

Mid-American Review of Sociology

- Silver, H.
1979 "Rethinking Arts and Crafts: A Response to Becker." *American Journal of Sociology* 84(6):1452-1457.
- Slivka, R.
1979 "Affirmation: 1979." *American Craft* 39(3):50-51.
- Smith, C.
1981 *A Search for Structure*. Cambridge, MA: MIT Press.
- Watt, I.
1957 *The Rise and Fall of the Novel: Studies in Defoe, Richardson, and Fielding*. Los Angeles: University of California Press.
- Yankelovich, D.
1981 "New Rules in American Life: Searching for Self-Fulfillment in a World Turned Upside Down." *Psychology Today* 1-15(4): 35-91.

ECONOMIC TRANSFORMATIONS AND THE
PROCESSING OF HYPERACTIVE SCHOOL CHILDREN*

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Hyperactive behavior as a medically defined social problem is examined, in order to emphasize the role of political economy as it applies to social problems research. Much of the research on hyperkinesis tends to adopt an ahistorical, symbolic interactionist perspective and fails to account for the structural bases of social control practices. Structural (economic and legal) determinants are examined which influenced the emergence and development of hyperactive behavior as a social problem. The implications for other medically defined social problems are suggested.

The medicalization of deviant behavior and the development of medically defined social problems are important areas of concern in social problems research (Conrad and Schneider, 1980). However, much of the social problems research adopts a labeling, symbolic interactionist perspective without addressing more fundamental issues of political economy and its relation to social control practices (Spector and Kitsuse, 1977; Schur, 1980). For example, Spector and Kitsuse (1977:75) offer the following definition of social problems: "*the activity of individuals or groups making assertions or grievances and claims with respect to some putative conditions*" (emphasis in original). They admonish social problems researchers not to impute motives to interest groups, but to study claims-making activity itself.

A limitation of this perspective is that social problems research remains at the level of investigating ideological assertions. Becker's (1963) concept "moral entrepreneurs"—reformers who couch their claims about social conditions in moral terms to

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effect rule changes—is relevant here. While economic and legal transformations shape the timing and course of interest group activity and social control practices, social problems research tends to focus on the ideological claims of moral entrepreneurs. Warren (1981) notes that Becker and others miss an important point about moral entrepreneurs. These interest groups are indeed “entrepreneurs”—they have material, as well as moral, interests at stake in struggles to define social problems. Becker’s term, in other words, needs to be addressed more literally.

Political economy refers to the study of power relations and the structure of interests which are grounded in particular production arrangements (Spitzer, 1975). Political economy considers the processes by which power relations and interests impact the action of groups, such as organizations, classes, governments, and of individuals. This approach also examines the role of ideology in the expression of power and interests through the establishment of rules, norms, values and social control practices.

From this perspective the enterprising work of interest groups emerges in a legal, economic and historical context that shapes the development of social problems. Without taking into account the economic factors in the politics of deviance and social control, we are left with a “great group” theory of social problems. Instead, this paper suggests that interest groups are successful or unsuccessful due to sociohistorical and economic conditions that provide a context in which these interest groups operate.

This paper illustrates the relationship between political economy and the emergence of social problems by examining the processing of hyperactive school children through an analysis of the structural factors that led to the emergence and development of hyperactivity as a medically defined social problem. Once the deviance category “hyperactive behavior” emerged, an organizational structure developed within which professionals could identify and treat these deviant children. The “natural history” of hyperactive school behavior is located in a structural and historical context and connections between medical definitions of hyperactive behavior and economic factors are investigated.

THE EMERGENCE OF HYPERACTIVE BEHAVIOR AS A MEDICALLY DEFINED SOCIAL PROBLEM

Hyperactivity¹ is the single most common behavioral symptom seen by childwork professionals (Ross and Ross, 1982; Whalen and Henker, 1980). Accurate prevalence rates are difficult to ascertain,² but estimates range from a conservative one to two percent of elementary public school children—about one-half million (Sandoval et al., 1980)—to an unlikely 20 percent—about seven million elementary public school children (Huessy, 1973). The National Center for Education Statistics (1978) places the prevalence rate around five percent, or approximately 1.5 million school children.

