our unconscious is what ultimately drives our behavior, as it contains information that is near impossible to reach the surface of the conscious. Therefore, when subliminal messages enter our brain, into the unconscious, we are unaware of it and, as a result, defenseless. Such findings have started a controversial debate whether it is ethical for advertisers to use subliminal messaging and whether it should be permitted. Some say there is no such thing as subliminal messaging, and some say there is and are strictly opposed to it, and then there are those who admit that subliminal messages exist in advertisements but counter by saying that humans have a free will to act as they please. This argument would agree with the Humanistic perspective which states that our unconscious could impact our behavior, but only to the extent that we allow it to do so. ✓

Subliminal messaging has been of interest since E.W Scripture wrote his publication *"The New Psychology"* in which he laid out the basis of subliminal messaging in 1898. This publication sparked the interest of psychologists who began to conduct studies on the topic. The most infamous study was done by James Vicary, who coined the term subliminal messaging. Vicary claimed to have conducted a study in which during the movie *Picnic* he flashed the phrases "Eat Popcorn" and "Drink Coca-Cola" at a 1/3000 of a second at five-second intervals and the results were that the sales for popcorn and coca-cola increased by 57.8%. ¹ ✓ ?

However, he eventually admitted that the results of the experiment were fabricated. There has even been talk that the experiment never even actually took place. Regardless, that experiment was the offset of many more to come. ✓

Not everyone was fascinated by the revelation of Subliminal Messages; some were even upset and outraged. The issue was even taken to trial in front of the American Federal Communications Commission which is in charge of all non-governmental TV and radio broadcasting. The Commission decided to ban the use of subliminal messages in advertisement in the US. There have even been cases where the effects of subliminal advertisement or messages have been considered to be harmful, like in the criminal case of Judas Priest. ✓

In December 1985, two young Nevada adolescents attempted suicide after listening to the heavy metal band *Judas Priest*. One was successful while the other survived. The parents sued the heavy metal band for having subliminal messages embedded in their songs and could prove that there was something at a very faint level saying "do it!" in one of the tracks. The parents accused the band of encouraging suicide. ✓

However, the lawyer of the defendant had strong evidence against the parents, which led to the case's dismissal. The lawyer argued that the boys were diagnosed with depression, and that they both had lived unhappy lives. They both had criminal records and were high school drop outs; it was also found that they had experienced abuse at home during

¹ Brannon, Laura A., and Timothy C. Brock. THE SUBLIMINAL PERSUASION CONTROVERSY Reality. Enduring Fable, and Polonious's Weasel. EF Reality. By Michael Lynn. 1-15 ✓

their childhood. Due to this strong upholding evidence, the court decided that it could not be solely the music (if at all) that drove them to commit suicide. The case was therefore dismissed.²

Other famous examples of subliminal messaging, and less morbid ones, are related to certain Disney movies. There have been instances in which, at fast speed, the word or implications of sex are flashed during scenes in Disney movies. In the classic of 1994 movie "The Lion King", when Simba exhaustively collapses on a cliff, dust flies up in the air and for a split second the dust supposedly spells out the word 'sex' (See appendix 1). Another example would be in "Bernard and Bianca" from 1977, when they are flying on an albatross, and for a split second there is a poster of a naked lady behind them (see appendix 2). The most controversial example however, is in "The Little Mermaid" from 1989 for which the official movie poster is said to have a phallic shape pillar built on the castle (see appendix 3.) ✓

Of course, Disney has denied all allegations and claims that there is no such thing as sexual subliminal messaging in any of Disney's movies or posters. In addition, there have been no reported incidents in which misbehaving of children has been linked to Disney movies. According to the Learning perspective, if children perceive the word or implication of sex in the movie they will most likely want to *model* this behavior (as in replicate it.) On the other hand, the Psychodynamic perspective would say that the children perceive the messages unconsciously and it will therefore have an effect on the behavior. What parents fear is a mix of both of these explanations; they're afraid of how the messages will affect their kid's behavior. ✓

There are different types of subliminality: Ebbinghausian, Pavlovian, and Freudian. The Ebbinghausian subliminality is when forgetting lowers the effect of the stimulus, Freudian is when the latent content is stored in the unconscious and surfaces in dreams, and Pavlovian, which is the one the marketers are accused of using, is when the information is caused associatively. ✓

Ivan Pavlov explains that behavior is caused when an unconditional stimulus (unlearned) is paired with a conditional stimulus (learned) and the result will be a conditional response. As an example; if a company wants to market a car, it might place a pretty woman in or on the flashy car. The woman would be considered the unconditional stimulus, the car is the conditional stimulus, and the excitement the consumers would ideally feel would be the conditional response. Since the consumer *learned* to feel excitement, the effect will ultimately be that they feel excitement everytime they see the advertisement and this will theoretically influence them to buy the product. ✓

Even though it is the Pavlovian subliminality that media and advertisers are accused of using, there is a lot of Freud involved in the use of Subliminal Messaging. Freud believed that our strongest innate drive was sex. This biological drive is what the media is supposedly trying to appeal to. Associations to sex are seen everywhere: in TV-shows, heard in music, and part and parcel of advertisements. However, the bottom line is whether these messages exist or not. If they do, is it ethical for the companies to invade the unconscious? And if they don't what is it that upsets the people? ✓

This para. Needs to be more developed

Subliminal messaging should be allowed because it is not harmful. ?

One side of this controversy believes that subliminal messaging, if even present, is too weak to work in the ways proposed by some research. It is said that it is not the presence of the subliminal message that persuades the consumer, but the belief that it does and therefore it is the consumers that are to blame for their actions. Subliminal stimuli in advertising cannot be

² Ingwerson, Charlyn. "Is it Subliminal?" Annals of the American Psychotherapy Association 10 (2007): 1

successful against the will of the receiver, according to research, because of two factors: subliminal stimuli are too weak to be observed, and even if they were observed they would be overpowered by stronger stimuli; secondly, if the subliminal stimuli were present, the consumer can control their responses and reject any undesired reaction or product through self control (Moore 1982) ^{reference?}

Furthermore, social psychologists have suggested that there are five tendencies as to why people insist that subliminal messaging affects behavior: the tendency to blame undesired behavior on external forces, the tendency to want to continue long held beliefs despite new evidence, experiences in which they have responded in an unusual way, and the tendency to respond to a topic and thinking it is the persuasion of subliminal messaging when in fact the behavior is a cause of past forgotten experiences.

