

Historical Definitions and Nomenclatures of the Label ‘ADHD’:  
An Investigating into Attention-deficit and Hyperactive Behavior through Time

By

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ABSTRACT

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<u>Historical definitions and nomenclatures of the label ADHD: An investigating into</u>			
<u>attention-deficit and hyperactive behavior through time.</u>			
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The purpose of this study was to examine whether attention-deficit or hyperactive behavior has always been present but overlooked by society in general. Of particular interest were the differing labels used throughout history describing symptoms akin to those now attributed to the mental disorder 'ADHD' (APA, 1994). These labels have been isolated and their relation to ADHD identified. Awareness of select social influences promoting the use of such labels has also been discussed and for which reason (in lack of) supports earlier non-specific recognition of non-threatening misbehavior.

## Acknowledgements

To everyone I have known, conversed with, read about, observed, and imagined.

And,

to You, the reader.

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Dedication

to everyone with ADHD

to anyone curious about 'ADHD'

to Logan McAbee

to Brigitta

To the present.

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## CHAPTER ONE

### Introduction

Attention-Deficit/Hyperactivity Disorder ('ADHD'<sup>1</sup>) is a term used to describe a very broad spectrum of behaviors (Edelbrock, 1997). Clinicians, school psychologists, parents and teachers are often divided whether a particular child exhibiting periodically questionable behavior should be branded with such a pernicious label. As will be detailed, the subjectivity involved in the diagnosis of this disorder has become a problem of great significance in the latter part of the 20<sup>th</sup> century. It is my contention, however, that this is nothing new, that both the disorder and subjectivity of its measure of inadequacy have existed in children long before its inclusion in the American Psychiatric Association's Diagnostic and Statistics Manual III (DSM-III; 1980) as Attention Deficit Disorder (ADD).

It has become common knowledge that incidences of 'ADHD' diagnoses have increased dramatically over the past decade, 1990-2000 (Minde, 1998; Zito, et al., 2000). There has also been much debate over the use of methylphenidate<sup>2</sup> as the first and often only line of attack used to combat this disorder. It is interesting to see domestic sales of methylphenidate increase nearly 500% from 1991 to 1999 (Woodworth, 2000), prior to

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<sup>1</sup> 'ADHD' is also recorded in literature as Attention-deficit/Hyperactivity Disorder and Attention Deficit Hyperactivity Disorder. 'ADHD' without quotations (i.e. ADHD) represent its characteristic behaviors.

<sup>2</sup> Methylphenidate is the generic name of one of many medications falling into the amphetamine family of drugs and used almost exclusively to treat ADHD. The Physicians' Desk Reference (PDR; Thomas Healthcare, 2002) list 12 variants of Methylphenidate under the heading Methylphenidate Hydrochloride, among them: Concerta®, Metadate®, Methylin®, and Ritalin®.

which they remained relatively stable, and to have Zito and colleagues (2000) discover a 1.8 to 3.1-fold increase in the use of stimulant drugs (methylphenidate) among children aged 2 to 4 years. All while drug companies themselves cite methylphenidate “should not be used in children under six years, since safety and efficacy in this age group have not been established” (Thomson Healthcare, 2002, p. 1999). Coupled with an abundance of unspecified criteria in research studies and a great deal of ambiguity in previous literature (Barkley, 1998), each indictment of ‘ADHD’ must be administered with a grain of salt.

Just as language itself is evolving and continually undergoing change, so, too, is the essence of what the ‘ADHD’ label purportedly represents and describes. How long has it been since English was spelled Englyshe, ‘read’ (i.e. you read this text) spelled ‘rede,’ and ‘you’ abbreviated simply ‘ye’? The notion of language as a living entity has been addressed by many, including Samela Harris (2002) in an article titled *Mangling the language: Abused apostrophes, the death of group nouns...* who affirms: “language is a living entity. It changes with society and the times.” If this is true, then the essence of language, created to portray the sonority of our thoughts, vibrant emotions and lively ideas, and represented by a series of structured, organized characters, must also change now and again. A striking example is presented by the term ‘comorbid,’ not listed in the 1981 edition of *Webster’s third new international dictionary: Of the English language unabridged* (Gove & Merriam-Webster) and coincidentally of which there is no mention prior to adoption of the term ‘Attention-deficit Disorder,’ ADD, in literature.

### Statement of the Problem

The primary concern is of the rise in ‘ADHD’ diagnoses and resulting stimulant medication prescribed to young children in the United States. This study will focus on identifying and describing various historic nomenclature used for symptoms now attributed to ‘ADHD’ in an effort to question the relevance of increasing ‘ADHD’ diagnoses by examining the validity of the label itself. This will be accomplished through a qualitative literature review, at the University of Wisconsin-Stout, of historical definitions for disorders resembling ADHD which, had the label existed at the time, could plausibly have been diagnosed as Attention-Deficit/Hyperactivity Disorder. Historical definitions will be presented in chronological order and span from the earliest thought incidence up to the completion of this study in the Fall of 2002.

### Research Objectives

There are four research questions concerning this problem. They are: 1) how has the definition of ‘ADHD’ evolved; 2) has ‘ADHD’ always been present but overlooked by society; 3) what are some potential problems which exist in the current definition of ‘ADHD’ that may have contributed to its over-diagnoses; and lastly, 4) stemming from the previous question, are there any lingering educational motivations evident that promote diagnosis and treatment of school-aged children suffering from ADHD?

There are four aims to this study. They are: 1) to question the definition and relevance of increasing diagnoses of ‘ADHD’ among school-aged children in the United States by describing and correlating historic ADHD ubiquity; 2) to explore the notion of ‘ADHD’ over-diagnosis not as a physically manifested problem, but born psychologically of its various definitions and terminology (i.e. is the taxonomy valid and

justifiable; what trends in its historic description become evident and do they still remain); 3) to briefly touch on and highlight the influence of structured educational systems in the development and promotion of ‘ADHD’; and finally, 4) to enlighten parents, teachers and authoritative figures of the historical taxonomies encompassing, in whole or part, the symptoms of ‘ADHD’ and, in so doing, allow people acquainted with ‘ADHD’ children to remain open to the possibility of change—that children with ADHD not be placed prejudicially in an ‘ADHD’ box.

### Definition of Terms

There are several terms that need to be identified for clarity and understanding:

*Attention*: “the act or state of attending: the application of the mind to any object of sense or thought” (Gove & Merriam-Webster, 1981, p. 141).

*Comorbid*: synonymous in many cases with ‘related diseases.’ A term used to express similarity between a number of prominent physical and mental characteristics between disorders: two kindred disorders showing much resemblance to one another.

*Disease*: described by Gove and Merriam-Webster (1981, p. 648) as “an impairment of the normal state of the living animal or plant body or of any of its components that interrupts or modifies the performance of the vital functions, being a response to environmental factors (as malnutrition, industrial hazards, or climate), to specific infective agents (as worms, bacteria, or viruses), to inherent defects of the organism (as various genetic anomalies), or to combinations of these factors: SICKNESS, ILLNESS” or, “a particular instance or kind of such impairment: MALADY, AILMENT.”

*Disorder*: described by Gove and Merriam-Webster (1981, p. 652) in various ways. Pertinent to this study, these are: 1) “a condition marked by lack of order, system,

regularity, predictability, or dependability: the act or fact of disturbing, neglecting, or breaking away from a due order;” 2) a “breach of public order: disturbance of the peace of society;” as in “MISCONDUCT, MISDEED, MISDEMEANOR;” and 3) “a derangement of function: an abnormal physical or mental condition: SICKNESS, AILMENT, MALADY.”

*Science*: “possession of knowledge as distinguished from ignorance or misunderstanding: knowledge as a personal attribute.” Generally, the “knowledge possessed or attained through study or practice” (Gove & Merriam-Webster, 1981, p. 2032).

*Scientific*: “yielding knowledge deductively: concerned with or treating of science: devoted to the study or practice of science” (Gove & Merriam-Webster, 1981, p. 2032).

*Researcher*: a disciple of science; a scientific person.

It is important to note that ADHD refers to the conditions and symptoms of the definition for the disorder as described in DSM-IV (APA, 1994). ADHD will always refer to the symptoms and behavior characteristics of a living person diagnosed subsequent to the formal adaptation of DSM-IV, for clinical practice in the United States, at the time of this writing. An attempt has been made to differentiate this meaning (i.e. the physical and mental manifestations of the disorder, its essence) with that of its clinical nomenclative designation as *Attention-Deficit/Hyperactivity Disorder*. Apostrophes are implemented to connote merely the disorder name. Therefore, ‘ADHD’ refers to the phrase *Attention-Deficit/Hyperactivity Disorder* (designated ADHD in other literature), and ADHD (without apostrophes) herein refers to *the symptoms and behavior*

*characteristics of 'ADHD'*. A list of acronyms used throughout this study is provided in Appendix A.

### Assumption

There have not been any known assumptions made before commencing research, save one: that 'ADHD' does indeed exist culturally (socially) and physically as a valid and crucial disorder in modern society. If, then, ADHD exists today it must have existed in some form yesterday, and the day before yesterday, and the day before that... and so on backwards through history. The disorder did not suddenly spontaneously arise without a major cataclysmic and global event affecting a vast percent of the earth's population. As none such event can be identified, attention is given to the amount and style of thought researchers in the past have shown in exploring attention-deficit and hyperactive behavior.

### Limitations

A limitation of the study arises from the assumption made; however, although the assumption is intellectual in nature, this limitation manifests itself physically. Even though ADHD is assumed to exist in recent history, it is difficult to say for certain whether it existed throughout *all* history. Darwin's theory describing a survival of the fittest through natural selection does not account for the modern growing trend in child behavior. If ADHD is truly harmful for the individual in society, then by Darwinian Law it should result in such individuals living as outcasts, independently and ultimately dying off. But this is not so, which brings up an important question: has society become more lenient of behavior or has it simply become so large that a natural balance is no longer maintained, that even the 'unfit' are able to survive.

A second limitation is the ever-persistent human factor, where symptoms cease to be recognizable as ‘ADHD’ depend less on their pervasiveness than on the descriptive nature and writing style (i.e. organized, concise, intelligible) presented by historic authors. Past writers, in their time, cannot have had experience or the foresight to relate observations specifically to ADHD as detailed in DSM-IV (APA, 1994). This becomes additionally compounded (confounded) by the lack of preserved writings, human nature to incorporate subjectivity and biases into literature, by memory in orally recounted facts, and by the lack of rigid and perpetual scientific process. Much of the medical knowledge surviving medieval Europe from the Graeco-Roman period is owed to the Arab and Islamic cultures whose translations (of already subsequent-generation copies of original texts) were later re-translated back into European tongues (Nutton, 1995a; Conrad, 1995).

A third limitation is also of an historic nature. Prior to the advent of national public schools in late 18<sup>th</sup> and early 19<sup>th</sup> centuries, students with attentional problems, and learning difficulties in general, simply did not attend class. It was in everyone’s best interest to see the student put to work supporting family living rather than continue on struggling at an education not deemed necessary to provide for and maintain a future family. Patience and tolerance of teachers toward students was also thin. Learning disabled students were frequently discouraged from pursuing an education since, in late antiquity and medieval times (c. 600 – 1300), education primarily required the memorization of whatever texts were available (Conrad, 1995).

## CHAPTER TWO

### Review of Literature

#### Introduction

This chapter will outline the history of nomenclature and defining features of what today is termed the Attention-Deficit/Hyperactivity Disorder (ADHD). There are numerous examples in history of behaviorisms exhibited by children and adolescents paralleling ‘ADHD’ or one of its often associated and misinterpreted comorbid disorders (i.e. Conduct Disorder, CD; Oppositional Defiant Disorder, ODD; Learning Disabilities, LD; etc.). To relate various historical descriptions and references of conduct akin to modern-day ADHD, each will be listed in chronological order to correlate their rationale.

The intent of this chapter is to determine how disorder labeling has been based on historical definitions and treatments, and to determine its efficacy. In particular, the likelihood and occurrence of attention disorders existing long before categorization and labeling by the APA in the late 1970s will be identified. Following this, discussion will progress toward a review of the requirements for a child living in the United States at the turn of the 21<sup>st</sup> century to be classified as having ‘ADHD.’ Of primary importance, however, is an understanding and identification of the term itself, in a historical context, before use as a potential exaggerate amplifying the perceived severity of a ADHD behavior.

Logically, it can be argued that if indeed symptoms resembling ADHD have truly existed for hundreds of years prior to creation of the ‘ADHD’ label, such classification need only be rhetorical since, as a society, we have and will undoubtedly continue to evolve, diversify, and expand our knowledge just as the sun continues to rise each day

whether we pay attention to it or not. With this in mind, a lingering thought remains: without attention to ADHD, will our knowledge of this disorder cease to expand. That having been said, do attention and vigor toward any object not automatically aid in its recognition, thereby increasing a collective awareness and knowledge concerning it? In the case of ‘ADHD,’ if its definition were too refined, its classification may cease to serve a practical clinical function. Thus, the question should be is classification of a disorder affecting as many individuals as ‘ADHD,’ as long as it has, really relevant in furthering our scientific knowledge.

This chapter is divided into five general sections, which in turn are often subdivided into smaller sections. The first section, A Concern for Moral Behaviorism, is inclusive of the earliest reference to conduct resembling ADHD. From the biblical era, due to lack of relevant writings, events and reflections skip ahead nearing the 18<sup>th</sup> century where, gradually, opinions pertinent to the disorder were recorded in writing and preserved. These ideologies are outlined in the remaining four sections: 2) Early Thoughts on Attention; 3) A Neurological Condition; 4) Reemergence of Behavior Deficits; and lastly, 5) Attention Deficit Disorder and Its ‘Official’ Definitions. To conclude the chapter, factors thought responsible for and ascribed to the prevalence of ‘ADHD’ behavior will be briefly mentioned, leading into some present and varying opinions about the disorder.

### A Concern for Moral Behaviorism

#### Plato (428 – 347 BC)

Once upon a time there were healers and there were philosophers. Healers (physicians) were charged with restoration of physical maladies through surgery

(University of Virginia Health System, n.d.) or any other means they deemed appropriate<sup>3</sup>. Philosophers did the thinking. They were the teachers and storytellers of society. The time period spoken of is the Graeco-Roman period and among the most notable philosophers of the time (c. 400 B.C.), still regarded highly today, was Plato (Still, 1931).

Plato's thought on the education of children was to "train children in their lessons, not by compulsion, but as if they were playing" (cited in Still, 1931, p. 309). In other words, Plato advocated adjusting the classroom to the student not the student to the classroom for optimal learning and child care. Though scientific validity of Plato's inquiry remains askew, there are an increasing number of home-schools and alternative education systems (e.g. Montessori, Waldorf, etc.) that indicate his reasoning may be well founded. In the Graeco-Roman period, however, public schools had yet to be imagined and the 'classroom' of children was continually being altered as it happened also to be the living environment of the pupil and apprentice. The question to be asked is did this pedagogical philosophy strike Plato out of an alarming need to resolve attention issues in the students of his time?

Plato was against inattention. Speaking of children, he was of the firm belief (Abraham, 1958, p. 17):

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<sup>3</sup> The healer was enjoined to do always what was helpful, or at least would not harm, which allowed such a person (man) the freedom of non-intervention including leaving a patient to other healers or even 'the gods' (Nutton, 1995b).

We must watch them from their youths upwards and make them perform actions in which they are most likely to forget or to be deceived, and he who remembers and is not deceived is to be selected, and he who fails in the trial is to be rejected. Clearly attention deficits were prevalent in his day, but to what extent is uncertain. Plato confounds modern inattention with what Abraham denoted as ‘giftedness.’ Sadly, however, Plato’s conviction of ‘that will be the way’ (truncated above) was made so. Abraham purports this theory of education to have lasted, and as having been a driving philosophy in instructional/school settings, well into the 19<sup>th</sup> century.

### The Holy Reference

The earliest evidence of behavior to be affiliated with the ‘ADHD’ evolution, outside Plato’s speculative suggestion, is found in a biblical reference. The proceedings of *The Holy Bible* are presumed to have held relevance throughout the time of Christ, nearly 400 years post-Plato. By then, however, the events and laws recorded by the Hebrew bible<sup>4</sup> would have already been well established, and therefore recorded much earlier (a specific date is not known). *The fifth book of Moses, called Deuteronomy* (1611, Chapter 21: 18-21) in the Hebrew bible states:

18: If a man have a stubborn and rebellious son, which will not obey the voice of his father, or the voice of his mother, and that, when they have chastened him, will not hearken unto them:

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<sup>4</sup> The original 1611 edition of the King James Version of the Holy Bible consisted 80 books in three sections: The Old Testament, The New Testament, and 14 books known only as Apocrypha which were officially removed by the Archbishop of Canterbury in 1885 (The Holy Bible, n.d.).

19: Then shall his father and his mother lay hold on him, and bring him out unto the elders of his city, and unto the gate of his place;

20: And they shall say unto the elders of his city, This our son is stubborn and rebellious, he will not obey our voice; he is a glutton, and a drunkard.

21: And all the men of his city shall stone him with stones, that he die: so shalt thou put evil away from among you; and all Israel shall hear, and fear.

Line 21 indicates the location to be that of Israel, unlike the Roman governance of central Europe in the preceding paragraph. From the above reference, symptoms of inattention<sup>5</sup> were either prevalent and common or prevalent and uncommon for such a ‘law’ to exist, regardless, they were certainly established. Even the bantering as a ‘glutton,’ representing a “greedy or excessive indulgence of any desire or faculty” (Gove & Merriam-Webster, 1981, p. 969), is indicative of the habitual self-serving behavior trait associated with ‘ADHD’ as listed in the fourth edition of the *Diagnostic and statistics manual of mental disorders* (DSM-IV; APA, 1994).

Because the antiquated laws of *The Holy Bible* were written specifically pertaining to every conceivable moral infraction at the time, although there are diametrically opposing opinions by various authoritative and religious figures of their exact interpretation, for the purposes of this study biblical scriptures serve to portray a complete, if somewhat varying, historic representation of societal functions. It follows from the reference included in Deuteronomy, that signs of inattentive and behavior now

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<sup>5</sup> Stubborn, rebellious, and self-serving behavior became a trade mark in the first cases of ‘moral defect’ children studied by Still in 1902; Still is considered a pioneer in the development of attention-deficit behavior disorders (Barkley, 1998).

unquestionably indicative of Conduct Disorder, CD (APA, 1994), and Juvenile Delinquency, JD (Binder, 1987), both considered comorbid disorders of ‘ADHD,’ were present two millennia ago. Perhaps for lack of schools par se, ADHD behavior appeared less prevalent than the estimated 10% of the United States, U.S., elementary school population (Fisher, 1998) that now exhibit symptoms of ‘ADHD.’ Had society consented that minor misconduct resembling ADHD was generally inappropriate, greater emphasis would most likely have been placed thereupon in biblical law and whose consequences would hopefully have not been as severe as death by stoning.