Hyperactive behavior was “discovered” in the 1960s; hyperkinesis became a widely recognized and employed medical diagnostic category and hyperactive behavior emerged as a new form of deviant behavior and as a medically defined social problem (Schrag and Divoky, 1975; Conrad, 1976). Commentators on the medicalization of hyperactive behavior frequently adopt a “natural history” approach to study this form of child deviance. Schrag and Divoky (1975), Conrad (1976) and Conrad and Schneider (1980) investigate the activities of interest groups, such as pharmaceutical company representatives, medical professionals, and members of educational and mental health associations, which contributed to the public acceptance of hyperactive behavior as a medically defined social problem in need of remedy. While interest group activity is certainly an important area of analysis in social problems research, investigations of interest group activity often do not adequately address the economic context in which this activity emerges and develops. Moreover, legal changes—and often the unanticipated consequences of legal changes (Merton, 1957:73-138)—may significantly influence the emergence and development of social problems. This paper suggests that social problems research generally and research on hyperactive behavior in particular frequently does not account for the influence of economic factors and legal changes on social problems conflicts. Regarding hyperactive behavior, this paper challenges Conrad’s (1976) interpretation of the emergence and development of hyperactive

behavior as a social problem and offers an alternative account by focusing on economic determinants and legal changes.

In his discussion of the "discovery" of hyperkinesis, Conrad (1976) poses two particularly important sociological questions: how did hyperactive behavior come to be seen as a medical problem, and why did it emerge as medical trouble when it did. To answer these questions, Conrad (1976:12-17) cites three "social factors": (1) the psychopharmaceutical revolution of the late 1950s, (2) developments within the profession of medicine, and (3) government actions. The psychopharmaceutical revolution led to the synthesis and availability of psychotropic drugs. Ritalin, for example, the most widely prescribed drug for hyperkinesis, was synthesized in 1959 and won Food and Drug Administration approval for use in 1961.

Within the profession of medicine, child psychiatry emerged as a field of interest and respectability. Medical professionals began to use available psychotropic drugs to remedy psychiatric disorders and this practice extended to use in child patients.

Government support of the medical definition of hyperactive behavior developed during the 1960s. While the Gallagher (1970) Congressional subcommittee on government operations concluded that caution needed to be exercised when prescribing drugs for school children, the evidence suggests that the federal government approved of the medical definition of hyperactivity and drug therapy (Clements, 1966; Freedman, 1971; National Institute of Mental Health, 1978).

Conrad (1976) argues that in order to employ medical social control technologies (e.g., psychoactive drugs), trouble must be understood from a medical perspective. In other words, the diagnostic category (hyperkinesis) must be available to rationalize medical therapy (drug treatment). Secondly, hyperactive behavior emerged as a new deviance category in the 1960s since both the diagnostic label and the control technology were simultaneously available. In addition, "the increased interest in child psychiatry provided a favorable background for the dissemination of knowledge about this new disorder" (Conrad, 1976:15).

Conrad's interpretation of the evidence suggests that the psychopharmaceutical revolution, developments within the

profession of medicine, government action, as well as the enterprising work of "moral entrepreneurs" (Becker, 1963) led to the emergence and development of hyperactive behavior as a social problem, medically conceived. There is, however, evidence to suggest more fundamental reasons for the origin and development of hyperactive behavior as a social problem at that particular time.

Conrad's account of why hyperactive behavior emerged as a social problem during the 1960s is traced in part to the simultaneous existence of a control strategy—drug therapy—and of the medical diagnostic category—which according to Conrad was named by Maurice Laufer in 1957. Conrad (1976:15) notes "to justify the treatment there had to be a medical label."