In an experiment carried out by Vokey and Read (1985),³ participants were shown three vocational images. In the first image sex was embedded three times, in the second a three word non-sense syllable was embedded, and in the third there was no word embedded. According to psychodynamic theories and the concerns of the consumers, the image that should have made a larger impression would be the first image. Instead, it was found that there was no difference in recollection of the pictures. ^{ref?}

There are issues with this study that could interfere with the results. If the words were not embedded well enough it could increase participant bias, meaning the participants try to help or destroy the experiment. Also it lacks ecological validity, as the participants were in a confined area which could cause some stress that would interfere with results. However, the strength of this experiment is that the results clearly support the theory that subliminal messages are too weak to direct behavior. ✓

Similarly, studies have been conducted on self-help audiotapes which are claimed to have subliminal content that help people overcome bad habits. A double blind study was conducted by Greenwald et al. (1991).⁴ Both the participants and the supervisor were not aware which tape was the Self-esteem boosting tape or the Memory-increase tape. Participants first completed a memory and self esteem pretest. Then the participants were given a tape at random either labeled "memory" or "self-esteem", but the tape had the opposite content of the label. That way the researchers were able to see whether the Placebo Effect would occur. The findings suggested that any effect of an audiotape is associated with the participant's belief concerning the self-help tape. ✓

This experiment contains strong evidence that subliminal messages are too weak to influence humans. The experiment takes into account experimenter bias, and to some extent mundane realism. The tapes are meant for listening, which is how mundane realism is achieved, but humans will rarely be asked to complete memory and self esteem pretests. Participant bias was increased as the tapes were labeled. The experiment was testing the placebo effect, and therefore increasing the participant bias would be able to support the theory. If a participant received a tape labeled Memory, but the subliminal messages were about Self-Esteem, and yet they showed an increase in memory, the placebo effect has been achieved. In addition, it provides evidence for the use of placebo effect being more profitable than subliminal messaging. ✓

As a conclusion, Greenwald and his associate Pratkanis (1988) summarized their results

³ Vokey, John R. "Subliminal Messages." Wilson Bryan Key and Subliminal Advertising. By Wilson B. Keys. 1976.

⁴ Greenwald, Anthony G. "Double-Blind Tests of Subliminal Tapes." Dr. Anthony Greenwald, PhD. Mar. 1991. Greenwald. 9 Nov. 2008

on subliminal research: marketers will profit more by not using subliminal messaging as it includes only a low level of cognitive processing.

Even though these researchers provide strong evidence that subliminal messaging does not work as effectively as some may believe, people still seem to believe that subliminal messaging is an invasion of privacy and unethical. ✓

Subliminal Messaging is unethical as it intrudes the defenseless unconscious

Those who are opposed to subliminal messaging in advertisement believe that it is unethical because the advertisers are intruding the consumers' unaware unconscious. These people seemingly agree with Freud, who said that the unconscious is stronger than our conscious and it is the unconscious that drives our behavior, and that we are determined to behave in a certain way; i.e. Psychic Determinism. One of the ways that marketers have been allegedly using ambiguous subliminal messaging is in sports. For example, Nike slogan is "Just do it." This statement can be perceived in different ways, but ^{who?} some are convinced that it's sexual. ✓

Freud conducted studies on the unconscious mind and how to treat neurosis. These studies are good examples of why people believe that subliminality has an effect on the unconscious. Anna-O is a notorious case among neo-Freudians and in psychology; she was a patient of Josef Breuer and Freud, suffering from hysteria. Anna-O was 21 years old and before the illness had struck, she had been healthy. Freud and Breuer suggested that the problem lay in the unconscious and that the problem was looking for some external expression, hence the hysteria. The treatment lasted for a year and a half, in which the *talking cure* was utilized. Each symptom was dealt with separately and according to Freud, as soon as the psychotherapists had identified and talked about the problem, the symptoms miraculously disappeared. ✓

Freud's study on Anna-O was included in this essay to express how far back the belief that the unconscious has control over human behavior can be traced. For Anna-O, it was explained that her unconscious troubles were looking for an escape from suppression which resulted in hysteria. There are, however, problems with this study: Anna-O was placed in a sanatorium shortly after treatment, where she became addicted to morphine, and she continued to experience loss of her mother tongue language, German. This shows that it couldn't only be the unconscious probing, but that there has to be some other explanation for her hysteria. ✓

Freud is famous in psychodynamics for his dream analysis; he described dreams as *the road to the unconscious*. This idea supposedly helped Freud relieve many of his patients' unconscious troubles that were, according to Freud, affecting their behavior. ✓

An infamous Freud case study is the *Rat Man*, whose real name was Ernst Lanzer. He was diagnosed by Freud to have obsessional neurosis. His fears included his lady-friend getting hurt and that his already deceased father would die. He was also often faced with the urge to cut his own throat. However, his biggest fear derived from a story he had heard about prisoners being punished in the old Orient by having a pot filled with rats placed on the prisoners' rear. The rats would eventually find the anus, and crawl into it. Freud traced this fear back to Ernst's childhood. Ernst had had sexual relations with his tutor and Ernst was afraid that his father would discover them. He therefore associated sexual pleasure with the fear of punishment and hostility towards his father. He also felt that he should be punished for his endearment of his lady friend. The Rat Man feared punishment but displaced this fear onto those close to him. ✓

Freud treated Rat Man for 11 months and by the end of the treatment, Rat Man was cleared with no neurosis. Although the findings from this case study were groundbreaking in

the Victorian era, modern psychology has found issues with Freud's technique. Freud is very nomothetic: he tries to fit this study into an already existing assumption. The problem with this is that, since Freud was trying to support his theories it seems that he forced explanations for the Rat Man just to make his own theories seem true. ✓