#### Eucharius Roesslin

Subsequent to Plato, thoughts were presented on pediatrics by Aristotle, Gale, and other individuals from Arabic and central European nations (Nutton, 1995b; Conrad, 1995). Although these early reflection sparked interest in the field of child care, attention gradually dwindled culminating in virtually no advance in the subject of pediatrics between A.D. 1000 and 1500 (Still, 1931). Growing up in one of the most literate of countries where truancy laws force children to be schooled, it becomes sometimes difficult to imagine that well into the 18<sup>th</sup> century education remained a privilege of the upper class; the vast majority of society was illiterate. In fact, it was not until the early 16<sup>th</sup> century that the first book, *The byrth of mankynde* by Richard Jonas<sup>6</sup>, a second-generation translation from the original German version by Eucharius Roesslin, dealing with ‘infants and their diseases’ was translated into and printed in the English language (Still, 1931). Albeit, there were earlier works containing similar subject matter, but

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<sup>6</sup> Translated into English from the Latin translation of *Der swangern frawen und hebammen rosegarten* by Eucharius Roesslin, originally published in Strassburg circa 1512 (Still, 1931).

primarily of Germanic, Latin, Greek, or a Middle Eastern tongue. At that time, the study of literature was not deemed necessary or relevant to survival. Still, however, reveres this book to be one of the most famous works of the period, resulting in more than forty known editions issued as late as 1730.

Sadly, as Still (1931, p. 99) points out, an ‘augmented’ edition of *The byrth of mankynde*<sup>7</sup> by Thomas Raynaldes in 1545 and soon after the original printing, omitted three chapters: ‘Of yerknesse,’ ‘Against the mother,’ and ‘Of shorte brethe.’ A copy of this work, Still explains, was rare even in his time; at the time of this printing, there has not been a copy available to study in depth. Of the contents listed by Still, none but these three excluded chapters are suggestive of symptoms attributed to ‘ADHD.’ For example, Merriam-Webster (Gove & Merriam-Webster, 1981, p. 2651) defines a Yerk, from the chapter ‘Of yerknesse,’ as: “a quick movement.” To yerk is defined as: “to beat vigorously,” and “to cause to move abruptly.” Since ‘of yerknesse’ is then suggestive of ‘the act of moving quickly,’ restless/hyperactive behavior<sup>8</sup> may have been what Roesslin observed, and whose tell-tail symptom now worded as “acts as if ‘driven by a motor’” (APA, 1994, p. 84), remains a distinguishing feature of ‘ADHD.’

Of the remaining two omitted chapters, ‘Against the mother’ signifies, as a literal interpretation, a parallelism to CD (APA, 1994) whose comorbidity with ‘ADHD’ has been demonstrated as high as 35% (Jadad, et al., 1999). This interpretation of behavior

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<sup>7</sup> Entitled: “The byrth of mankynde otherwyse named the women’s boke. Newly set furth, corrected and augmented. Whose contentes ye maye rede in the table of the booke and most playnly in the prologue” (Still, 1931, p. 99).

<sup>8</sup> Restless and hyperactive behavior also occurs in a variety of other disorders such as Tourette’s syndrome or even epilepsy in the time of Roesslin.

was also grouped under one of the earliest terms used to represent ADHD in literature, that of ‘moral defect’ by Still<sup>9</sup> in 1902. With mild innovation, a parallelism between ‘Of shorte brethe’ and ADHD can also be seen, but even so, will remain provisional without knowledge of specific chapter contents.

Only speculation can be offered herein about what Roesslin truly elected to discuss within Raynaldes’ omitted chapters. In reviewing a Latin work by Georgius Pictorius Villinganus (1563) on the education of children, Still (1931, p. 312) does however remark: “there is a paragraph which suggests that the boy in the early sixteenth century was much the same as the boy of to-day, he required washing.” Now, did Still view children having attentional/hyperactive problems as requiring washing? This question can be easily answered with a fair degree of accuracy—quite possibly, yes. At the time of recording the statement, Still was already in the later years of this life (age 63) and had had the opportunity of quite an extensive study of pediatrics, both in theory and practice. In 1902, he had presented a series of lectures on the behavior characteristics in children and adapted his theory of ‘moral defect,’ describing accurately children who would today fall under the category of ‘ADHD’ (Barkley, 1998).

Comparing the works of Raynaldes and Roesslin, Still affirms the former to be ‘much less rare,’ subtly stating that Roesslin’s treatises on attention/behavior disorders in children were suppressed in the 16<sup>th</sup> century. It is unclear whether Roesslin foreshadowed the emerging field of psychology yet to take place. In fact, from the dawn of medicine well into the 19<sup>th</sup> century, superstition played a large role in medical hypotheses and treatments. If a majority population considered a given behavior

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<sup>9</sup> George Still was considered by many to be the grandfather of ‘ADHD’ (Ross & Ross, 1976).

abnormal (undesirable) it was not uncommon, as Vivian Nutton (1995b) describes, for the symptoms to have been attributed to witchery, demons, or the will of the gods; or, as Still (1931, p. 5) adds, Hippocrates' notion that "diseases have their critical days at multiples of 7." A number of these superstitions still maintain a lingering influence today: a blessing is bestowed upon those who have sneezed for fear of their souls parting their bodies; the phrase 'that little monster' award to a child of maladapted and inappropriate (demonically possessed) behavior, and; suffering 7 years bad luck upon breaking a mirror or walking under a ladder. Even in recent science, the magic number 7 appears, as seen in the title of a 1956 essay by George Miller, *The magical number seven, plus or minus two*, discussing human attention and the capacity of short-term memory (Hockenbury & Hockenbury, 1997). Pre-nineteenth century, behavior disorders were not considered something to bring to the attention of a 'learned' physician, there were simply integrated and tolerated by society. Lack of involvement of medical or otherwise literate individuals is another factor associated with the sparse record of historical literature related to ADHD available today.

#### Hoffman's Poem

From the generally somber, medically quiet, medieval days emerged the earliest poem on the care of children<sup>10</sup> (Still, 1931). Gradually thereafter, an increasing number of physicians and other literate individuals turned to poetry as a form of recording their thoughts and observations, among them the first reference to keynote behaviors characteristic of 'ADHD.' Several texts addressing the history of 'ADHD' attribute the

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<sup>10</sup> The earliest poem on the care of children occurs as part of *Versehung des leibs*, 'Care of the Body' in English, by Heinrich von Louffenburg in 1429 (Still, 1931).

first recognition and record of its symptoms to a poem written in 1854 by a German physician named Heinrich Hoffman, 1809-1894 (Cantwell, 1975; Ross & Ross, 1976). His poem (Hoffman, 1854) is found below to the left, an approximate translation accompanies it to the right:

Die Geschichte vom Zappel-Philipp

„Ob der Philipp heute still

Wohl bei Tische sitzen will?“

Also sprach in ernstem Ton

Der Papa zu seinem Sohn,

Und die Mutter blickte stumm

Auf dem ganzen Tisch herum.

Doch der Philipp hörte nicht,

Was zu ihm der Vater spricht

Er gaukelt

Und shaukelt,

Er trappelt

Und zappelt

Auf dem Stuhle hin und her,

„Philipp, das missfällt mir sehr!“

Hoffmann, 1854

The Story of Fidgety Philip

*“Will Philip sit still*

*For once at the table today?”*

Thus spoke in an earnest tone

The father to his son,

And the mother looked mutely

Around at the entire table.

But Philip did not hear,

What his father spoke to him.

He wriggles

And rocks,

He fiddles

And fidgets

To and fro on the chair;

*“Philip, that displeases me so!”*

Translated by: R. Helmerichs, 2002

“The tale of the humorous activities of ‘fidgety Phil who couldn’t sit still,’” as Cantwell (1975, p. ix) describes, “is the first recorded description of the hyperactive child syndrome” (a pre-‘ADHD’ label). To no surprise, this child reportedly suffered from

restlessness, moral, and attention problems (Kidsource Online, 1997), symptoms common to ADHD (Ross & Ross, 1976). But it was not Hoffman who is typically regarded as the person to commence study into this behavior phenomenon. Barkley (1998) acknowledges George Still and Alfred Tredgold as the two individuals most commonly revered to be the first to focus ‘serious scientific attention’ on the behaviors of children which, today, most closely resemble those of ‘ADHD.’ However, as the reader will hopefully understand, just as Sigmund Freud (1856-1939) is considered the forefather of modern analytical psychology although psychology as a field existed long before his time, so too did scientific inquiry into behaviorisms not suddenly begin with the indoctrination of the 20<sup>th</sup> century. How the *scientific* community has received previous writings attributing deficits in personal character to explain common neurotic traits will remain a lost secret to the past. Plato (cited by Still, 1931) advocated, for the benefit of both philosopher and apprentice, that only when one is ready to receive is attention paid to what is being taught.

### Emerging Thoughts on Attention Characteristics

#### William James (1842 – 1909)

The field of pediatrics eventually began to infringe on the field of psychology, the study of the mind. By the late 19<sup>th</sup> century, serious concentration was placed on attention and the number of things a person was able to attend to at once. The purpose behind the study of attention was to question and define its properties: to determine its boundaries, and its limits. William James (1890) was one of several investigators who came to believe that each person intimately understands inattention, “even in its extreme degree.” His charge, describing a ‘confused, dazed, scatterbrained’ state, was that “most people

probably fall several times a day into a fit of something like this” (James, 1890, p. 404). Initially, the ‘scattered condition of mind’ was attributed to fatigue and monotonous mechanical occupations, but this did not justly explain occurrences of inattention in the school-aged population.

Evidence of inattention in students, as encountered and perceived by their teachers, surfaces over a hundred and fifty years ago. Theodore Waitz, in 1849, discusses the teacher’s role in facing the problem of student inattention. Waitz relates this issue to a study of attention characteristics in animals (cited by James, 1890, p. 405):

The first and most important, but also the most difficult, task at the outset of an education is to overcome gradually the inattentive dispersion of mind which shows itself wherever the organic life preponderates over the intellectual. The training of animals... must be in the first instance based on the awakening of attention (cf. Adrian Leonard, *Essai sur l’Education des Animaux*, Lille, 1842); that is to say, we must seek to make them gradually perceive separately things which, if left to themselves, would not be attended to, because they would fuse with a great sum of other sensorial stimuli to a confused total impression of which each separate item only darkens and interferes with the rest. Similarly at first with the human child. The enormous difficulties of deaf-mute- and especially of idiot-instruction is principally due to slow and painful manner in which we succeed in bringing out from the general confusion of perception single items with sufficient sharpness.’ (Waitz, *Lehrb. d. Psychol.*, p. 632.)

It is doubtful that teachers or philosophers would have dared conjure a fallacy condemning their own education system and possibly also themselves so long ago. In the

21<sup>st</sup> century, job security provided by tenure and employment unions offers a greater amount of freedom both in thought and written word; stepping on the wrong toes, however, will still invariably result in dismissal and ‘restructuring’ of employment positions. But in the time of James, however, and until well into the 1900’s, education remained the sole privilege of the fortunate and ‘well to do’ (Tredgold, 1922). The questioning of a child’s innate schoolroom abilities would have meant loss of employment for his/her teacher.

‘The things to which we attend are said to interest us’ (James, 1890, p. 416), and who better than James himself to portray as evidence, as he displays his interest in attending to the recognition and classification of numerous types of attention. James (p. 416) explains:

Attention may be divided into kinds in various ways:

It is either to

- a) Objects of sense (sensorial attention); or to
- b) Ideal or represented objects (intellectual attention).

It is either

- c) Immediate; or
- d) Derived: immediate, when the topic or stimulus is interesting in itself, without relation to anything else; derived, when it owes its interest to association with some other immediately interesting thing. What I call derived attention has been named ‘apperceptive’ attention. Furthermore, Attention may be either
- e) Passive, reflex, non-voluntary, effortless; or
- f) Active and voluntary

Interestingly, as thoroughly as James has scrutinized the subject, ‘involuntary’ attention is not mentioned, which does, in one sense, imply an inherent difficulty faced when forcing someone to pay attention to an object/event if they themselves do not naturally decide to do so. It is also noteworthy to mention the synonyms James used for attention, referring to it as a ‘condition’ and a ‘state,’ which indicated the issue of attention (or antithetical inattention) to have been a relatively tame issue in schools and society when compared to the lengthy papers and numerous conferences taking place at present. Attention/inattention has now been labeled (in most cases) a chronic disorder, and is no longer simply a ‘condition’ or ‘state.’ Several researchers mentioned by James (e.g. Helmholtz, Cattell, Herbart, Wundt, Exner, etc.—psychologists of the earlier 18<sup>th</sup> century) have conducted experiments on instantaneous and sustained attention, trying at length to understand and identify its primary factors. Research which James perpetuated upon his closing of the subject by asking whether voluntary attention ‘is a resultant or a force,’ i.e. psyche or spiritually related. This debate remains a current topic, though renamed suitably as caused by external environmental factors or internal organic processes (Cadbury, 1999; Teeter, 1998).

With the establishment and wide spread acceptance of psychology as a distinct and separate field within the study of medicine, many of the ‘diseases’ mentioned by James (1890) and also Goodhart and Still (1921) gradually became recognized as ‘disorders.’ Some examples include night terrors, anorexia, and epilepsy (Goodhart & Still, 1921). Other disorders, having previously been referred to as such and including Goodhart and Still’s (1921) functional nervous disorder (hysteria, tic convulsif, pica, etc.), simply relocated proverbial branches of the field of medicine into a new area of

psychology designated as ‘mental disorders.’ Goodhart and Still, in discussing the general classification and relative priority of diseases, state an important fundamental philosophy of medicine whose validity and importance remain an integral part of medicine today: “the well-being of the community is of first importance” (p. 308). This philosophy was initially remote, born from an isolated fear of contagiousness, but has meanwhile progressed to the noticeably delicate arena of day to day experience. Just as typical normal parents only want the best for their children, education systems strive to maximize the efficiency of their classrooms in preparing the maximum number of students possible to comprehend, learn, grow, and be successful in later life. All in all, attention paid to inattention was an important issue, but did not achieve the uproar made today over selective attention and inattentive behavior, specifically in classroom settings.

#### A Defect in Moral Control

George Fredrick Still, 1868-1941, a London physician at the turn of the 20<sup>th</sup> century, devoted a series of three Goulstonian lectures to unusual behavioral observations made of children encountered through clinical practice and displaying what he coined a ‘defect in moral control’ (Still, 1902). In studying and treating these children, he came across 43 cases exhibiting moral defect, which he subsequently divided into two categories. The first these categories included children of obvious intellectual retardation (23 cases), while the second contained patients whom displayed near normal intelligence (20 cases). Still (p. 1008) defines moral control as “the control of action in conformity with the idea of the good of all,” which includes “not only such activity as is concerned with the good of others, but also with the good of self—in other words,” what is meant, Still goes on, is “the altruistic but also the self-regarding” moral control.

Still (1902, p. 1009) lists nine ‘qualities’ common to and portraying a full representation of the moral defect: “(1) passoinateness; (2) spitefulness—cruelty; (3) jealousy; (4) lawlessness; (5) dishonesty; (6) wanton mischievousness—destructiveness; (7) shamelessness—immodesty; (8) sexual immorality; and (9) viciousness.” Two points of those elaborated on in his lectures are worth mentioning. ‘Aggressiveness’ can often be substituted for Still’s ‘passoinateness,’ which he also describes as “outbursts of rage reckless attacks” (p. 1167) and, in occasional instances, notes that “attacks of passoinateness were accompanied by recurring excitability” (p. 1165).

The second point worth elaborating upon is lawlessness. Still (1902, p. 1009) described lawlessness to be “characteristic of deficient moral control not only in imbecile children but also in those ... with no obvious intellectual deficiency.” By lawlessness, Still does not mean “the occasional or even frequent failure to conform to law—whether it be nursery law, school law, or the law of the land,” but rather “a reckless disregard for command and authority” (p. 1009). A resistance to discipline was also described in a number of cases. Still states “the keynote of these qualities is self-gratification, the immediate gratification of self without regard either to the good of others or to the larger and more remote good of self” (p. 1009). Still stresses not all characteristics need be present for a child to be classified a moral defect, not unlike the defining style and criteria currently in use for ‘ADHD’ by the APA (1994).

In addition to the qualities of a moral defect, Still lists three grades of defect characterized by lack of moral control that bear a striking resemblance to the ‘ADHD’ sub-classifications: inattention, impulsivity, and hyperactivity (APA, 1994). Respective to these subgroups, Still’s three grades of defect are: “(1) defect of cognitive relation

to environment; (2) defect of moral consciousness; and (3) defect of inhibitory volition” (Still, 1902, p. 1011)—the latter of which was, in his third lecture, expanded to include “exaggeration of excitability with consequent insufficiency of inhibitory volition” (p. 1165). Although these grades are in association with ‘general impairment of intellect,’ Still (p. 1008) also states:

There are other cases which cannot be included in this category—children who show a temporary or permanent defect of moral control such as to raise the question whether it may not be the manifestation of a morbid mental state, but who nevertheless pass for children of normal intellect.

Still had noted symptoms of ADHD in children exhibiting normal *and* above average intelligence, this recognition greatly contradicted the subsequent connotation of such behavior in Tredgold’s (1922) amentia<sup>11</sup>. In fact, Still (p. 1082) believed that “a morbid defect of moral control may occur apart from any general impairment of intellect.” He clarifies this accordingly:

Except in the lower grades of idiocy and imbecility where the cognitive relation to environment is absent or extremely defective there is not necessarily any direct proportion between the moral limitation and the general intellectual limitation; that no particular type of idiocy or imbecility can be specially associated with moral defect (Still, 1902, p. 1012).

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<sup>11</sup> A disorder identified primarily by a failure to adapt oneself to one’s environment at the time of physical maturity (age 16) independently of external support, believed to be caused by a (premature) arrest of cerebral development (Tredgold, 1922). Tredgold (1922) observed a below average intelligence in almost all cases.

Still has clearly pointed out that symptoms which he attributes to ‘moral defect’ exist in children of ‘normal’ intellect. He also, however, describes a “morbid defect of moral control in children is often seen in association with idiocy or imbecility” (p. 1009).

Teeter (1998) describes Still’s moral defect as a problem resulting from a child’s inability to internalize rules and limits, characterized by a pattern of inattentive, over-aroused, and restless behavior. Due to an increased incidence of alcoholism, criminality, depression, and suicide (considered Affective Disorders today) in the biological relatives of many of the children Still had observed, the conviction of bad parenting (child rearing) as at fault for their conduct began (Barkley, 1998). Of the moral defect cases displaying normal intelligence, Still (1902) had found that only 5 were girls. Translated, Still discovered a boy-girl ratio of 3:1, exactly that which Zito and colleagues (2000) and several additional research teams have found indicative of ‘ADHD.’ Still also noted that, in a few cases, children suffered from convulsions and/or had associated tic disorders (Teeter, 1998).

Although this disease became typically blamed on bad parenting, Still (1902) was of the opinion that children raised under questionable circumstances should be exempt from classification as a moral defect (Barkley, 1998). He believed that a child could not be held accountable for his/her parents’ actions, particularly if these actions become manifest in the child’s moral behavior. For the child not raised under questionable circumstances and having a good upbringing, Still postulates that the cause of defect in moral control was likely hereditary or due to some form of pre and/or postnatal injury (Barkley, 1998):

It seems clear that whilst in some cases the failure of normal control dates from very early in its development, in others an arrest of this development, or perhaps a loss of already acquired control, occurs at a later period of childhood (Still, 1902, p. 1080).

Clearly heredity cannot account for symptoms of ADHD in all cases, but neither can environmental (psychosocial) influences account for all occurrence of such behavior. Still (1902, p. 1166) speculated “that there is not only a perversion of function in the higher nervous centres but an actual physical abnormality underlying the moral defect seems more than probable” suggesting “cell-modification dependent upon interference with cell-nutrition, may be the physical basis of the moral defect” (p. 1166). Barkley (1998) elucidates the dated term ‘cell-modification’ to mean ‘brain damage.’ Both Still (1902) and Tredgold (1922) discovered temporary improvements could be achieved with use of medications and/or changes in the child’s environment and that symptom pervasiveness displayed a relative permanence throughout life. Still (1902, p. 1077) went so far to conclude that moral control “is not present at birth, but under normal psychical conditions is gradually developed as the child grows older.”