One flaw in Conrad's argument is the evidence that Laufer (1957) was not the first medical researcher to identify the diagnostic category. Indeed, hyperactive behavior was first clinically described by George Still, a British pediatrician, in 1902.³ Between 1902 and 1957, hyperactive behavior received a good deal of attention in medical literature in the United States and England (Tredgold, 1908; Hohman, 1922; Ebaugh, 1923; Strecker and Ebaugh, 1924; Smith, 1926; Doll et al., 1932; Kahn and Cohen, 1934; Childers, 1935; Strauss and Lehtinen, 1947; Strauss and Kephart, 1955). Medical labels developed during this period, such as Smith (1926) and later Doll et al.'s (1932) term "minimal brain damage," Kahn and Cohen's (1934) term "organic drivenness," and Strauss and Kephart's (1955) term "normal brain injury." The medical conception of hyperactive behavior, then, was extant well before 1957 and certainly before Charles Bradley noted the "paradoxical effect" of stimulants on children in 1937.⁴

Laufer et al.'s (1957) description of "hyperkinetic impulse disorder" was significant not because it was the first characterization of hyperactive behavior as medical trouble, but because it received a great deal of attention among educators (Schrag and Divoky, 1975; Ross and Ross, 1982). By the 1960s, hyperactive behavior emerged as a category of medical trouble with implications for classroom management strategies. Psychoactive drugs began to be used in troublesome school children since former management practices were becoming unfeasible (Conrad, 1976; Conrad and Schneider, 1980). This shift in classroom social

control practices reflects economic transformations and legal changes that influenced educational policy and practice.

Although interest group activity was a factor in the emergence of "hyperactivity" as a social problem in the period after World War II, the widespread acceptance of this form of child deviance occurred when it did because of the education system's response to newly identified needs of the political economy. In particular, the demand for well-trained technical workers increased dramatically during the post-World War II period. Furthermore, the need for educational social control at the least possible cost (social and economic) to the state led to the medicalization of troublesome school behavior in which drug therapy became the treatment of choice.

ECONOMIC AND LEGAL TRANSFORMATIONS

The institution of schooling was shaped by transformations in the labor market during the late 1950s. The post-World War II technological (computer) revolution—the so-called "second industrial revolution"—began to require technological education for school children, the future workers. The future of education was revealed in policy decisions that stressed the importance of an educated populace, and emphasis was on technological areas in education—especially mathematics and sciences. Educated children were considered a resource in the newly emerging high technology labor market.

The new development in educational policy is often attributed to the launching of Sputnik by the Soviets in 1957 and the advent of the space race. However, computer technology was well established by 1957 and the technology revolution was already well underway.⁵

Labor market demands for scientists and engineers burgeoned during the 1960s. The education system geared schooling to meet the demands for a technically sophisticated labor force—the introduction of "New Math" is but one example.

As evidence for the changing educational needs of the political economy, the federal government increased support for high technology research and development through the 1960s and 1970s. Between 1960 and 1970, federal funds for research and development in high technology doubled, from \$8 billion in

Table 1

Scientists/Engineers Employed
in High Technology Sector of the Economy
(in thousands)

1961	425.7
1965	494.5
1970	546.5

Source: National Science Board, 1982:250.

1960 to \$15 billion in 1970; and by 1979, the figure reached \$29 billion—in constant 1979 dollars (National Science Board, 1982:258).

The United States' foreign trade also began to rely heavily on technological products. Indeed, the United States' trade balance was enhanced by technological products during the 1960s and 1970s. To the extent that the state must perform the

Table 2

United States Trade Balance for Technology Intensive
and Nontechnology Intensive Industries (1960-1979)

(in billions)

	Technology Intensive Industries	Nontechnology Intensive Industries
1960	\$ 5.9	-\$.2
1965	\$ 8.2	-\$ 2.0
1970	\$11.7	-\$ 8.3
1979	\$39.3	-\$34.8

Source: National Science Board, 1982:234.

function of providing conditions for the accumulation of capital (O'Connor, 1973), the federal government was active in supporting technological industries. The state made federal funds available for research and development and transformed educational policies to train future workers in technological industries.