Recent studies have been conducted on the unconscious and how it affects human behavior. Silverman conducted a study on patients with Schizophrenia, a disorder in which an alteration of perception, thought, language and emotion occurs. Twenty-four schizophrenia patients were given psychological tests to measure their Thought Disorder (illogical reasoning, confused recall, strange speech) as well as Non-Verbal Pathology (smiling or laughing at inappropriate times, strange gestures and speech blocking.) The participants were asked to look into a tachistoscope, a device which flashes images for a split second. The participants received several exposures to one of three stimuli; one stimulus was "MOMMY AND I ARE ONE" with an image of two people connected at the shoulder, the second was "PEOPLE ARE THINKING" showing people in deep contemplation, and the third stimulus was "KILL MOTHER". The image of "PEOPLE ARE THINKING" was the control in this experiment and as expected, it showed no change in behavior. "MOMMY AND I ARE ONE" showed a relaxation in behavior for about 15 minutes, while as "KILL MOTHER" showed intensification in thought disorder, and verbal distortion for about 15 minutes. (Silverman 1969.)⁵ ✓

This study supports the theory that subliminal messaging can affect human behavior, although the fact that the effects only lasted for fifteen minutes suggests the weakness of subliminal stimuli. The problems with this study are several: there are ethical problems, ecological validity problems, and its validity in general. Flashing phrases such as "KILL MOTHER" could affect the unconscious, according to this study. These patients are already not well, therefore flashing phrases that imply killing of their own mother could increase stress or discomfort. The experiment was held in a confined area, where all the variables could be controlled, which causes problems with the ecological validity. Attempts have been made to replicate this experiment, and none have succeeded (e.g Allen & Condon 1982, Emmelkamp & Straatman 1976.) Therefore this experiment should be disregarded as evidence for the assumption that the unconscious affects our behavior, since *replication* of an experiment is a must in the psychodynamic perspective. ✓

The magazine Times published an article in 1979 about a case of department stores trying to reduce shoplifting by playing music in which subliminal messages were embedded. The message embedded in the music was "I am honest, I will not steal". The message was repeated 9000 times in an hour. This type of anti-theft experiment was installed in about 50 department stores throughout the US and Canada. It was found that theft was reduced by 37% in one department store, and they save \$600,000 during a nine month trial. ⁶ ✓

The experiment can be used as an argument against the use of subliminal messaging because it supports how subliminal messaging influences behavior. Or does it? There is not clear relationship between cause and effect in this study, as there could have been many factors that could have affected the decrease in theft. In addition, the experiment was successful in just one store out of fifty. If it was in fact the subliminal message that changed the behavior of the shop lifters, it was so faint that only 1/50 succeeded. This finding would support the idea that subliminal messaging is not harmful, since it's too weak to steer behavior. ✓

⁵ Rofo, Yacov. The Rationality of Psychological Disorders: Psychobizarreness Theory. New York: Springer, 2000. 5-6

⁶ "Secret Voices." TIME 10 Sept. 1979: 1-2

Conclusion

Based on the evidence of this research it can be concluded that we as humans have the ability to choose how we want to respond to situations as well as to stimuli. This conclusion is based on the Humanistic perspective which implies that we humans aren't simply machines that respond to stimuli from the environment, nor are we doomed by our already determined behavior from our unconscious. The difference between humans and other organisms is that humans have a developed frontal lobe which allows them to make rational decisions. Therefore, humans have the ability to think and analyze a situation based on our past experiences and future aspirations. ✓

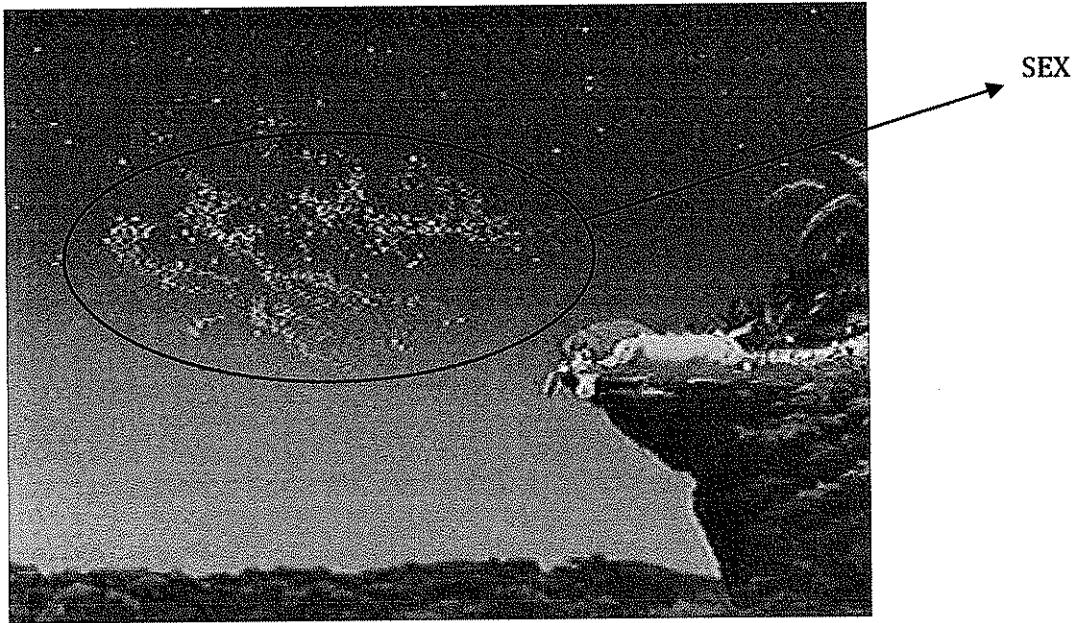
Applying this concept to the topic of subliminal messaging, it can be concluded that it is up to the consumer whether to fall for the tricks of marketers or not. If we are gazing upon an expensive car we have the ability to reject the attractive advertisement and think logically about whether we should or shouldn't purchase. By accepting the idea that subliminal messaging has a power over us, it will evidently change our behavior, but on a conscious level. For example, if consumers gaze upon expensive cars and tell themselves that there are hidden subliminal messages that have power over them, they are only making up excuses for their undesired behavior. There is a difference between being unaware of the hidden stimulus and actually being helpless and searching for an excuse for one's own behavior. ✓