As already mentioned, Still (1902) considered ‘the immediate gratification of self’ the ‘keynote’ quality of a moral defect. This keynote quality is also crucial of ‘ADHD,’ evident from its first recognizable label and ‘official’ definition as ADD (APA, 1980) and loquaciously affirmed by criterion B. of Table 3. Still (1902, p. 1166) considered moral control to be “the most recent and therefore most unstable product of mental evolution.” In other words, at the time of his lectures in 1902, he was convinced the symptoms he had observed were unique and not previously described. A presumption he himself

demonstrated false in 1931 by reviewing works of Plato, Roessler, etc. Still's 'defect in moral control' followed closely to the theory of attention as an important element in the moral control of behavior (James, 1890). Like James, Still was of the opinion that attention-deficit and hyperactive syndromes were chronic but that they did diminish to a certain extent in adolescence (Barkley, 1998). Due to his diligence and observations in 1902, Still had indeed set much of the groundwork from which ADHD and its comorbid disorders would later be classified and defined.

#### Mental Deficiency / Amentia

Alfred Tredgold, 1870-1952, (1922, p. 1) defines mental deficiency as the state in which a "mind has never attained normal development." But what does he mean by 'normal' mental development? In answer to his own question, Tredgold outlines an intellectual continuum on which several labels fall, beginning at one end with genius and traversing through 'average' unto 'dullard,' 'feeble-minded,' 'idiot,' and lastly, 'gross idiot.' However, the original question remains unsatisfied and transforms instead into a matter of 'intellect.' Defining 'intellect' is a broad and subjective matter, and not intended or within the scope of this research. Suffice it to say, in the past, intellect has been tied to scholastic achievements (Tredgold, 1922), although this premise has undergone much change since the early 19<sup>th</sup> century in an effort to become more inclusive of 'native intelligence.' Historically, intelligence has been indicative of accomplishments made toward society or determined by some socially agreed upon scale, e.g. the Dissect Picture Test, Word Completion Test, and Pictorial Completion Test (Tredgold, 1922). These tests were among many believed to derive an individual's mental age and, once determined and divided by the child's physical age, to render the

Intelligence Quotient (IQ) ratio—a measure of individual intellect. The phrase ‘intelligence,’ as relative as ‘normal,’ has nonetheless successfully aided and played a key role in the development of amentia as a mental disorder<sup>12</sup>. It cannot be surprising that authorities of the early 1900’s were not in agreement on the constituents of ‘amentia’ (Tredgold, 1922), just as the entire system and classification of symptoms characteristic of ‘ADHD’ have led to an on going feud of medication as its primary treatment.

In diagnosing an ament, someone having amentia, Tredgold (1922) discusses the presence of a “capacity for adaptation” wherein a person’s range of ‘intelligence’ may widely vary, a fundamental quality required to establish an individual as having a ‘normal’ mental development. He suggests ‘normal,’ with regard to a state of mind, as: “The presence of a mental faculty which enables the individual so to manage his affairs and regulate his conduct as to be able to maintain existence without external supervision or support” (p. 7), and defines amentia accordingly (p. 8-9):

A state of restricted potentiality for, or arrest of, cerebral development, in consequence of which the affected is incapable at maturity of so adapting himself to his environment or to the requirements of the community as to maintain existence independently of supervision or external support [Italics Removed].

Tredgold also mentions that “the condition is a psychological one, although the criterion is a social one” (p. 8). Nowhere, however, does he mention inattention specifically. In fact, his definition is broad enough to encompass everyone at one moment or another in

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<sup>12</sup> The term ‘disorder’ is apparently reserved for use with the concept of insanity. ‘Deficient,’ ‘defect,’ and ‘imperfect development’ are used by Tredgold (1922) where today the term disorder would readily been seen.

their lives, much the same as James (1980) had done 40 years earlier. It is interesting to analyze the approach taken in defining ‘mental deficiency.’ Instead of clearly stating the common held requirements of amentia at the time, Tredgold (1922) presents his own opinions, blended with those of other authors, which result in a historical smorgasbord of ideas and varying opinions of how mental deficiency would most accurately be classified, subdivided, and explained. He does point out several characteristics children and individuals generally regarded as having amentia display, among them: “Excessive Movements.—In another type of aments all movement is in excess, and the condition is one of chattering, ceaseless activity” (p. 130). There are also sections detailing conduct and moral deficit, causing amentia to greatly parallel the later concept of Minimal Brain Dysfunction, MBD.

Goodhart and Still (1921) classify amentia into three ‘degrees’ (levels) of severity: ‘feeble-mindedness’ (least severe), ‘imbecility,’ and ‘idiocy’ (most severe). Within the context of amentia, they further list several categories of ‘developmental’ and ‘acquired’ diseases. These categories are aptly renamed by Tredgold (1922) as ‘primary’ and ‘secondary’ forms of amentia, respectively. Labels aside, Goodhart, Still, and Tredgold agree on which diseases are founded in mental deficiency, this category being the most relevant to the characteristics of ‘ADHD,’ and credit a “simple primary failure of brain development” as the ‘developmental’ cause for the condition (Goodhart & Still, 1921, p. 710). ‘Failure of brain development’ is perhaps also the most accurate diction describing the opinions and thoughts driving investigations, and subsequent writings on ADHD preludes, in the 1950s and 1960s. Of all amentia related maladies, Tredgold (1922) estimates that nearly 90% belong to the primary group, of which Goodhart and

Still (1931) attribute a further 50% to the above mentioned failure of brain development. The incidence of gender divisions among the ‘feeble-minded’ is thought to be approximately equal (Tredgold, 1922), affecting slightly more girls than in recent studies. The definition of feeble-mindedness as recorded in the Mental Deficiency Act of 1913 (England) and cited by Tredgold (p. 93) reads:

Persons in whose case there exists from birth or from an early age mental defectiveness not amounting to imbecility, yet so pronounced that they require care, supervision, and control for their own protection or for the protection of others, or, in the case of children, that they, by reason of such defectiveness, appear to be permanently incapable of receiving proper benefit from the instruction in ordinary schools.

This same Act dictates that children who are recognized as feeble-minded are to be referred to as ‘mental defective children’ until their sixteenth anniversary (birthday). It should be noted that in the United States, a distinction between degrees of mental deficiency was not commonly adapted, preferring instead use of the term ‘feeble-mindedness’ as substitute for ‘amentia’, and designating the term ‘moron’<sup>13</sup> to children considered only slightly mentally impaired (referred to as ‘feeble-minded’ herein; Tredgold, 1922).

By an act of parliament in England in 1899, ‘feeble-minded’ children under the age of sixteen fell within the jurisdiction of the educational system. A brief historical account and elaboration of this Act, taken from Tredgold (1922), is provided in Appendix

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<sup>13</sup> Tredgold (1922, p. 94) explains the origin of the term ‘moron’ to stem “from the Greek word meaning ‘fool—a person mainly lacking in judgement and good sense.’”

B, the essence of which, pertaining to ‘ADHD,’ affirms that in the interests of the majority of the community, as many of these children as possible remain independent of and self-supportive in society throughout their adult life. Thus, the trend commenced, establishing the role of schools and the education system as authoritative figures presumed to supercede the child’s own legal guardians.

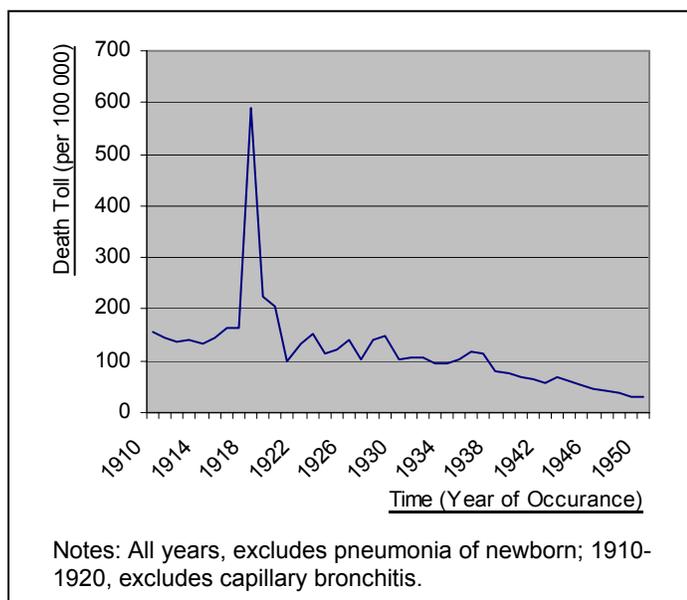
Early in the twentieth century a popular belief explaining the difference between a normal and abnormal/defective mind was pedagogic in nature: “it is now often contended that the criterion of mental defect is inability to reach a certain degree of scholastic proficiency” (Tredgold, 1922, p. 2). But Tredgold is very much against this notion, remarking “there are persons whom every mental specialist would agree in classing as defective who yet possess very considerable scholastic attainments, which may be greater, indeed, than some members of the non-defective class” (p. 2). Thus, Tredgold absolves schools, institutions of scholastic attainment, as being at fault for the behavioral traits of amentia present in its attendees. Furthermore, it then becomes “generally recognized that mere scholastic inability cannot be regarded as a criterion of mental deficiency” (p. 3). Sadly, even knowledge recorded in print becomes lost and obscured with time, as demonstrated by the focus in DSM-III (APA, 1980) whose ADD criteria are geared almost specifically toward the bettering of child behaviors in the school setting, in direct contradiction to Plato’s pedagogic philosophy of altering the pupil’s learning environment to satisfy his or her needs (not vice versa).

## A Neurological Condition

### Post-encephalitic Behavior Disorder

The view that hyperactive behavior in children can be linked to actual brain damage is strengthened by the events of the 1918 encephalitis (an inflammation of the brain) epidemic (Ross & Ross, 1976). Some people like Tedd Koren (2002) are convinced encephalitis led to the numerous increases of Minimal Brain Damage (MBD<sub>0</sub>; also autism, learning disorders, Parkinson disease, etc.) and lay blame on the widespread vaccinations given to the general public against 'The Spanish Influenza.' Duvoisin and Melvin (1965) describe the encephalitis epidemic to have lasted from 1918-1926, thereafter diminishing gradually until 1935 at which point the "number of new cases was negligible" (n.p.). This is evident in Figure 1, derived from statistical data gathered by the U.S. Department of Commerce, Bureau of the Census (1975, p. 58). Although the data is of death rates for influenza *and* pneumonia, a positive correlation exists with the encephalitis epidemic occurring approximately 1918-1935.

FIGURE 1: U.S. death rates for influenza and pneumonia from 1910 to 1950



Charles Kennedy and Lourdes Ramirez (1964, p. 13-14), in the case of a hospitalized young boy critically ill with meningitis “following which a discontinuous change in behavior was present,” express that his behavior, as well as the meningitis infection in general, “may be unequivocal evidence that his present deviant function could be attributed to brain injury from that illness:”

It is well known that early in this course of acute bacterial meningitis the inflammatory process goes beyond the meninges to involve the adjacent brain. After the first few hours of onset, the illness may more accurately be labeled ‘meningo-encephalitis,’ in which the changes on the surface of the cortex result in irreversible destruction of cerebral tissue.

After which, death will result if recovery does not occur (which was often the case).

Ross and Ross (1976), in reviewing detailed case descriptions by Hohman (1922), Ebaugh (1923), and Strecker and Ebaugh (1924), found that children having recovered

from acute phase encephalitis may have been physically normal but showed unusual behavior changes. These children “rarely showed evidence of cognitive impairment but often underwent a ‘catastrophic change’ in personality, becoming hyperactive, distractible, irritable, antisocial, destructive, unruly, and unmanageable in school” (Ross & Ross, 1976, p. 15). Barkley (1998, p. 5) points out these children also to have been “impaired in attention, regulation of activity, and impulsivity, as well as other cognitive abilities, including memory, and were often noted to be socially disruptive.” He continues detailing “symptoms of oppositional and defiant behavior as well as delinquency and conduct disorder also arose in some cases.” Not long after the encephalitis outbreak a connection of hyperactivity to brain damage was also made “in children who had suffered brain damage from head injuries and other causes, particularly anoxia during delivery, and in military personnel who had suffered head wounds in World War I” (Ross & Ross, 1976, p. 16).

Whether the increase in post-encephalitic cases exhibiting symptoms of oppositional, defiant, hyperactive, or inattentive behavior is truly due to encephalitis or simply an apparent increase represented by an augmented awareness is an important concern. It is the same question asked of the perceived increase in ‘ADHD’ diagnosed children today. Clinically, the Post-encephalitic Behavior Disorder has shown a strong tie to brain damage, and thus has strongly promoted further investigation between the connection of brain dysfunction and hyperactive impulses. An immediate positive correlation to ‘ADHD’ cannot be made directly, but on the continuum, this disorder is directly related to amentia (displaying and referring to ‘feble-mindedness’ in its cases) and led straight into the next major genre pursued as a label for symptoms of ‘ADHD.’

The next major label pursued was none other than MBD, but first an intermission by the National Conference on Nomenclature of Disease.

The National Conference on Nomenclature of Disease

In 1933, the National Conference on Nomenclature of Disease published the first *official* edition of *Standard classified nomenclature of disease*. This book dedicated a dozen pages to the sole instruction of its reader/user in understanding the subsequent 75 translatory code pages, the ‘Schema of Classification,’ which in turn was used to decipher and understand the final section of ‘Classified Nomenclature,’ the content for which the text was published. It is a far cry from subsequent DSM manuals published by the American Psychiatric Association, APA, designated for mental (and physical) disorder classification in clinical settings across the United States; the APA has extensively defined each listed disorder! But even in its user-unfriendly format this first official ‘standard classified nomenclature of disease’ includes several references of symptoms common to ‘ADHD.’ Table 1 depicts an abridged and partial list of detailing the extent of these ‘diseases’ that may today be recognized as part of ‘ADHD,’ adapted from the second edition of the *Standard classified nomenclature of disease* (Logie & National Conference on Nomenclature of Disease, 1935, p. 95-105).

TABLE 1: Resemblance of ADHD in the *Standard classified nomenclature of disease*  
(abridged)

<p><u>Under '0- Diseases of the Psychobiological Unit.'</u></p> <p>“Mental Deficiencies”</p> <ol style="list-style-type: none"> <li>1. Various categories from which to choose the apparent causality of Mental Deficiency<sup>i</sup> (e.g. “-0 Due to prenatal (constitutional) influences”; “-1 Due to infection (lower forms)”; “-4 Due to trauma”; etc.) including also an ‘other’ category: (“-Y   Due to causes not determinable in the particular case”) for all remaining cases.</li> <li>2. “Mental Disorders”<sup>ii</sup> (<i>List approved by the Council of the American Psychiatric Association</i>),” and under the sub-heading: “00-X Disorders of psychogenic origin or without clearly defined tangible cause or structural change” <ul style="list-style-type: none"> <li>- A Sub-group of Psychoneuroses: Hysteria: 002-x10 Conversion hysteria, yields two relative disorders: 1) “002-x13 Hyperkinetic type (87b).” Including but not limited to: 225 tic (facial or other); 222 spasm; 20x postures; 302 stammering; 2) 002-x16 Amnesic type (87b).” Including but not limited to: 902 trance; 904 dream states; 933 stupor</li> <li>- “000-yxx   Mental deficiency<sup>i</sup> (87b). <i>See page 95</i>” [outlined above]</li> <li>- “000-163 Disorders of personality due to epidemic encephalitis”</li> <li>- A Sub-group of Primary Behavior Disorders: Primary behavior disorders in children, yields two relative disorders: 1) “000-x72: Habit disturbance.” Including but not limited to: 031 nail-biting; 033 tantrums; 2) “000-x73: Neurotic traits.” Including but not limited to: 226 tics; 302 stammering; 006 overactivity</li> </ul> </li> </ol> <p>Notes: “   Y signifies an incomplete diagnosis. It is to be replaced, whenever possible by a code digit signifying specific diagnosis”; <sup>i</sup>“In patients over 16 years, specify mental level as idiot, imbecile, or moron; intelligence quotient (I.Q.) based on 16-year level”; <sup>ii</sup>“Wherever desired, symptomatic manifestations may be coded and named in addition to the diagnosis. See Supplementary Classification (page 488) or under Organ (Category 5.5).”</p>
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The standard list of ‘diseases’ offered by the National Conference on Nomenclature of Disease classifies psychologically related symptoms under two headings: Mental Deficiencies and Mental Disorders. They are, however, interrelated; there are a number of references found of Mental Deficiency under Mental Disorders, repeating their earlier classifications. Although this book has a detailed and painfully ordered list of diseases, overall a vague and unestablished sense of definition remains. Clearly the intent was not to define and clarify terminology, but to identify and group disease into like categories resulting in a general interpretation which is left open for a large degree of subjectivity. Of the above mentioned symptoms, Mental Deficiency (including the post-encephalitis behavior disorder) is associated frequently enough with symptoms similar to those of ‘ADHD’ to validate its status (inclusive of amentia/feble-mindedness) as a forerunner to the ‘ADHD’ disorder. From Table 1, and prior research into Mental Deficiency, taxonomy encompassing ADHD was evidently, though gradually, subdividing into multiple disorders beginning to share several common symptoms.

### MBD

As demonstrated in Still’s 1931 history of pediatrics, physicians have continuously been preoccupied with the brain; everything whose process was not otherwise understood was associated with some defect of the brain. From the early writings and lectures of Still in 1902, there grew an increasing focus on a possible link between brain damage and the hyperactive, attentional, and moral defect traits found in the clinically referred children of his practice (Ross & Ross, 1976). For a time after Still’s initial 1902 introduction of these ‘new’ symptoms it appeared as though little

headway was being made. Tredgold (1922) hypothesized some ‘brain damage’ had initially passed unnoticed in problematic children but that it became, in most cases, readily apparent as children commenced school. This theory led to Tredgold’s notion that even when actual damage to the brain could not be demonstrated, it *could* be presumed. This became a founding hypothesis of Minimal Brain Damage, MBD<sub>0</sub><sup>14</sup>, as a disorder.

It was not until after the Second World War that pediatricians approached the subject of MBD<sub>0</sub> with vigor. A few years prior to the war an accidental discovery brought focus on the amphetamine family of drugs as possibly curing, or at the least aiding suppression of, symptoms of hyperactivity (Bradley, 1937). MBD<sub>0</sub> was, however, as a term for classification very short lived. Some authors of the time have mentioned that its specificity disregards other children exhibiting identical or similar symptoms of MBD, but do not show evidence of brain damage (Birch, 1964). There may also have been too many potentially traumatic psychological repercussions for the children so frequently branded as brain injured (Gardner, 1973). Replacement of the term ‘damage’ with ‘dysfunction’ solved this issue. MBD therefore, and thereafter, was rapidly to

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<sup>14</sup> In writings of the time, the acronym MBD was used for Minimal Brain Damage. MBD<sub>0</sub> is used herein solely to distinguish from Minimal Brain Dysfunction, also designated by the acronym MBD found in subsequent (1970s-) literature. There is no specific differentiation between the terms ‘Damage’ and ‘Dysfunction’ except that the former is exclusive of possible neurological damages incurred without visible signs of trauma or head injury (Birch, 1964). Since MBD quickly succeeded MBD<sub>0</sub> and became mutually inclusive thereof, MBD will accurately be used to represent the broader term. MBD<sub>0</sub> is used to signify Minimal Brain Damage.

became the center of attention in pediatric journals of the 1960s and early 1970s (Barkley, 1998).

