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The Medicalization of Hyperactivity and Inattentiveness : A Social History and Theoretical Perspectives on ADHD

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THE MEDICALIZATION OF HYPERACTIVITY AND INATTENTIVENESS:
A SOCIAL HISTORY AND THEORETICAL PERSPECTIVES ON ADHD

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ABSTRACT

This study investigates the rise of the Attention-Deficit/Hyperactivity Disorder diagnosis. It approaches the topic from a medicalization perspective and frames it under the therapeutic state as proposed by Nicholas Kittrie in 1971. It asks three questions: how has society, and particularly, the medical community changed to allow the medicalization of hyperactivity and social control of active children? How has the continuing diagnosis of hyperactivity in children expanded to include attention deficit hyperactivity disorder in both children and adults? And what forces are behind the continuously inclusive diagnosis and why? In an attempt to answer these questions the history of the diagnosis is followed from its inception through the present. Special attention is paid to studies of causality, stimulant medication, evolving diagnostic criteria, and research that place the topic within a social framework. Sources include reputable experts in the field, respected journalists, and organizational data, including the United States Government. Major theorists consulted include Nicholas A. Kittrie, Peter Conrad, and Max Weber. It concludes that the psychiatric community, drug companies and individuals are responsible for the disorder's medicalization. Further, research into ADHD has not yielded results consistent or significant enough to justify a sick label.

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Introduction

ADHD is “the most commonly diagnosed behavioral condition in children” (Reiff & Tippins, 2004, Introduction). The average informed American is most likely familiar with the term. Since its popularization, the diagnosis has permeated American culture, and has, in some ways, become fashionable (Jergen, 2004). Some may not know ADHD stands for Attention Deficit Hyperactivity Disorder but because it is a cultural phenomenon, people are often familiar with the acronym and who it represents. YouTube, the popular streaming video website, is plastered with videos of children and adults who reportedly have ADHD. With the recent play written by former *Sex and the City* actress Cynthia Nixon, *Distracted,* there is little doubt that ADHD has permeated our culture (Cox, 2008). Caricaturized versions of hyperactive children are ubiquitous. Mike Myers’ *Saturday Night Live* character Phillip was a hyperactive boy fitted with a safety helmet and harnessed to playground equipment (NBC). Phillip provides an excellent example of the power a label can have. The skit shows that ADHD has become a significant part of our culture. Television programs respond to viewer ratings; if there were not enough people interested in the topic of a skit, it would not be aired.

The dispute over ADHD - its treatment, causes, and even existence - has continued for decades. In fact, this was a debate within the medical and psychological communities for much of the 20th century and is now continuing into the 21st century (Fourier, 2009). The National Institute of Mental Health (2008) claims that ADHD is “one of the most common mental disorders in children and adolescents” (p. 17). In fact, a 2007 report claimed ten percent of children in Tennessee are diagnosed with the disorder (Pinto, 2007).

Among the general public, ADHD is now synonymous with hyperactivity and inattention, much like Kleenex and Xerox are synonymous with tissues and making copies respectively. It is not uncommon to hear people say things in conversation like “I think I have ADHD” or “sometimes I get ADHD.” This kind of language is, no doubt, indebted to the expansion of the diagnosis to include not only children, but adults as well. What was once a childhood disorder for most of the 20th Century has inflated to the point where it could currently affect any person in the population. This expansion has opened the door to profiteers reaping enormous benefits from the continuation of the diagnosis. While lay people and professionals alike are still debating the existence of the disorder, one thing is certain; before the 20th century hyperactivity was rarely mentioned but by the end of the first decade of the 21st Century, millions of people are being diagnosed and treated with psychotropic, mind altering drugs.

The popularity of the ADHD diagnosis is not an isolated incident; it coincided with the rise of the therapeutic state in the early 1970s. The medical and psychiatric communities dramatically increased their influence on western culture during this period (Kittrie, 1977). The term “medicalization” was coined to explain how the medical community has increasingly taken control of deviant behaviors (i.e., alcoholism, depression, drug addiction) and made them part of their domain (Conrad, 1992; Szasz, 2007). Medicine in the United States has now become big business, at times advertising directly to the public and bypassing the physician altogether. Everyday occurrences such as sadness, activity, and pregnancy are linked to medical interventions such as anti-depressants, stimulants, and unnecessary Cesarean sections.

Those who embrace medicalization theory are apt to point out that this takeover is a form of social control (Conrad, 1992; Szasz, 2007). In the psychiatric world, many of the diagnoses are based not on biological evidence, but behavioral evidence that stresses the presence of social disruption. Treatment is often prescribed to reduce or minimize social disruption on the basis of observation and surveys. Consequently many social delinquents and deviants, rather than being diverted to the criminal justice system, are being controlled by the psychiatric system (Kittrie, 1977). Treatment is often used in lieu of incarceration. No longer confined to criminal deviants or social misfits, medication is now often given to children to treat socially deviant "symptoms" such as talking in class and not sitting still in a wooden chair for hours on end.

ADHD is the most commonly treated socially disruptive childhood disorder. Prescribing drugs to children diagnosed with ADHD in order to induce them to sit still at school is a form of social control because it literally controls their social behavior. In less than a century, the medical community created a new diagnosis for deviant behavioral patterns and now treats these patterns with psychotropic drugs known to produce a myriad of serious side effects. Furthermore, the evidence to support the claim that ADHD is a disorder is unproven (Baughman & Hovey, 2006). Even one of ADHD's staunchest supporters admits that the behaviors could simply be a natural phenomenon (Barkley, 2000). This hyperactive and inattentive behavior was almost entirely ignored by the medical community prior to the 20th century. It was subsequently labeled deviant by a medical community that showed passive interest in the disorder by mid-century, and finally labeled a sickness that required a treatment intervention by a large segment of the medical and psychological communities towards the end of the 20th Century.

Discussion over ADHD has changed little; the same debate that started in the 1930s continues. The questions must be raised; how has society, and particularly, the medical community changed to allow the medicalization of hyperactivity and social control of active children? How has the continuing diagnosis of hyperactivity in children expanded to include attention deficit hyperactivity disorder in both children and adults? And finally, what forces are behind the continuously inclusive diagnosis and why?

Chapter 1 contains a theoretical overview. It lays the foundation for considering the rise of ADHD popularity within the medicalization framework. This portion contains theoretical ideas from Peter Conrad, Nicholas Kittrie, Max Weber, and Erving Goffman. Chapter 2 discusses specific points of ADHD including a description of the diagnosis, its prevalence, and the cultural impact on America. Chapter 3 discusses the treatment options available for the disorder. Chapters 4 through 8 contain a chronological social history of the diagnosis. Finally, Chapter 9 provides theoretical discussion of the significance of western culture on the development of the disorder.

Chapter 1
Review of Social Theories on Medicalization

In his 1971 work, *The Right to be Different: Deviance and Enforced Therapy*, Nicholas Kittrie discussed the rise of what he called the therapeutic state. Kittrie made insightful predictions of the future of criminality and the social control of deviance. He contended that the social control of deviance would increasingly be undertaken by the medical community. He described psychiatry as an enforcer of society's behavioral norms. Kittrie's theories were criminological and his focus was on the civil rights of the mentally ill subjected to forced institutionalization. His reflections, however, can be extended to include the medication of western culture since his manuscript was written. With every diagnosis and treatment prescribed to modify an individual's behavior, the psychiatric community controls behaviors considered socially disruptive. When active and assertive children are routinely prescribed a drug similar to cocaine (National Institutes of Health, 2009), Kittrie's concerns about the therapeutic state become more prophetic.

The therapeutic state has two unique characteristics. The first of these is a shift from a religious explanation of criminal and deviant behaviors to a more secular one that "speaks not in terms of moral judgment…but in concepts reputed to be descriptive and scientific" (Kittrie, 1977, p. 39). This has accompanied a general change from the sacred to the secular in the United States. Previously unexplained phenomena that were once attributed to angels, demons, and God are now often explained by science. Therefore, we no longer say that social deviants are possessed by demons but rather

that they are sick and need treatment. This observation does not favor demonic possession as an explanation; it simply states that the change has occurred.

Another characteristic of the therapeutic state is the extension of an English governing ideal known as *parens patrae*. *Parens patrae* gave the state the right and responsibility to become a parental figure for those deemed unfit to care for themselves. It gave the English monarchs certain control over the affairs of children and the mentally ill during the Middle Ages (Kittrie, 1977). It was primarily a law created to protect property but the idea of government as a benevolent parent has been incorporated into United States legislation. The government has enacted legislation regarding the rights, treatment, incarceration, and protection of juveniles and the mentally ill. Some of these laws enable the medical and psychiatric communities to act for the benefit of the mentally ill, often against their will. While this can be a positive addition to society, it also opens the door for maltreatment and exploitation of those who deviate from the norms and institutions of society. The spirit of *parens patrae* can clearly be seen in the actions of the psychological community.

The therapeutic state is a logical extension of what Weber (1946) described as an increased rationalization of society. The mechanization of society demands streamlined efficiency. “Precision, speed, ambiguity, knowledge of files, continuity, discretion, unity, strict subordination, reduction of friction, and of material and personal costs” are “raised to the optimum point” in a bureaucracy (p. 214). A rationalized society is a highly structured and ordered world where standing in line, bureaucratic red tape, and filling out the right forms are necessities. People know their place in the social structure, they are aware of and obey their superiors, and they exist as one of many.

Heretofore the justice and the economic systems have been charged with enforcing this kind of order. Because the bureaucracy strives for increased efficiency in human interaction, social deviants are seen as counter productive. When traditional social institutions were unable to socially control law abiding, yet deviant, citizens the bureaucracy created an institution that could. It is a social enforcement tool born of medical science and humanity's tireless efforts to conform. When enforcing norms on "sick" individuals, pills are the preferred choice because they are quick, easy, and efficient. The therapeutic state, however, cannot wantonly medicate anyone; it must bring behaviors under its domain by the process of medicalization.

Medicalization, which literally means "to make medical" (Conrad, 1992, p. 210), happens when an everyday occurrence is defined in medical terms, uses medical language to describe it, and places its conceptualization in a medical framework (Conrad, 1992). Conrad & Schneider (1992) picked up where Kittrie left off saying, "Some say that rehabilitation has replaced punishment, but in many cases medical treatments have become the new form of punishment and social control" (p. 1). Since its conception, the term has generally taken on a negative connotation. It is often used in social critique; some go so far as to call psychiatric medicalization slavery (Szasz, 2007). Others claim that medicalization itself is not inherently negative (Conrad, 2007).

The prevailing view is that medicalization is primarily negative by expression or implication. Often the psychiatric community bears the brunt of negative accusations. Szasz asserted that, "although medicalization encompasses more than psychiatry, we must be clear about one thing: *Psychiatry is medicalization, through and through*"

(Szasz, 2007, p. xx). However, psychologists and psychiatrists take the view they are helping the social deviant. Goffman (1967) claimed:

> Persons who come to the attention of a psychiatrist typically come to the attention of their lay associates first. What psychiatrists see as mental illness, the lay public usually first sees as offensive behavior – behavior worthy of scorn, hostility and other negative social sanctions. The objective of psychiatry all along has been to interpose a technical perspective: understanding and treatment is to replace retribution; and a concern for the interests of the offender is to replace a concern for the social circle he has offended. I refrain from enlarging here on how unfortunate it has been for many offenders to have been granted this medical good fortune. (p. 137)

Goffman painted a picture of the psychiatric community as an agent of misguided social control. A clear illustration of the subjective and political nature of the process of medicalization is that homosexuality was transformed from sinful to a medical condition when medical science conceptualized it as such. It became a “nondisease when the homosexual lobby became powerful and troublesome enough to force psychiatrists to abolish the diagnosis” (Szasz, 2007, p. xviii). This view holds the psychiatric community as enforcers of society’s norms. If true, psychiatrists as a group can sometimes be the proverbial wolf in sheep’s clothing.

There are three factors that underlie medicalization. The first of these is the “power and authority of the medical profession, whether in terms of professional dominance, physician entrepreneurs, or, its extremes, medical colonization” (Conrad, 2005, p. 4). The expansion of the medical field was a prime mover for medicalization.

The medical community has most certainly extended its power; this was inevitable as technology expanded. At one point doctors were regarded as little more than butchers and now society highly respects them. This has only happened only within the last century. The medical community has assimilated mental health and troublesome behavior in children within its sphere of influence, thereby expanding the treatment of childhood disorders.

Secondly, medicalization can emerge as a consequence of special interest groups and social movements; “In these cases, organized efforts [are] made to champion a medical definition of a problem or to promote the veracity of a medical diagnosis” (Conrad, 2007, p. 9). Grassroots movements can also be effective catalysts for social change (Conrad, 2007). Children and Adults with Attention Deficit Disorder (CHADD) was formed by parents of ADHD children who were concerned with gathering reliable information on the disorder. It has been a very active lobbying group that has dedicated substantial time and energy to promoting the idea that ADHD is a real disorder. It has even lobbied the government on occasion for certain special compensations. Various forms of the disorder were recognized before CHADD’s founding; however, ADHD still did not gain popular favor until the late 1980s and 1990s (Armstrong, 1997). This was the time period when CHADD became very active in the establishment of the diagnosis (DeGrandpre, 1999).

Thirdly, medicalization happens due to “directed organizational or inter- or intraprofessional activities” (Conrad, 2007, p. 9). Conrad (2007) explains that “professions competed for authority in defining and treating problems” (p. 9). In a profession where one distinguishes oneself by discovery, these individuals may see

disorders and diseases where none exist. Some entrepreneurs are under-stimulated doctors establishing themselves in a cut throat field (Conrad, 1992). This could be done innocently; years of training and working in the medical or psychiatric fields will define how one conceives social reality. Dismissing any devious plot against the diagnosed, doctors actually believe that some social deviancy is a sickness. Goffman describes the behavior of putting sick labels on unpopular behaviors and beliefs. He asserted:

> Although it is easy enough to call psychotic behavior social deviancy, it is even easier to see that there are many types of social deviancy that are not instances of psychotic behavior—even though brave psychiatrists and psychologists have tried to get at the sick roots of everything from crime to political disloyalty. (Goffman, 1967, p. 140)

It is under these conditions that medicalization takes place. Medicalization is a means to which the therapeutic state brings deviant behaviors under its control and the therapeutic state is an enforcement institution in the bureaucracy.

To fully understand the medicalization of the disorder, a basic understanding of the history of the ADHD diagnosis and where it currently stands is needed. There are two basic views of ADHD; one view classifies it as a mental disorder and one view holds it to be a natural state of humanity. Those who believe it is natural are often at odds with the psychiatric treatment; in fact, the treatment with medication is an important factor of any discussion of the disorder. Many have weighed in on this discussion both in academia and popular culture. Chapter 2 discusses these issues as well as the cultural impact the disorder has had on American society, showing the importance of the study of ADHD from a sociological framework.