The evidence from studies of Vokey and Read^{date?} as well as Greenwald leads to the conclusion that there is no overpowering effect of subliminal messaging. The advertisers use the concern of the consumers that there are hidden messages to their own advantage. The marketers do this by having obvious sexual inferences in their advertisements, which allows the consumers to think that by detecting this "hidden" message the consumers have advantage. As the consumers are consciously aware of the product and its sexual inferences they will want to buy the product, but because the consumers look for an excuse for their undesirable behavior they say it is the marketers' fault. This concept was explored in *the five tendencies* (Moore 1982.) It is due to the consumers feeling ashamed of their undesirable behavior that they grasp onto the overexploited idea of subliminal messaging. ✓

Therefore, **Should the use of subliminal messaging be allowed in advertising?** Based on the provided research, it would only be logical to say that it should be allowed, and that it does not cause harm as is alleged. The evidence against the use of subliminal messaging is too weak to classify subliminal messaging as harmful. In fact, the use of subliminal messaging is so weak that not many marketers use it maybe because of the studies^{which studies?} done they consider it useless. It is much more effective to have the consumer aware of the sexual inferences. To clarify this idea: if there is an advertisement about the new Maybelline lipgloss and the model looks very attractive and her lips look very luscious, there is obviously no hidden sexual content in this advertisement it's all very explicit. The consumer will thus want to look like this model, consciously; therefore, she will buy the lipgloss. This technique is much more profitable for companies rather than using subliminal messaging. ✓

To sum it all up, it is the responsibility of the consumer to respond appropriately to stimuli; humans have the ability to think about their actions and not act as machines. If we were to say that humans respond to hidden subliminal messaging like a computer would to a mouse click, we would feel Darwin roll over in his grave. Evolution has set us apart from all other organisms who survive on their basic biological instinct. We are much more complex than a computer. Therefore, it would be wrong to suggest that we are victimized by our environment. ? Subliminal messaging is evidently not as effective as some insist it is. In fact, the research conducted on its effectiveness supports not that it's a harmful force but instead supports how humans tend to hold on to old beliefs, no matter the new evidence. Therefore, based on the research conducted, ? yes, subliminal messaging should be allowed in Advertising. ✓

Appendix 1 the word 'sex' supposedly appears as Simba collapses.

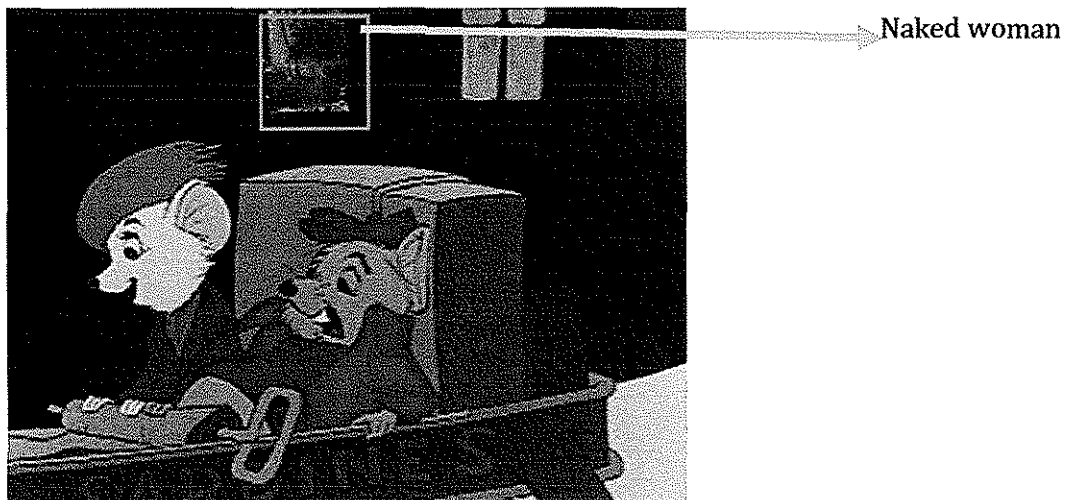


<http://www.putoslokos.com/images/lion%20king%20sex.jpg>

Comments:

The candidate has produced several interesting findings from her reading. There is a need to provide empirical evidence for several of the assertions that are made in the essay. All studies & authors mentioned in the essay should be referenced in an academically approved manner.

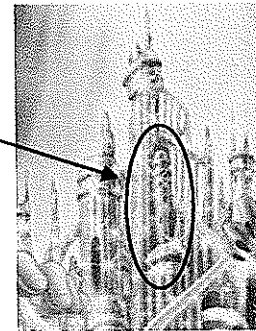
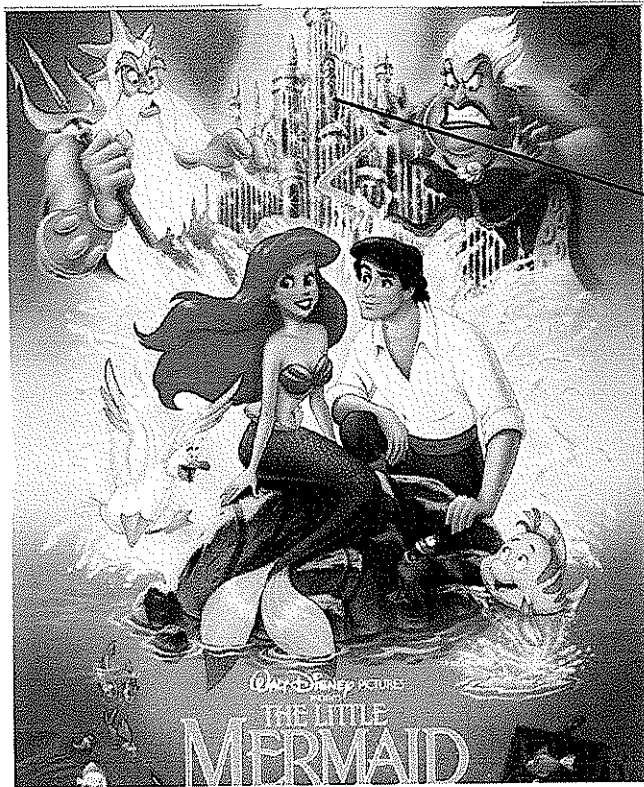
Appendix 2: Bernard and Bianca, naked woman is apparent in the window/poster.