Sam Clements, in a report on the terminology and identification of MBD in children to the U.S. Department of Health (Clements, 1966) noted a pair of researchers from Wisconsin, Strauss and Lehtinen, as having provided the first comprehensive presentation on the concept of MBD and as being the researchers most frequently cited by subsequent authors. Strauss and Lehtinen (1947, p. 4) defined their use of the term a “brain-injured child” as:

... a child who before, during, or after birth has received an injury to or suffered an infection of the brain. As a result of such organic impairment, defects of the neuromotor system may be present or absent; however, such a child may show disturbances in perception, thinking, and emotional behavior, either separately or in combination. These disturbances can be demonstrated by specific tests. These disturbances prevent or impede a normal learning process. Special educational methods have been devised to remedy these specific handicaps.

Strauss and Lehtinen were not as explicit in defining specific symptoms of a brain-injured child as they were for MBD. Although their definition may perhaps have provided a crucial bases from further expansion by subsequent authors (Clements, 1966), it remains slightly vague and open to inclusion of any child by the sole discretion of her authoritative figure or pediatrician. Writings expanding on or contributing to this notion implement further nomenclature for children exhibiting signs of attention-deficit or hyperactivity. Strauss and Lehtinen traditionally used the terms ‘brain-crippled’ and

‘brain injured,’ as well as ‘brain-injured child,’ but subsequent researchers progressed unto labels ranging from ‘brain damage’ and ‘brain-damaged child’ to ‘brain dysfunction’ and ‘cerebral dysfunction.’ The difficulty of this, besides the overwhelming confusion of having multiple labels for similar symptoms, was the unclear and potentially erroneous connotations of specific demonstrable brain alterations often presented by authors (Clements, 1966).

The terms ‘Hyperkinetic Impulse Disorder’ and ‘Hyperkinetic Syndrome,’ based on the newly discovered evidence linking stimulants to hyperactive children (Work, 2001), began to crop up and were actively used to describe children displaying ADHD. Among others, Laufer and Denhoff (1957) reasoned the MBD to originate from a central nervous system (CNS) deficit possibly occurring in the thalamic area and, which through poor filtering of sensory-stimulation, allowed an excess of stimulation to reach the brain (Barkley, 1998). Barkley (1998) depicts the Hyperkinetic Syndrome as quite likely being the first attempt at an explanation accrediting symptoms of ‘ADHD’ to brain damage “even when evidence of damage was lacking” (p. 8). This had also been a primary factor for the renaming of MBD<sub>0</sub> to MBD.

Paul Wender, a research psychiatrist for the National Institute of Mental Health in the late 1960s and throughout the 1970s, became the most vocal advocate justifying use of the term MBD, and the characteristics thereof, as a valid and meaningful psychiatric syndrome having both hyperactivity and attention deficits as its most prominent clinical features (Rutter, 1983a). Micheal Rutter (1983a, p. 259) explains the gravitation toward the label ‘MBD’ over ‘Hyperkinetic Syndrome’ to lie in “the ‘constitutional’ nature of

the condition and its ‘medical’ basis.” A glimpse of the confusion from which this gravitation emerges is offered by Clements.

Clements (1966, p. 9), from a review of selected literature, lists no less than “a total of 38 terms used to describe or distinguish the conditions grouped as minimal brain dysfunction in absence of findings severe enough to warrant inclusion in an established category, e.g., cerebral palsies, mental subnormalities, sensory defects.” He mentioned there to be several methods by which to group MBD-like terminology, although he only offered one. The structure he elects to use is to divide the various nomenclatures synonymous of MBD into two categories. The first, ‘Organic Aspects,’ stem from a general philosophy of behavior traits related to or derived from the physical (organic) body itself. The second category, ‘Segment or Consequence,’ incorporates the belief that behavioral traits are a consequence and repercussion of a previous action. Recall a similar division was offered by James in 1890 concerning the factors affecting human attention. Included for its descriptive and nomenclative value, the following list is the structure offered by Clements (1966, p. 9) for 38 terms akin to and often synonyms of MBD:

Group I— <i>Organic Aspects</i>	Group II— <i>Segment or Consequence</i>
Association Deficit Pathology	Hyperkinetic Behavior Syndrome
Organic Brain Disease	Character Impulse Disorder
Organic Brain Damage	Hyperkinetic Impulse Disorder
Organic Brain Dysfunction	Aggressive Behavior Disorder
Minimal Brain Damage	Psychoneurological Learning Disorders
Diffuse Brain Damage	Hyperkinetic Syndrome
Neurophrenia	Dyslexia
Organic Drivenness	Hyperexcitability Syndrome
Cerebral Dysfunction	Perceptual Cripple
Organic Behavior Disorder	Primary Reading Retardation
Choreiform Syndrome	Specific Reading Disability
Minor Brain Damage	Clumsy Child Syndrome
Minimal Brain Injury	Hypokinetic Syndrome
Minimal Cerebral Injury	Perceptually Handicapped
Minimal Chronic Brain Syndromes	Aphasoid Syndrome
Minimal Cerebral Damage	Learning Disabilities
Minimal Cerebral Palsy	Conceptually Handicapped
Cerebral Dys-synchronization Syndrome	Attention Disorders
	Interjacent Child

Clements (1966, p. 9) raised a very interesting point with regard to the many labels in existence describing behaviors which today would be acknowledged as ‘ADHD’ but present at the time of his literature review:

With few exceptions, the most striking omission throughout the literature was the lack of attempt at a definition of the terms used or the condition discussed.

Although there is a more than ample supply of terminology and characteristics, there is a shortage of interpretative elucidation.

Nearly two decades after the definition given by Strauss and Lehtinen in 1947, Clements offers his own definition for MBD (Clements, 1966, p. 9-10):

The term ‘minimal brain dysfunction syndrome’ refers in this paper to children of near average, average, or above average general intelligence with certain learning or behavior disabilities ranging from mild to severe, which are associated with deviations of function of the central nervous system. These deviations may manifest themselves by various combinations of impairment in perception, conceptualization, language, memory, and control of attention, impulse, or motor function.

Clements’ definition of MBD is slightly clearer than that of his colleagues, Strauss and Lehtinen, but still remains vague with regard to the identification of specific symptoms and leaves the door open for much bias and personal opinion in the labeling and diagnoses of clinically referred children.

“It is clear that there is no one overriding concept of ‘MBD’” (Rutter, 1983b, p. 577); it was far too broad a term to be of any clinical use (Collard, 1981; Goldstein & Goldstein, 1998). Contrary to the introductory statement by Wender (1971, p. 3) that “the behavior pattern associated with MBD is rather distinct [and] is easily identified,” it becomes evident that MBD had involved a great mixing of concepts (Rutter, 1983c). Rutter (1983c, p. 2) explains: “the concept of the ‘brain-damaged child’ refers to a pattern of behavior and not to any known pathologic alteration in the tissues of the brain.” But then, Wender also maintains, in conjunction with his introduction to the subject, “that the

typical ‘classical’ picture is only one of many variants” (Wender, 1971, p. 3). Herbert G. Birch (1964, p. 4) points out two severe setbacks with use of the term MBD: 1) there is little evidence of children exhibiting such behavioral patterns do in fact have damage to the brain, and 2) there are a numerous children who have “independently verified” brain damage but fail to exhibit any behavioral patterns associated with it. Birch goes on to indicate that “attaching the adjective ‘minimal’ to the term ‘brain damage’ ... does not increase the descriptive accuracy of the term or add to either its scientific validity or its usefulness” (p. 5).

By 1966, a task force for the National Institute of Neurological Diseases and Blindness recognized at least 99 symptoms for MBD (Barkley, 1998). Ninety-nine symptoms are far to many to ever remember, let alone identify in cases... and so, gradually, the disorder became recognized as vague, over inclusive, of little ‘prescriptive’ value, and without much neurological evidence (Barkley, 1998). Ross & Ross (1976, p. 13) go so far as to say: “[MBD] can best be described as an ‘umbrella term.’ It does not present a clear picture of the behavior problem it describes and it fails to distinguish that problem from other problems.” Vagueness aside, MBD nonetheless showed a clear indication of the trend in pediatrics; ‘ADHD’ symptoms were under the gun.

Spanning over three decades, the term ‘Minimal Brain Dysfunction’ became commonly spoken among the lay community and medical practitioners. Nearly every psychiatrist and clinical psychologist had a personal opinion of *the problem*, what MBD amounted to, and thoughts on how to remedy it. Most, however, agreed MBD to be neurologically founded and requiring medication as a remedy. Believers of non-organic environmentally based causes or willing to explore potential beneficial effects of

psychosocial and physical alterations to the child's environment were well outnumbered. Sadly, prescriptions were and still are seen to bring immediate improvement when patience for other remedies grows thin. Though symptoms for this disorder may have been vague, they appeared no different than those for amentia; MBD was a step ahead in the narrowing and classifying of a clinically 'prescriptive' disorder encompassing symptoms of 'ADHD.' Following MBD, somewhat of a vain attempt was made to employ the phrase 'Minimal Cerebral Dysfunction,' but it was the perceived rise in and increasing prevalence of hyperactivity that spawned the subsequently short lived, but for a longer time simultaneous, acknowledgement of the 'Hyperactive Child Syndrome.'

#### Reemergence of Behavioristic Deficits

##### Hyperactive (Hyperkinetic) Child Syndrome

Stella Chess (cited in Barkley, 1998, p. 8) in 1960 defined a hyperactive child as "one who carries out activities at a higher than normal rate of speed than the average child, or who is constantly in motion, or both." A few years later, John Werry (cited in Ross & Ross, 1976, p. 3) carries this definition a little further adding specificity by defining hyperactivity as: "...a level of daily motor activity which is clearly greater (ideally by more than two standard deviations from them mean) than that occurring in children of similar sex, mental age, socioeconomic and cultural background." Clinical and historical definitions of ADHD have been and still are based to a large extent on the subjectivity/objectivity of their human observers; 'hyperactivity' is no exception. But hyperactivity is not in itself a cause for concern; indeed, it occurs normally in infants and young preschool children (Ross & Ross, 1976)—Werry (cited in Ross & Ross) clearly meant problematic levels of hyperactivity. Definitions offered for the hyperactive child

by Chess, Werry and others initiated an important emphasis on behavior and activity versus poor child rearing and brain damage which Still had set forth at the turn of the century.

Webster (Gove & Merriam-Webster, 1981, p. 2320) defines a syndrome as “a group of symptoms or signs typical of a disease, disturbance, condition, or lesion in animals or plants.” The term ‘Hyperactive Child Syndrome’ then implies a child to be unusual (not normal), with abnormally high motor activity. This, however, is not *always* the case. For a child to be classified as possessing the Hyperactive Child Syndrome, she must be dependent on a variety of factors including age, sex, situational appropriateness, and the ability to inhibit hyperactive behavior (Ross & Ross, 1976). Yet in refining the definition of ‘Hyperactivity’ from the broad ‘MBD,’ discrepancies previously avoided begin to surface. Ross and Ross (1976, p. 10), citing Rutter and colleagues (1969), outline one such issue:

It is unfortunate that the World Health Organization has suggested that a category such as *hyperkinetic syndrome* should be included in their classification scheme (Rutter, Lebovici, Eisenberg, Sneznevskij, Sadoun, Brooke, & Lin, 1969) since the label tends to be used without the accompanying restriction that it ‘should be used as a descriptive category as there was uncertainty both as to its nature and as to how far it constituted an individual clinical entity’ (p. 49).

A corollary to having ‘constituted an individual clinical entity’ and be drawn to the effect: ‘evidence suggests the syndrome constitute an individual school and/or home entity.’ It can therefore also be argued that the structured educational system is partially at fault, indirectly causing children to be diagnosed with this disorder; perhaps by

creating an environment ill suited for the nature of this select minority. Reverting back to the synergy of 'syndrome' with 'hyperactivity,' Ross and Ross (1976, p. 10-11) elaborate on the reoccurring hyperactive behavior:

There are a number of medical and behavioral disorders that have hyperactivity in common and that sometimes other behavioral symptoms develop in a child as a result of either the negative responses his hyperactivity elicits from others or his own feelings of frustration concerning his ineffective performance. It is the *association of these secondary symptoms with hyperactivity* that is suggestive of a syndrome.

Already a potential problem is encountered by the expanding taxonomies leading to and unable to prevent misdiagnoses even in their day.

As popularity with, and use of the MBD term gradually began to wane, emphasis shifted from the CNS, and problems of the neurological system, to more of an innate behavioral problem. Hyperactivity, a defining feature and precursor to 'ADHD,' had now begun to remove accountability of the child's behavior from his or her parents though many of whom would continue blaming themselves (Gardner, 1973). "One serious flaw in a purely quantitative concept of hyperactivity is its lack of validity: there are no activity level norms for the children," report Ross and Ross (1976, p. 3), a seeming echo of Tredgold's (1922) dilemma with amentia. Perhaps more importantly however was the underlying standard that clinicians also objectively consider evidence of symptoms outside the often biased reports of teachers and parents (Barkley, 1998). Barkley (1998) explains, owing to a growing recognition in North America that hyperactivity was more a behavioral disorder versus something caused by or attributed to

brain damage, several differences between U.S. and United Kingdom, U.K., interpretations of a hyperactive child began to develop. Table 2 summarizes differences arising in the 1960s between the North American and British definitions of the Hyperactive Child Syndrome (Barkley, 1998).

TABLE 2: Differences between U.S. and U.K. hyperactive child syndrome definitions  
(Barkley, 1998)

<u>North America</u>	<u>British</u>
- Greater than normal levels of activity, relatively common in childhood	- Showing signs of severe overactivity and believed to be highly uncommon
- Not necessarily associated with mental retardation or demonstrable brain pathology	- Normally found in conjunction with other signs of brain damage (i.e. epilepsy, hemiplegias, retardation, trauma or infection)
- 'An extreme degree in the normal variation of temperament in children'	- 'An extreme state of excessive activity of almost driven quality'

Interestingly, children diagnosed as having attention and hyperactivity difficulties in North America, would typically be diagnosed as having conduct disorder in Europe (Barkley, 1998). In North America, the term 'Hyperactive Child Syndrome' arose to indicate children of an unusually high hyperactivity level (Laufer & Denhoff, 1957, cited in Barkley, 1998).

By the mid 1970s, Safer and Allen (1976, p. 6) make clear that, despite the interchangeable use of MBD and HA [Hyperactivity] in public discussions, the two categories are not identical. For one, MBD children are not

always hyperactive, although most are (c). Secondly, hyperactive children do not always have a learning or perceptual disability, although most do.

So where exactly is the distinguishment of Hyperactivity from MBD to validate the use of yet another label for ADHD? “For purposes of order and simplicity,” Safer and Allen (p. 7) provide “four of the most prominent characteristics commonly associated with hyperactivity,” namely “the major features of the disorder.” In order of prominence, these are: 1) inattentiveness; 2) learning impediment; 3) behavior problems; and, 4) immaturity. The minor features predominantly regarded and commonly associated with MBD are listed as “those less closely associated with hyperactivity” (p. 9) and include: impulsivity, peer difficulties, and low self-esteem. Both the major and minor characterizations of Safer and Allen, despite starting off on the wrong foot by excluding impulsivity in the list of most prominent characteristics, now portray a disorder with uncanny likeness to that of ADHD.

Symptoms and terminology associated with Hyperactivity were carrying researchers and pediatricians along a narrower path toward the creation and description of ‘ADHD.’ While authors like Chess, Werry, and Laufer and Denhoff concerned themselves with its definition, depth to the emerging ‘ADHD’ disorder was also provided. The attributes now related to hyperactivity, listed by Safer and Allen (1976) in their review of current literature, and those of others, after slight revisions in wording would eventually be adapted and published by the APA.

#### APA and DSM-II

The American Psychiatric Association, APA, released its first edition of the *Diagnostic and statistics manual of mental disorders*, DSM-I, in 1952, with no mention

of an attention deficit disorder (Edelbrock, 1997). By 1968 however, the list of mental disorders grew 46% from 112 to 163 (Baughman, 1998) and now included such a label. The second edition of the DSM, DSM-II, contained the first ‘official’ mention of a hyperactive disorder in the United States, listed as ‘Hyperkinetic Reaction’ (Quay, 1999). But owing to the introductory term of ‘Hyperactive Child Syndrome’ by earlier literature, researchers had already been forced to consider and pay more attention to the hyperactivity aspect of behaviors associated in previously ‘MBD’ diagnosed cases. Only speculation exists why the APA elected to tread on neutral ground and employ the term ‘Hyperkinetic Reaction’ for the symptoms clinical psychologists and psychiatrists had already been attributed to the ‘Hyperactive Child Syndrome.’ This did, however, undoubtedly help the APA assure the credibility of DSM and satisfy the various diametrical opinions practitioners had on nomenclative and taxonomic issues.

Merriam-Webster considers ‘Hyperkinetic’ to be anything of or relating to an “abnormally increased and unusual purposeless and uncontrollable muscular movement” (Gove & Merriam-Webster, 1981, p. 1113). But the reader must bear in mind witnesses of such behavior will generally not have or be suffering from what they describe and, so, may not naturally be able to judge behavior occurrence objectively. DSM-II lists the following as a description for ‘Hyperkinetic Reaction:’ “The disorder is characterized by overactivity, restlessness, distractibility, and short attention span, especially in young children; the behavior usually diminishes by adolescence” (cited in Barkley, 1998, p. 9). Compared to the complex guidelines and interpretations of ADHD, the wording of Hyperkinetic Reaction left much to the discretion of the examining authority and “provided very little with regard to disorders of childhood and adolescence” (Quay, 1999,

p. 4; APA, 1987). It was the policy of the APA, however, to remove as little diagnostic power of the clinician as possible (APA, 1980), leaving much room for subjectivity by authoritative figures in the diagnostic process. Furthermore, it is astounding to find such a recent forefather of 'ADHD' completely lacking in one criterion having now become a fundamental element associated with hyperactivity; this constituent is aggression.

Shortly after the publication of DSM-II, Paul Wender (1971) published his theory of MBD which essentially re-described the APA's 1968 'hyperkinetic' child. Like George Still before him, Wender (1971, p. 26) was of the opinion that children tended to outgrow many of their 'motoric problems' along with other prepubescent difficulties, that "any given MBD child may follow the developmental sequence listed and 'drop out' at one particular stage." He also brings up a very good point: "cultural expectations of appropriate sex-role behavior contribute to the definition of a child as 'deviant'" (p. 33). Wender proposed a developmental sequence in which traits are associated with certain age groups ranging from infant to early adolescence. Influences of Wender's theory can be seen in subsequent DSM editions (by the APA in 1980, 1987, 1994, and 2000) where it is required that onset of the disorder (ADD/'ADHD') occur before the age of seven for clinical diagnosis.

However, before work began on DSM-III in 1974, Virginia Douglas (1972), in a presidential address to the Canadian Psychological Association, theorized that "sustained attention and impulse control were more likely to account for the difficulties seen in these children than just hyperactivity" (cited in Barkley, 1998, p. 12). Barkley accredits much of the emerging concept of attention-deficit to the vigorous work of Douglas, whose model inclusive of impulsivity steered the definition of 'ADHD,' as applicable to

children, in DSM-III along a revolutionary path. Coincidentally, Douglas' symptoms were also areas targeted by the stimulant medications long since used to treat hyperactivity in children (Fisher, 1998).