Chapter 2
An Overview of the ADHD Diagnosis and its Cultural Impact

Minimal Brain Damage, Hyperkinesis, Hyperactive Child Syndrome, Hyperactive Reaction of Childhood, Attention Deficit Disorder, and Adult ADD are all terms used to describe what is now Attention-Deficit/Hyperactivity Disorder. Those who are diagnosed with ADHD are active and inattentive children and adults. These are the ones who cannot sit still; the ones who go at life full throttle and neglect to pay attention in class or at work or sometimes when spoken to. ADHD is a multifaceted disorder that has come to represent much beyond its original hyperactive definition. It is wrong to say ADHD children and adults are simply hyperactive and impulsive.

A plethora of private and public organizations offer expert information on ADHD. Also, individual doctors have become experts on the subject, having served years in the field. Many of these individuals have written medical and theoretical books on the disorder, some having become classic ADHD literature. The debates on the disorder are often a key point in many of these manuscripts. The opinions of these professionals may differ, but many are well respected in their field. Some are strong advocates of the disorder and its treatment with stimulants; others are strong critics. This suggests that while ADHD is a cultural phenomenon, it is still hotly debated. There are many documents that have become classics in the field; however, the *Diagnostic and Statistical Manual of Mental Disorders* has become the go-to document for diagnosis.

During the first half of the 20th century, there was no standard, no official guide to diagnosing mental disorders; as a consequence, several terms were used for the same behaviors. In an attempt to standardize the identification of mental illness, the

American Psychiatric Association published the first edition of the *Diagnostic and Statistical Manual of Mental Disorders* in 1952. Although the first edition was a limited publication, it soon became widely accepted as the key diagnostic manual in treating mental disorders (Connor, 1999). The *DSM* is a growing document. Since its initial publication, it has been revised several times. It was not until the second edition that the *DSM* (1968) recognized hyperactivity in children as a disorder. Today the *DSM* has such widespread acceptance that one would be hard pressed to find a mental health facility that does not use one. This is, in part, because it is easier to avoid insurance lawsuits if diagnosing based on the manual (Gavirina, 2001). Since its original publication, it has become the proverbial bible of mental disorders (Connor, 1999).

The most recent edition of the *Diagnostic and Statistical Manual of Mental Disorders*, the *DSM-IV-TR* (2000), recognizes not only ADHD, but also four unique subtypes. To accomplish this, the *DSM* breaks the criteria into two categories, hyperactive and inattentive, each with a set of qualifications. If seven of these qualifications are met in either category, a diagnosis is given. Those meeting the criteria under the hyperactive category are diagnosed Attention Deficit/Hyperactivity Disorder, Predominantly Hyperactive Type. Those meeting the criteria under the inattentive category are diagnosed Attention Deficit/Hyperactivity Disorder, Predominantly Inattentive Type. Individuals who meet an appropriate number of qualifications to be diagnosed with both are categorized as Attention Deficit/Hyperactivity Disorder, Combined Type. The label Attention Deficit/Hyperactivity Disorder, Not Otherwise Specified is reserved for those who do not meet the criteria for the other three types but the diagnostician feels they warrant an ADHD diagnosis nonetheless. This is to serve as

a catch-all for those who do not fit the criteria for the other categories. Brief mention is given to the possibility of Attention Deficit/Hyperactivity Disorder in remission. This is reserved for those who once qualified for an ADHD diagnosis but no longer do. It is often attributed to aging out.

According to the current *DSM*, 3-7% of school aged children suffer from ADHD. This is a higher percentage than previous editions. The *DSM-IV-TR* (2000) admits that:

> Prevalence of Attention-Deficit/Hyperactivity Disorder as defined in the *DSM-IV* may be somewhat greater than the prevalence of the disorder based on the *DSM-III-R* criteria because of the inclusion of the Predominantly Hyperactive-Impulsive and Predominantly Inattentive Types. (p. 90)

This shows that the eligibility criteria are expanding. The age of onset, according to the *DSM,* should be measured at 7 years and it cautions against labeling and treating children under 4 or 5 because developmental issues are likely to skew any interpretation of ADHD symptoms. The *DSM* (2000) admits “there are no laboratory tests, neurological assessments, or attentional assessments that have been established as a diagnostic in the clinical assessment of Attention-Deficit/Hyperactivity Disorder” (p. 88-89) Also, “there are no specific physical features associated with Attention-Deficit/Hyperactivity Disorder” (p. 89) This firmly establishes ADHD as a behavioral disorder with no undisputable biological evidence.

The most recent version of the manual includes other statistics and points of interest about ADHD. According to the *DSM* (2000):

> On average, individuals with Attention-Deficit/Hyperactivity Disorder obtain less schooling than their peers and have poorer vocational achievement. Also, on

> average, intellectual level, as assessed by individual IQ tests, is several points lower in children with this disorder than compared with peers. (p. 88)

The *DSM* also claims that about half of the clinic-referred children with ADHD have Oppositional Defiant Disorder or Conduct Disorder as well. These disorders are characterized by behavior that is hostile, aggressive, and anti-social. The rate of co-occurrence with other disorders is very high. Other associated disorders include; Disruptive Behavior Disorders, Mood Disorders, Anxiety Disorders, Learning Disorders, and Communication Disorders. A high incidence of ADHD occurs among children with Tourette's Disorder ; and there "may be a history of child abuse or neglect, multiple foster placements, neurotoxin exposure…, infections…, drug exposure in utero, or Mental Retardation" (p. 88).

The *DSM* has been met with controversy on many occasions. Much of this has to do with reliability and validity of interpretations. Psychologist Michael G. Conner (1999) described one of these criticisms:

> The *DSM* does have merit. When correctly used, the *DSM* is very highly reliable. But this just means that a group of professionals using the *DSM* will often reach a similar diagnosis. The concerns expressed by scientists and practitioners are that the conclusions, although reliable, are often wrong and may do more harm than good. (p. 3)

There are even more insidious accusations that illustrate general flaws in the mental health system. Some have pointed out the political nature of the document, saying certain mental illnesses are voted into existence when it fits the trends of society to do so, and conversely voted out of existence when those trends change. Homosexuality is

one of the most cited examples of this practice (Szasz, 2007). While homosexuality was once viewed as a mental disorder, to call it that now would be politically incorrect. Conversely, to not recognize ADHD as a mental disorder is politically incorrect because those who champion it are cohesive enough to constitute a political power. This exemplifies the subjectivity of psychiatric labeling.

Another concern about the validity of the *DSM* has to do with funding. In a PBS Frontline interview, Dr. Merrill Goozner, the director of the Integrity in Science Project at the Center for Science in Public Interest, offered examples of the *DSM's* bias:

> If you looked at, for instance, the obsessive compulsive disorder latest guidelines [in the *DSM-IV*, the *Diagnostic and Statistical Manual of Mental Disorders*] for how to treat this, it was something like 10 out of 11 physicians on the panel had conflicts of interest in that they had taken money from antidepressant manufacturers or from drug manufacturers who had made antidepressants that had indications for treating obsessive compulsive disorder. (Gaviria, 2008)

This is an assertion echoed about the mental health field as a whole. Psychiatrists and doctors accepting money from drug manufacturers has long been a sticking point for critics.

While some are in disagreement, this has not impeded the advance of the diagnosis. The popularity of mental disorders, and particularly ADHD, is growing. The annual rate of increase for the ADHD diagnosis in the United States was an average of 3% between 1997 and 2006 (U.S. Dept of Health and Human Services, 2008). As of 2006, 4.5 million children in the United States ages 5-17 have been diagnosed with the

disorder (U.S. Dept of Health and Human Services, 2007) and as of 2003, 2.5 million children 4-17 years old were receiving medical treatment for the disorder.

This growing diagnosis, which has recently been expanded to include adults, was first thought to be only a childhood disorder. Though the sick label is a modern convention, the behavioral patterns have been around much longer, and are particularly noticeable in children. While the psychiatric community claims that ADHD is a disorder, there are some who approach the disorder from an alternate angle. Chief among these is Thom Hartman.

Hartman, a former psychotherapist, has written extensively on the subject of ADHD. He has been involved with establishing schools and daycare centers for ADHD children and pioneered the idea that it is a natural phenomenon and possibly a biological adaptation from earlier times. He postulated that those who are now diagnosed would have been hunters in ancient nomadic and tribal societies and traits associated with ADHD would have been useful before pastoral societies began to spread and undermine hunting and gathering societies (Hartman, 2003). In *Attention Deficit Disorder: A Different Perspective*, he attempted to reconceptualize the behavioral patterns by stating the disorder view of the behaviors and posing the alternate interpretation of the hunter child.

The disorder view holds that those afflicted have a short attention span. However, these same individuals can become very focused for extended periods of time. The hunter child, in a different framework, constantly monitors its environment for new stimuli. The disorder view describes poor planning skills, impulsivity, and disorganization while hunter children have the ability to make snap decisions in a

positive way, being “able to throw themselves into the chase on a moment's notice” (Hartman, 1993, p. 18). The disorder view describes the inability to follow directions; the hunter child is conceived as an independent agent. The disorder view describes mind wandering and daydreaming; the hunter child is someone who is bored with mundane tasks and is stimulated by excitement and new ideas. The disorder view describes someone who acts dangerously without considering the consequences; the hunter child is willing to accomplish tasks by taking risks.

Thought patterns among those diagnosed are different as well. The disorder view describes a lack of time awareness among these individuals. They believe those with the disorder cannot accurately judge how long something will take. Hartman promoted a fluid thought pattern and the flexibility to change strategy at a moment's notice. The disorder view describes a person who cannot easily make connections between words and concepts, believing a learning disability might be present; whereas, Hartman described a person with visual and concrete thinking with sight of a goal even if it is not converted into language. And finally, the disorder view describes a lack of social graces Hartman claimed that if there is work to be done such people do not beat around the bush with niceties (pp. 14-18).

Hartman represents an academic community who question the tenets of the therapeutic state. The importance of his view goes beyond raising questions about the pathologization of the behaviors; it shows there are qualified academics with extensive experience and knowledge about the disorder who disagree with its label. This community includes psychologists, psychiatrists, various medical specialists,

sociologists, anthropologists, biologists and a host of other academics who choose to challenge the current view.

ADHD is not only debated in the academic community, it has spilled over into the larger culture. Lay people are also knee deep in the discussion. Proof of this is reflected in popular television and literature. Not only has ADHD been discussed in the news, it has appeared in amusing television skits, episodes, and anecdotes as well.

Cultural Impact of ADHD

ADHD has permeated pop culture, becoming part of the language and crossing over from the strictly medical to an everyday word for some people. There are jokes about it, television episodes, skits, radio broadcasts, news specials, songs and comic strips. Few people today have never heard of the disorder. In literature and popular culture, the ADHD character has been around for some time as well. Hallowell and Ratey (1994) discussed how forms of the ADHD child have been popular characters in the 20th century, citing characters such as Calvin from *Calvin and Hobbes* and Dennis from *Dennis the Menace*. But the prevalence of such characters in society runs deeper than that. The 1908 character Mr. Toad, from Kenneth Grahame's *The Wind in the Willows,* is another example. Mr. Toad was the self-centered, conceited, impulsive, flighty, wealthy owner of Toad Hall who was always being caught up in some new fancy or obsession without thinking ahead. He acted regularly on impulse and whim without regard for consequences.

A few older examples that show the prevalence of this behavior in the past would include Tom Sawyer from Mark Twain's *The Adventures of Tom Sawyer* and other

books. Several characters in Lewis Carroll's *Alice's Adventures in Wonderland* fit the profile as well, including The White Rabbit and The Mad Hatter. Hallowell and Ratey (1994) posed the question, "how is it that this [ADHD character] has existed throughout the centuries?" (p. 271). This implies an acceptance that the behaviors are not new, they have only been medicalized.

In addition to literary examples of the ADHD-like character and the aforementioned *Saturday Night Live* skit, there have been a host of other television shows that have dealt with the subject. ADHD is often the object of amusement, mostly taking view that the disorder is not real or treatment is handled badly. Steve Carell presented a mock report on the disorder on *The Daily Show with Jon Stewart*. In this presentation Carell (2000) introduced the disorder saying:

> Today I want to talk about an illness that's sweeping the nation, Attention-Deficit and hyperactivity disorder or what doctors call ADHD. Formerly ADD and before that spazzing out.

According to Carell, symptoms indicating ADHD are "talks too much," "not seeming to listen to parents or teachers," "fidgeting and restlessness," "always asks 'Why?'," "points out fat people," "not interested in sex," "wants his 'mommy'," and "outgrows clothing." The host of the show, Jon Stewart, responded, "it sounds like you just described every child in the world" and Carell agreed, "exactly Jon, now the question is how do we make them well again?"

Carell then swallowed fake Ritalin in an amusing manner, listing side effects as he ingested. He claimed that every medicine has side effects and told people not to worry. At the suggestion that Ritalin might be over prescribed Carell asked, "can you

over prescribe happiness?" He furthered, "lithium makes kids happy, Ritalin makes parents happy" and "a few pills every four hours or so, no more 'I'm bored Dad' or 'read me another story' or 'when's Mommy coming back?' 'Stop drinking!'" (Comedy Central, 2000). This humor reflects the beliefs of those who think ADHD is linked to bad parenting and bad schools.

The Simpsons (Scully, et al., 1999*)*, a popular cartoon sitcom, directly tackled the topic of ADHD and medication. In 1999, the FOX network aired the episode "Brother's Little Helper." It was a comical exploration of the treatment of ADHD children. Bart Simpson, the rambunctious and often troublesome son of Homer and Marge, was diagnosed with Attention Deficit Disorder by the principal of his school. He was prescribed the fictitious drug Focusyn. When Bart became unstable to the point of violence and psychosis, his mother took him off of Focusyn. The episode ended with the jingle, "When I can't stop my fiddlin' I just takes me Ritalin" (Scully, et al., 1999).

As these media presentations illustrate, one of the cultural themes regarding ADHD often revolve around the medication used in its treatment. There are many medications used in treatment. Without an elementary understanding of the history and properties of the most popular of these, the weight of events concerning labeling and treating America's youth and adults cannot be fully grasped. The term Minimal Brain Damage was used to describe active children beforehand in a limited capacity. However, ADHD has its roots in the accidental discovery of the current most common type of treatment: stimulants.

Chapter 3
Introduction to Stimulant Medication

One of the criticisms of ADHD is that the treatment was discovered before the diagnosis itself, leading to speculation that the disorder was created to describe those most effected by stimulants. Dr. Charles Bradley's discovery of the effects of stimulants on hyperactive children occurred at a time when “psychological response of children to drug therapy of any sort [appeared] to have been a generally neglected subject” (Bradley, 1937, p. 577). Bradley was a physician at the Emma Pendleton Bradley Home in Rhode Island, a residential treatment facility for children who were diagnosed with neurological or behavioral disorders (American Psychiatric Association, 1998). He was the first to discover the calming effects of stimulants on hyperactive children (Hallowell & Ratey, 1994). Bradley’s sample consisted of 21 boys and 9 girls who were 5-14 years old. These children were hospitalized for a number of reasons. Bradley (1937) claimed:

> The children’s behavior disorders were severe enough to have warranted hospitalization, but varied considerably. They ranged from specific educational disabilities, with secondarily disturbed social behavior, to the retiring schizoid child on the one hand and the aggressive egocentric epileptic child on the other. (p. 578)

He administered Benzedrine to these children and, observing their behavioral effects, was very pleased with the results.