http://www.jamais203.net/images/Mixage_Video/resc1big.jpg

✓

Appendix 3: Little Mermaid movie poster:



<http://www.jigsawgallery.com/prodpics/ED13457.jpg>

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http://faculty.washington.edu/agg/pdf/gwald_sprang_partk_esk_psychsci_1991.ocr.pdf

Several cited studies do not appear in this section. They should do so,

Assessment form (for examiner use only)

Candidate session number	0	0						
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Assessment criteria		Achievement level		
		First examiner	maximum	Second examiner
A	research question	1	2	
B	introduction	1	2	
C	investigation	2	4	
D	knowledge and understanding	2	4	
E	reasoned argument	2	4	
F	analysis and evaluation	2	4	
G	use of subject language	3	4	
H	conclusion	2	2	
I	formal presentation	2	4	
J	abstract	1	2	
K	holistic judgment	3	4	

Total out of 36

Name of first examiner:
(CAPITAL letters)

Examiner number: _

Name of second examiner: _____
(CAPITAL letters)

Examiner number: _____



Candidates must complete this page and then give this cover and their final version of the extended essay to their supervisor.

Candidate session number

0

0

Candidate name

School number

0

0

School name

Examination session (May or November)

May

Year

2009

Diploma Programme subject in which this extended essay is registered:

Psychology

(For an extended essay in the area of languages, state the language and whether it is group 1 or group 2.)

Title of the extended essay:

ADHD - Disease or Parental Deficit?

Candidate's declaration

If this declaration is not signed by the candidate the extended essay will not be assessed.

The extended essay I am submitting is my own work (apart from guidance allowed by the International Baccalaureate).

I have acknowledged each use of the words, graphics or ideas of another person, whether written, oral or visual.

I am aware that the word limit for all extended essays is 4000 words and that examiners are not required to read beyond this limit.

This is the final version of my extended essay.

Candidate's signature: _

Date: 01 / 15 / 09

Supervisor's report

The supervisor must complete the report below and then give the final version of the extended essay, with this cover attached, to the Diploma Programme coordinator. The supervisor must sign this report; otherwise the extended essay will not be assessed and may be returned to the school.

Name of supervisor (CAPITAL letters) _

Comments

Please comment, as appropriate, on the candidate's performance, the context in which the candidate undertook the research for the extended essay, any difficulties encountered and how these were overcome (see page 13 of the extended essay guide). The concluding interview (viva voce) may provide useful information. These comments can help the examiner award a level for criterion K (holistic judgment). Do not comment on any adverse personal circumstances that may have affected the candidate. If the amount of time spent with the candidate was zero, you must explain this, in particular how it was then possible to authenticate the essay as the candidate's own work. You may attach an additional sheet if there is insufficient space here.

I have read the final version of the extended essay that will be submitted to the examiner.

To the best of my knowledge, the extended essay is the authentic work of the candidate.

I spent 30 Min hours with the candidate discussing the progress of the extended essay.

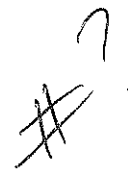
Supervisor's signature:

Date: 24/0/09

ADHD – Disease or Parental Deficit?

International Baccalaureate Program

August 2008
Word Count: 3,553



ADHD-Disease or Parental Deficit?

Table of Contents

Abstract	3
Introduction	4
What is ADHD/ADD?	5
What does ADHD/ADD look like?	6
ADHD/ADD History	7
ADHD/ADD Disbelief	9
ADHD/ADD Cause and Effect	10
ADHD/ADD Personally	11
Summary	15
Bibliography	16

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✓

Abstract

Attention Deficit Hyperactivity Disorder (ADHD/ADD) is a mental illness characterized by inattentiveness, hyperactivity, and impulsivity. Controversy concerning the legitimacy of the disorder is widespread- some recognize it as a disorder, while others believe that ADHD is nothing more than the result of poor parenting. Scientific data, as well as my own personal experiences have proven that ADHD is, in fact, as legitimate a disorder as any. Those who are diagnosed are not written off as disciplinary problems when they are merely incapable of [continuous] self control. My own mother and brother have fallen into these terrible behavioral misunderstandings, yet they are two of the brightest people I know. This is not to say that every child diagnosed with ADHD/ADD is genuinely a case; there are those parents who are simply looking for excuses to their child's poor behavior. But for those who truly have fallen to the mercy of this disorder, the fault is not their own.

no RQ
no Scope
no Concl.

Introduction

Attention Deficit Hyperactivity Disorder/Attention Deficit Disorder (ADHD/ADD) is a psychiatric disorder that supposedly impacts only three to five percent of children in the United States, which translates into approximately two million children. Over the last decade, though, children have been diagnosed with ADHD/ADD at alarming rates reaching an almost epidemic status. While there is more than sufficient scientific data supporting the diagnosis of ADHD/ADD as a true form of mental illness, many people – to include even psychiatrists and other health care providers in the mental health medical community – believe that the diagnosis is merely a myth. They believe the impulsive and/or inattentive behaviors of ADHD/ADD are actually caused by a lack of self-control and/or a manifestation of insufficient parenting. In my opinion, ADHD/ADD is absolutely a true and viable disease state. I derive my opinion simply by considering the fact that I have consulted some information of the enormous scientific body of evidence, but also from my first hand experience of living with two family members who have the disease. ✓

def'n
rates

Thoroughly disregarding the plethora of information discussing this psychiatric disorder, some firmly believe that ADHD/ADD is nothing more than a pathetic excuse, and a two-fold excuse at that. On one hand, the child could simply be acting out, for whatever reason, be it a self control difficulty or some other form of behavioral problem. This particular type of behavior is considered 'normal' for children in their earliest years of schooling. Even those in the medical field are confident in their beliefs that children are *supposed* to speak without first thinking, to be incapable of sitting still for extended periods of time, and to be inattentive at times. On the other hand, psychiatrists and ✓

no support
for where
this idea
originated

skeptics alike theorize that ADHD/ADD is only the result of a lack of discipline from parent to child in this new generation, viewing these cases from a “spare the rod, spoil the child” standpoint. Granted, some of these supposed ADHD/ADD cases can clearly be the manifestation of insufficient parenting, a need for boundaries, but those are not the particular cases to be addressed. ✓

no RQ.