During the 1960s, the emergence of hyperactivity as a social problem reflected contradictions of a capitalist economic system. As more and more "baby boom" children entered school, they needed to be managed in the classroom during a time of high achievement expectations and expectations for their future position in a technologically sophisticated labor market. While the pupil to teacher ratio did not change appreciably during the 1960s—the ratio was 27.1:1 in 1954 and 25.4:1 in 1968 (National Center for Education Statistics, 1981:15)—other economic and educational changes significantly transformed the character of conventional education.⁶

Federal expenditures for public education grew rapidly during the 1960s. These increased expenditures reflect the federal government's commitment to improving education and making schooling responsive to labor market demands and to assist individual states to expand their school systems to accommodate a larger and growing school population.

Table 3

Federal Expenditures for Elementary and Secondary Education

(in millions)

1950	\$ 155.9
1960	\$ 700.0
1965	\$2100.0
1970	\$3400.0

Source: Advisory Committee on Intergovernmental Relations, 1981:2.

The population of elementary public school students grew from 23.1 million in 1955 to 27.7 million in 1960, and by 1970, there were 32.6 million elementary students enrolled in public schools (National Center for Education Statistics, 1980:5).

The federal government's concern to develop an educated populace led to a greater democratization of education. A greater number of children gained access to public education and they were coming from more diverse backgrounds than in the past (Advisory Committee on Intergovernmental Relations, 1981). Consequently, teachers faced new management issues during the 1960s and educators began to address these issues seriously (Shane and Shane, 1969; National Education Association, 1979).

To be sure, not all students will succeed in school. It is noteworthy that most students identified as hyperactive are middle class children (Schrag and Divoky, 1975; Conrad and Schneider, 1980). Working class students are more likely to receive a delinquent or mentally handicapped label. While this process suggests that a medical label is less stigmatizing than a criminal label or than a label of being retarded, there are economic factors operating as well. The educational system operates to track students into future positions in the labor market (Rosenbaum, 1976). Middle class students are likely to be managerial or professional workers; working class students will likely occupy working class positions in the labor market (Rubin, 1976). The tracking system in schools efficiently and subtly effects this transition from school to the labor market (Bowles and Gintis, 1976). But what about the cases where middle class children are viewed as troublesome in the classroom? When achievement expectations for middle class children are great, children must stay in school to do well. When they prove troublesome, they must be managed effectively. Medical control allows students to remain in the classroom while management is effected. The employment of medical control strategies to manage troublesome school children developed since traditional methods of social control in the classroom were rendered unfeasible, economically and legally.

Classroom teachers are drawn predominantly from the middle class, represent middle class values to students and devote greater time, energy and attention to middle class students

(Bowles and Gintis, 1976; Rubin, 1976). These interactions subtly operate to reproduce the class structure, system and class values. Undoubtedly, middle class parents encourage a medical definition and solution to troublesome school behavior rather than accept stigmatizing labels such as mental disability, for their children. After all, disciplinary problems implicate parents or teachers as inadequate socialization figures, but the diagnosis of "hyperactivity" is backed by the social power and prestige of the medical profession and no one is held culpable for medical trouble.

The Gault Decision

The Gault decision by the United States Supreme Court in 1967, which guaranteed juveniles the right to due process, made the expulsion or suspension of students more difficult. As a consequence, school officials began to adopt new management strategies. The number of students in public elementary schools identified as learning disabled for behavioral reasons rose from 99,000 in 1967 to well over 200,000 by 1970 (Dunn, 1973; United States Department of Education, 1980:19). It seems unlikely that this dramatic increase is attributable to any real increase in the phenomenon—but is more likely the result of the Gault decision and the deployment of a new management etiology. The consequences of the Gault decision were to shift classroom management from banishment to therapeutic control.