Owing much to the publication of DSM-II, the term 'Hyperactivity' now included impulsivity, short attention span, low frustration tolerance, distractibility, and aggressiveness, and was seen as separate from MBD (Barkley, 1998). It took over a decade since publication of DSM-II in 1968 for a subsequent edition of DSM to become available, although still shorter than the nearly three-decade reign of the terms 'brain damage' and 'brain dysfunction.' Ferguson and Rapoport in 1987 (cited in Fisher, 1998, p. 128) reported: "DSM-III taxonomy represented the shift from the assumption of underlying brain damage toward the establishment of specific behavioral criteria for diagnosis." It was intent of the APA (1980) to provide open definitions for clinicians, to avoid prejudice and exclusion of clinical cases having such varying characteristics as those defining 'ADHD,' something impossible to accomplish with a list of 'black and white' requirements. As the reader will see, diagnostic definitions as a whole became more involved and specific, when comparing new versions of DSM to its predecessor. However, the term 'disorder' being no more than mere label itself, connoting a set of complex ideas, now and again also changes. The alteration of defining criteria determining a 'disorder' result in the possibility of disorders no longer considered of medical concern and, which ultimately have to gain public support and reintegration as 'normal' through removal from the DSM. But for those disorders that remain in DSM, their gray boundaries grow ever wider.

## Attention Deficit Disorder and its 'Official' Definitions

### DSM-III and ADD (APA, 1980)

Publication of the diagnostic manuals by the APA amounted to the availability of one manual to all practicing psychiatrists and clinical psychologists for reference and use as a common foundation upon which to base their diagnoses (Kirk & Kutchins, 1992). The third edition of DSM (DSM-III; APA, 1980) added a new perspective on the diagnosing of mental disorders. It came as a complete turnaround to the five-decade tradition of utilizing Freudian based psychoanalytic reasoning for the explanation of symptoms and justification of diagnoses, and now incorporated a more 'factual based' approach without 'invented justifications' for its position (Kirk & Kutchins, 1992). Jeff Maxmen summarizes the transition in thought at the time: "Psychoanalytic psychiatry bases truth on authority; something is true because Freud said so. Scientific psychiatry bases truth on scientific experimentation... The old psychiatry derives from theory, the new psychiatry from fact" (1985, p. 31). The newly reworked edition of the DSM, now incorporating *scientific* explanations, includes a much broader definition for its previous 'Hyperkinetic Reaction.' In fact, the title itself has also been altered. Owing to the prominent and virtually unending presents of attentional difficulties in children receiving such a diagnosis (APA, 1980), the title was now termed 'Attention Deficit Disorder' or simply ADD. The diagnostic nomenclature of DSM-III did not stop at the title, it separated the various symptoms of DMS-II's 'Hyperkinetic Reaction' into three distinct behavior disorders: 1) Attention Deficit Disorder, ADD, and inclusive of three subtypes, ADD with hyperactivity (ADDH/ADD+H), ADD without hyperactivity (ADD/ADD-H), and ADD residual type (ADD-RT); 2) Oppositional Defiant Disorder, ODD; and 3)

Conduct Disorder, CD (Fisher, 1998; Quay, 1999). This triad of disorders, ADD, ODD and CD, became cataloged as ‘Disruptive Behavior Disorders’ in the third and subsequent editions of DSM. Perhaps the subdivision of ‘Hyperkinetic Reaction’ into three separately considered entities accounts for a much lower prevalence of ADD than ADDH (Quay, 1999). Symptoms previously thought resulting from a simple dysfunction of the brain were now growing into a complex list of disorders each with varying definitions of their own.

With the publication of DSM-III also came the realization that prior clinicians had made incorrect assurances to parents based on, following, Still’s 1902 belief children would in effect out grow ADHD behavior in their adolescent years (Kapley & Pfohl, 1997). The diagnostic criteria for ADD with hyperactivity in DSM-III by the APA are found in Table 3. DSM-III specifies, as diagnostic criteria for ADD without Hyperactivity, the following definition: “the criteria for this disorder are the same as those for Attention Deficit Disorder with Hyperactivity except that the individual never had signs of hyperactivity (criterion C)” (APA, 1980, p. 44). The criteria defining the third subtype of ADD, ADD-RT, as listed in DSM-III are found in Table 4.

TABLE 3: DSM-III diagnostic criteria for attention deficit disorder with hyperactivity

(APA, 1980, p. 43-44)

<p>A. <b>Inattention.</b> At least three of the following:</p> <ol style="list-style-type: none"><li>(1) often fails to finish things he or she starts</li><li>(2) often doesn't seem to listen</li><li>(3) easily distracted</li><li>(4) has difficulty concentrating on schoolwork or other tasks requiring sustained attention</li><li>(5) has difficulty sticking to a play activity</li></ol> <p>B. <b>Impulsivity.</b> At least three of the following:</p> <ol style="list-style-type: none"><li>(1) often acts before thinking</li><li>(2) shifts excessively from one activity to another</li><li>(3) has difficulty organizing work (this not being due to cognitive impairment)</li><li>(4) needs a lot of supervision</li><li>(5) frequently calls out in class</li><li>(6) has difficulty awaiting turn in games or group situations</li></ol> <p>C. <b>Hyperactivity.</b> At least two of the following:</p> <ol style="list-style-type: none"><li>(1) runs about or climbs on things excessively</li><li>(2) has difficulty sitting still or fidgets excessively</li><li>(3) has difficulty staying seated</li><li>(4) moves about excessively during sleep</li><li>(5) is always "on the go" or acts as if "driven by a motor"</li></ol> <p>D. Onset before the age of seven</p> <p>E. Duration of at least six months.</p> <p>F. Not due to Schizophrenia, Affective Disorder, or Severe or Profound Mental Retardation.</p>
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TABLE 4: DSM-III diagnostic criteria for attention deficit disorder, residual type  
(APA, 1980, p. 44-45)

<p>A. The individual once met the criteria for Attention Deficit Disorder with Hyperactivity. This information may come from the individual or from others, such as family members.</p> <p>B. Signs of hyperactivity are no longer present, but other signs of the illness have persisted to the present without periods of remission, as evidenced by signs of both attentional deficits and impulsivity (e.g., difficulty organizing work and completing tasks, difficulty concentrating, being easily distracted, making sudden decisions without thought of the consequences).</p> <p>C. The symptoms of inattention and impulsivity result in some impairment in social or occupational functioning.</p> <p>D. Not due to Schizophrenia, Affective Disorder, or Severe or Profound Mental Retardation, or Schizotypal or Borderline Personality Disorders.</p>
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What clinicians may forget to tell (or show) the public in referencing DSM-III is a short sentence found in the introduction to the manual: “for most of the categories the diagnostic criteria are based on clinical judgment, and have not yet been fully validated by data” (APA, 1980, p. 8). A crucial note leaving the definition of ADD quite open to incessant disagreement and foreshadowing further revision of defining criteria in the future. With regard to mental disorders listed by DSM-III, the APA (1980, p. 8) admit, “undoubtedly, with further study the criteria for many of the categories will be revised.” However, even if only temporary, an ‘official’ standard list of criteria, those of DSM-III, now existed and served to function as the national guideline which must be met in order for a child to be diagnosed and classified as having ADD (ADHD; APA, 1980; Power & DuPaul, 1997). Ironically, although the APA was determined in having DSM become the official national standard for mental diagnoses (one of its many goals for DSM-III), they

explain that “in January 1979 [the ICD-9-CM<sup>15</sup> classification] became the official system in this country for recording all ‘diseases, injuries, impairments, symptoms, and causes of death’” (APA, 1980, p. 5). The APA has included this system as an appendix in DSM-III. Nationally across the U.S., as the APA had desired and predicted, DSM classification structures were “generally acceptable to third party payers and most record-keeping systems” (1980, p. 5), but were *not* ‘official.’ The *International statistical classification of diseases and related health problems*, ICD, publication by the World Health Organization, WHO, was regarded as the technically official system of classification.

There are three important points worth mentioning herein cited by the APA, in DSM-III, in the introduction to ADD. The first is that the clinician need not observe the required symptoms in order to diagnose a child with this disorder. Instead, clinicians may rely solely on third-person reports if given by at least two separate (preferably in environment circumstance and authoritative roles) adults of the child’s environment (e.g. parent, teacher, school councilor, day care provider, etc.). Furthermore, should a discrepancy arise between teacher and parent reports, preference will be given to the teacher for their assumed knowledge of age appropriate behavior over that of the parent (APA, 1980).

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<sup>15</sup> ICD-9-CM is the APA altered version of the World Health Organization’s *International statistical classification of diseases and related health problems*, ninth edition, for Clinical Modification (ICD-9-CM). The APA had found the standard four digit codes each correlating to a specific disease in ICD-9 (WHO, 1975; implemented in 1978) to be too restrictive for U.S. clinical settings and so converted (modified) each code to five digits. Although adapted by other countries, the WHO did not officially acknowledge this system.

The second noteworthy position of the APA reveals the criteria for ADD is specified “for children between the ages of eight and ten, the peak age range for referral” (1980, p. 43) and that more severe forms and a greater number of symptoms occur in children of younger ages. But DSM-III does not discuss specifically how severe or abundant symptoms may become. This allows for diagnostic leeway whereby the clinician can incorporate personal interpretation and conjecture, which possibly (if inexperienced) result in the use of age-inappropriate criteria as a diagnostic reference. This is especially likely for children of very young ages, where it is normal their activity levels are higher and whose normal heightened activity risk greater association with characteristics ascribed to the respective disorder of ADD/‘ADHD’ (Still, 1902)<sup>16</sup>.

Most incredible is the third point, the potentially confusing distinction between hyper and normal activity as provided in the list of criteria. DSM-III distinguishes the two types of ADD (with and without hyperactivity) by discretely noting “hyperactivity tends to be haphazard, poorly organized, and not goal-directed” (APA, 1980, p. 41). Barkley (1998) compounds the diagnostic dilemmas of DSM-III by adding there to have been generally vague and unspecified criteria used in published studies, and a general lack of specificity in writings, up to 1980. The subjective nature and incomplete overall understanding of both the definition and nature of ADD is evident, yet the public for the most part remained unaware and trustworthy of clinical diagnoses.

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<sup>16</sup> This notion is offered as a corollary and adaptation of Still’s statement that “a degree of moral control which may be perfectly normal in a very young child may be altogether below the average for a child a few years older” (1902, p. 1009).

The hyperactivity aspect, a mandatory and intra-ADD diagnosis distinguishing feature, was also common to CD and ODD. Differentiation was typically made by the pervasiveness of aggressive traits formally and historically associated with ‘ADHD,’ but which frequently led to misdiagnosis or additional diagnosis of ADD in conjunction with CD and ODD (Fischer, 1998). Juvenile Delinquency, JD, has become another term frequently associated with hyperactive and aggressive traits and, in the past, also attributed to MBD (Wender, 1971). Wirt and Briggs provide one example of the close tie between JD and ADHD (MBD) in their interpretation of a juvenile delinquent: “the adolescent without major home or personality disorder whose normal hyperactivity and rebelliousness cannot be constructively integrated by his present environment because of a lack of acceptable outlets” (1965, p. 17). Juvenile delinquent traits are incorporated by the APA (1987) into the categories CD and ODD.

DSM-III did provide a landmark definition for ADHD by recognition of the several subtypes for ADD, though this did not become evident until re-examination of DSM-III-R criteria for ‘ADHD.’ Could the generous portion of interpretative subjectivity incorporated by the APA their definition of ADD have been necessary for the acceptance of such a radical change in the definition of ADHD from DSM-II? “Although it is not known whether they [ADD subtypes] are two forms of a single disorder or represent two distinct disorders” (APA, 1980, p. 41), subtypes were present nonetheless. Criterion F. of Table 3 establishes this inadequate understanding of the subdivision within ADHD by recognizing hyperactivity to exist also in several comorbid disorders, many of which had yet to be ‘officially’ associated with ADD, but at least the taxonomic title had progressed unto justified nomenclature, now incorporating mention of attention-

deficit. By incorporation of the label ADD, and its subsequent definition, ‘ADHD’ established a foundation as characteristic of an apparent deficiency in attention, not necessarily caused by brain damage and not always producing a ‘moral defect.’ Work did not begin on a subsequent revision of DSM-III, and the definition of ADD contained therein, until 1984.

### DSM-III-R

The publication of DSM-III and DSM-IV were set to coincide with the estimated effective dates of ICD-9 and ICD-10 by the WHO in 1979 and 1998 respectively. However, as normally occurs to theory in practice, upon completion and clinical implementation of DMS-III, the APA discovered a “need for fine-tuning the criteria to improve their sensitivity and specificity” (1987, p. xx) which could not attend the publication of DSM-IV. This time, in evaluating proposals for revisions to the classification and diagnostic criteria of DSM, although the APA had placed greatest significance on well-conducted research studies, they began to ponder whether after half a century of research and interrogation “data from empirical studies were lacking” (1987, p. xxi). As a result, for the revised edition of DSM-III (DSM-III-R) “primary importance was usually given to some other consideration, such as: clinical experience” (p. xxi), which translated into a national field trial conducted to aid the development of ADD diagnostic criteria. In this field trial, participating clinicians were asked to assess and classify 550 children into four diagnostic groups as follows: 1) ADD+H, (56.6%), 2) ODD (25.5%), 3) CD (23.6%), and 4) ‘other and no mental disorder’ (24.3%). The final revision of criteria for ADHD, heavily influenced by practicing clinicians, as published in DSM-III-R (APA, 1987), is related in Table 6.

TABLE 6: DSM-III-R diagnostic criteria for attention-deficit hyperactivity disorder

(APA, 1987, p. 52-53)

**Note:** Consider a criterion met only if the behavior is considerably more frequent than that of most people of the same mental age.

A. A disturbance of at least six months during which at least eight of the following are present:

- (1) often fidgets with hands or feet or squirms in seat (in adolescents, may be limited to subjective feelings of restlessness)
- (2) has difficulty remaining seated when required to do so
- (3) is easily distracted by extraneous stimuli
- (4) has difficulty awaiting turn in games or group situations
- (5) often blurts out answers to questions before they have been completed
- (6) has difficulty following through on instructions from others (not due to oppositional behavior or failure of comprehension), e.g., fails to finish chores
- (7) has difficulty sustaining attention in tasks or play activities
- (8) often shifts from one uncompleted activity to another
- (9) has difficulty playing quietly
- (10) often talks excessively
- (11) often interrupts or intrudes on others, e.g., butts into other children's games
- (12) often does not seem to listen to what is being said to him or her
- (13) often loses things necessary for tasks or activities at school or at home (e.g., toys, pencils, books, assignments)
- (14) often engages in physically dangerous activities without considering possible consequences (not for the purpose of thrill-seeking), e.g., runs into street without looking

**Note:** The above items are listed in descending order of discrimination power based on data from a national field trial of the DSM-III-R criteria for Disruptive Behavior Disorders.

B. Onset before the age of seven.

C. Does not meet the criteria for a Pervasive Developmental Disorder.

**Criteria for severity of Attention-deficit Hyperactivity Disorder:**

**Mild:** Few, if any, symptoms in excess of those required to make the diagnosis **and** only minimal or no impairment in school and social functioning.

**Moderate:** Symptoms or functional impairment intermediate between “mild” and “severe.”

**Severe:** Many symptoms in excess of those required to make the diagnosis **and** significant and pervasive impairment in functioning at home and school and with peers.

In comparing this criteria to that of DSM-III, several differences begin to stand out. Firstly, and most prominently, the label used to describe ADD has once again changed. Although minor, this marks yet another chapter in the history of developing and defining ADHD; the label now reads ‘ADHD’ except, and importantly, without a ‘/’ between deficit and hyperactivity. But a revision of the criteria has yielded more than its present-day label. The second change is of the former three classifications of symptoms for ADD in DSM-III. Inattention, impulsivity and hyperactivity have been reduced to a single list of 14 symptoms; four new criteria were added, and nine have been reworded (Quay, 1999).

Thirdly, a transformation has also occurred in the subtypes offered for the disorder, attention-deficit disorder (without hyperactivity) is no longer readily distinguishable from ADDH (ADHD; Power & DuPaul, 1997). The distinct subtypes encompassing all combinations of attention-deficit and hyperactivity occurrence have been eliminated and merged into one. Inferred by the new label for this disorder, the presence of hyperactivity is not designated by subtypes; instead, its degree of severity is to be noted, reconditely describing its prevalence within the ADHD population. A fourth subtle change, pointed out by Power and DuPaul (1997), is the lack of requirement that

symptoms be pervasive (requiring input from multiple adults in the child's environment) imparting even greater authority to already imperious pediatricians.

Finally, the last noticeable alteration made to the definition of ADD is in its exclusion criteria: Pervasive Development Disorders (PDD) vice severe Mental Retardation (MR; APA, 1980; APA, 1987). PDD<sup>17</sup> include disorders akin to Autism, Schizophrenia, and Schizotypal disorders, in which symptoms characteristic of ADHD are often observed (APA, 1987). Though MR may share many features of ADHD, additional diagnosis of ADHD in MR children are substantiated if “the relevant symptoms are excessive for the child's mental age” (APA, 1987, p. 52), a similar point of which is seen atop Table 6. To determine a child's mental age however (for the note of Table 6), consideration must be bestowed upon who is providing behavior reports (teacher, psychologist, clinician, etc.), and by which standard the mental age is determined. Is further labeling of an already ‘mentally retard’ ostracized child necessary for his or her behavior treatment regime?

Kapley and Pfolh (1997) consider the component of hyperactivity required to diagnose ADHD to be overemphasized with the removal of ADD-H as a subtype. In substitution of this omission, DSM-III-R does however include an ‘other’ category which can be called upon by clinicians for diagnoses of ADHD without hyperactivity. The taxonomy implemented by the APA for the subtype formally termed ‘ADD-H’ is “Undifferentiated Attention-deficit Disorder” (APA, 1987, p. 52). Goodyear and Hynd in 1992, cited by Fisher (1998, p. 128), realized that any combination of symptoms of inattention, impulsiveness, or hyperactivity can result in an ADHD diagnosis using the

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<sup>17</sup> PDD are additional comorbid disorders of ‘ADHD’ not mentioned in DSM-III.

criteria of DSM-III-R. By removal of the ADD-H subtype, the previous speculative (subjective) attribute of ADD blossomed into a disorder which could essentially be used as a scapegoat for clinicians encountering problem cases exhibiting some level of abnormal kinetic behavior. In fact, DSM-III-R made it possible to diagnose ADHD with only 8 symptoms present, of which a child not need to have or show any symptoms of inattention at all (Fisher, 1998; Quay, 1999)! In support of the charge by Kapley and Pfolh (1997) that the distinction between clinical cases exhibiting and not exhibiting hyperactivity has become unclear, Quay (1999, p. 4) illustrates, “as McBurnett (1997) has pointed out, two children could each exhibit 8 symptoms [be diagnosed as having ADHD], yet only share 2 in common.”