What is ADHD/ADD?

In 1845, a physician by the name of Dr. Heinrich Hoffman described ADHD. Also a medicine and psychology author, Dr. Hoffman became interested in children's books when he could not find suitable reading material for his three year-old son. He then wrote a book of poems, illustrations included, about different characteristics of children. “The Story of Fidgety Philip” impeccably described a young boy with Attention Deficit Hyperactivity Disorder. Sir George F. Still published a series of lectures in 1902 depicting impulsive children with behavioral problems caused by a genetic dysfunction rather than poor child rearing. Several thousand scientific papers on the disorder have provided information on its nature, course, causes, impairments, and treatments since that time. (ADD Coach Academy, page 1-2) ✓

Basic Des

Attention Deficit Hyperactivity Disorder becomes apparent in children in the preschool- early school years; children have a difficult time controlling their behavior and/or paying attention. According to the Diagnostic and Statistical Manual, Fourth Edition (DSM IV), if a child has not been diagnosed with ADHD/ADD by age six, they cannot be diagnosed. There is no late onset for this particular psychiatric disorder. ✓

What does ADHD/ADD look like?

The specific behaviors of children with ADHD/ADD of course vary; however, there are three principal characteristics of ADHD/ADD: inattention, hyperactivity, and impulsivity. The inattentive children get bored quickly, and cannot focus on one task. If the task at hand is one that the child enjoys, there will be no trouble focusing, but once organization, completion of tasks, and/or learning to things comes into play, difficulties arise. The DSM IV characterizes the inattentive student as one that is easily distracted by extraneous sights and sounds, does not pay attention to detail, and makes careless mistakes. The inattentive child is also said to skip from one unfinished task to the next, to rarely follow instructions carefully, to completely forget or lose things like toys, pencils, books, and tools needed for a task. For the inattentive child, homework is a particularly difficult task, for they tend to forget to write assignments down, or bring home a book [and the correct book at that]. Frustrating as it may be, the homework, if completed, is usually full of errors and erasures (Coach Academy "Signs", 1)✓

The hyperactive children are those that are "on the go", moving relentlessly. These hyperactive, or hyper, children eagerly touch and/or play with anything in sight, or talk incessantly. Sitting still at the dinner table or throughout a school lesson/story can turn out to be tricky, fidgeting and squirming in their seats. Hyperactive teenagers and adults tend to feel restless when eating as they eat, and may feel the need to roam around the room, or wiggle their feet, touch everything, or tap noisily (Coach Academy "Signs", 2). ✓

According to the DSM IV, the three patterns of behavior that indicate ADHD (inattentive, hyperactivity, and impulsivity), give way to three "subtypes" of ADHD

CHAPS

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recognized by professionals [that is, if they so choose to recognize ADHD as a mental disorder]. These subtypes are the predominately hyperactive-impulsive type; the predominately inattentive type; and the combined type. The predominately hyperactive-impulsive type does not show significant inattention; the predominantly inattentive type does not show significant hyperactive-impulsive behavior, which is sometimes called ADD—an outdated term for this entire disorder; the combined type which displays both inattentive and hyperactive-impulsive symptoms (Coach Academy “Signs”, 2).

ADHD/ADD History

The earliest scientific reference to poorly behaved children is attributed to Sir George F. Still and his description of the child symptoms of aggression, resistance to discipline, poor self-control, hyperactivity, and poor attention in group activities in 1902. This depiction of these children is remarkably consistent with what we now call ADHD/ADD. Still believed the children exhibited a “defect in moral control” resulting from a biological predisposition or pre- or postnatal injury (Meaux, 2).

The encephalitis epidemic (encephalitis being an [acute] inflammation of the brain, commonly cause by a viral infection) of 1918 mounted support for the theory that brain damage caused poor behavioral control and hyperactivity. Children who recovered from acute encephalitis often displayed drastic personality changes, for example, hyperactivity, distractibility, antisocial behavior, and especially, a resistance to discipline. Clinicians noticed the similar symptoms in children who had suffered from other brain disorders, such as epilepsy, head injury, or anoxia. The apparent link then deemed the disorder as “minimal brain damage”. Controversy in the 1930s over the causes of the disorder began to relate different terms to the same pattern of behavioral symptoms.

Historical

info

“Restlessness” syndrome was the name applied to children who showed normal to superior intelligence with no signs of brain injury, but exhibited symptoms of hyperactivity, poor attention span, impulsivity, etc. Scientists believed the child’s symptoms derived from psychological etiology caused by either parental overindulgence or parental neglect. On the other hand, two scientists, Kahn and Cohen believed that “defective brainstem organization caused ‘organic drivenness,’ a term the two introduced to describe hyperactivity (Meaux, 3). ✓

In 1937, stimulant drugs began to be used to treat the behavioral problems with Dr. Charles Bradley. Dr. Bradley discovered, by accident, that hyperactive children responded well to the drugs. After taking Benzedrine, the children improved performance in school, were less disruptive, and were able to concentrate. Dr. Bradley results did not spark interest until the early 1960s (Meaux, 3). ✓

The scientific community began questioning the theory of brain damage causing behavioral disorders throughout the 1950s and 1960s. Research began to grow, and focus was transferred from brain damage notion to the hyperactive symptom itself. Scientists then substituted the term “hyperkinetic syndrome” in place of the previous “minimal brain damage.” Scientists felt this change would better describe the broad range of behavior and learning disorders. The next shift of scientific focus occurred in the 1970s, caused by the steadily growing body of literature about the disorder. Other symptoms of ADHD/ADD (examples: poor attention span, impulsivity control issues, etc) began to receive more concentration than the hyperactivity. The diagnostic criteria were then established, as was an official name: Attention-Deficit Disorder, and later Attention-

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Deficit Hyperactivity Disorder. During this time, the use of stimulant medications for hyper children same period increased exponentially (Meaux, 3).