Bradley (1937) reported that the most “striking change in behavior during the next week of Benzedrine therapy occurred in school activities of many of these patients,” further asserting, “fourteen children responded in a spectacular fashion” (p.

578). Fifteen children improved in school and two children showed no change at all. Bradley reported, “Fifteen of 30 children responded to Benzedrine by becoming distinctly subdued in their emotional responses”. He contended that several children who had “expressed their irritability in group activities by noisy, aggressive, domineering behavior” became “more placid and easy-going.” Bradley also admitted there were negative side effects; seven of the children “gave evidence of a sense of well-being, even to the point of mild euphoria,” three were “observed to cry much more easily,” and two “were noted to wear worried expressions quite foreign to their usual appearance.” Sleep was disturbed for 6 of these children, a moderate rise in blood pressure was noted in half of them, and “loss of appetite and nausea at the time of the morning meal” was reported. There were also 8 cases of gastrointestinal distress and one child was afraid to go outside and “fearful of death” (pp. 579-581).

Some children became more talkative and active but Bradley used words like “subdued” to describe the effect on many of them. He posited, “20 mg. was generally a satisfactory amount to produce changes in behavior without undesirable psychological consequences” (p. 581). He concluded:

> To see a single daily dose of Benzedrine produce a greater improvement in school performance than the combined efforts of a capable staff working in a most favorable setting, would have been all but demoralizing to the teachers, had not the improvement been so gratifying from the practical viewpoint. (Bradley, 1937, p. 582)

He noted that the subjects who improved in school “were of good intelligence” (p. 582). In 1944, seven years after Bradley discovered the positive effects of simple

amphetamines on hyperactive children, Ritalin was synthesized (Baughman & Hovey, 2006). Ritalin, a gentler stimulant than used in the Bradley study, is simply a brand name for a commonly prescribed stimulant for ADHD, methylphenidate (Reiff & Tippins, 2004). The United States Food and Drug Administration approved it for use in 1955 (Associated Press, 2006). Later, in the 1970s, Ritalin was one of the first drugs to be classified as Schedule II (Breggin, 2002), a classification reserved for the most dangerous and controlled substances legally available. Other Schedule II drugs include Cocaine, Methamphetamine, Morphine, Opium, and OxyContin (DEA).

In 1971, the FDA and the National Academy of Sciences issued a public warning about the abuses of the drug, and by the late 1970s Sweden issued a ban on it based on addictive properties and trafficking (DeGrandpre, 1999). The United States Government has continued to sanction the use of Ritalin even though it is often compared to cocaine. Indeed, in 2001 an article in the Journal of the American Medical Association reported that Ritalin was more powerful than cocaine in comparable doses (Baughman & Hovey, 2006). There is danger in stimulant use but millions of users report improvement in coping with ADHD. While other aspects of the drug are debated, the immediate social benefits are not often among the topics. It is undeniable that for some people, stimulant use does increase performance in the short term; a plethora of scientific articles have concluded this.

Today there are several stimulants on the market used to treat ADHD. Among the most widely prescribed are Ritalin (methylphenidate) and Adderall (*d*- and *l*-amphetamine combination). Ritalin once dominated the market as the treatment for ADHD, but Adderall is an alternative treatment. After a multi-million dollar advertising

campaign (Baughman & Hovey, 2006), Adderall has passed Ritalin in sales (Gaviria, 2001). Adderall has been accused of being a repackaging of the banned dietary drug Obetrol (Baughman & Hovey, 2006); this is only a rumor. It began being marketed as an "improved form of stimulant medication" in the late 1990s and early 2000s but is only a chemical mixture of four "old-fashioned" amphetamines that resemble Dexedrine (Breggin, 2001, p. 29). It is, in many respects, like Ritalin. It can also be obtained in traditional and long-lasting formulas (Shire, 2007). Some claim Adderall is safer than Ritalin but it is not. It may even be more harmful to the brain (Breggin, 2002). The popularity of Adderall and the ADHD diagnosis is exemplified by the fact that Adderall sales brought in $19 million in 1997. The figure rose to $200 million by 2000. By 2002 Adderall sales represented 40% of Shire's income, bringing in $400 million (Baughman & Hovey, 2006).

Stimulants bear that title because they increase the arousal and activity of the brain. While chemically similar, different stimulants may affect individuals differently. If one stimulant does not work for someone, it is not uncommon for the physician to switch to another. Sometimes more than one stimulant at a time is used (Hallowell & Ratey, 1994). According to Yale University psychiatrist Thomas Brown (2005), medications offer relief from ADHD; they are not a cure, although for some people, stimulants may be all they need to treat their ADHD.

When people are on methylphenidate, they are "turned on" to whatever task needs to be performed. Brain scans show increased metabolic activity in the brain that corresponds with self reports by patients of increased well-being (Brown, 2005).

Stimulants work by blocking dopamine transporters in the brain. According to Brown (2005):

> Blocking slows the normal reuptake process so that a larger amount of dopamine is held a bit longer at countless synaptic junctions, thereby improving communication in those neural networks operating on dopamine. (p. 252)

This process improves neural signaling for whatever specific task needs to be performed, which effectively drowns out “noise” and competing signals. It allows some parts of the brain to signal more effectively with others, in effect streamlining the efficiency of communication and eliminating distraction. “In other words,” Brown says, “increased dopamine in the synapse can act almost as a kind of ‘Viagra’ to encourage the brain’s response to the task” (p. 252).

Hallowell and Ratey (1994), both medical doctors diagnosed with ADHD, explained that each dose of normal methylphenidate, no matter the size of the dose, lasts about four hours depending on the individual taking the medication. There is also a slow release version available that doubles the time it stays in effect. This option is also now available in the more popular Adderall. With either type it is common for an individual to take multiple doses a day, and almost required with the regular form. The dosage is typically about 10 mg three times daily; the type of methylphenidate used affects the dosage times. Generally the patient is started out on 5 mg and works up to 10mg or higher as needed. The patient is monitored and the dosage is manipulated based on side effects. The dosage and schedule for methylphenidate use varies from person to person. Hallowell and Ratey (1994) explain:

> Often it takes weeks, even months, to find the right dosage and the right dosing schedule. Sometimes a low dose will work, but only if it is given at the right time. Sometimes a small increase in dose will make a great difference. Sometimes the addition of another medication will allow the first medication to work better, as combining a stimulant with an antidepressant or combining a beta-blocker with a stimulant. This can be a tedious process, like trying on many pairs of shoes until you find the right fit. (pp. 239-240)

While many doctors have no problem prescribing a drug so subjectively, there is considerable controversy. Barkley (2000) partially attributes this controversy as the consequence of a fringe religious group's attack on Ritalin in the 1980s and 1990s. Most likely he was referring to the continued attack on psychiatry by the Church of Scientology. Many who speak out against ADHD have subsequently been accused of being Scientologists, sometimes to the point of having to repeatedly defend their positions apart from the Church of Scientology. It has become an easy attack from ADHD supporters. Barkley believes the media has also been an instrument of confusion for the public, as well as some physicians. He claims:

> Unfounded fear of these drugs is unfortunately perpetuated by some physicians' requirement that parents sign a consent form indicating they have been informed about the medicines and their side effects. (Barkley, 2000, p. 271)

He insists these medicines are safe and encourages parents considering stimulant medications for their children to "gather as much background information as you can" (p. 269), further saying:

> The use of these medications for children with ADHD continues to be controversial in the public's mind, although there is absolutely no controversy among the scientific community as to the safety and effectiveness of these medications. (p. 270)

This claim may be true among medical and psychiatric organizations like the National Institutes of Health and the American Psychiatric Association, where casting votes makes decisions and diseases; that is not the case with all medical practitioners.

As in the lay community, there is a high degree of controversy within the scientific community. Many dissenters are psychiatrists and medical doctors who have spent decades practicing medicine and doing independent research. Among these is Peter Breggin, author of *The Ritalin Fact Book*. This work claimed to expose facts about Ritalin and stimulants that were not widely known to the general public, and even among many academic circles. Nicknamed the conscience of psychiatry, Breggin drew upon his professional experience as a psychiatrist since 1968 to educate the public on the negative side effects of Ritalin as well as other amphetamine and amphetamine-like drugs. Opposing views like Barkley's and Breggin's typify the discussion of hyperactivity since the 1930s, and many of these discussions revolve around the use of stimulant medications. Despite what committees and experts say, there is a rather heated argument.

As in most cases, the people on the extreme edges of the continuum are the ones with the loudest voice. Lost in this clamor are those cautious takers of the middle ground. Lawrence Diller, a practicing behavioral pediatrician and assistant clinical professor at the University of California, was interviewed by Jim Lehrer on *NewsHour*

for PBS. He was asked whether he thought Ritalin is “manna from Heaven” or poison. Diller responded:

> I think that for the individual child, once you've explored issues of parenting and getting the school to work as best with that child as possible, and making sure the child doesn't have any learning problems, that if that child is still struggling, utilizing Ritalin to allow that child to cope more effectively I think is a legitimate avenue. That's my role as a doctor. But my role as a citizen is to ask the question why do we use 85 percent of the world's Ritalin? Why have Ritalin use rates gone up 700 percent in our country in the last nine years? (Lehrer, p. 2)

Some say that the drugs are the problem, others say abuses of the drugs, and still others indicate flaws inherent in the medical and psychiatric communities. Either way, there has to be a reason why the United States consumes five times more methylphenidate than any other country in the world (Gaviria, 2001). A closer look at the history of the disorder will shed some light on the issues. The early years of the diagnosis from 1902 through the 1960s laid the foundation for the conceptualization of what we now recognize as a disorder. The amount of research on the subject increased exponentially during the first half of the 20th Century. Economic and political factors influenced the development of the diagnosis as well as the increased interest by lay people. Chapters 4 through 8 discuss, in chronological order, the rise of the disorder. They demonstrate the process whereby ADHD was birthed and nurtured within the therapeutic state. They also exemplify the process of medicalization as happened with the disorder.

Chapter 4
A Social History of ADHD: 1902 Through 1969

Though the first reference to behaviors now associated with ADHD was made in 1798 by Alexander Crichton (Palmer & Finger, 2001), the first reference of note to ADHD-like behaviors was made by Dr. George Fredrick Still in 1902 during an address to the Royal College of Physicians in London (Zimmerman, 1999). Still, a pediatrician, described a predominantly male group “who were defiant, excessively emotional, passionate, lawless, spiteful, and had little inhibitory volition”. All had displayed these symptoms before they were 8 years old (Hallowell & Ratey, 1994, p. 271). Still referred to his male subjects as “Fidgety Phils” (Zimmerman, 1999).

After careful inspection of the children’s families, Still reported, while they were raised in good homes, the children had a history of other disturbances in the family such as depression, alcoholism, and conduct problems. On the basis of this information, he concluded that the children’s hyperactive and deviant nature had to be based on biology. Still diagnosed the children with Minimal Brain Damage. He made the assumption that since brain damage can cause behavioral abnormalities, and these children were raised in good homes, their brains must be damaged in some way whether by an accident or by birth (Baughman & Hovey, 2006). His findings were later published in *Lancet*, the esteemed British medical journal (Zimmerman, 1999).

It was not seen as a pressing issue and thirty years passed before another significant publication was released on hyperactivity. Since Still’s publication in 1904, there was an apparent increase in either childhood hyperactivity, or the observance thereof. This prompted Kahn and Cohen to publish a piece in the *New England Journal*

of Medicine called “Organic Driveness” in 1934. They were concerned with discovering a biological basis for hyperactivity. Picking up where Still left off, they proposed that the recent spike in hyperactive children was due to the encephalitis outbreak in 1917-1918. This outbreak had been known to cause other strange neurological conditions such as insomnia, poor impulse control, and impaired attention. While it is no longer believed that ADHD is caused by encephalitis, Kahn and Cohen were the first to link these specific symptoms to Minimal Brain Damage (Hallowell & Ratey, 1994). It was only three years after the publication of this article that Charles Bradley accidentally discovered the effects of stimulants on hyperactive children in his hospital. In 1950, Bradley performed another study that, like his initial research, indicated stimulants effectiveness in treating hyperactivity (Baughman & Hovey, 2006). Since there had previously been next to no medical discussion of the topic, this is clearly the point that ADHD had its initiation into popular medical literature.

Stimulant medication was seen as a useful tool for many ailments and a few years later, in 1944, Ritalin was synthesized in what Diller (1998) calls an unsuccessful attempt to create a stimulant without addictive properties and could be increasingly tolerated. Soon after the Drug Enforcement Administration approved Ritalin as well as Dexedrine, the amphetamine used in Bradley’s initial research, for use with the general public (Breggin, 2002). The 1957 Physician’s Desk Reference stated Ritalin was to be used for:

> Chronic fatigue and lethargic and depressed states, including those associated with tranquilizing agents and other drugs; disturbed senile behavior;

> psychoneuroses and psychoses associated with depression; and in narcolepsy. (Morton & Stockton, 2000, p. 159)

While stimulants arouse the depressive and lethargic patients, they stimulate hyperactive children in a different way. Because of its reverse effects, Ritalin was quickly prescribed as the drug of choice for treating Minimal Brain Damage.

The 1950s was a season for rapid growth and change in the field of psychiatry. In 1952 the first edition of the *Diagnostic and Statistical Manual for Mental Disorders* was published by the American Psychiatric Association. While significant, the document did not mention ADHD (*DSM-I*, 1952). Five years later a Providence psychiatrist, Maurice Laufer, and his colleagues "announced the discovery of a new syndrome: hyperkinetic impulse disorder" (Schrag & Divoky, 1975, p. 42). In an article published in *Psychosomatic Medicine* in 1957, they tried to match his new syndrome with a dysfunction in the thalamus, a structure in the mid-brain.

Their work, which included many of the symptoms now associated with ADHD, was a major step towards centering on the condition. A noteworthy inclusion was the belief that hyperkinetic impulse disorder was a rare syndrome, occurring in 1 in every 2,000 individuals (Laufer, et al., 1957). This was far from the virtual epidemic ADHD is now. At this point, there were varying descriptions of what appeared to be the same animal; one that may or may not be a new phenomenon but certainly one increasing in frequency. Because these behaviors were documented in the 18th Century, this was an old set of behaviors gaining increased attention from the medical community. Moreover, it coincided with the beginning of the therapeutic state.