The medical, therapeutic response to troublesome school children proved efficacious for a number of reasons. School officials need to keep students—especially middle class students—in the classroom to educate them to the demands of the labor market. Drug therapy allows management to be effective in the classroom. Secondly, the medical definition of hyperactive behavior is less stigmatizing than alternative labels, such as being morally incorrigible or mentally handicapped. Thirdly, medical ideology suggests an optimistic, humanistic and scientific approach to deviance while viewing the child deviant as not responsible for his or her troublesome behavior (Conrad and Schneider, 1980). Therapeutic control replaces the concept of punishment. Lastly, and perhaps most importantly, drug therapy is a relatively inexpensive form of control. It costs about 25 cents

per day to provide a child with pediatric stimulants; and parents pick up the medical cost.

The political economic consequences of drug therapy become apparent when one considers that many forms of treatment have been proposed for hyperactive school children, such as special classroom environments, sophisticated special education teaching techniques, and school therapy programs, to name only a few (Knights and Bakker, 1980; Whalen and Henker, 1980). What these proposals share is that they are costly. Since the 1960s, drug therapy has remained the treatment of choice for hyperactive behavior (Safer and Allen, 1976). This is not because drug therapy is necessarily more effective than alternative treatments; it is, however, cheaper.

Processing Hyperactive School Children: Recent Developments

The development of hyperactive behavior as a social problem since the 1960s has been shaped by emergent economic factors and further legal changes. In 1975, Congress passed the Education for All Handicapped Children Act (PL 94-142). The Act mandates that school age handicapped children be guaranteed "a free and appropriate education." The legislation specifies that a multidisciplinary team of specialists evaluate any child presumed to have special needs and to determine the most appropriate educational setting for that child. Additionally, any child identified as handicapped must have an individualized education program (IEP) developed for him or her. The schools are to notify parents of the identification findings and to include parents in the decision-making process regarding their child's treatment program. The law further mandates that the handicapped child be educated in "the least restrictive environment," and to the maximum extent feasible, each handicapped child should be included in the regular classroom with nonhandicapped children. While "mainstreaming," or including students with special needs in the regular classroom, is not explicitly mandated by PL 94-142, it is certainly implied, and schools have aimed at mainstreaming handicapped children as much as possible (United States Department of Education, 1980).

There are, in addition, a number of important fiscal considerations written into the act. Whalen and Henker (1980:352-353) note:

Each participating state is slated to receive a supplement of 40 percent of the national average per pupil expenditure for each student being served. There is a ceiling of 12 percent on the number of students who can be considered handicapped and, currently, children with learning disabilities cannot exceed 1/6 of the total.

The protections of the federal legislation extend to every qualifying child whether or not that child is counted (by the individual state) for fiscal purposes.

While a state may choose not to participate in the fiscal aspects of PL 94-142, all states currently are participating. Since states must provide services to handicapped children anyway—under the provisions of an earlier act, PL 93-112—it is in the interests of the states to receive federal assistance monies.

Are hyperactive school children handicapped and therefore covered by the provisions of PL 94-142? The answer is “probably”: or more to the point, hyperactive school children have been processed under the provisions of PL 94-142. To the extent that a child has a specific learning disability and the child is in need of an individualized education program, that child is handicapped. “Attention Deficit Disorder (ADD)” is the official diagnosis established by the American Psychiatric Association (1980) for which hyperactivity is the prominent symptom. ADD qualifies as a learning disorder. PL 94-142 defines a learning disability as a disorder that “may manifest itself in imperfect ability to listen, think, speak, write, spell or do mathematical calculations” (Public Law 94-142, 1975: Sect b, 4). It is interesting to note that the medical diagnosis, ADD, maintains the concept of medical etiology while shifting emphasis toward the educational consequences of the disorder. It is in the interests of schools to adopt the medical view of hyperactivity since federal funding for hyperactive school children does not apply to disabilities “that result from emotional disturbance, or from environmental, cultural or economic disadvantage” (Whalen and Henker, 1980:352). The medical view of troublesome school behaviors is supported in practice since educational program funding is tied to the medical view.