In spite of the evidentiary support of stimulant medicines for hyperactive children, public and professional “drugging [of] schoolchildren” soon became a dilemma.

Additional theories speculating causes of hyperactivity began surfacing quickly during the 1970s, such as diet, rapid cultural changes, and poor parenting; however support of these theories was inconsequential. The 1980s reallocated research, as it continued through the 1990s, due to the foible of finding the key deficits in children with ADHD/ADD (Meaux, 4). ✓

ADHD/ADD Disbelief

“ADHD has received more scientific scrutiny than any other childhood psychiatric disorder,” and yet there are still those that remain undaunted by the legitimacy of this [child] behavioral disorder (Fritz, 1). Now ordinary in America, millions of children are prescribed numerous addictive, hazardous medicines to control typical child behaviors, for which no cure is needed. Scientists have questioned the ADHD happening and why has it not been documented over time? Or in different cultures? Or even in animals? Although there is not scientific evidence supporting this hypothesis, ADHD } disease model supporters wholly believe that ADHD is nothing more than the manifestation of a chemical imbalance in the brain. Scientists question the validity of the disorder, inquiring why, if ADHD is, in fact, a neurological disorder, the sudden change of the neurological system of the typical American boy over the last decade? (Stolzer, 113) ✓

ADD/ADHD has frequently claimed patients that did not have the inattentive disorder, for there are a number of other conditions displaying similar symptoms, both mental and genetic. A few of the majorly mistaken symptoms are: learning and language disorders, disorderly conduct, depression, and anxiety (Rappley 1). The concept of the illegitimacy of the diagnosis allows room for question; if the disease cannot stand strong alone as a diagnosis, how could it possibly be admissible as a serious disorder? Other?

not a disorder

✓ ? . . .

ADHD/ADD Cause and Effect

The public, predominately parents of diagnosed children, tends to question the etiology [cause] for the disorder, wondering what has happened to the child to make them ADHD children. The majority of authentic diagnoses were indeed said to have been caused by some neurological or genetic defect, although this is not to disregard the role of environmental factors in the severity of the disorder. The degree of affliction and impairment the child may have may be due to environmental factors, but these factors alone do not seem to cause the disorder (Child Developments Institute, 1). ✓

One agent that is potentially associated with a higher risk of ADHD/ADD is lead, finding high levels of lead in preschool children. Lead is no longer allowed in paint, and is often found in older buildings, toxic exposure to elevated lead levels is not as recurrent as it once was. Earlier suggestions as to the cause state that some children who have suffered brain damaging accidents behave similar to children diagnosed with ADHD/ADD; however, minute percentages of children with ADHD/ADD were found to have suffered traumatic brain damage (Child Developments Institute, 1). ✓

LEAD

Attention disorders have, in addition, suggested to be caused by refined sugar or *Food* food additives, or that the symptoms of ADHD/ADD worsen by refined sugar or food additives. In 1982, the National Institutes of Health held a conference to discuss the subject, and found that five percent of children with ADHD/ADD improved with diet restrictions. [This five percent consists of children with food allergies.] (Child Developments Institute, 2) ✓

The last and perhaps the most probable suggestion, is that attention disorders have *GEN* genetic influences. Studies show that twenty five percent of the relatives in families of a(n) ADHD/ADD child(ren) also have ADHD/ADD; however, in the general population, the rate is only five percent. Researchers continue to study this genetic role in ADHD/ADD in an attempt to identify the genes that cause a person to be inclined to have ADHD/ADD (Child Development Institute, 2). Technically speaking, ADD/ADHD does not affect the body as much as it does the interpersonal skills necessary for a fulfilling and successful lifestyle. ✓

↑ each only mentioned & not elaborated

ADHD/ADD Personally

The children involved with the ADD/ADHD cases seem typical, just much more "busy-bodied." For example, as stated in an article by Marsha Rappley:

A mother brings in her eight-year-old son for evaluation after he is suspended from riding the school bus for jumping out of his seat, teasing other children, and not following directions. He spends two to three hours a night with homework that he never successfully completes. His mother wants to know whether he has attention deficit-hyperactivity disorder. ✓

Most children, especially males, have symptoms similar to these-not necessarily bad children, yet random and constantly distracted (example: the boy tries, daily, to complete his homework, but struggles nonetheless, etc). Rappley, utilizing diagnostic criterion tables from the DSM IV, indeed recognizes that this boy has ADD/ADHD; not that he is a bad child, or that he is suffering from some past traumatic experience, but that he is solely incapable of self control and attentiveness. ✓

As previously stated, I was exposed to ADHD/ADD at a young age, matter-of-factly, it was all I knew. I grew up (and still reside in) a home with two individuals that have been diagnosed with Attention Deficit Hyperactivity Disorder/ Attention Deficit Disorder. Those two people, my mother (Kimberly) and my brother (George), have more than proven to me that ADHD/ADD is indeed a mental illness. They do not physically *try* to do the things they do, these things just happen: the absentmindedness, the random outbursts of energy, the speaking on impulse, the daydreaming at the most inopportune times possible. ✓

Personal exp.

Because I grew up without ADHD/ADD in a home with two individuals who did have the disorder put me in a position to be the most consistent. I would keep up with keys, purses, wallets, homework assignments, money, everything, not because I was forced or told to, but because I was the only one that could do it consistently. My mother would walk outside in the mornings to go to work, get in her car, and wonder what is missing, and have no idea that she had left her purse and keys inside. It got to the point where I would be standing at the door with the two in hand when she came dashing through the door in search of them, and it became routine for me, which ending up working for everyone. /

anecdotal

My mother's ADHD/ADD put her into quite a bit of trouble as a child, and even more as an adolescent/teenager; she was always disciplined for forgetting things, for being a "busy body". Because my mother has ADHD/ADD, I am led to believe that this psychiatric disorder most certainly is genetic rather than perhaps a brain injury because my mother and brother are two of the most brilliant people one could ever hope to meet.