Because the nature of medicine, society, and deviance was changing, the medicalization of hyperactivity was just part of the increased medical attention given to well known phenomena. On June 7, 1955, The Committee on Public Health of the New York Academy of Medicine issued a *Report on Drug Addiction*. In this report they said there needed to be "a change in attitude toward the addict who is to be looked on as a 'sick person, not a criminal'" (Drug Addiction, 1955, p. 67). Instead of punishment, mental health treatment and psychopharmacology became more commonplace. By the latter half of the 1950s, the foundations of psychiatric diagnosis were becoming well established; mental hygiene was becoming a serious issue. A 1957 edition of *Science* contained an article called "Drugs for the Soul: The Rise of Psychopharmacology" that dealt with the recent rise of prescriptions for mental disorders. The psychiatric establishment was growing in power and prestige but prior to the 1960s there was still limited mention of hyperactivity as a disorder (DeGrandpre, 1999). It was, however, obviously seen as a growing problem.

The 1960s brought an increased discussion of Minimal Brain Damage, also popularly known at the time as Hyperactive Child Syndrome. Early that decade the syndrome was conceived as biological rather than a consequence of brain damage (Hallowell & Ratey, 1994). The disorder became popular enough that in 1961 the FDA approved Ritalin for use specifically with children (Baughman & Hovey, 2006). This opened the proverbial Pandora's Box; a whole new segment of the population could now consume Ciba's product. For the next 10 years Ciba marketed Ritalin for a number of uses in various journals. By this time, there were several studies showing the immediate positive benefits of stimulant medications for the treatment of child

hyperactivity. Being able to market immediate relief for parents and teachers with hard-to-control children was profitable for the drug manufacturer. The era was rife with change and child learning disabilities became a cause for concern for many parents. In January 1964, the Association for Children with Learning Disabilities was founded (Crawford). An example of changing attitudes of the time can be seen in that a few years later a survey of the entire school system of Des Moines revealed that teachers believed 53% of the boys and 30% of the girls displayed problems with overactivity in the classroom (Schrag & Divoky, 1975). With growing focus on childhood disorders and learning disabilities, professionals and laypersons began to take notice of hyperactive children.

Mid-decade, efforts were made to medically congeal the diagnosis. Schrag and Divoky (1975) explain:

> In what was to become a key document establishing the new disease and converting unacceptable behavior into a medical ailment, a team of national authorities headed by Sam D. Clements of the University of Arkansas Medical Center published a monograph in 1966 which purported to eliminate "professional disjunction and discord." (p. 43)

Clements' group of experts was supported by the National Institute of Neurological Diseases and Blindness (part of the Public Health Service) as well as the Easter Seal Research Foundation. They spent two years researching 38 separate terms representing Minimal Brain Dysfunction before publishing their findings (Clements, 1966). The study was the result of professional dissatisfaction with the 1952 *DSM's* lack of usefulness in treating children. The professional community was not the only one

interested in such a study because “stirrings of discontent have been intensified by parents of such children” (p. 1). The advice offered in *Minimal Brain Dysfunction in Children* was that MBD was of so much concern that society could no longer “afford the luxury of waiting until causes can be unquestionably established by techniques yet to be developed” (Schrag & Divoky, 1975, p. 44). In effect, the researchers believed the issue so serious they felt justified in defining and treating this disorder in the absence of a concrete biological connection. They concluded that those who suffered from Minimal Brain Dysfunction met a vague set of qualifications. The children were said to be:

> 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. These deviations may manifest themselves by various combinations of impairment in perception, conceptualization, language, memory, and control of attention, impulse or motor function…These aberrations may arise from genetic variations, biochemical irregularities, prenatal brain insults or other illnesses or injuries sustained during the years which are critical for the development and maturation of the central nervous system, or from unknown causes. (Schrag & Divoky, pp. 9-10)

Further clarifying the disorder, Clements (1966) listed 99 more indicators along with classic hyperactive and disobedient symptoms. These included: “spotty or patchy intellectual deficits,” “achievement low in some areas; high in others,” “distorted concept of body image,” “few, if any, apparent gross abnormalities,” “general awkwardness,” “slowness in finishing work,” “easy fatigability,” “thumb-sucking, nail-biting, head-

banging, and teeth-grinding," "slow toilet train," "sleep abnormally light or deep," "socially bold and aggressive," "possibly antisocial" and "physically immature, or physical development normal or advanced for age" (pp. 11-13).

The importance of these symptoms can be seen in that the diagnosis has remained guesswork. Though the Clements document could be applied to virtually any child, it provided a legitimization for a disorder that many parents and teachers were concerned about; a moral consensus reminiscent of the therapeutic state. Child psychiatry was thriving and concern for children's learning disabilities eventually resulted in the creation of the *Journal of Learning Disabilities* in 1967 (Schrag & Divoky, 1975).

The diagnosis finally received sanction from The American Psychiatric Association with the release of the second edition of the Diagnostic and Statistic Manual of Mental Disorders in 1968. The *DSM-II* added 51 new disorders to the catalogue including a brief passage describing the Hyperkinetic Reaction of Childhood (or adolescents). The *DSM-II* (1968) stated the disorder was:

> Characterized by overactivity, restlessness, distractability, and short attention span, especially in young children; the behavior usually diminishes in adolescence. If this behavior is caused by organic brain damage, it should be diagnosed under the appropriate non-psychotic *organic brain syndrome.* (p. 50)

Although vague, the entry constituted an official diagnosis. Changing the term from Minimal Brain Damage to Hyperkinetic Reaction of Childhood served to lessen the stigma of the diagnosis. This new label did not, however, stop the term Minimal Brain

Damage from being used. As late as 1987 Minimal Brain Dysfunction (MBD) was being used in discussions of learning-disabled children (Coles, 1987).

According to Conrad (2005), medicalization takes place with the expansion of the "power and authority of the medical profession" (p. 4). As late as World War II, doctors were still widely regarded as butchers because medical science was still very much guesswork. However, with the modern advances in science the medical community took many conditions under its sphere of influence; hyperactivity in children was one of these. This was spurred on by medical professionals trying to distinguish themselves in a cutthroat field. When professionals compete "for authority in defining and treating problems" medicalization takes place (Conrad, 2007, p. 9). Doctors, with the latest technology, were looking for new disorders, diseases, and illnesses. Numerous mental disorders and learning disabilities were voted into existence. From its inception through the 1960s, ADHD had been largely promoted by individuals in the medical and psychological communities. In the 1970s the medicalization of ADHD will change. It will be a time of radical transformation in the conceptualization of the diagnosis. With the advances in the 1960s to spur it on, the 1970s paved the way for the solid establishment of the disorder.

Chapter 5
A Social History of ADHD: 1970 Through 1979

While it was originally suggested that Minimal Brain Damage could affect 1 in 2000 children, an estimated 150,000 children were being medicated with Ritalin in the early 1970s (Diller, 1998). The concern over hyperactivity in children was somewhat common; the medical and psychiatric communities were gaining enormous influence. The rise of ADHD corresponded with the rise of numerous learning disabilities. During the early 1970s, anomie regarding childhood mental illness was widespread. There was little known about them and learning disabilities were becoming commonplace in schools where they had not been before. Schrag and Divoky (1975) reported:

> As early as 1971, William M. Cruickshank of the University of Michigan, a national authority in special education, had complained that the [learning disability] label was being applied to children who stuttered, teased the family cat, had night terrors, couldn't swim, masturbated, didn't like to go with girls, bit their nails, had poor eating habits, didn't keep their rooms neat, wouldn't take baths, or didn't brush their teeth. (p. 47)

Adding fuel to the fire, the U. S. Department of Health, Education, and Welfare released a report estimating that 3% of school aged children had hyperkinesis. As a consequence of this pronouncement, public concern grew even more. The Government began to spend enormous sums of money on social services. Between 1966 and 1972 money spent on the handicapped and mentally disabled in public schools tripled (Schrag & Divoky, 1975).

There were many inquiries into hyperactivity during the 1970s. Understandably, many of these were in support of the increasingly popular childhood disorder. A fringe theory, still popular among some, was introduced that attempted to conceptualize hyperactivity, along with other mental disorders, as a nutritional deficiency (Reiff & Tippins, 2004). While unproven, many nutritionists and those with organic sensibilities still cite this as a possible cause for hyperactivity. Several studies pointing to various causes arose with varying success; however, a very popular explanation came from the 1970 Kornetsky study. Kornetsky proposed a Catecholamine Hypothesis of Hyperactivity. Hallowell and Ratey (1994) explained:

> Catecholamines are a class of compounds that includes the neurotransmitters norepinephrine and dopamine. Since the stimulants affect norepinephrine and dopamine transmitter systems by increasing the amount of these neurotransmitters, Kornetsky concluded that symptoms of ADD possibly was caused by an underproduction or underutilization of these transmitters. (p. 274)

In other words, the hyperactive brain does not produce enough dopamine transmitters and stimulant medications increase production of these. This is a widely cited study in support of the diagnosis; however, as impressive as this theory sounds, science has yet to provide a link between catecholamines and ADHD (Hallowell & Ratey, 1994).

The Kornetsky study was one of many in support of stimulants for use in treating hyperactivity. Also noteworthy was a 1978 study of identical twins. The researchers, Cunningham and Barkley, found that children on stimulants spent more time playing alone and less time initiating social contact with other children. Though human beings are social in nature, this was seen by some as a positive result (Breggin, 2001). There

was no shortness of studies in support of the use of stimulants for immediate control of children; however, dissenting voices were present.

In 1976, Herbert Rie, professor of Pediatrics and Psychology at Ohio State University, and his colleagues reported that on the basis of a two year comprehensive study of Ritalin that it actually interferes with learning. This contradicted the widely held belief that Ritalin improves school performance. In a double blind study, Rie and colleagues found that even when the child had reportedly improved behaviorally in a school environment there was no actual improvement in academic ability. According to the researchers, teachers often reported better scholastic achievement while in reality there was none. This is a natural result of subjective learning techniques. The study concluded that giving medications for learning disabilities was not effective (Breggin, 2001). In a 1975 mid-study interview with Schrag and Divoky, Rie discussed what would have been the current findings of the ongoing study. Schrag and Divoky (1975) reported:

> At first the teacher ratings indicate an improvement, Rie told us, because “the kids slow down dramatically and are out of people's hair, but when objective testing is done, they're not performing one bit better. In fact, what we're observing on this round of measurement is that the youngsters on drugs are far less responsive and enthusiastic, and are far more apathetic, humorless, and zombie-like. It's there and you can see it and measure it, and we don't know why it hasn't been picked up before.” (p. 89)

Furthering the argument against stimulant medications, in 1977, a Norwegian team found that Ritalin affected growth hormones, effectively stunting the growth of children

who take them (Breggin, 2001). This is still a discussion topic regarding the use of stimulants on children.

While stimulants were a popular topic, there were studies that did not employ their use. In 1971, Coleman publicized the results of a study of hyperactive children in the *Journal of Pediatrics* that emphasized the social nature of the diagnosis. In "Serotonin Concentrations in Whole Blood of Hyperactive Children" Coleman studied serotonin levels in the brains of over 25 hyperactive kids. Using a control group of similar kids without the hyperactivity, he found that the serotonin levels in the hyperactive children were much lower than those in the normal children; so low that the lowest serotonin level in the non-hyperactive children was still higher than the highest serotonin level in the hyperactive children. DeGrandpre (1999), remarking on this study, claimed if it were to happen now the researchers would see this as proof that ADHD "is the result of some inborn biological disorder" (p. 145). However, this was not the conclusion drawn. Coleman took two of the most hyperactive children, and effectively "cured" them of their hyperactivity, if only for a short time.

Coleman placed the two most hyperactive children in completely different environments, in this case, the research hospital. When the children were taken out of their homes, their serotonin levels slowly came up and the hyperactivity went down. They were subsequently returned. After they spent only a month back in their homes, their serotonin levels had, yet again, dropped and their hyperactivity increased. While this study does not prove or deny the claim that ADHD is a real disorder, it did illustrate a marked difference in hyperactivity levels in different environmental settings with corresponding chemical brain changes. It indicated an environmental orientation for

hyperactivity. The problem was shown to not be an inherent brain dysfunction or disorder. This is one of the most important studies indicating social orientation to this phenomenon (DeGrandpre, 1999).

While the Coleman study raised questions about the use of stimulants, a 1973 article that appeared in the *New England Journal of Medicine* raised questions about the hyperactive label itself. Based on an extensive review of the literature surrounding the use of stimulant medications on those diagnosed with Minimal Brain Damage, the study concluded that the reasoning behind the establishment and continuation of the diagnosis of Minimal Brain Damage was circular. Many of these studies had assumed that the symptoms of the disorder were caused by brain damage, thus leading to a diagnosis of brain damage based solely on the presence of the symptoms (Schrag & Divoky, 1975, Breggin, 2001). In effect, researchers had claimed these children had brain damage because they were hyperactive, and that they were hyperactive because they had brain damage.

During this period Ciba, the makers of Ritalin, was very active. They manipulated public confusion with gusto, marketing Ritalin for Minimal Brain Dysfunction as well as depression, alcoholism, schizophrenia, tired mother's syndrome, and an energy boost for the elderly. Schrag and Divoky (1975) claimed:

> Through the late sixties and early seventies, the CIBA literature was backed by a direct sales campaign in which company representatives were urged, in the words of one CIBA executive, to become 'more effective pushers.' The objectives were teacher training institutes, juvenile probation officers, PTA meetings and whatever other community groups might be hospitable. 'Your ingenuity in the

promotion of Ritalin,' the executive said in his 1971 territorial sales report, 'is becoming more apparent.' (p. 91)

This advertisement occurred while the FDA and the National Academy of Sciences "warned strenuously of the risks of abuse" indicating the toxicity and addictive nature of the substance. This warning was issued, in part, as a response to Sweden's banning of Ritalin in the late 1960s (DeGrandpre, 1999, p. 153). In an attempt to control the flow of such dangerous substances, early in the decade The Controlled Substances Act illegalized and classified a number of drugs by schedule (DEA). A Schedule II classification was assigned to those drugs considered the most dangerous. Ritalin, along with other amphetamines, was among the first of these drugs to be listed as Schedule II.

While this restricted the sale of the drug, that is as far as it went. Soon after, the U.S. Government instructed Ciba to stop marketing Ritalin directly to the public. Ciba, in a tactical switch, produced a 96-page document called the *Physician's Handbook: Screening for MBD*. It was a handbook designed to help doctors better diagnose Minimal Brain Damage. The only diagnostic criteria for MBD included in Ciba's handbook were results from the 1966 Clements study of hyperactive children (Schrag & Divoky, 1975). These results were 7 years old and produced vague and conflicting results. Also, the terms Minimal Brain Damage or Minimal Brain Dysfunction were out of date; the *DSM* had already replaced those terms.