A very evident change was taking place in the way practitioners came to interpret the ADHD disorder. By removal of the residual subtype, the APA began opening clinicians' eyes to first time adult diagnoses, since ADD was typical of children and considered in all cases to have started in early infancy or childhood, it implied that for some individuals ADD had gone unnoticed and been left unchecked. Owing much to the publication of DSM-III-R, the differential style of diagnostic definitions used by the APA (initiated in DSM-III) had successfully been adapted by practicing psychiatrists and clinical psychologists in the United States. Since it was possible for a child to exhibit a multitude of similar disorders concurrently, differential diagnosis involved the diagnostician following APA's recommended, strongly publicized guidelines reading through disorder criteria of all suspected maladies in hopes that she may discover the one most suited (a best fit) for each individual case (Kirk & Kutchins, 1992; Quay, 1999). Additionally, although papers had appeared in the 1960s and 1970s, widespread belief of

ADHD's prevalence in adults (in up to 66% of childhood cases) only now began (Barkley, 1998). Over all, DSM-III-R added very little 'new' criteria to the definition of ADHD, especially since the subsequent version, DSM-IV, reincorporated much of the omitted characteristics presented in DSM-III. DSM-III-R appears to have been the proverbial step backward needed in order to advance; much wisdom and insight was gained into the antithesis of 'ADHD' by clinical implementation of its ADHD label.

#### DSM-IV

The American Psychiatric Association began the process of revising DSM-III-R the same year it was published (Widiger et al., 1994). Initially, the APA Committee on Psychiatric Diagnosis and Assessment met to explore possible timetables for the publication of DSM-IV, but the committee concluded because work was already proceeding on ICD-10 (WHO, 1992) "work should also begin on DSM-IV to allow for mutual influence and convergence of the two systems" (Widiger et al., 1994, p. xvii). With the goal of providing unbiased, comprehensive information reflecting the best available clinical and research literature, the fourth edition of DSM, DSM-IV, was published by the APA in 1994. However, a cautionary statement was now also included, noting "DSM-IV reflects a consensus about the classification and diagnosis of mental disorders derived at the time of its initial publication" (APA, 1994, p. xxiii). If unclear the first time, it was reiterated once more in the 'Cautionary Statement' au debut to the main text of the manual: "These diagnostic criteria and the DSM-IV Classification of mental disorders reflect a consensus of current formulations of evolving knowledge in our field" (APA, 1994, p. xxvii). Incorporation of cautionary statements (repeatedly) is a 'sign of the times' in which professionals have begun to pay serious attention to their

public reputation and future livelihood, incessantly striving to shoulder as little responsibility as possible when facing a potentially angry mob, legal disputes, or new modes of thinking superceding and disproving older published notions. By receiving so much criticism of their DSM-III-R criteria, the APA may believably have desired to shield their backs with two coats of scapegoat clauses, unduly under-exemplifying the perpetually varying historical concept of ADHD. Cautionary statement having been issued and heeded, the consented 'official' definition of 'ADHD' described in DSM-IV (APA, 1994), and still current as of this writing in December of 2002, is depicted in Table 7. Having already introduced both the public and professionals relying on DSM to an open and detailed description for the attention-deficit disorder, the list of criteria for 'ADHD' in DSM-IV (APA, 1994), reincorporating the ADD subtypes, was positively received and portray the conviction of clinicians to a greater degree of accuracy than those detailed in DSM-III-R.

TABLE 7: DSM-IV diagnostic criteria for attention-deficit/hyperactivity disorder

(APA, 1994, p. 83-85)

A. Either (1) or (2):

- (1) six (or more) of the following symptoms of **inattention** have persisted for at least 6 months to a degree that is maladaptive and inconsistent with developmental level:

*Inattention*

- (a) often fails to give close attention to details or makes careless mistakes in schoolwork, work, or other activities
- (b) often has difficulty sustaining attention in tasks or play activities
- (c) often does not seem to listen when spoken to directly
- (d) often does not follow through on instructions and fails to finish schoolwork, chores, or duties in the workplace (not due to oppositional behavior or failure to understand instructions)
- (e) often has difficulty organizing tasks and activities
- (f) often avoids, dislikes, or is reluctant to engage in tasks that require sustained mental effort (such as schoolwork or homework)
- (g) often loses things necessary for tasks or activities (e.g. toys, school assignments, pencils, books, or tools)
- (h) is often easily distracted by extraneous stimuli
- (i) is often forgetful in daily activities

- (2) six (or more) of the following symptoms of **hyperactivity-impulsivity** have persisted for at least 6 months to a degree that is maladaptive and inconsistent with development level:

*Hyperactivity*

- (a) often fidgets with hands or feet or squirms in seat
- (b) often leaves seat in classroom or in other situations in which remaining seated is expected
- (c) often runs about or climbs excessively in situations in which it is inappropriate (in

adolescents or adults, may be limited to subjective feelings of restlessness)

- (d) often has difficulty playing or engaging in leisure activities quietly
- (e) is often “on the go” or often acts as if “driven by a motor”
- (f) often talks excessively

*Impulsivity*

- (g) often blurts out answers before questions have been completed
- (h) often has difficulty awaiting turn
- (i) often interrupts or intrudes on others (e.g., butts into conversations or games)

- B. Some hyperactive-impulsive or inattentive symptoms that caused impairment were present before age 7 years.
- C. Some impairment from the symptoms is present in two or more settings (e.g., at school [or work] and at home).
- D. There must be clear evidence of clinically significant impairment in social, academic, or occupational functioning.
- E. The symptoms do not occur exclusively during the course of a Pervasive Development Disorder, Schizophrenia, or other Psychotic Disorder and are not better accounted for by another mental disorder (e.g., Mood Disorder, Anxiety Disorder, Dissociative Disorder, or a Personality Disorder).

*Code based on type:*

**314.01 Attention-Deficit/Hyperactivity Disorder, Combined Type:** if both Criteria A1 and A2 are met for the past 6 months

**314.00 Attention-Deficit/Hyperactivity Disorder, Predominantly Inattentive Type:** if Criterion A1 is met but Criterion A2 is not met for the past 6 months

**314.01 Attention-Deficit/Hyperactivity Disorder, Predominantly Hyperactive-Impulsive Type:** if Criterion A2 is met but Criterion A1 is not met for the past 6 months

**Coding note:** For individuals (especially adolescents and adults) who currently have symptoms that no longer meet full criteria, “In Partial Remission” should be specified.

DSM-IV criteria for ‘ADHD’ reveal several novelties in revision of those listed in DSM-III-R, as well as being noticeably longer and more detailed. The first difference is found at the very top of the classification hierarchy. No longer are the symptoms of ‘ADHD’ classified as a disorder listed on a mere branch or subtype of the ‘Disruptive Behavior Disorders,’ instead, the group to which ADHD now belongs is ‘Attention-Deficit *and* [italics added] Disruptive Behavior Disorders’ (APA, 1994). The second difference is also evident prior to the listed of criteria of Table 7; DSM-IV goes into greater detail describing the diagnostic features of the disorder as well as its subtypes and associated features. It appears as though an extra amount of care was taken in the clarification of criteria A. through F. in order for there to be as little misunderstanding and misinterpretation as possible—though the diagnosis may remain subjective, its guidelines certainly should not. Added care is also seen in the visual presentation of criteria, which are now offered in a visually pleasing, easy to understand fashion and not massed into three separate sections partially repeating each other (DSM-III; APA, 1980).

The third and most significant modification in the opinion of Power and DuPaul (1997) is evident by the list of criteria for the disorder. The fourth edition of DSM has reverted to the primary style of categorization found in DSM-III, undoing its previous decision eliminating the ADD-H subtype. This distinction is immediately noticeable by modification of the 1987 ADHD label from ‘Attention-deficit Hyperactivity Disorder’ to the current ‘Attention-Deficit/Hyperactivity Disorder’; ‘hyperactivity’ and ‘attention-deficit’ are now of equal importance. DSM-IV, then, lists two types of symptoms (each with 9 criteria): Inattention and Hyperactivity-Impulsivity. Although this too had already been introduced in the third edition: where previously three criteria existed there are now

only two, the impulsivity group of symptoms has been coupled with those for hyperactivity and not required for diagnosis of the former ADD-H subtype.

Over the past century, focus has shifted from a defect in moral control, through hyperactivity, to the designated current taxonomy for these symptoms, attention-deficit. The shift in focus of distinguishing behavior is accentuated by the elimination of impulsivity as a requirement for at least one subtype of ‘ADHD,’ the predominantly inattentive type (‘ADHD’/I). In DSM-III, distinction between ADD-H and ADD+H had been made (for ADD+H) by the inclusion of hyperactive behavior along side inattentive and impulsive traits. In DSM-IV, a clear division is cast between ‘ADHD’ with and without hyperactivity by classifying predominantly inattentive symptoms in the latter and associating hyperactive-impulsive symptoms with the former group. The emphasis on inattentiveness from the third revised to fourth edition of DSM is as different as night is to day; as mentioned, DSM-III-R made it possible for diagnosis of ADD without showing any signs of direct attention-deficit behavior.

DSM-IV has three distinct subtypes: combined (‘ADHD’/C), predominantly inattentive (‘ADHD’/I), and predominantly hyperactive-impulsive (‘ADHD’/HI). There is also a fourth subtype to be considered as a *last* resort in ‘Not Otherwise Specified’ (‘ADHD’/NOS) cases. The ‘ADHD’/NOS category is for disorders with prominent symptoms of inattention or hyperactivity-impulsivity that do not meet the criteria of any other subtypes for the Attention-Deficit/Hyperactivity Disorder (APA, 1994). This option also existed in DSM-III-R, but was viewed by clinicians primarily as a means of circumventing the removal of the ADD-H subtype. By reestablishing this option, the APA has eliminated an obvious and well proven potential exploit of the NOS subtype,

further verifying the need for an attentive-deficit (without hyperactivity) category to remain as part of the ‘ADHD’ diagnosis structure.

To be diagnosed as having ‘ADHD,’ an individual must meet 6 or more symptoms from either lists (1) or (2) of criterion A. in Table 7 and meet four additional requirements concerning duration, maladaptiveness, age of onset, and locations of impairment (in two or more settings). Severity of the disorder is still listed, though now found at the very beginning of the manual and applicable to all disorders in general, not itemized for each as in DSM-III. Additionally, the APA designates the phrase ‘In Partial Remission’ to be specified where individuals no longer display the minimum number of criteria for classification. Uniformity among authoritative figures is essential in recognizing and establishing the disorder, no doubt many differences of opinion will exist between clinicians, teachers, parents, school psychologists and other professionals actively involved in the child’s life. The criteria for ‘ADHD’ in DSM-IV appear very detailed. At the same time, standards have also become inclusive of a wider range of characteristics all with the sincere intent to create and fine-tune the best possible clinically operational definition for the pervasive symptoms. The APA in DSM-IV, having greatly expanded James’ (1890) dated attention to inattention, has procured yet another working definition for ‘ADHD’ which now encompass many new symptoms Plato, and perhaps even Still, would not likely have considered scrutinizing.

#### Present Considerations on Terminology

Attention is an integral part of memory. It is the driving vehicle transforming present experience into past recollections (Hockenbury & Hockenbury, 1997) whereby memory becomes brain activity. And attention *must* continue to be related to brain

activity (for physical cause and effect) or many theories concerning dear memory would be proven flawed, rendered useless, a large segment of wisdom clarifying the understanding of the human psyche would come undone (i.e. the stage model of memory, etc.). The same can be said for inattention. Attention and inattention, twins like matter and antimatter, cannot exist one without the other. Perhaps not in the time of Plato, but surely with the advent of psychological scrutiny did the ongoing saga begin: Is inattention of the mind or ether, organic or in organic (James, 1890)?

James has touched on bits of both aspects that attention is of the ‘intellect’ and also ‘sensory’ (behaviorally/environmentally) induced. But he *was* a creative sort and, in one explanation, he offers as ‘a means of drafting off all the irrelevant sensations of the moment,’ the following (James, 1890, p. 457-458):

It is a well-known fact that persons striving to keep their attention on a difficult subject will resort to movements of various unmeaning kinds.... Each individual usually has his own peculiar habitual movement of this sort. A downward nerve-path is thus kept constantly open during concentrated thought; and as it seems to be a law of frequent (if not of universal) application, that incidental stimuli tend to discharge through paths that are already discharging rather than through others, the whole arrangement might protect the thought-centers from interference from without.

Still (1902) thought attention (and inattention), as part of ‘moral defect,’ to be directly attributed to a brain malfunction—a physical deformity. In fact, all supportive writings of MBD following James and Still continued this line of thinking. Hoffman (1854),

predating James, was perhaps the first to pass ‘ADHD’ characteristics off purely as behavioral in nature, but then his poem showed support neither way.

Tredgold (1922, p. 77) sided with Still (1902) describing as a cause irregularly arranged brain cells:

Irregular Arrangement.—Hammarberg<sup>18</sup> states that the arrangement of the cortical cells in amentia does not differ from the normal; but my own experience, as also that of several other observers, is to the effect that an irregular and haphazard arrangement is very characteristic of this condition.

Clements, in 1966, was also pro neurological (cited by Ross & Ross, p. 12):

The term ‘minimal brain dysfunction syndrome’ refers... to children of near average, average, or above average general intelligence with certain learning or behavioral disabilities ranging from mild to severe, which are associated with deviations of function of the central nervous system.

MBD, and for the most part also ADD, characteristics were almost exclusively considered associated with the actual brain chemistry, specifically a neurotransmitter imbalance (norepinephrine) (Fisher, 1998). Current theories accuse either the under or over stimulation of the neurotransmitter dopamine which regulates motor control in the body (K. Gorbatenko-Roth, personal communication, December 4, 2002).

The category which ‘ADHD’ is listed under, by the APA, is somewhat deceiving; ‘Disruptive Behavior Disorders,’ which to the neophyte DSM interpreter taking references literally and without caution, may interpret ‘behavior disorder’ to be of the spirit as James (1890) had insinuated. This is not the case. DSM represents, essentially,

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<sup>18</sup> ‘(Studien über Klinik und Pathologie der Idiotie, Upsala, 1895)’

the collective opinion of numerous psychiatrists and clinical psychologists complied, not by one, but many teams consisting of yet more doctors and experienced professionals. Barkley (1998, p. 26.) elucidates the origin of 'Behavior' in the supraclassification of 'ADHD' by stating matter-of-factly: "A deficit in responding to behavioral consequences, not attention, was the difficulty in ADHD." I.e. "ADHD arises out of an insensitivity to consequences, reinforcement, punishment, or both." Barkley (1998, p. 39) briefly declares 'behavior' as the descriptive feature of ADHD, dictating:

Deficits in behavioral inhibition may be the most distinguishing characteristic of this disorder from other mental and developmental disorders (Barkley, 1997b; Pennington & Ozonoff, 1996; Schachar, Tannock, & Logan, 1993), and that this deficit is associated with a significant disruption in the development of normal self-regulation.

To which Quay (1999, p. 19) further adds "using DSM-III-R criteria in a large-scale study of twins, Levy, Hay, McStephen, Wood, and Waldman (1997) concluded that ADHD was best viewed as an extreme of behavior varying genetically throughout the population rather than as a discrete disorder." Just *what* 'ADHD' really is, is a genuine concern of psychologists today. With such public neurological advocates as Barkley, Gardner, Rutter, and Quay it is hard to imagine the APA to have erred not once, but three times in listing ADHD as a disorder of behavioral origin, when, as Fisher reasons, 'ADHD' "is now thought of as a higher-level thinking disorder, not a behavioral or psychological disorder" (1998, p. 3). It is hard to imagine when exactly it was not thought of as such, but even Sam Goldstein in the forward to Teeter (1998, p. xi) states "ADHD is increasingly conceptualized and understood as a neurologically based

condition, with genetics found to play a significant role in increasing the risk that an individual will experience the disorder.” Perhaps it is possible a future edition of DSM may list ‘ADHD’ (or the like) as a ‘Disruptive Neurological Disorder.’

An interesting revelation in thought took place sometime commencing in the mid 1960s and progressing throughout the 1970s. Barkley (1998) describes the opinions of several of his colleagues<sup>19</sup> as believing deficits in motivation to be a better model for explaining the symptoms seen in ‘ADHD’ children. Justification for this opinion is given by Carlson and Bunner (1997) who reported learning disabilities to be present in only a quarter to half of ‘ADHD’ cases, contrary to the earlier proposition by Tredgold in 1922 that ‘abnormal’ and ‘mentally deficient’ be applied to those individuals who’s ‘maintenance of existence’ have not become a conscious process (i.e. that all Aments display a learning disability of some sort). Goldstein suggests that ‘ADHD’ is more a disorder of inconsistency than inability; “a disorder that results not from lack of information but rather from not doing what one knows” (Teeter, 1998, p. xii). ADHD cannot therefore be accurately reflected in brief laboratory observations or reports of parents and teachers as is relied upon far too often in diagnosis (Sattler, 2002).

A text revision of DSM-IV (DSM-IV-TR) was released by the APA in the year 2000 which superceded the fourth edition. In this most recent publication, the APA has not incorporated changes affecting the definition of ‘ADHD’ or other Disruptive Behavioral Disorders (BehaveNet, 2002). Could this signify the waning emphasis on taxonomy and pervasive symptoms for ‘ADHD’ or has a temporary balance at long last been achieved. The difference in years of the two publications totals a mere six. Six

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<sup>19</sup> Sroufe in 1975; Rosenthal and Allen in 1978; Glow and Glow in 1979.

years is hardly worthy of basing any conclusion upon when considering the vigorous attention paid to defining and classifying 'ADHD' throughout the entire 20<sup>th</sup> century. However, as the APA has taken on the position of a collective representation of current thoughts and opinions in the field of psychiatry, six years without a single change in either taxonomy or symptomology of the disorder is a considerable amount of time.

In a recent review of literature by Jensen, Martin, and Cantwell (cited by Henker & Whalen, 1999) it was recommended that two additional subtypes be added to the 'ADHD' disorder in DSM-V: 'ADHD,' aggressive subtype, and 'ADHD,' anxious subtype. At present, however, satisfactory balance in the classification of 'ADHD' appears to have been achieved. Perhaps researchers have taken a step back to regenerate their creativity in hopes of attaining new perspectives and examining the situation ever clearer. For the most part, what will become of ADHD in the future will only be revealed with the publication of DSM-V expected sometime in the future, and for which work has already begun

## CHAPTER THREE

### Discussion, Conclusions, and Recommendations

#### Introduction

This chapter summarizes and discusses historic labeling for symptoms attributed to and described by the definition of Attention-Deficit/Hyperactivity Disorder, ‘ADHD.’ In the first section, Discussion, reflection on the efficacy of disorder labels and behaviors expressed by ‘ADHD’ is presented. A variety of factors noticeably fueling and benefiting from the labeling of ADHD will be mentioned. Following the discussion, is the Conclusion, a summary of the results of this study.

#### Discussion

An aspect previously unmentioned, owing to its application as a larger question of society, is the significance of change in cultural educational structures. Has there been a change in the mindset, mannerisms, and social habits of humanity that now cause a spotlight to shine exceedingly bright on ADHD, or has the disorder arisen gradually over time hand in hand with these changes. The former is touched on partially by this study, but the latter poses a problem. On a gradual, continuous spectrum there cannot be a solid line drawn dividing black from white and signifying the absolute beginning of any given event, the entire spectrum becomes a process of change and so resembles a marvelous shade of grey. For ADHD to have suddenly arisen would be to render the past discontinuous. The diagnosis ‘ADHD,’ therefore, must have developed in specific historically situated, changes in the past.