Raised in the olden days of "children are to be seen and not heard", my mother was disciplined for impulsively jumping into adult conversations, singing, and dancing at the most inopportune times. When questioned, she would respond, "I couldn't help it," and that is honestly what she felt. As a child [in school], my mother was constantly chastised for running around energetically, impulsively speaking out of turn, for which her punishment was the dreaded "time-out". Time out for my mother was indescribably difficult. Although she was supposed to sit still and quietly, the silent secluded area compelled her to play with the chair she sat on, to tap and sing happily to herself. Seeming disobedient, she would again be told to sit still. She always tried to sit still, but she felt as though she had to move, fidget, and squirm. Constantly sent to time out or the principal's office, my mother was written off as a disciplinary problem child, but when her academics were called into question, she was exceptional.

As an adult, the ADHD/ADD still got my mother into a bit of trouble, but it was occasionally more serious. Because she had her absentminded moments, she would be "spacing," as we call it at home, and driving, which of course means my mother got into countless car accidents. But my mother is not deaf, dumb, or stupid.

Granted my mother did undergo some stressful times in her childhood: to be given up by your biological mother is hard. Thankfully, my mother's aunt (her mother's

sister), a school teacher, took her in. Soon after, in her early teenage years, my mother was bounced around to numerous relatives, to whoever was willing to take her. After in a home for so long, her 'disciplinary problems' became her enemy, for the relatives she lived with did not know how to handle her behavior, and would give her up to the next willing relative. Although trauma is suggested to be one of the underlying causes of ADHD/ADD, I do not believe her trauma contributed to her behavior because the trauma came after the disciplinary problems. ✓

My older brother, George, was much more of a handful than my mother, who has had years to adapt and learn from her ADHD/ADD. George was a loveable child, however loquacious he may have, and perhaps the busiest child around at the time. He would be sleepy beyond words, and he would run around in circles, screaming with laughter, and all of a sudden he would fall to the ground, fast asleep. George was notably destructive and absentminded as an adolescent, as well as absentmindedly destructive. My mother refused to put George on drugs like Ritalin, "calming" drugs used to "treat" ADHD/ADD, recognizing that if he was put on the drug, he would be on it for an extended period of time. ✓

George loves the game of baseball, and played as a child. Well, George was on the baseball team. He did not get much playing time because when he did, he would be absentmindedly picking flowers rather than focusing, paying attention to the game. But when children play recreational sports, everyone plays, so George got his chance. He would be called up to bat, and would be so excited that he would get to hit; but he would strike out because he impulsively swung before the ball reached him. George loved the game, but could not control his actions. ✓

Even as a teenager, a young man, George still finds himself blurting out answers in class before he even thinks to raise his hand, spontaneously bursting into song for no apparent reason, and even impulsively pulling chairs out from under his classmates. But because he was a male, George's destructive nature was [unfairly] perceived much differently than my mother's. Although George practically lived in time out, silent lunch, detention, etc, he was by chance one the most gifted individuals throughout his schooling. George was also [slightly] traumatized by the divorce of our parent at age seven, as was I, but he, like my mother, behaved impulsively and absentmindedly before the divorce. Why does he do the things he does? When asked, George will stop, genuinely think about it, and still be unsure as to motive behind his actions. But is that his fault?

Summary

The people who refuse to acknowledge the existence of behavioral and attention disorders have yet to experience it firsthand, for a loved one to be written off as a mere derelict. I have two prime examples, and they are the greatest people in my life. They mean absolutely no harm, and they do not enjoy receiving the repercussions of their actions. They despise feeling like "problems" or burdens, but simply cannot control their behavior as someone like me could. Often times, they do not understand why they move incessantly, just that it happens without warning. I firmly believe that Attention Deficit Hyperactivity Disorder is a genetic mental disorder. Unreflective of character, I am certain that if those with ADHD/ADD could stop and think things all the way through, keep up with things on their own, or pay attention to important details, they would. Unfortunately, that option has yet to be presented to them. I've seen the looks of

Strong personal connection
but only provides as
anecdotes as
no support or
linkage
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wonderment at how I can manage to sit still for a movie in its entirety, how I can keep up with all my belongings, how I remember everything. The ADHD/ADD is not something easily controlled.

Likewise, I believe that there are diagnosed (and “treated”) cases of ADHD/ADD that are not true; I believe that some parents who did not do a marvelous job of child-rearing look for excuses to their child’s ridiculous behavior, and pass it off as ADHD/ADD. However, I refuse to believe that all cases are as such.

I cringe at the notion that drugs like Ritalin or Dexedrine are the solution to ADHD/ADD. There is nothing ‘wrong’ with the physical composition of those diagnosed, so why is medicine implemented to ‘fix’ them? These drugs used to treat the disorder are used until the symptoms decrease, until control is attainable. But is it honestly worth it, to put a loved one on drugs for the rest of their lives just to make them settle down? No, it is not, and yet nowadays, parents are willing to drug their children for them to be “normal”. From someone who knows, being normal is vastly overrated.

✓
No conclusion
as no RQ.

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Assessment form (for examiner use only)

Candidate session number	0	0						
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		Achievement level			
Assessment criteria		First examiner	maximum	Second examiner	
A	research question	0	2	0	
B	introduction	1	2	1	
C	investigation	1	4	1	
D	knowledge and understanding	2	4	2	
E	reasoned argument	0	4	0	
F	analysis and evaluation	1	4	1	
G	use of subject language	1	4	1	
H	conclusion	0	2	0	
I	formal presentation	2	4	2	
J	abstract	0	2	0	
K	holistic judgment	2	4	2	
Total out of 36		10		10	

Name of first examiner:
(CAPITAL letters)

Examiner number: _

Name of second examiner:
(CAPITAL letters)

Examiner number: _