Even with the obstacles placed in front of the company, Ciba was profiting enormously from Ritalin. Although Cylert was created as an alternative in 1974 (Breggin, 2001), Ritalin had already become established as the drug of choice for

children needing pediatric stimulants. Ciba continued to run advertisements in medical journals. Schrag and Divoky (1975) reported:

> In the previous six years, while the prescription of such drugs has been growing at a rate approaching 50 percent a year, tripling between 1970 and 1974, Ritalin's share of the market, currently estimated at $30 million annually, grew from about 50 percent to something over 80 percent. (p. 89)

The opinions from professionals, recommendations from teachers, and advertisements of drug companies had convinced the public that a plague of hyperactive children, heretofore unseen, had been unleashed. Conveniently the cure was discovered before the epidemic manifested. Treatment was given without solid scientific evidence to support any sort of brain damage. As the decade came to a close, the DEA banned the use of the diagnostic label Minimal Brain Damage on the basis that it was not scientific (Baughman & Hovey, 2006).

Previous to the 1970s the medicalization of ADHD had taken place in the doctor’s office. In the 1970s, however, parties that had something to gain became more active in the process, creating confusion among doctors and lay people alike. Individual researchers and doctors were responsible for further medicalization of the disorder in the 1970s, but by this time it had crept into society as well. This is evidenced by the fact that the U. S. Government had so much involvement; this was done partially in response to public confusion. This effectively lent credibility to the disorder, further fanning the flames. In the background, Ciba championed the diagnosis by directly and indirectly promoting their medication and offering information on the disorder that was out of date. As the power and prestige of the medical community grew, so did that of the

pharmaceutical companies. One of the more important aspects of medicalization is that often it is done without regard for public safety. This can clearly be seen in the actions of Ciba.

During the 1980s, medicalization of ADHD continued in this manner. The decade began with a new concept of the disorder, and a new name, putting it on the map as one of the most expansive non-terminal medical phenomena in history. Chapter 6 discusses the developments with the disorder during the 1980s. It outlines the change in diagnosis from minimal brain dysfunction (or damage) to Attention Deficit Disorder in 1980, the transformation from Attention Deficit Disorder to Attention-Deficit/Hyperactivity Disorder, and the creation of Children and Adults with Attention Deficit/Hyperactivity Disorder, the ADHD advocacy group that would play a key role in establishing a diagnosis of ADHD in adults.

Chapter 6
A Social History of ADHD: 1980 Through 1989

The 1980s were a landmark decade for the establishment of a hyperactive diagnosis in children. With the rapid acceptance of the disorder in children in the 1970s, the 1980s began with 350,000 diagnosed cases (Baughman & Hovey, 2006). A flurry of information became available on the subject because it was receiving a significant amount of academic and public attention. One theory attempted to link ADHD and other learning disabilities to a chronic yeast (candida) infection. While some nutritionists subscribe to this theory it never gained widespread acceptance; however it illustrated a continued effort to discover scientific support for the diagnosis. A few years later an argument was advanced that there was a decreased blood flow in the frontal lobe of the brain among ADHD individuals. This theory received more academic support. According to Hallowell and Ratey (1994):

> The right hemisphere generally controls the so-called executive or decision making capabilities, our visual-spatial abilities, and our ability to process many sources of stimuli simultaneously. Some specific deficits associated with right-hemisphere dysfunction include topographagnosia (getting lost a lot!) and socio-emotional learning disabilities. (p. 276)

There have been many subsequent studies into this specific phenomenon with mixed results and still no definitive proof.

Shortly thereafter, in a variation on this theme, the frontal-lobe hypothesis was given new life by the assertion that ADHD was the result of the brain's inability to inhibit itself effectively. Presumably this was due to "disturbed inhibition in the cortex" and

without this inhibition the brain “fails to block inappropriate responses and fails to send out appropriate inhibitory messages” (Hallowell & Ratey, 1994, p. 276). The conclusion drawn was that without the inhibition, the brain was not able to tell the individual to put on the brakes, resulting in impulsivity and hyperactivity. This has become one of the most popular biologically based explanations.

While many in the medical community were supportive, there was hardly consensus. A growing concern among many was that children were being medicated too often. Two researchers at the Western Psychiatric Institute and Clinic (Pittsburgh) found that two-thirds of children being hospitalized had been treated with multiple psychotropic medications prior to hospitalization. Seeing the prevalent use of psychiatric drugs in American society, they cautioned:

> Inappropriate and injudicious use of psychoactive medications may be associated with unanticipated adverse behavioral effects, which can result in the deterioration of a child’s functioning. (Breggin, 2002, p. 34)

Their warnings went unheeded, but their cautionary note was shared by others.

A 1986 study indicated that long-term use of stimulants such as Ritalin may cause brain damage. CT scans of twenty-four males with a history of hyperkinesis and who had been treated with stimulants found that over half of them had brain atrophy. This suggested that the atrophied brain damage might be the long-term side effect of stimulant use (Baughman & Hovey, 2006). This should have been a warning to those who would perform cognitive tests on those who have been treated with stimulants for an extended period of time. If the biological evidence for ADHD was brain damage, why had the scientific community performed tests on those who had been on stimulants for

long periods of time when stimulants were known to cause brain damage? This, in effect, leads to cyclical reasoning for the existence of the disorder. Despite the questions raised, the decade saw the rapid expansion of ADHD. While scientific studies and articles furthered the diagnosis, the most important agents of medicalization came from the American Psychiatric Association's diagnostic bible itself.

In 1980, the American Psychiatric Association published a new edition of the *Diagnostic and Statistical Manual of Mental Disorders* (*DSM-III*); a whopping 493-page handbook. Enormous compared to the previous editions, it reflected the vast expansion in psychological disorders and learning disabilities in the late 1960s and 1970s. Coincidentally, after the abolition of the Minimal Brain Damage diagnosis, the *DSM-III* changed the name of the disorder from the vague Hyperactive Reaction of Childhood (or Adolescence) to the more scientific sounding Attention Deficit Disorder. The new nomenclature came with 4 pages of information compared to the *DSM-II's* two sentences on Hyperactive Reaction of Childhood (or Adolescence).

Constructed almost from scratch, as opposed to building upon the *DSM-II*, the new version attempted to pull together all the diagnoses previously attributed to hyperactive and inattentive children. The *DSM-III* (1980) stated:

> In the past a variety of names have been attached to this disorder, including: Hyperkinetic Reaction of Childhood, Hyperkinetic Syndrome, Hyperactive Child Syndrome, Minimal Brain Damage, Minimal Brain Dysfunction, Minimal Cerebral Dysfunction, and Minor Cerebral Dysfunction. In this manual Attention Deficit Disorder is the name given to this disorder, since attentional difficulties are

> prominent and virtually always present among children with these diagnoses. (p. 41)

This diagnostic manual made great strides in trimming the symptoms that had previously been associated with the disorder. The *DSM-III* (1980) listed two subtypes of ADD, Attention Deficit Disorder with Hyperactivity, and Attention Deficit Disorder without Hyperactivity, but acknowledged, “it is not known whether they are two forms of a single disorder or represent two distinct disorders” (p. 41). In addition, a subtype was reserved for those “individuals once diagnosed as having Attention Deficit Disorder with Hyperactivity in which hyperactivity is no longer present, but other signs of the disorder persist” (p. 41). Arguably, the most important information in the introduction was this admission of ignorance. Seventy-six years of intermittent study had produced an authoritative document of uncertainty.

The *DSM-III* asserted that the most significant markers of the illness were “developmentally inappropriate inattention, impulsivity, and hyperactivity.” Children diagnosed with ADD were described as fidgety and restless. They were also said to behave as if “running like a motor” (p. 41). Unscientific terms like “on the go” and “running like a motor” were part of the actual diagnostic criteria (p. 44). The manual also contended that symptoms of ADD were highly variable according to circumstance:

> A child’s behavior may be well-organized and appropriate on a one-to-one basis but become dysregulated in a group situation or in the classroom; or home adjustment may be satisfactory and difficulties may emerge in school. (*DSM-III*, 1980, p. 42)

There is perhaps no clearer indication of the social nature of the disorder. According to the *DSM*, ADD manifests itself most prominently in two of the most important agents of socialization: the school and home. The authority figures in these environments teach children how they are expected to behave in society; they are places where children learn to become subservient to the demands of the culture.

Although the *DSM-III* noted that, in the home, the ADD child may have difficulty following parental instructions or sustaining activities. Discussion of children in the classroom was primarily featured. It had long been pointed out that school officials have diagnosed ADD before doctors and mental health professionals get a chance. The *DSM-III* lent credibility to this claim saying the disorder frequently "does not come to professional attention until the child enters school" (p. 42). In the classroom, signs of ADD were inattention, problems with organization and sloppy and/or unfinished work. The *DSM-III* (1980) claimed children "give the impression that they are not listening or that they have not heard what they have been told"; and when given

> Individually administered tests, careless, impulsive errors are often present. Performance may be characterized by oversights, such as omissions or insertions, or misinterpretations of easy items even when the child is well motivated, not just in situations that hold little intrinsic value. (p. 41)

In addition to the primary symptoms, the manual listed the following "associated features" for ADD: "obstinacy, stubbornness, negativism, bossiness, bullying, increased mood lability, low frustration tolerance, temper outbursts, low-self esteem, and lack of response to stimuli" (p. 42). Judging from the disproportional concern with children's academic performance, it might be reasonable to surmise that ADD children manifest

these symptoms more often at school. This is not surprising since the structure of schools requires discipline and self-regulation.

Finally, the *DSM-III* (1980) claimed 3% of the population may suffer from ADD but admitted that:

> Nonlocalized 'soft' neurological signs, motor-perceptual dysfunctions (e. g., poor eye-hand coordination), and EEG abnormalities may be present. However, in only 5% of cases is Attention Deficit Disorder associated with a diagnosable neurological disorder. (p. 42)

This is an erudite and elusive way of saying there are no diagnostic tests to measure ADD and no genetic markers to indicate its presence. In effect, one cannot prove it even exists. It is simply a cluster of behaviors assumed to be a disorder. The addition of ADD to the *DSM* was the single biggest step in solidifying the disorder's place in American culture. Its significance cannot be overstated; and only 7 short years later it was expanded.

In May, 1987 the first printing of the American Psychiatric Association's revised third edition of the *Diagnostic and Statistical Manual of Mental Disorders* (*DSM-III-R*) was released. While 120,000 copies of the *DSM-III* were published in 1980, 230,000 copies of the *DSM-III-R* were published in 1987. The *DSM-III-R* was noticeably bigger, reflecting the development of the psychiatric movement. The most obvious change in the diagnosis was the name; Attention Deficit Disorder was replaced with Attention-Deficit Hyperactivity Disorder. The most powerful example of the social influence of the Attention Deficit Disorder label is the fact that it is still used while the nomenclature has been invalid since 1987. There are still academic books and articles published on ADD.

Adding to the confusion, experts deviate from the *DSM* definition of the disorder, at times adding a distinction between the two (Barkley, 2000) where one does not officially exist.

The most notable descriptive changes in the *DSM-III-R* (1987) were nouns and language; the designation “people” (p. 50) instead of “children” (1980, p. 42) to indicate sufferers was a substantial change and marked a shift in the perception of the diagnosis. While the whole entry is vague, for the first time the *DSM* was nebulous on age as well. The document primarily dealt with locations where children are socialized, and this was continued in the *DSM-III-R* with some additions. The new version claimed, “Manifestations of the disorder usually appear in most situations, including at home, in school, at work, and in social situations” and described symptoms that may occur in the “classroom or workplace”. Furthermore, worsening symptoms could occur not only in the classroom and while performing chores at home, but also when “attending meetings” (*DSM-III-R*, 1987, p. 50).

The *DSM-III-R* offered “an inability to play quietly and regulate one’s activity to *conform* to the demands of the game” as a symptom. It also indicated that “signs of the disorder may be minimal or absent when the person is receiving frequent reinforcement or very strict control” (p. 50). This language strikingly illustrated that the diagnosis was a mechanism to classify and thus facilitate the treatment of a deviant behavioral pattern and enforce societal norms through the use of therapy as social control.

Indications of ADHD were expanded in the *DSM-III-R* (1987) to include such things as “blurting out answers to questions before they are completed, making comments out of turn,” and “failing to await one’s turn in group tasks.” Also, at home

"interrupting or intruding on other family members" would indicate its presence (p. 50). These are all social *faux pas* but fall short of indicating brain dysfunction. The *DSM-III-R* also chronicled self-harming behaviors like "grabbing a hot pan from the stove" and "riding a skateboard over extremely rough terrain" (p. 50), thus implying that diagnosing and treating these "people" is actually good for them. This attitude reflects ideals of *parens patrie;* that the medical community knows what is best for the patient when the patient does not.

While the *DSM-III-R* (1987) left age somewhat open to interpretation by substituting "people" for "children" and including discussion of symptoms in a work environment, it did not directly discuss adults with ADHD in the indications. In the section called Age-Specific Features, variability of symptoms at different ages is discussed. The *DSM-III* spoke of preschool children, older children, and adolescents but notably lacked any mention of adults with ADHD. In fact, the only mention is a later statement suggesting, "follow-up studies of clinical samples indicate that approximately one-third of children with ADHD continue to show some signs of the disorder in adulthood" (p. 51). While the text did not specify that adults can suffer from ADHD, it paved the way for the medicalization of hyperactive and inattentive traits in adults. The exclusion of an adult diagnosis of ADHD in the new edition of the *DSM* did not stop some individuals from taking the next step. By this time, there was speculation that children did not age out of ADHD.

A few months after the *DSM-III-R* was released, Children and Adults with Attention-Deficit Hyperactivity Disorder (CHADD) was founded "by a small group of parents of children with AD/HD and two treating psychologists in Plantation, Florida

(near Miami).” CHADD claims “these parents came together because they felt frustrated and isolated, and there were few places to turn for support and information about AD/HD” (p. 9). According to the organization’s website, it was created

> To provide a support network for parents and caregivers; to provide a forum for continuing education; to be a community resource and disseminate accurate, evidence-based information about AD/HD to parents, educators, adults, professionals, and the media; to promote ongoing research; and to be an advocate on behalf of the AD/HD community. (CHADD, p. 10)

The mission statement was simply, CHADD CARES; cares being an acronym for collaborative leadership, advocacy, research, education, and support (CHADD).

The significance of CHADD was multi-layered. When the American Psychiatric Association would not make the leap from the childhood disorder ADHD to adults with ADHD, CHADD did. That is not to say they focused on adults with ADHD; their primary goal was regarding support and information for parents and caregivers who have children with the disorder. However, CHADD played a key role in extending the diagnosis and advocating the idea that ADHD was not just a childhood disorder. It is inherent in the name Children *and Adults* with Attention-Deficit Hyperactivity Disorder that they began with the belief that adults suffer from this as well as children.