From the time of the Graeco-Roman period, due in large part to the teachings and interpretations of Plato, philosophers placed importance upon, and observed great

consideration in, educating the young. The prime desire of educators was how best to teach and have pupils remember their lessons. There has been indirect reference made to the instruction of inattentive<sup>20</sup> students, those having difficulty in their lessons, but none directly ascribing cause to factors amounting in a disorder as culturally broad<sup>21</sup> as ‘ADHD.’ Indirect reference to symptoms occurred at least 2400 years ago, but specific effort was not made to isolate the cause and concentrate on affected cases until less than 200 years ago. Instead, children exhibiting ADHD appear to have been viewed no different from others. This may easily be attributed to the nature of ADHD as being neither (physically) contagious nor life threatening.

It follows from the historical use of nomenclature that ADHD did not rate in high medical importance until: 1) its general pervasiveness became identifiable through the creation of regimented social-education structures such as public elementary schools; and 2) the field of medicine (and psychology) had expanded to a capacity where an account of diseases not otherwise harmful to the individual or society would be included.

Evidence in support of the irrelevance of treating ADHD prior to the establishment of public schools is given by the Apollo Managed Care Consultants (1999, n.p.) who are not alone in their belief that, for ‘ADHD,’ “stimulant medications may be stopped safely

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<sup>20</sup> ‘Attention-deficit,’ from ‘ADHD,’ is a conceptualized term of the 20<sup>th</sup> century and becomes unfounded in contexts predating its existence.

<sup>21</sup> Goldman and colleagues (1998) have summarized various studies of ADHD prevalence, showing it to exist in New Zealand (6.7%), Puerto Rico (9.5-16%), Canada (6.3%), German (9.6%), England (1.7%). The New South Wales (NSW) Department of Health (2000) quoted an 11.2% prevalence in Australia, Becker (2001) a 1.5-10% in China, and Fredman and Korn (2002) have studied its comorbidity in Taiwan.

during school vacations and holidays.” The advocacy of drug holidays<sup>22</sup> for school children implies medication to be prescribed primarily for the betterment of the child’s in-school behavior and not applicable outside of the institutional boundaries. Therefore, ADHD appears to be a situational condition rather than a pervasive disorder.

The long silence before the work of Eucharius Roesslin in the 16<sup>th</sup> century, and the subsequent interest of isolated pediatricians until the end of the 19<sup>th</sup> century, is indicative of the low standard society placed on formal education. Until recently, mathematical and textual literacy was not considered necessary to care for and nurture a family. Without an environment in which to compare and contrast children of similar ages, under like circumstances, it will have been difficult for attentional and other finer behavioral traits to be recognized. Even in the isolated environments of larger places of employment, emphasis would not have been placed on education, as food and shelter were of utmost priority. It is questionable whether a textbook education, or inattention and hyperactive remediation, would have been of any benefit to individuals living in a primarily farming, hunting, and trade society.

Plato’s basic philosophy which assesses pupil-apprenticeship compatibility to be determined by ‘he [student] who remembers and is not deceived,’ can be seen as a simple yet effective solution to maintain a low incidence of student inattentiveness in his or her studies. Translated, Plato’s philosophy states the principle that a student’s career is derived from natural interests and talents, that a student should not be coerced to learn or

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<sup>22</sup> Drug holidays, though viewed as beneficial to the child, are a source of much controversy (Apollo Managed Care Consultants, 1999). Whether this is due to reasons already mentioned or for the physical wellbeing of the child (preventing medication addiction) is not included as part of this study. Further reading is encouraged.

undertake, unless innately suited, any particular profession. It appears, however, as though this pedagogic standard has been long forgotten. The biblical reference in Deuteronomy would have seen all juvenile delinquent children, diagnosed as either Conduct Disorder (CD) or Oppositional Defiant Disorder (ODD) which have a respective comorbidity of 23.6% and 25.4% with ADHD (APA, 1987), stoned to death. Death by stoning is most certainly an effective means to alleviate society of undesirable behavior but certainly not considered just, moral, or humane in the year 2002.

Prior to the existence of public elementary schools, pupils invariably did as Plato had foreseen: if one apprenticeship failed another more suited was entered. Formal schooling available to all socioeconomic classes did not begin until the 20<sup>th</sup> century, coinciding with the approximate time of Still's 1902 observations on moral defect. Bradley (1937) considers Still in 1902 to have been the first to clinically recognize, describe, and create a label for hyperactive behavior. The handle of 'moral defect' appeared for two reasons. The first was that psychology, and the more recent medical branch of psychiatry, had progressively achieved a classification of diseases now inclusive of attention. The second was of the amount of attention paid to children displaying ADHD: not only were they singled out but a specific locale existed (namely the clinic) where treatment could now be sought.

The prime affect labels had in organizing characteristics of ADHD and disorder classification, and still have on these classifications in general, is to further research and inquiries into their essence and what they purportedly represent. To his effect, have the numerous labels served their purpose? No well to do doctor's intent is to ostracize a young invalid if her aim is to ease the child's debilitating conditions. There rests no

alternate means by which thought may spread and scientific inquiry commence, into mannerisms and behaviors publicly perceived problematic, than through classification and social-structure alterations that allow inauguration of medical taxonomy. Use of labeling systems serve an important dual purpose in culture as the initiation and justification of serious inquiry, but not without grave repercussion. Taxonomies used by clinicians also serve to segregate individuals from normal, civilized, sociable society, and have the unfortunate effect of causing numerous label-branded children to lose hope in their own ability to heal/alter personal behavior. Sadly however, without careful methodological deliberation, as careful of unforetold proceedings as possible, an objective start in the scientific process becomes difficult to attain.

Labels for ADHD are necessary, but they may be necessary for science and not for humanity. The betterment of the human organism's collective body of knowledge has historically considered the thoughts, feelings and desires of the majority, neglecting and often mistreating the minority. For this reason alone stringent human subject regulations have been adapted by nearly all institutions of higher education across the United States. A fallacy of labeling is their proper correlation to symptom pervasiveness. Sadly, evidence suggests a high occurrence of misused medical nomenclature. For the sake of those affected, may it never be neglected to demand of researchers, and periodically review their efficacy, if the scientific process undertaken is indeed working toward a necessary life-bettering goal raising the general quality, emotional level and happiness of living.

Even more widespread and culturally diverse than ADHD is the profound effect of materialism. Self-interest exists, too, in the home and doctor's office. Sometimes

labels serve interests other than that of the child. One case mentioned by Fischer (1998) was of a clinician that knowingly misdiagnosed a child, who exhibited only minor symptoms of 'ADHD,' simply to please his parents. McIlroy, Foss, and Picard (2001), in a series of 4 lengthy articles published in a national Canadian newspaper, exposed eye-opening examples of pharmaceutical companies providing incentives (condominiums, cruises, luxury cars, etc.) for doctors favoring and prescribing their medications in large annual amounts. Other potentially fraudulent cases have invoked letters to parliamentary figures (Baughman, 1998) and resulted in class action lawsuits, the first of which was filed on May 1, 2000 (PBS Online, 2001).

The motives of medical practitioners are further accentuated in a cross-examination of stimulant prescriptions, used almost exclusively to treat 'ADHD,' demonstrating a 6 to 10-fold increase from 1987 to 1996 (Zito, 2000). It was not Still's intention in 1902 to spawn controversy when he convicted children of being morally defect. The labeling of children as moral defect was intended as a means of information transmission by which to engage fellow researchers, and bring to the attention of science, questionable behavior facing a growing population of school children (Still, 1902). Still was able to question his assertions with an objective eye only by involving fellow colleagues.

The label 'ADHD' and what it represents are remarkably different from the 'ADHD' labeled child, and what *she* represents. Even without materialistic influence, unanimity over 'ADHD' diagnoses among psychologists and clinicians of vastly different upbringings and personal statures can never be attained, for if authorities were of the same opinion, there would be no need for a scientific process. An 'ADHD' child

becomes the embodiment of current scientific theory relating to the principals and circumstances represented by her label, rather than being primarily a child. It can be neither proven nor disproven that ‘ADHD,’ as a disorder, exists as a separate mental entity given the multitude of other disorders bearing varying degrees of resemblance to ‘ADHD.’ However, even *existence*, as a term, is very subjective and can easily be philosophized into non-existence. In fact, *all* disorders, whether they exist or not, are only ever momentarily<sup>23</sup> categorized. The APA (1994, p. xxii), responsible for maintaining the official national precedent of mental (and physical) disorders, has confessed to this: “New knowledge generated by research or clinical experience will undoubtedly lead to an increased understanding of the disorders included in DSM-IV, to the identification of new disorders, and to the removal of some disorders in future classifications.”

Consider homosexual behavior as an example to describe a ‘momentary’ disorder. Not long ago, homosexuality was considered a mental condition perceived by many as contagious; over time such behavior acquired a label and became officially recognized by the APA. At some point however, prior to publication of the third edition of the Diagnostic and Statistics Manual of Mental Disorders (DSM-III), a subcommittee of the Committee on Nomenclature and Statistics, part of the APA, “introduced two criteria for determining which psychiatric conditions should be listed in DSM-II. The condition must (1) regularly cause distress, or (2) interfere with social effectiveness”<sup>24</sup> (Bieber,

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<sup>23</sup> ‘Momentarily’ is taken from the Merriam-Webster (Gove & Merriam-Webster, 1981) reference ‘of a point in time.’ In this context, the arbitrary quantity of ‘time’ is implied as to be infinitely large.

<sup>24</sup> Bieber (1987, p. 433) defines social effectiveness as “the ability to maintain positive social relations and perform work effectively.”

1987, p. 433). Thereafter, homosexuality was no longer regarded as a pathological disorder and, with much initial shock and controversy, was decidedly dropped from the list of disorders in DSM-III (Bieber, 1987). Like homosexuality, so too ADHD will one day be moved out from under the medical microscope. Although highly unlikely this will occur in the near or foreseeable future, consideration must be given to this possibility, especially if Jadad and colleagues (1999) are correct that nearly seven percent of the United States school-age population meet the criteria for ‘ADHD.’

There are a number of factors which have been a driving force in further exploration and exposure of ADHD. Hyperactivity first became clinically described in children in 1902 (Goldman, Genel, Bezman, & Slanetz, 1998). After its initial debut, recognition of hyperactive conduct as a disorder increased exponentially, culminating and achieving a near lay-awareness plateau in the late 1960s as ‘Minimal Brain Dysfunction’ (MBD).

The brain and the head in general were historically regarded with great fascination and wonder. Initially, Still (1902) had attributed ADHD behavior to a construct of poor inhibition, but specific cause was not known for certain. Still had speculated ‘cell modification’ (brain damage) as generally responsible for morally defective behavior. By 1922, Tredgold had convinced researchers encephalitis, alcoholism, physical injury, etc. affecting the delicate balance of chemistry in the brain were responsible. MBD was largely in favor and, as its name implies, for the accreditation of brain dysfunctions as viable explanations for attention-deficit behavior. Even passing the year 2000 where technology has provided for awareness and signification of discrete hormones and neurotransmitters, focus on the brain has established itself as relentless. Therefore,

Fisher's prediction that "as diagnostic techniques improve, the presence of ADD will be correctly distinguished and diagnosed" (1998, p. 4) may not occur for quite some time, assuming: 1) ADD ('ADHD') remains a 'disorder' *par se* to be diagnosed, and 2) it has not already been correctly identified as a neurological pathology. As it stands, human tendency—the inclination and perpetual curiosity driven by science desperate to explore the unknown—may have unwittingly steered and kept focus honed to that part of human anatomy long least understood and believed to be the most complex, as explaining ADHD behavior. Could this tendency be an underlying, subconscious factor exploiting any possible opportunity of exploring the unfamiliar, itself a compelling reason to further scientific inquiry?

To consider a second motivating factor influencing the adaptation of new labels for well established behaviors and mannerisms, consider an accusation by Goodhart and Still (1921, p. 308) on the relation between the individual, disease, and community:

If the disease is specific and possesses infective properties, its most important feature as regards the community is its specific nature—as regards the individual only can the local symptoms claim priority. Since, therefore, the well-being of the community is of the first importance, pertussis most properly groups with those other diseases which have contagious properties.

The effects of this statement are far reaching both in time and space. Aside from the obvious quarantine segregating physically healthy hospital patients from the infective ill (e.g. Tredgold's bacterial-meningitis), Goodhart and Still's treatise also applies to non-physical pathologies. Evidence whereby the good of the community is honored above that of the individual predates the time of Christ in the biblical reference of

Deuteronomy. Setting examples for others to follow has been the cornerstone of cultural transmission throughout the ages; it requires neither words nor pre planned thoughts, simply actions. If any child is allowed by lack of demonstrated behavior restraints in her sociostructural environment to be disruptive, perhaps not all (but not all are needed) are bound to follow which will inadvertently cause an ensuing socially unacceptable foundation for age-inappropriate behavior.

This leads into a third identifiable factor directly affecting the categorization of 'ADHD' children. It is more than mere coincidence that a label had been created, ADHD symptoms recognized, shortly after the advent of public schools. Schools, apart from educating, function as place in which to compare and contrast the mannerisms of similar aged children. For this reason, teacher's opinions are regarded over those of parents in reporting a child as hyperactive (APA, 1980). Once a critical mass of children had been contrasted with the educator's ideal student, those children considered not normal, extremely under par, were sent to be examined by Dr. Still and other pediatricians. Sorting students has ultimately resulted in the implementation of the very goal school boards had unknowingly or perhaps surreptitiously desired; a means by which to categorize children while remaining in political asylum. In doing so, teachers imparted their lessons: 1) with greater ease; 2) to students exhibiting like learning processes; 3) with fewer disruptions to 'serious' students; and 4) to the greater satisfaction of their employers, ultimately the general public, by producing a knowledgeable and well-educated next generation of citizens and leaders. Parents, too, played a role in pressuring clinicians to label their children.

Eisenberg explains: “Clinically, what mattered to the child, his parents, his pediatrician, and his teacher was the unequivocal improvement in his behavior” (cited in Wender, 1971, p. xi). When Bradley, in 1937, discovered a connection between amphetamines and reduced hyperactive behavior, he fueled a lustful desire deep within parents of all children struggling with their studies. Wender describes one case where teacher and parent opinions differed from those of the pediatrician: after “a trial of amphetamine therapy brought about striking behavioral changes, a decisive improvement in school performance, and a consequent uneasy peace among the warring factions, it was difficult to argue with success” (Wender, 1971, p. x). In several cases of children exhibiting ADHD, dating back to Still (1902), there were no apparent brain damaging factors or hereditary grounds that could be identified in the child’s life, thus child rearing fell under the gun. Perhaps out of guilt, perhaps resentment of friends’ offspring, perhaps simply out of general competition and an over ambitious drive for achievement, a number of parents became hypercritical of their children’s behaviors. Upon observation and recognition of ADHD, they requested their child, too, be given additional remediation for what may have been influenced by their own psychological fallacies perceiving an unfair advantage awarded to every child but their own.

Guardians of ‘ADHD’ diagnosed children are often the first to become firm believers in medication as a sound and required treatment having witnessed first hand its effects. Guardians, however, may be unaware of comorbid disorders. Altered, identified behavior in children may be more accurately attributed to a closely related but altogether different disorder. Jadad and colleagues (1999) have found a comorbidity of 35% with CD and 12% among learning disabilities (LD)—a number quoted at 30-40% by Kidd

(2000) and as high as 80% by Tabassam and Grainger (2002). Quite contradictory to Still's 1902 findings of 'moral defect' children displaying a great number of 'ADHD' characteristics yet often demonstrating normal intellect. Two additional labels whose symptoms also echo those of 'ADHD' are ODD and JD. Other comorbid disorders fall under the category of Affective Disorders and include Autism, Mania, Depression, etc. Satisfaction of pharmacological treatment alone for ADHD and overjoyed parent advocates believing medication to be a cure<sup>25</sup> for 'ADHD' symptoms, add positive reinforcement to its label's efficacy and can result in medical complacency, possibly leading to inferral of one disorder biased by and solely based upon the identification of another.

### Conclusions

ADHD is a transient label applied to a reified essence/condition but its definition, and interpretation, is continually under revision. ADHD then, should not be classified as a 'mental' or any other disorder since the definition of 'disorder' too changes. The temporary taxonomic and defining values derived for these symptoms do not justify the psych-social impact compartmentalization and segregation imparted on these 'diseased' children have. Prior to classification of hyperactive behavior, such illness was considered second rate and of unimportance because it neither resulted in death, nor caused pain in its possessor, and although rare causes<sup>26</sup> of these symptoms may have been contagious, behavior represented by 'ADHD' is not. There is much benefit to be gained from the

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<sup>25</sup> No evidence has been found of medication indefinitely curing ADHD, in fact, it has been suggested that a decreased efficacy occurs over time requiring a gradual increase of dosage (Thomson Healthcare, 2002).

<sup>26</sup> A collective summary of factors attributed to ADHD behavior, occurring in literature of the 20<sup>th</sup> century, is included in Appendix C.

presence of ADHD in society, they hold the potential of causing observers to experience variety in life and the feeling of living, in freedom, simplicity, and, as difficult as it may be to accept, innocence.

ADHD characteristics have existed for over two millennia, yet have held a formal name for only the last hundred years. There is much use made of the label 'ADHD,' for one, it has exponentially increased research on its symptoms with each passing decade. 'ADHD,' as a term, encompasses irrefutable symptoms and whose pervasiveness has spanned much of the modern history of civilization. But, this same pervasiveness of symptoms also negates the necessity of such recent creation as a structure within which to classify and define these symptoms. By nature, the human organism is curious, it is, however, also insecure and so rejects change without accompanying, clearly visible benefits. Change is a risk, and risk opposes security. ADHD diagnoses have become relevant, but only so long as they serve a functional purpose. As it appears, the purpose this label serves is not necessarily in the best interests of those to whom it become applied, in fact, use and creation of the label is found to be quite independent of the object and personal affects resulting from its application. It is doubtful that dependence on structure and order will, in the foreseeable future, allow once again for the required change to come full circle, fluidly connecting ways of the past with current trends. It is hoped that by examining current and historic literature, this study will initiate and fuel a desire to further research and question the use labeling structures, and particularly to determine its prime motives as benefiting greater the user or usee.

It is the conclusion of my research that ADHD should not be classified as any disorder, mental or otherwise, and that treatment of mildly hyperactive or attention-

deficit behavior currently may be over exaggerated. Classification may serve a useful purpose in research, to organize and further explore avenues among scientists, but such labeling does not help the child in his/her immediate surrounding to understand his/her behavior. Rather, such labels should be employed . . . to further research agendas which attempt to understand the complex factors which cause and affect human behavior, which includes that of children in schools.