Conrad (2005) claimed that important agents of medicalization are grassroots organizations and lobbying groups. CHADD is both of these. Because it came relatively late in the 1980s, it was not the primary mover in that decade but its establishment paved the way to further medicalization of ADHD in the 1990s. What CHADD and the two versions of the *DSM* released in the 1980s did represent was cohesiveness. The

DSMs illustrated a professional agreement that went beyond the individual studies performed in previous decades. The creation of CHADD illustrated that the culture had accepted the diagnosis and would help in its promotion. While Ciba was active in the 1980s, its activities are overshadowed by this impressive display of acceptance. Medicalization no longer required individuals; ADHD had been swept up into the therapeutic state. Sales and growth of the *DSM* alone testify to this. ADD and ADHD were voted into existence in one decade, effectively coalescing all previous terms into one while lending credibility to the disorder. This, more than any other aspect of medicalization was responsible for the expansion of the diagnosis, not only in the 1980s but throughout the entire history of ADHD in any form. With acceptance in the 1980s, the 1990s was replete with scientific publications on the topic. The groundwork had been laid and all that was left was to build and expand.

Chapter 7
A Social History of ADHD: 1990 Through 1999

By the end of the 1980s, the diagnosis of ADHD had become established in American culture, exemplified by the establishment of CHADD. The disorder and the treatment had coevolved (Diller, 1998). The use of Ritalin for the treatment of ADHD expanded considerably (Hill & Castro, 2002) and was considered so conventional that, by 1990, 1,000,000 individuals were being medicated with stimulants (Baughman & Hovey, 2006). The study of ADHD had expanded in the 1980s; but in the 1990s it exploded. With the American Psychiatric Association's support, the floodgates opened to a variety of investigations in the topic.

Many studies made connections between ADHD and other disorders. ADHD was connected to a rare form of thyroid dysfunction called generalized resistance to thyroid hormone. It was reported that 70% of people with ADHD also suffered from this affliction (Hallowell & Ratey, 1994). ADHD was connected with Obsessive Compulsive Disorder, Bi-polar Disorder, Tourette's Syndrome, serious language deficits, severe depression, substance abuse at a young age and being the recipients of sexual abuse (Brown, 2005). In 1998, The Journal of Child and Adolescent Psychiatry reported that 97% of children diagnosed by a psychiatrist with the disorder were prescribed medication and 49% of these children ended up on at least two different drugs (Baughman & Hovey, 2006). Not only were these individuals were sick, they were very sick with multiple mental illnesses.

Many speculated on the function (or dysfunction) of the ADHD brain as well. Intelligence was reportedly unrelated to the disorder; and it was believed the diagnosis

spanned the entire intelligence spectrum. This conformed to some earlier theories. Even among those supporting the diagnosis they could not agree; another study claimed that ADHD brain used different and less efficient circuits to process information. Specifically, ADHD boy's brains were unable to process information correctly; depending on the circumstance their brains either worked too slow or too fast. Calling back to previous studies, ADHD brains reportedly had abnormalities in processing dopamine. It was also discovered that those afflicted had excessive motor problems in addition to deficiency of attention. This indicated a serious neurological problem. Barkley proposed that ADHD was not simply a collection of these inabilities, but a problem in the executive functioning of the brain. This has since become one of the most prevalent views of the disorder (Brown, 2005). Not only were these individuals sick; they were very sick with multiple mental illnesses and had defective, inefficient brains.

Further studies reported on behaviors associated with the diagnosed. It was claimed that teens diagnosed with ADHD were more likely to have an STD, more likely to conceive a child, and less likely to use birth control. Drivers with ADHD reportedly had more collisions than those without. ADHD boys were also found to have a lower threshold for frustration and difficulty in regulation of subjective emotional expression. Those diagnosed were claimed to be less productive members of the society as well. Individuals with ADHD were reported to hold down a job for a shorter amount of time than those not diagnosed, and when medicated ADHD children had improved concentration on long boring computer tasks that they previously could or would not concentrate on. It was even found that those with ADHD could not even so much as tell a story as well as those not diagnosed (Brown, 2005). Not only were these individuals

sick, they were very sick with multiple mental illnesses, had defective, inefficient brains and could not perform simple tasks many take for granted.

As in previous decades, much of the work done on ADHD concerned stimulant medications. In 1992, a team of experts chosen by the Department of Education examined the literature on stimulants. They claimed that “cognitive toxicity may occur at commonly prescribed clinical doses of stimulant medication” (Breggin, 2002, p. 32). This meant that stimulants can cause brain damage at the same dosage levels used in treating children with ADHD. The following year Swanson and colleagues released the results of a study revealing that there was no evidence that Ritalin resulted in any long-term academic improvement among school aged children (Baughman & Hovey, 2006). A 1994 study of the effects of Ritalin on 69 children appeared to yield multiple side effects including depression and lethargy and adverse reactions similar to the zombie-like effects described by others for decades (Breggin, 2002).

Concurrently, the American Medical Association released the results of a study comparing Ritalin to cocaine. They concluded that methylphenidate (the generic name for Ritalin) caused nearly identical effects on the brain (Breggin, 2002). The same year the U.S. Drug Enforcement Administration cautioned that 20% of individuals on stimulant medications become depressed (Breggin, 2002). A separate study conducted at Broadlawn Medical Center (Des Moines) concluded that methylphenidate was the most “malignant addictive drug known to mankind” (DeGrandpre, 1999, p. 175). Such startling results are made even more shocking by a 1999 study that showed of 401 pediatricians fewer than 40% even used the *DSM* for diagnosing children with ADHD (Baughman & Hovey, 2006). This meant that pediatricians were not only dispensing

these drugs, but they were not even relying on official guidelines in making the diagnosis that benefited from the treatment. No wonder 90% of the world's supply of Ritalin was used in the United States (Breggin, 2001).

Though some were apparently ignoring the document, in 1994 The American Psychiatric Association published a new edition of the *Diagnostic and Statistical Manual of Mental Disorders*. Understandably, the section pertaining to the disorder was not expanded as much as it had been in previous editions; ADHD was firmly established and required little embellishment. Nevertheless, the entry describing ADHD was augmented considerably with more detailed descriptions. There were, however, some notable changes beyond that. The new edition contained more specific explanations of hyperactivity, impulsivity, behavioral manifestations, and especially inattention.

Where the diagnosed were referred to as "people" in the previous edition (*DSM-III-R*, 1987, p. 50) they were referred to as "individuals" in the new edition (*DSM-IV*, 1994, p. 78). The *DSM* was becoming increasingly adult oriented, giving examples such as individuals being distracted by "a car honking," "missing appointments" and having trouble concentrating on paperwork (pp. 78-79). Most importantly, references to adult patients became more explicit. In the discussion of age in the previous editions, only childhood and adolescence were discussed. The *DSM-IV* (1994) added:

> In adulthood, restlessness may lead to difficulty in participating in sedentary activities and to avoiding pastimes or occupations that provide limited opportunity for spontaneous movement. (e. g., desk jobs) (p. 82)

Of equal note, while many scientists and doctors claimed to have produced biological evidence for the disorder in the years since the previous edition, the manual concluded,

“there are no laboratory tests established” to detect and diagnose ADHD and “there are no specific physical features associated with Attention-Deficit Hyperactivity Disorder” (p. 81).

While the *DSM* held considerable weight in the diagnosis of ADHD, there were other books published in this decade that were regarded as expert. One of these was John Ratey and Edward Hallowell’s book, *Driven to Distraction*. This document has been described as being “the single most powerful force in the subsequent proliferation of the [ADHD] diagnosis” (Eberstadt, 1999, p. 161). Aimed at ADHD adults, it promoted the diagnosis of ADHD in children and adults as well as the routine use of stimulant medication. Not only did the authors advocate stimulant use, they advocated the use of multiple stimulants on one patient. Hallowell and Ratey (1994) provided a self-assessment list for ADHD. Symptoms included: being left handed or ambidextrous, moodiness, impatience, smoking, drinking too much, changing the car radio frequently, gambling, strong intuition, hypersexuality, divorce, being a “maverick,” needy, adopted, highly allergenic, prone to ear infections as a child, claustrophobic, and love to travel (p. 209-214).

This list is as nebulous as the 1966 Sam Clements document that listed 99 indicators of Minimal Brain Dysfunction, including: “spotty or patchy intellectual deficits,” “achievement low in some areas; high in others,” “distorted concept of body image,” “few, if any, apparent gross abnormalities,” “general awkwardness,” “slowness in finishing work,” “easy fatigability,” “thumb-sucking, nail-biting, head-banging, and teeth-grinding,” “slow toilet train,” “sleep abnormally light or deep,” socially bold and aggressive,” “possibly antisocial behavior” and “physically immature, or physical

development normal or advanced for age" (p. 11-13). Since its publication, *Driven to Distraction* has become classic ADHD literature. While its historical facts are reliable, it loses usefulness as a diagnostic tool by adding confusion to an already vague diagnosis. It remains a highly referenced document, particularly in discussion of Adult ADHD. Illustrating the connectedness of those involved in the diagnosis, Hallowell and Ratey refer readers to the ADHD advocacy group Children and Adults with Attention Deficit/Hyperactivity Disorder (CHADD) for more information on the subject. At this time, however, CHADD had its hands full elsewhere.

Because the popularity of ADHD increased, the use of stimulants also increased. Between 1990 and 1995 the production of Ritalin grew five-fold (Reiff & Tippins, 2004). Supporters of the drug continued to claim Ritalin helped ADHD patients as previous research suggested. However, in the middle of the decade a scandal surfaced that suggested a connection between CHADD and Ciba. The relationship between the two entities lead to a special report on PBS in 1995 called "A.D.D. — A Dubious Diagnosis?"

According to the report, the relationship between Ciba and CHADD began in 1988; and for the next seven years Ciba had given close to $1 million to CHADD. In that time the membership had grown from 800 to over 35,000. There was also a questionable public service advertisement produced by CHADD that had actually been paid for by Ciba (Merrow, 1995). While CHADD claimed to be independent, money talks; this is evidenced by CHADD's lobby to get Ritalin removed from the list of Schedule II drugs in 1994 (Hill & Castro, 2002). This was done on the grounds that the stimulant was not addictive (Woodworth, 2000). Curiously, Ciba donated $400,000 to

CHADD during that time (DeGrandpre, 1999). That was 8 times the amount of money donated in 1991. Breggin (2000) explained that if the lobby had been successful it

> Would have relieved [Ciba] of having to go to the DEA each year in order to get approval for the gross amount of Ritalin that it manufactures. It would have relieved doctors of the necessity of writing prescriptions, rather than calling them in, for Ritalin. It would have been a boon to [Ciba] and organizations like CHADD that support the concept of ADHD and the use of stimulant drugs. (p. 71)

That meant money in Ciba's pocket, and CHADD's as well. The DEA "conducted an extensive review of the use, abuse liability, actual abuse, diversion, and trafficking of methylphenidate" (Woodworth, 2000) and concluded that CHADD's claim did not reflect reality; CHADD consequently withdrew the petition.

The relationship between CHADD and Ciba seemed to have waned after Ciba merged with the Swiss company Sandoz in 1996, creating Novartis. Whether the disconnection between the two had to do with the merger or the controversy is uncertain; however, the monetary support went from $137,000 in 1996 to $65,000 in 1997 and continued to decline. Nevertheless, the financial boost needed to expand the advocacy group and diagnosis had already been given by a number of pharmaceutical companies. Breggin (2001) reported:

> For the year ending June 30, 1997, Richwood Pharmaceutical, the maker of the amphetamine Adderall, gave $118,000. Abbott Laboratories (Cylert) gave $27,000, SmithKline Beecham (Dexedrine) gave $2,500, Glaxo Wellcome (Wellbutrin) gave $3,500, Wyeth Ayerst (Effexor) gave $9,150, Pfizer (Zoloft)

> gave $5,000, and Alza (maker of a testosterone skin patch) gave $10,000. (p. 234)

Along with these companies, Ciba helped CHADD get off the ground. In an act of reciprocity, CHADD had popularized ADHD and other childhood disorders, increasing sales of Ritalin and other pharmaceuticals.

Exposing CHADD's connection with drug companies intensified discussion of the diagnosis. Eberstadt (1999) reported that since the middle of the 1990s:

> Interested parties from all over – the Drug Enforcement Administration (DEA), the Food and Drug Administration (FDA), the medical journals, the National Institutes of Health (NIH), and especially the extremely active advocacy group CHADD (Children and Adults with Attention Deficit Disorder) – further stoked the debate through countless reports, conferences, pamphlets, and exchange on the Internet. (p. 161)

Along with the research and development of ADHD, events were unfolding on a political, social, and economic scale. A 1991 addendum to the Individuals with Disabilities Act of 1990 afforded special compensation to children who were unmanageable in the classroom and needed special educational requirements. This allowed children diagnosed with ADHD to receive special compensation in school even without a specific law regarding ADHD (Reiff & Tippins, 2004). And toward the end of the decade the National Institute for Health called a conference to examine the evidence of ADHD and make a decision on its validity. This was in response to the controversy surrounding the disorder and its treatment. After reviewing the scientific

data, the panel concluded that Attention-Deficit Hyperactivity Disorder was real. In a statement issued at the close of the conference, the panel said:

> The diagnosis of ADHD can be made reliably using well-tested diagnostic interview methods. However, as of yet, there is no independent valid test for ADHD. Although research has suggested a central nervous system basis for ADHD, further research is necessary to firmly establish ADHD as a brain disorder. (NIH, 1998, p. 17)

Reflecting the wisdom steeped in the traditions of psychiatry, psychology, and pediatrics, much of what the panel stated was in agreement with what the *DSM* claimed about the disorder. The panel continued:

> Although little information exists concerning the long-term effects of psychostimulants, there is no conclusive evidence that careful therapeutic use is harmful. (p. 32)

Though the committee claimed to be impartial, there have been serious allegations contesting that. The conference was planned by the staunch ADHD advocate Peter Jensen, and David Kupfer, the chairman of the objective consensus panel, had "received particularly extensive funding from NIMH for research based on the supposed validity of the ADHD diagnosis and stimulant treatment" (Breggin, 2001, p. 11). In addition, The National Institute of Mental Health, the organization running the conference under the authority of the National Institutes of Health had "failed to invite any critics of the medication to speak at the conference and planned no specific presentation on adverse drug effects" (p. 11).

Peter Breggin appealed to the institutes to provide a more balanced conference. He alone was added to the list as a presenter at the conference, making a total of four out of thirty presenters raising concerns over the safety or efficacy of these medications (Breggin, 2001). On the side supporting the diagnosis and treatment were academics such as outspoken stimulant proponent Russell Barkley as well as Joseph Biederman, who clamed that 10% of school-aged children in America had ADHD (Diller, 1998). This is well above the *DSM's* estimates. Because of the sex ratio among the diagnosed, this would mean one in six boys between 5 and 12 should be treated for the disorder (Diller, 1998).

Further evidence calls into question the reliability of the decision made at the conference. Among the scientific studies cited as evidence of a biological basis for ADHD was a famous 1990 study by Alan Zametkin. A doctor at the National Institutes of Health, Zametkin published the results of a then recent brain study he conducted in the *New England Journal of Medicine*. Zametkin found that those with ADHD had a statistically significant lower rate of chemical activity in specific and global regions of the brain when performing a sustained task (Brown, 2005). Those with the disorder were said to metabolize glucose at an 8% lower rate than the non-ADHD controls. Using PET scans to create images of the brain, a test was designed to measure the attention spans of the diagnosed. Deficiencies in the frontal lobe of the brain were said to be consistent with previous scientific analyses of the disorder (Hallowell & Ratey, 1994). This study appeared to confirm the frontal lobe hypothesis and finally made credible the biological basis for ADHD. There were, however, questions raised about the validity of the study. DeGrandpre (1999) pointed out a number of flaws in Zametkin's research:

> First efforts to replicate the findings reported by Zametkin et al. have failed; numerous studies have followed up this report, with little to show in return. Second, the participants were adults rather than children, thus limiting the applicability of this study for children. Third, there remains no evidence that a mere 8.1 percent difference in metabolism would produce clinically significant difference in behavior, including hyperactivity; as students of statistical testing should know, statistical significance should not be interpreted to mean clinical significance. (p. 141)

Furthermore, DeGrandpre also suggested that the difference in metabolism was the result of an uneven sex ratio, claiming “while 72 percent of participants in the hyperactive group were men, in the control group the number was 56 percent” (p. 142). The results of the study could also suggest that men have a lower glucose uptake in that particular part of the brain, and in fact “another group of researchers compared the metabolism between the men and women in the control group of the Zametkin study and found just such a statistical difference in metabolism” (DeGrandpre, 1999, p. 142). Although the study may have questionable flaws, it continues to be used as an argument for a biological basis for ADHD as a disorder.

Combined with other concerns, the inclusion of such scientifically flawed evidence at the conference nullifies any decision they made. It also raises serious questions about the quality of all the studies sanctioned at high levels of government where major decisions regarding the validity of the ADHD diagnosis and the efficacy of stimulant medications are made. That being the case, the next year the National Institutes of Mental Health encouraged physicians to use stimulants, claiming that they

produced far more improvement of ADHD symptoms than other forms of intervention (Brown, 2005). The government had officially decided that ADHD was a genuine disorder and stimulants were the most effective treatment. The authenticity was not only supported by the pediatric, psychiatric, and academic communities, but it enjoyed the full weight of the government as well.

The diagnosis expanded from an estimated 900,000 to an estimated 5 million towards the end of the decade and Ritalin production increased some 700 percent (Diller, 1998). Research on the subject grew exponentially, effectively furthering its medicalization. However, CHADD, Ciba and the United States Government did more to further the diagnosis than anything else in the 1990s. While the early years of ADHD study had been done independently, many of the experts were, by this time, part of larger organizations. They were board members of CHADD and involved in the National Institutes of Mental Health. There was interconnectivity between. As individuals, they could only do so much but as a cohesive unit they embodied the “power and authority of the medical profession” that Conrad (2005, p. 4) claimed as an agent of medicalization.

During this decade Ciba supported CHADD financially and the results were stellar. Ritalin lead the nation as the most commonly used stimulant in the treatment of ADHD. The 1990s produced a rapid expansion of the diagnosis. Though the consensus conference made great strides in affirming the acceptance of the diagnosis in the lay community, it did not end the debate. Fresh theories presented in the 2000s will call into question the validity of the diagnosis. ADHD will continue to expand and ADHD will further be accepted into the adult realm, opening up the possibility of adults with no prior diagnosis to be labeled.

Chapter 8
A Social History of ADHD: 2000 Through 2009

By the end of the 20th Century ADHD was firmly established. It permeated every level of American society from the United States Government down to the individual level. People from all walks of life were involved in its medicalization. Much of the argument that had been going was quieted by the National Institutes of Health. The legwork had been done; stimulants, by the 21st Century, had become ubiquitous. Where Ritalin dominated the market in the 20th Century, by the 21st Century Adderall surpassed it in sales. In 1997 Adderall sales brought in $19 million. The figure rose to $200 million by 2000 and by 2002 Adderall sales represented 40% of Shire's income, bringing in $400 million (Baughman & Hovey, 2006).

A 2006 estimate claimed 7 million people had misused stimulant medication designed to treat ADHD and 75,000 showed signs of addiction. One Boston Globe article reported that teachers coerced parents into treating their children (Breggin, 2001). Even a respected board member of CHADD discussed the possibility of legally enforcing treatment for ADHD in a *USA Today* article (Baughman & Hovey, 2006).

On college campuses and in high schools, students have been routinely using Ritalin and Adderall as brain steroids. A recent news article reported “Adderall and Ritalin have become the drugs of choice for students looking for a brain gain”. One student claimed that 80% of the students he knew used ADHD stimulant medication to get an edge in school (O’Mara, 2009, p. 2). The problem has become so widespread that a simple search of “ADHD Medication” on the Google news search engine will

render multiple hits on news articles discussing stimulant abuse in the college population. Television news reports and specials on the problem are common.

Like the 1990s, much of the study in the 2000s revolved around the comorbidity of ADHD with other disorders. These studies included links to Dyslexia, Dysthymia, Depression, Anxiety Disorder, Obsessive Compulsive Disorder, mathematics disorders, reading disorders, and written expressions disorders. Presumably a full 88% of those diagnosed with ADHD also suffered from one other disorder in their lifetime (Brown, 2005). So much research was done on the diagnosis that the American Academy of Pediatrics estimated that about 1000 articles are written about it annually (Reiff & Tippins, 2004). Understandably, the vast majority of these are in support.

Arguably one of the most important papers contradicting the assumptions about ADHD was an extensive literature review of brain imaging scans used to indicate a biological basis for the disorder. After reviewing more than thirty neuroimaging studies, Leo and Cohen (2003) found serious scientific flaws in all of them. The most common was that many test subjects had been on stimulant medication for extended periods of time prior to the study. Since stimulant medication is known to cause neurological damage, any data gathered from these studies is dubious at best. Other deficiencies include the use of non-comparable control groups and the possibility of rival explanatory factors. Leo and Cohen (2003) concluded:

> After twenty-five years and thirty-five studies, there is not a single straightforward experiment comparing typical unmedicated children with an ADHD diagnosis to typical controls. We are perplexed. (p. 51)

As recent as March 27, 2009, the *Washington Post* published a news article announcing the results of a “large federal study” into the effectiveness of stimulant medication for the treatment of ADHD (Vedantam, 2009, p. 1). Not only did the study indicate that such medications were ineffective, it also demonstrated that stimulant medication might be harmful (Vedantam, 2009). One of the principal scientists of the investigation concluded that stimulant medication was effective in the short term but lost effectiveness in the long term:

> “People are embarrassed to say they were wrong and we led the whole field astray," said Pelham, of the State University of New York at Buffalo. Pelham said the drugs, including Adderall and Concerta, are among the medications most frequently prescribed for American children, adding: "If 5 percent of families in the country are giving a medication to their children, and they don't realize it does not have long-term benefits but might have long-term risks, why should they not be told?” (Vedantam, 2009, p. 5)

The response from the medical, psychiatric and public advocacy communities like CHADD was to deny the findings and claim that the study was biased against the use of medication (Vedantam, 2009). Occasionally, supporters of the medication re-confirm the effectiveness of the treatment through scientific studies, as was done shortly after this article was published. Continuing a 30 year trend, the American Psychiatric Association published a new manual for a new decade.

At the beginning of the decade the newest version of The American Psychiatric Association’s *Diagnostic and Statistical Manual of Mental Disorders* was released. The previous decade ended with a government sanctioned diagnosis of ADHD in children.

This new version of the *DSM*, in addition to a general expansion of the diagnosis, finally confirmed the presence of ADHD in adults. The *DSM-IV* (1994) referred to ADHD "in adulthood" saying "restlessness may lead to difficulty in participating in sedentary activities and to avoiding pastimes or occupations that provide limited opportunity for spontaneous movement (e. g., desk jobs) (p. 82). The *DSM-IV-TR* (2000) elaborated:

> Caution should be exercised in making the diagnosis of Attention-deficit/Hyperactivity Disorder in adults solely on the basis of the adult's recall of being inattentive or hyperactive as a child, because the validity of such retrospective data is often problematic. Although supporting information may not always be available, corroborating information from other informants (including prior school records) is helpful for improving the accuracy of the diagnosis. (p. 89)

Because of diagnostic changes, the *DSM-IV-TR* (2000) also expanded the percentage of school-age children estimated to have ADHD from 3%-5% to 3%-7%. Though the manual made no qualms about labeling more children, it concluded that there are no medical tests to detect the disorder's presence.

This expansion has lead to people being diagnosed well into adulthood. For instance, an April 2009 news article reported that a 55 year old man was diagnosed for the first time in his life, furthering an estimate that 700,000 Canadian adults have the disorder that has heretofore gone largely undetected (Man Turns Life Around, 2009). Currently organizations like Attention Deficit Disorder Association and Children and Adults with Attention-deficit Hyperactivity Disorder advocate for the diagnosis of ADHD in adults. Because so many adults are now struggling to live with their ADHD, the

popularity of the ADHD Coach has skyrocketed. This is an artifact of the Adult ADHD movement in the 1990s, spearheaded by Hallowell and Ratey's *Driven to Distraction*. According to Little (2001), ADHD coaching is

> An ongoing relationship which focuses on the client taking action toward the realization of their vision, goals or desires. AD/HD coaching uses a process of inquiry to discover ways in which a client can maximize strengths and talents, function optimally with a disability, and be responsible and accountable for actions or lack of action. AD/HD coaching provides clients with structure, support, skills and strategies. (p. 1)

A coach is not difficult to find. The internet is flooded with them. Clients can retain one over the phone and many such coaches have internet sites to promote their services. There is no official medical certification and literally anyone can do it after a few classes at one of the several coaching institutions across the United States and Canada. The educational background for these individuals varies and does not have to be in the mental health field. For example, one coach holds degrees in education, art, and history (Gordon, 2009). Another holds a degree in Political Science (Quilly, 2003). Still others feel no need to report any education leaving one to wonder if they have any legitimate credentials.

ADHD has become so conventional that it has infiltrated the adult population. There are jobs specifically created to deal with this adult ADHD epidemic. It has been accepted to the point people are being diagnosed with a traditionally childhood disorder well into their 50s. Naturally, along with this, pharmaceutical companies have become

very wealthy and authoritative. These corporations not only have enormous financial resources, they have a loud voice in politics and culture.

> The pharmaceutical industry is enormously powerful, powerful enough to strongly influence everything from the classification of new psychiatric disorders, medical research, medical training, information given to educators, the position of mental health advocacy groups, and the federal government itself. (Baughman & Hovey, 2006, p. 173)

One news article from *The Guardian* supports this, stating:

> In the past two decades the US has moved steadily toward a market-based healthcare system. In this system, the pharmaceutical industry has achieved unprecedented financial power. Since the early 1990s, the pharmaceutical industry has been the most profitable industry in America, with margins exceeding 18%. With profit has come power. (Elliott, 2003, p. 3)

The companies have infiltrated a vast area of culture and even influenced American elections.

> In the 1999-2000 election cycle, the drug industry spent more money on political lobbying than any other industry, more than the oil and gas industry, more than tobacco, more than the insurance or automobile industry. (Elliott, 2003, p. 4)

While the pharmaceutical companies, advocacy groups, and political action groups continue to fight for a firm establishment of the disorder, expanding it along the way, recent studies unassociated with the American pharmaceutical companies and medical community are rendering startling results. One of the most important scientific breakthroughs in ADHD studies was the link discovered with the DRD4 gene. The

behavioral patterns for ADHD are strongly associated with certain mutations of this gene. And while having a certain mutation in this gene does not confirm an ADHD diagnosis, it does suggest a genetic predisposition for the development of the behaviors (Winstead, 2000).

While some would use the DRD4 gene as proof that ADHD is a genetically based disorder, further research indicates differently. Three anthropologists and a biologist conducted a study of a Kenyan tribe that was partially nomadic and partially settled in a westernized environment. Eisenberg and his colleagues (2008) measured the body mass index of those with the gene both in the nomadic society and in the settled society. They concluded:

> Frequencies of the DRD4/7R and DRD2/A1 alleles were 19.4% and 28.2%, respectively and did not differ between the nomadic and settled populations. BMI was higher in those with one or two DRD4/7R alleles in the nomadic population, but lower among the settled. (p. 2)

They found that among the part of the tribe living within a non-western, tribal culture, those with the ADHD associated gene had greater overall health than the rest of the tribe, including a higher body mass index. The researchers hypothesized:

> Increased impulsivity, ADHD-like traits, novelty-seeking like traits, aggression, violence and/or activity levels may help nomads obtain food resources, or exhibit a degree of behavioural unpredictability that is protective against interpersonal violence or robberies. Increased activity levels, if not resulting in increased food access, likely would decrease nutritional stores. The 7R allele might also

> promote better infant survival depending upon the social and ecological context. (Eisenberg, et al., 2008, p. 6)

While further study is required in this area, this study suggests that ADHD may be a culturally based “disorder” and beneficial under certain social conditions.

While the diagnosis of ADHD was expanded at the inception of the decade, throughout the course of the 2000s it has been called into question despite the National Institutes of Health Conference on its validity. Thomas Szasz (2007) asserted that the reasons we are told that certain behaviors are illnesses are that deep down as human beings we know that it is not true. The medicalization of activity and distractibility has produced many outcomes. Children, and now adults, are controlled a little more tightly. Money is being made with every prescription; and a black market flourishes with college students illegally consuming stimulant medication.

The diagnosis is part of culture yet dissenters continue to point out flaws, combating the diagnosis with studies of their own. Chapter 9 will return to the theoretical foundations of the therapeutic state and medicalization. It will discuss the theories put forth by Nicholas Kittrie and Peter Conrad and explain the significance of Max Weber’s theories on the rationalization of society. It will also address arguments over the diagnosis and offer suggestions for further areas of research.

Chapter 9
Theoretical Review and Conclusion

Since it was first created, ADHD has been controversial; it is a behavioral disorder that cannot be measured like other illnesses. It is diagnosed by a professional who recognizes the symptoms and writes a prescription (Gaviria, 2008). Diagnosis is a guessing game; treatment is given before one is confirmed and the treatment confirms a diagnosis if it calms the patient. The tautological reasoning for its existence is apparent in this procedure. The current admission among the psychiatric and mental health communities is that there is no empirical test for ADHD. Those in the mental health field admit it cannot be biologically tested for, but they as trained individuals simply recognize the symptoms and that is good enough. This leaves the diagnosis wide open for interpretation and expansion. With undefined parameters and tautological reasoning it is conceivable that, with persistence, any child or adult could be diagnosed with ADHD.