## REFERENCES

- Abraham, W. (1958). *Common sense about gifted children*. New York: Harper & Brothers.
- American Psychiatric Association. (1980). *Diagnostic and statistical manual of mental disorders* (3rd ed.). Washington, DC: Author.
- American Psychiatric Association. (1987). *Diagnostic and statistical manual of mental disorders* (3rd ed. rev.). Washington, DC: Author.
- American Psychiatric Association. (1994). *Diagnostic and statistical manual of mental disorders* (4th ed.). Washington, DC: Author.
- Apollo Managed Care Consultants. (1999). *Disease state management: Clinical behavioral health guidelines* (Vol. II). Santa Barbara, CA: Author. Retrieved September 26, 2002 from: <http://www.apollomanagedcare.com/DSMII-ADHD-Expp.htm>
- Barkley, R. A. (1998). *Attention-deficit hyperactivity disorder: A handbook for diagnosis and treatment* (2nd ed.). New York: Guilford Press.
- Baughman, F. A. (1998, September 4). *A letter to Governor Pete Wilson*. El Cajon, CA: Author. Retrieved September 26, 2002 from: <http://home.att.net/~Fred-Alden/Es11.html>
- Becker, S. A. (2001). *A Ritalin alternative: Acupuncture in the treatment of ADHD*. Retrieved December 13, 2002 from: [http://chinesemedicalpsychiatry.com/articles/article\\_ritalin.html](http://chinesemedicalpsychiatry.com/articles/article_ritalin.html)

- BehaveNet. (2002). *BehaveNet clinical capsule: Criteria changes DSM-IV to DSM-IV-TR*. Retrieved November 21, 2002 from:  
<http://behavenet.com/capsules/disorders/dsm4changeTR.htm>
- Bieber, I. (1987). On arriving at the American Psychiatric Association decision on homosexuality. In H. T. Engelhardt Jr., & A. L. Caplan, *Scientific controversies: Case studies in the resolution and closure of disputes in science and technology* (pp. 417-436). New York: Cambridge University Press.
- Binder, A. (1987). An historical and theoretical introduction. In H. C. Quay (Ed.). *Handbook of juvenile delinquency* (pp. 1-32). New York: Wiley.
- Birch, H. G. (1964). The problem of “brain damage” in children. In H. G. Birch (Ed.), *Brain damage in children: The biological and social aspects* (pp. 1-12). Baltimore, MD: Williams & Wilkins.
- Bradley, W. (1937). The behavior of children receiving Benzedrine. *American Journal of Psychiatry*, 94, 577-585.
- Cadbury, D. (1999). *Altering Eden: The feminization of nature*. New York: St. Martin's Press.
- Cantwell, D. P. (Ed.; 1975). *The hyperactive child*. New York: Spectrum.
- Carlson, C. L., & Bunner, M. R. (1997). Effects of methylphenidate on the academic performance of children with attention-deficit hyperactivity disorder and learning disabilities. In D. L. Smallwood (Ed.), *Attention disorders in children: Resources for school psychologists* (pp. 287-296). Bethesda, MD: National Association of School Psychologists.

- Clements, S. D. (1966). *Minimal brain dysfunction in children*. Washington, DC: U.S. Department of Health, Education, and Welfare.
- Collard, J. (1981). The MBD child: The art of definitive history-taking for diagnostic clarification. In R. Ochroch (Ed.), *The diagnosis and treatment of minimal brain dysfunction in children: A clinical approach* (pp. 46-64). New York: Human Sciences Press.
- Conrad, L. I. (1995). The Arab-Islamic medical tradition. In L. I. Conrad, M. Neve, V. Nutton, R. Porter, & A. Wear, *The western medical tradition: 800 B.C. – 1800 A.D.* (pp. 93-138). New York: Cambridge University Press.
- Duvoisin, R. C., & Melvin, D. Y. (1965). Encephalitis and parkinsonism. *Archives of Neurology*, 12, 227. Retrieved November 5, 2002 from:  
<http://www.parkinson.org/pdencephalitis.htm>
- Edelbrock, C. (1997). *Attention problems/hyperactivity*. University Park, PA: Pennsylvania State University. Retrieved September 26, 2002 from:  
<http://www.personal.psu.edu/faculty/c/s/cse1/>
- Fisher, B. C. (1998). *Attention deficit disorder misdiagnosis: Approaching ADD from a brain-behavior/neuropsychological perspective for assessment and treatment*. New York: CRC.
- Fredman, S., & Korn, M. L. (2001). *ADHD and comorbidity*. Retrieved December 13, 2002 from: <http://www.medscape.com/viewarticle/418740>
- Gardner, R. A. (1973). *MBD: The family book about minimal brain dysfunction*. New York: J. Aronson.

- Goldman, L.S., Genel, M., Bezman, R., & Slanetz, P. J. (1998, April 8). Diagnosis and treatment of attention-deficit/hyperactivity disorder in children and adolescents. *Journal of the American Medical Association*, 279(14), 1100-1107.
- Goldstein, S., & Goldstein, M. (1998). *Managing attention deficit hyperactivity disorder in children: A guide for practitioners* (2nd ed.). New York: Wiley.
- Goodhart, J. F., & Still, G. F. (1921). *The diseases of children* (11th ed.). London: J. A. Churchill.
- Gove, P. B., & Merriam-Webster (Eds.; 1981). *Webster's third new international dictionary: Of the English language unabridged*. Springfield, MA: G. & C. Merriam.
- Gross, M. D., & Wilson, W. C. (1974). *Minimal brain dysfunction*. New York: Brunner / Mazel.
- Harris, S. (2002). *Mangling the language: Abused apostrophes, the death of group nouns....* Retrieved November 12, 2002 from:  
<http://www.walkleys.com/magazine/articles/harris.htm>
- Henker, B., & Whalen, C. K. (1999). The child with attention-deficit/hyperactivity disorder in school and peer settings. In H. C. Quay, & A. E. Hogan (Eds.), *Handbook of disruptive behavior disorders* (pp. 157-178). New York: Kluwer Academic / Plenum.
- Hockenbury, D. H., & Hockenbury, S. E. (1997). *Psychology*. New York: Worth.

- Hoffman, H. (1854; 1999). Die geschichte vom zappel-philipp. In R. Godwin-Jones (Ed.), *19th-century German stories: Web editions for language learning & literary study* (n.p.). Retrieved November 15, 2002 from:  
<http://www.fln.vcu.edu/struwwel/philipp.html>
- Jadad, A. R., Boyle, M., Cunningham, C., Kim, M., & Schachar, R. (1999). *Treatment of attention-deficit/hyperactivity disorder*. Rockville, MD: Agency for Health Care Policy and Research. Retrieved December 1, 2002 from:  
<http://www.ahrp.gov/clinic/epcix.htm>
- James, W. (1890). *The principles of psychology* (Vol. 1). New York: Henry Holt and Co.
- Kapley, D. J., & Pfohl, W. (1997). Medications and the attention-deficit/hyperactivity disorders: A short guide for school professionals. In D. L. Smallwood (Ed.), *Attention disorders in children: Resources for school psychologists* (pp. 297-302). Bethesda, MD: National Association of School Psychologists.
- Kennedy, C., & Ramirez, L. S. (1964). Brain damage as a cause of behavior disturbance in children. In H. G. Birch (Ed.), *Brain damage in children: The biological and social aspects* (pp. 13-26). Baltimore, MD: Williams & Wilkins.
- Kidsource Online. (1997, July 24). *Hyperactivity: History, name changes and early treatment*. Retrieved September, 17 2002 from:  
<http://www.kidsource.com/kidsource/content3/hyperactive/history.html>

- Kidd, P. M. (2000, October). *Attention deficit/hyperactivity disorder (ADHD) in children: Rationale for its integrative management*. Retrieved December 13, 2002 from:  
[http://www.findarticles.com/cf\\_0/m0FDN/5\\_5/67150696/p1/article.jhtml?term=DGLA](http://www.findarticles.com/cf_0/m0FDN/5_5/67150696/p1/article.jhtml?term=DGLA)
- Kirk, S. A., & Kutchins, H. (1992). *The selling of DSM: The rhetoric science in psychiatry*. New York: Aldine de Gruyter.
- Koren, T. (2002). *Autism, encephalitis, and vaccination*. Retrieved November 5, 2002 from: <http://www.vaccination.co.uk/articles/autism.htm>
- Logie, H. B. (Ed.), & National Conference on Nomenclature of Disease. (1935). *Standard classified nomenclature of disease* (2nd ed.). New York: The Commonwealth Fund.
- Maxmen, J. (1985). *The new psychiatry: How modern psychiatrists think about their patients, theories, diagnoses, drugs, psychotherapies, power, training, families, and private lives*. New York: William Morrow and Company.
- McBurnett, K. (1997). Attention-deficit hyperactivity disorder: A review of diagnostic issues. In T. A. Widiger, A. J. Francis, H. A. Pincus, R. Ross, M. B. First, & W. Davis (Eds.), *DSM-IV sourcebook* (Vol. 3; pp. 111-143). Washington, DC: American Psychiatric Association.
- McIlroy, A., Foss, K., & Picard, A. (2001, January 1-4). *Under the influence: A Globe and Mail series*. Toronto, ON, Canada: The Globe and Mail.
- Minde, K. (1998, August). The use of psychotropic medications in preschoolers: Some recent developments. *Canadian Journal of Psychiatry*, 43(6), 571-575.

- NSW Department of Health. (2002, January). *NSW public health bulletin supplement: Trends in the prescribing of stimulant medication for the treatment of attention deficit hyperactivity disorder in children and adolescents in NSW*. Sydney, NSW, Australia: Author.
- Nutton, V. (1995a). Medicine in late antiquity and the early middle ages. In L. I. Conrad, M. Neve, V. Nutton, R. Porter, & A. Wear, *The western medical tradition: 800 B.C. – 1800 A.D.* (pp. 71-87). New York: Cambridge University Press.
- Nutton, V. (1995b). Medicine in the Greek world, 800 – 50 B.C. In L. I. Conrad, M. Neve, V. Nutton, R. Porter, & A. Wear, *The western medical tradition: 800 B.C. – 1800 A.D.* (pp. 11-38). New York: Cambridge University Press.
- PBS Online. (2001). *ADHD lawsuits*. Retrieved December 13, 2002 from:  
<http://www.pbs.org/wgbh/pages/frontline/shows/medicating/backlash/lawsuits.html>
- Power, T. J., & DuPaul, G. J. (1997). Attention-deficit hyperactivity disorder: The reemergence of subtypes. In D. L. Smallwood (Ed.), *Attention disorders in children: Resources for school psychologists* (pp. 51-60). Bethesda, MD: National Association of School Psychologists.
- Quay, H. C. (1999). Classification of the disruptive behavior disorders. In H. C. Quay, & A. E. Hogan (Eds.), *Handbook of disruptive behavior disorders* (pp. 3-21). New York: Kluwer Academic / Plenum.
- Ross, D. M., & Ross, S. A. (1976). *Hyperactivity: Research, theory, and action*. New York: Wiley.

- Rutter, M. (1983a). Behavioral studies: Questions and findings on the concept of a distinctive syndrome. In M. Rutter (Ed.), *Developmental neuropsychiatry* (pp. 259-279). New York: Guilford Press.
- Rutter, M. (1983b). Issues and prospects in developmental neuropsychiatry. In M. Rutter (Ed.), *Developmental neuropsychiatry* (pp. 577-598). New York: Guilford Press.
- Rutter, M. (1983c). Introduction: Concepts of brain dysfunction syndromes. In M. Rutter (Ed.), *Developmental neuropsychiatry* (pp. 1-11). New York: Guilford Press.
- Safer, D. J., & Allen, R. P. (1976). *Hyperactive children: Diagnosis and management*. Baltimore, MD: University Park Press.
- Sattler, J. M. (2002). *Assessment of children: Behavioral and clinical applications* (4th ed.). San Diego, CA: Author.
- Still, G. F. (1902, July 5). The Goulstonian lectures on some abnormal psychological conditions in children. *The Lancet*, *1*, 1008-1012, 1077-1082, 1163-1168.
- Still, G. F. (1931). *The history of paediatrics: The progress of the study of diseases of children up to the end of the XVIIIth century*. London: Humphrey Milford.
- Strauss, A. A., & Lehtinen, L. E. (1947). *Psychopathology and education of the brain-injured child*. New York: Grune & Stratton.
- Tabassam, W., & Grainger, J. (2002, Spring). Self-concept, attributional style and self-efficacy beliefs of students with learning disabilities with and without attention deficit hyperactivity disorder. *Learning Disability Quarterly*, *25*, 141-151.
- Teeter, P. A. (1998). *Interventions for ADHD: Treatment in developmental context*. New York: Guilford Press.

The fifth book of Moses, called Deuteronomy. (1611; 1995). In *The Holy Bible* (King James Version) (n.p.). Charlottesville, VA: University of Virginia Library.

Retrieved December 7, 2002 from:

<http://etext.lib.virginia.edu/toc/modeng/public/KjvDeut.html>

*The Holy Bible* (King James Version). (n.d.). Retrieved December 7, 2002 from:

<http://www.geocities.com/cott1388/kjv.html>

Thomson Healthcare. (2002). *Physician's desk reference* (56th ed.). Montvale, NJ: Medical Economics.

Tredgold, A. F. (1922). *Mental deficiency (amentia)* (4th ed.). London: Baillière, Tindall and Cox.

Tzang, R. F., Wu, K. H., & Liou, C. P. (2002, November 20). ADHD comorbidity study in one Taiwan elementary school. *Journal of Medical Sciences*, (22)0, 19.

Retrieved December 13, 2002 from:

[http://jms.ndmctsg.edu.tw/achieves\\_articles.php?&Search\\_vol=22&Search\\_num=0](http://jms.ndmctsg.edu.tw/achieves_articles.php?&Search_vol=22&Search_num=0)

University of Virginia Health System. (n.d). *Surgery of ancient Rome*. Charlottesville, VA: Author. Retrieved December 7, 2002 from: <http://hsc.virginia.edu/hsc-library/historical/antiqua/instru.html>

U.S. Department of Commerce, Bureau of the Census. (1975). *Historical statistics of the United States, colonial times to 1970* (Bicentennial ed. Vol. 1). Washington, DC: Author.

Wender, P. (1971). *Minimal brain dysfunction in children*. New York: Wiley.

- Widiger, T. A., Frances, A. J., Pincus, H. A., First, M. B., Ross, R., & Davis, W. (1994). *DSM-IV sourcebook* (Vol. 1). Washington, DC: American Psychiatric Association.
- Wirt, R. D., & Briggs, P. F. (1965). The meaning of delinquency. In H. C. Quay (Ed.), *Juvenile delinquency* (pp. 1-26). Princeton, NJ: D. Van Nostrand.
- Woodworth, T. (2000, May 16). *The Committee on Education and the Workforce: Subcommittee on Early Childhood, Youth and Families*. U.S. Drug Enforcement Administration Congressional Testimony. Retrieved April 28, 2002 from: <http://www.usdoj.gov/dea/pubs/cngrtest/ct051600.htm>
- Work, H. H. (n.d.). *George Lathrop Bradley and the war over ritalin: One parent's concern for his child has meant help for several million children a century later*. Retrieved September, 17 2002 from: <http://www.cosmos-club.org/journals/2001/work.html>
- Zito, J. M. (2000). *Pharmacoepidemiology of methylphenidate and other medications for the treatment of ADHD*. Retrieved December 1, 2002 from: <http://www.mentalhealth.org/publications/allpubs/SMA01-3537/chapter12.asp>
- Zito, J. M., Safer, D. J., dosReis, S., Gardner, J. F., Boles, M., & Lynch, F. (2000, February 23). Trends in the prescribing of psychotropic medications to preschoolers. *Journal of the American Medical Association*, 283(8), 1025-1030. Retrieved April 10, 2002 from: <http://jama.ama-assn.org/issues/v283n8/rpdf/joc91250.pdf>

## APPENDIX A

## List of Acronyms Used Throughout this Study

ADD:	Attention Deficit Disorder (Attention-deficit Disorder)
ADDH:	ADD with Hyperactivity
‘ADHD’:	Attention-Deficit/Hyperactivity Disorder
ADHD:	Symptoms and behaviors associated with ADHD by DSM-IV (APA, 1994)
APA:	American Psychiatric Association (Note: different from the American Psychological Association)
DBD:	Disruptive Behavioral Disorders
DSM:	Diagnostic and Statistics Manual of Mental Disorders
-R	-Revised
-TR	-Text Revision
ICD:	International Statistical Classification of Diseases and Related Health Problems
-CM	-Clinical Modification (by the APA)
JD:	Juvenile Delinquency
CD:	Conduct Disorder
CNS:	Central Nervous System
EBD:	Effective Behavior Disorder
LD:	Learning Disabilities
MBD <sub>0</sub> :	Minimal Brain Defect
MBD:	Minimal Brain Dysfunction

MR: Mental Retardation  
ODD: Oppositional Defiant Disorder  
PDD: Pervasive Development Disorders  
PDR: Physicians' Desk Reference  
WHO: World Health Organization  
U.K.: United Kingdom  
U.S.: United States

## APPENDIX B

## An Account of Feeble-mindedness in the English Educational System

The following is taken from Tredgold (1922, p. 174)

After the passing of the Education Act of 1876, making attendance at public elementary or other schools compulsory, it gradually became apparent that a group of children existed who were so far mentally defective that they could not be satisfactorily taught in the ordinary public schools, but who were not sufficiently defective to be certified as imbeciles or idiots under the Idiots Act of 1886 [England].

After which, a 'Departmental Committee of the Board of Education' was appointed in 1896 to fully investigate and report on the above observation. The committee's findings, taken from Tredgold (1922, p. 175) is as follows:

This Committee presented its report in 1898 [*Report of the Departmental Committee on Defective and Epileptic Children*]. It recognized that a number of children existed in public elementary schools who, in their mental capacity, were intermediate between the ordinary 'dullards' and certifiable imbeciles, and it estimated the proportion of this class as approximately 1 per cent. of the elementary school population. Its inquiries showed that these children were incapable of receiving proper benefit from the individual attention and instruction given in special classes—that, in fact, under such conditions there was a fair prospect of many of them being enabled to take their place in the world. It considered that these defective children would suffer by association with

imbeciles, and should not, therefore, be educated with them; and that it recommended that special classes and schools should be established to meet their requirements. This report led to the passing in the following year of the Defective and Epileptic Children (Education) Act.

This Act (62 and 63 Vict., ch. 32, 1899) defines mentally defective children as those children who, *‘not being imbecile, and not being merely dull and backward, are defective—that is to say, by reason of mental (or physical) defect are incapable of receiving proper benefit from the instruction in the ordinary public elementary schools, but are not incapable by reason of such defect of receiving benefit from instruction in such special classes and schools as are in this Act mentioned.’*

This Act, therefore, defines a grade of defect milder than any which had previously been recognized; it designates children suffering from this ‘mental defectives,’ and it permits, but does not compel, the Local Education Authorities to establish special classes and schools for the education of such children; and where such are established, attendance is compulsory up to the age of sixteen years, instead of fourteen, as in the ordinary schools.

## APPENDIX C

## Factors Attributed to Attention-Deficit or Hyperactive Behavior

## Causations unrelated to brain dysfunction:

- i. Child Rearing (primarily historical)
- ii. Physical or Emotional Stress
- iii. Cultural: immigration, education (accepted norms, standards, habits, requirements, etc.)
- iv. Psychological Stress: environmental stimulants (TV, multi-media, classroom seating arrangements, classroom decorations, etc.)

## Causations possibly associated with brain dysfunction:

- v. Maladies: physical injury, viral infection (bacterial-meningitis, etc.)
- vi. Hereditary
- vii. Prenatal and Fetal Drug Abuse: opiates (heroin, etc.), amphetamines (cocaine, etc.), ethanol (alcohol, etc.)
- viii. Environmental Toxins: pharmacological (mood altering prescription drugs), diet (food additives, artificial flavors and colors), neurotoxins (lead, mercury, cadmium, tin, manganese, aluminum), solvents (styrene, perchloroethylene, trichloroethylene, vinyl chloride, gasoline, toluene, methylethylketone, carbon tetrachloride, etc.), pesticides (over 600 types), electromagnetic fields (high-tension power lines, electric blankets, cell phones, etc.), air pollutants (benzene vapors, formaldehyde, acetaldehyde, carbon monoxide, polychlorinated biphenyls or PCBs, sulfates, lead, asbestos).

## AUTHOR'S NOTE

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Comments, questions, and suggestions are welcomed and appreciated