It has become evident that brain dysfunctions among those with ADHD are not medicated; activity is. Activity that is hard to control is “treated”. If “sufferers” were enthusiastically hyperactive in submitting to authority, sitting quietly, quickly finishing given work, performing chores dutifully, and conforming to rules without question, there would be no need for medication (Baughman & Hovey, 2006). ADHD is a product of the medicalization process. This occurs when “previously non-medical problems are defined and treated as medical problems, usually in terms of illnesses or disorders” (Conrad & Leiter, 2004, p. 158). This is a dry definition; McLeod and colleagues (2004) elaborate:

> Classic writings on medicalization critiqued the medical profession's promotion of medical interpretations of social problems, its use of medications whose long-term efficacy has not been documented, and its efforts to expand its boundaries and power base at the expense of public safety and well-being. (p. 54)

This is most certainly what has happened with ADHD. Reality, in this view, is socially constructed (Conrad & Schneider, 1992) and the "greatest social control power comes from having the authority to define certain behaviors, persons and things" (Conrad, 1992, p. 216). The therapeutic state has increased its power base for decades and carries with it the ability to define behaviors and individuals. It has, on numerous occasions, used harmful medications and techniques to control those deemed sick.

Though the concept of the therapeutic state originated in the 1970s, the groundwork for its understanding was laid nearly a century before. Thomas Armstrong, psychologist in the field of multiple intelligences, posited that those with ADHD are naturally disinclined to fit in the capitalistic society shaped by what Weber (1946) called the Protestant Ethic. Those who thrive in this society value systematic and tedious work for self-betterment. Armstrong (1997) asserted that "such a society might well be expected to define deviance in terms of distractability, impulsiveness, and lack of motivation" and that diagnosing children with ADHD "may represent a means through which our society attempts to preserve its underlying value system" (p. 27). Many of Weber's ideas can be applied toward the understanding of the ADHD label.

The development of a therapeutic state is just one aspect of what Weber (1946) described as an increased rationalization of society. He asserted that society was becoming more mechanized and finding more ways to routinize life and streamline

efficiency. “Precision, speed, ambiguity, knowledge of files, continuity, discretion, unity, strict subordination, reduction of friction, and of material and personal costs” are “raised to the optimum point” in this kind of society (p. 214). A rationalized society is a highly structured and ordered world where standing in line and red tape are the norm. The justice system has been charged with keeping order in this kind of society but the medical and psychiatric communities have recently taken a more active role in bringing into line those who deviate from the norm but are not so deviant as to be labeled criminal (Kittrie, 1977). For this task, deviant behavior needs to be labeled. To be legitimate these behaviors have to become medicalized.

The claim, “one way or another, the medical profession and the expansion of medical jurisdiction was a prime mover for medicalization” (Conrad, 2005, p. 4) fits when examining the medicalization of ADHD. This is a diagnosis pioneered by the medical profession. Parents used to punish their children with corrective behavior and, at times, employ the use of hard drugs. At the beginning of the 20th Century, the medical community spearheaded the “sick” label for these behaviors. Early mention of ADHD-like traits appeared in medical journals and only dealt with childhood hyperactivity. They consisted mostly of speculation on the cause of the disorder or stimulants’ unusual ability to counteract socially disruptive behaviors. This has expanded considerably since and many of the same arguments of that time are heard today.

Medicalization “sometimes occurred through the activities of social movements and interest groups” (Conrad, 2005, p. 4). In such cases, these groups “champion” the problem and advocate for its cultural acceptance. In the late 1980s, Children and Adults with Attention-deficit Hyperactivity Disorder (CHADD) popularized the diagnosis of

ADHD. Although they did not invent the diagnosis, with the financial backing of drug companies they were a key component in the establishment of the disorder. They also popularized the idea that adults could suffer from ADHD before the *DSM* expanded the diagnosis to include them. In some sense they helped to create the adult ADHD diagnosis.

Serious medical discussion of behaviors associated with ADHD happened shortly after the United States Government outlawed the free commerce in hard drugs that were given to keep children calm and docile. This facilitated the direct supervision by the medical community of any drugs given to children for the “treatment” of hyperactivity. There was nowhere for these behaviors to go except the medical community, and they were happily assimilated. Conrad (2007) explained that, professions competing “for authority in defining and treating problems” spurred on the medicalization process (p. 9). The absorption of hyperactivity into the medical community opened the door for psychologists, psychiatrists, and pediatricians to make a name for themselves by becoming experts in hyperactivity. This factor was important in the beginning of the diagnosis.

In the 20th Century, there was a change in the way medicalization evolved. Medicalization became profitable and health and medicine became much more consumer driven (Conrad, 2005). Pharmaceutical companies began to market drugs as consumables and individuals became consumers who, at times, asked for drugs by name. Pharmaceuticals have become one of the most profitable industries in America and the medical community carries considerable political weight, actively lobbying in Washington (Elliott, 2003). In 2007 Thomas Szasz said, “People do not have to be told

that malaria and melanoma are diseases. They know they are. But people have to be told, and are told over and over again, that alcoholism and depression are diseases. Why?" (p. xxiii). Because it is profitable; it has economic and social benefits. The medicalization of ADHD is among those stories "so emblematic of a particular time and place that they demand to be designated cultural landmarks" (Eberstadt, 1999, p. 159). The growth of the medical community's active intervention in the lives of so many children and adults is a clear marker of the therapeutic state and is a natural extension of the bureaucracy.

Kittrie (1977) claimed, "The growth of new controls in the area of mental health, alcoholism, drug addiction, and juvenile delinquency has become a national preoccupation, if not a passion" (p. 6). This is even truer today. His primary concern was with rights of institutionalized patients. This is no longer an issue but the therapeutic state has adapted. Modern society has evolved so that millions of children and adults have become out-patient institutionalized individuals who have undergone what can only be described as a chemical lobotomy. The nature of the bureaucracy demands a quick, efficient means to end social deviance; with the removal of institutionalization, medication is the logical choice.

Because of the compulsory nature of "treatment" for deviance, medicating children with psychoactive drugs for ADHD is part of what Szasz (2007) called "psychiatric oppression" (xxvi). Children have been coerced by parents into believing they have a sickness; these parents have been convinced by representatives of the therapeutic state that this is true. Those administering the medication have enlisted the help of the child in "treating" his or her own "sickness" (Lasch, 1991). This socializes

more individuals into the therapeutic state and leads to acceptance of the label into adulthood. This cycle has reinforced the diagnosis to the point that it is possible to “see it everywhere” (Hallowell & Ratey, 1994, p. 3). Society has become so dystopian that individuality is corrected by drugs. This is compulsory at early ages; however, the goal is to enlist the help of the victim. Cooperation ensures the easy function of the bureaucracy.

The fault does not lie with individuals. Parents have been socialized to trust doctors due to the prestige of the profession. Medical knowledge has increased, thus increasing the difficulty to earn the title “doctor”. Medical professionals speak a language that is generally inaccessible to the lay public. This leads to a gulf of knowledge where patients must trust doctors. It would be easy to blame individuals in the therapeutic state. However those in the psychiatric and medical communities cannot carry the entire blame; they are simply gears and cogs in the bureaucracy. They have been trained in the worldview where certain deviances are sick.

> The relentless tendency to define problems as the result of individual failure or deficiency is, in part, a reflection of the training that most practitioners in the helping professions receive. Most have been trained in identifying and addressing individual pathologies, not in understanding the problems of the family as an institution, much less those of the larger society. (Currie, 2004, p. 148)

Medical training does not include a wide understanding of social contexts of varying complexity. This leads to a “worldview so deeply ideological as to be disconnected from elementary reality” (p. 147). Mental health professionals are not intentionally involved in

social control but “if your only tool is a hammer, every problem becomes a nail” (p. 148). This problem is exacerbated because the modern therapeutic state sees everyone as a nail. Medicalization of deviant behaviors has become so intrusive in the United States that

> American psychiatrists, in their eagerness to include all varieties and vagaries of human feelings and behavior in their professional domain, are running the risk of trying to medicalize not only psychiatry but the human condition itself. (Chodoff, 2002, p. 3)

New research lends considerable credibility to this claim.

On a March 31, 2009 radio program, Dr. Richard Silberstein, director of the Brain Sciences Institute at Swilburne University in Melbourne, Australia, discussed recent findings on ADHD brain patterns. According to his research, neurological patterns of ADHD individuals are “quite different” than those of non-ADHD individuals. He reported that disordered subjects had an “increased communication between the back of the brain and the front of the brain” and concluded:

> There is a lot of evidence that a very high proportion of entrepreneurs, innovators, and inventors would have been diagnosed with ADD or ADHD had those labels been around at the time. (Hartman, 2009)

This suggests that the medical community has “pathologized a way of thinking”. He compared the brains of ADHD people and those traditionally viewed as creative and came to the startling conclusion that:

> The more creative they were, the stronger was that very pattern we saw in that ADHD group, which was the back of the brain; the parietal occipital region talking

> to the frontal region. And I must admit that was really one of the most exciting moments I've had in a long time because seeing that pattern so clearly suddenly made a lot of sense. (Hartman, 2009)

Describing the results as “staggering,” he expressed the need to “rethink what ADHD is” and, excluding extreme pathological cases, that maybe a “normal part of our thinking style is being pathologized”. This study raises serious questions about the social control aspect of this diagnosis and calls into question the medical community’s claim to label these behaviors as sick.

Research like Silberstein’s and Eisenberg’s DRD4 gene study on Kenyan tribes places the diagnosis in a cultural arena. In fact, many of the tasks which ADHD individuals were reportedly deficient in are culturally constructed. For example: ADHD people are reportedly poor drivers. The vehicle is a modern invention, not a human necessity. ADHD people are reportedly bad at sitting at a computer performing tasks for extended periods of time. The invention of the computer is even more recent; and already American society is completely dependent on it. ADHD people are reportedly bad at holding employment. Contemporary employment reflects modern conceptions of time and capitalistic ideals. This type of work has no power beyond what it is handed by society. In tribal and undeveloped societies, work was directly related to survival. There were no jobs as we know them today. People generally lived hand to mouth. Research indicates that not only would ADHD individuals be able to live free from these constrictions, they would be healthier than everyone else doing it (Eisenberg, 2008). Evidence suggests that those with ADHD can not nor will not adapt to what is most

certainly a social landscape that has become unnatural. Humanity has departed from nature and become bureaucratic.

Three questions were raised in the introduction. The first of these is: how has society, and particularly, the medical community changed to allow the medicalization of hyperactivity and social control of active children? Society has been moving in the direction of increased efficiency since the establishment of the bureaucracy. Weber wrote about this nearly a century before Kittrie noted the development of what he called the therapeutic state. This therapeutic state is a mechanism for controlling the population under the bureaucratic society Weber described. This society has enlisted the help of the medical community in controlling deviant individuals and populations who have not violated cultural norms to the point their behavior is deemed criminal but remains disruptive.

The medical community has assimilated behaviors that once were not deemed medical. As the sale of drugs became more profitable, the medical community became more consumer-driven. Pharmaceutical companies market to medical professionals on a regular basis, and often market to patients through direct or indirect advertisement. With the advent of self-help books like *Driven to Distraction*, people with no medical knowledge often diagnose themselves then seek a professional to confirm it. This is not altogether discouraged by the authors, who often are mental health professionals themselves, or by the drug companies who manufacture the treatment. Both of these groups profit. Teachers and school officials are now playing an increasingly significant role in diagnosing children with ADHD. It is not uncommon for schools to receive information packets or hold meetings where ADHD is discussed. This effectively leaves

untrained non-medical individuals to recognize symptoms and plant the seeds of a label in children.

The second question posed in the introduction was: how has the continuing diagnosis of hyperactivity in children expanded to include attention deficit hyperactivity disorder in both children and adults? This can be attributed to a number of factors. Previous to the 1980s there was no serious widespread discussion of ADHD adults. This expansion seems to be patient driven. The grassroots organization CHADD has been very active in its expansion. Children diagnosed with this disorder grew up and realized they did not change. Charismatic individuals like Hallowell and Ratey also promoted the idea. There was also no small help from drug companies. They provided funds to organizations like CHADD to promote the ADHD diagnosis. Adult ADHD effectively widens their consumer base. Further, the *DSM* increasingly broadened the diagnosis; first by changing nouns. Over the years, however, they gave more examples of adult oriented activities in relation to ADHD. Finally, the document explicitly expanded the disorder, including the heretofore unaffected portion of the population.

The third question posed was, what forces are behind the continuing diagnosis and why? The expansion and maintenance of the ADHD diagnosis could not have been possible had American society not been in a constant move towards streamlined efficiency for centuries. The inclusion of adults in the ADHD category was good for society and continues to be so. The treatment of such individuals with stimulants not only provides a quick and efficient answer to a societal problem, but it increases productivity and solidarity. Schools and offices profit by having more obedient students and workers. The drug and medical industry profit in the strictest sense as well; they

make millions of dollars a year on the diagnosis. ADHD has become an acceptable disorder to have. The term is fast losing its stigma so it is favorable above other diagnoses. It has been popularized to the point that some people who have never been diagnosed claim to have it. Lay people say things like “I think I have ADHD”. It has become a cultural landmark and firmly established itself in American slang. It has become the diagnosis *de jure* for those who have deviant behavioral problems. It is one of the top behavioral disorders in children; further, it is believed to exist when individuals react positively to stimulant medication, which is often easy to accomplish. Put simply, it is convenient.

There has been no definitive proof in over 100 years of study that behaviors associated with ADHD are actually based on defective brains. No child or adult can be diagnosed based on an impartial scientific test. An average of 1,000 articles are written on the subject every year, yet the *DSM* (2000) still claims that there are no biological tests to prove it exists. Even one of its most charismatic spokespersons, Russell Barkley (2000), acknowledges the fact that it could be a natural phenomenon, yet claims treatment is needed nonetheless. The treatment, however, looks more like a treatment for society, and the blight is 5-10% of society who think differently than everyone else.

Current society benefits from ADHD staying the mental disorder that it is. Untreated ADHD individuals are disruptive to modern bureaucracy. They do not stay in line. The do not sit in their seats. They do not strictly submit to authority. They say what they are thinking and they are free from social norms. ADHD individuals are creative and often think outside the box, and not always in ways that are economical or

profitable. Untreated, each one of these individuals is a wild card. Treated they fall in line with the norms and values of the larger society. The fact that any number of negative side effects to the individual may present is a minor concern when compared to keeping society streamlined. Potential dangers to individual persons simply do not account for much on the grand scale.

Further research into this area is needed. Thousands of medical and psychiatric studies are released every decade with mixed success and credibility. However, comparatively little research is being done from a sociological, anthropological, or historical perspective. Credible work has been done by Breggin, DeGrandpre, Diller and others; however it is not up-to-date and much has been about stimulant dangers. There is a recorded history of drug use on children for the purposes of social control. A more in-depth look at the history of this prior to and after the turn of the 20th century would be useful in putting this argument into a larger context. An inspection of the rates of ADHD diagnosis per-capita in high population areas may shed light on a connection between the 20th Century population explosion and the medicalization of deviance for social control. And a comparison of the medicalization of homosexuality and ADHD would explore the political nature of unproven brain disorders and explain how ADHD can become demedicalized. There is plenty of room for growth in ADHD social research.

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