Unanticipated Consequences of Legal Change

The fiscal politics of PL 94-142 are complex. The federal government is to contribute 40 percent of the cost to educate hyperactive school children under the provisions of the law. This requires individual states to pick up the remaining 60 percent of the cost. In the wake of the growing fiscal crisis, states have been hard-pressed to meet the increased expenditures mandated under the act. Moreover, in fiscal year 1979, the federal government actually contributed only 12.5 percent of the cost to educate handicapped children. The average annual expenditure per pupil was \$1,738. The average federal allocation was only \$218 in 1979 (United States Department of Education, 1980:20).

The provisions of PL 94-142 contributed to an increased number of school children being diagnosed as hyperactive. Children, who, in the past, escaped diagnostic labeling, are being drawn into special programs since a child must be identified to be treated—and to be counted for fiscal purposes (Whalen and Henker, 1980:358).

The implementation of PL 94-142 would seem to reduce the number of school children on pediatric stimulants since emphasis is placed on educational intervention and parental participation. This does not appear to be the case. School districts are identifying hyperactive school children as required by law. However, educational programs for hyperactive school children are not being adequately developed. To decrease class size, employ teacher aides, train special education teachers and develop special education programs are costly. States are heavily burdened with education expenditures and to increase tax revenues during a time of taxpayer revolt is not a likely option. The federal government contributed over \$20 million in fiscal year 1980 to train special educators, but states must pay their salaries. An estimated 64,000 new special education teachers and over 52,000 support staff are needed to meet the requirements of PL 94-142 (United States Department of Education, 1980:7-8). At present only five states effectively monitor compliance with the provisions of PL 94-142.

All of these economic considerations contribute to a continued reliance on drug therapy to treat hyperactive school children. Indeed, the relationship between medical control and classroom management was strengthened in 1980 when the

American Psychiatric Association (1980) published its *Diagnostic and Statistical Manual (3ed)* or *DSM-III*. The American Psychiatric Association (1980) termed the hyperactive behavior pattern "Attention Deficit Disorder (ADD)." The *DSM-III* states that the "essential features are signs of developmentally inappropriate inattention, impulsivity, and hyperactivity" (American Psychiatric Association, 1980:41). The *DSM-III* adds that "in only 5% of the cases is Attention Deficit Disorder associated with a diagnosable neurological disorder" (American Psychiatric Association, 1980:42). In other words, there is no clinical evidence to support the diagnosis in the vast majority of cases. To diagnose ADD, the clinician must rely on behavioral reports. The American Psychiatric Association advises:

signs must be reported by adults in the child's environment. Because the symptoms are typically variable, they must not be observed directly by the clinician. . . . When the reports of teachers and parent conflict, primary consideration should be given to the teacher reports because of greater familiarity with age-appropriate norms" (American Psychiatric Association, 1980:43).

This gives teachers, who are not trained medical professionals, the pivotal role in the process.⁷ Teachers, concerned as they are about classroom management issues, are required by law to identify hyperactive students, and frequently do not adequately appreciate the ill effects of stimulants on children (Robins and Bosco, 1973). Hence, teachers often do not hesitate to suggest to parents that they refer troublesome school children to physicians. Since they have been professionally socialized to view drug therapy as the treatment of choice, they are generally unaware of alternative strategies to deal with troublesome school children, in part because few other strategies are actually available at this time (Ross and Ross, 1982). Reciprocally, physicians must rely on teacher reports to cast a medical diagnosis.

SUMMARY

Researchers studying the emergence of hyperactive behavior as a medically defined social problem have emphasized the

role of the psychopharmaceutical revolution of the 1950s and the enterprising work of "moral entrepreneurs." While these factors are important, they must be set in an economic and legal context. Economic transformations during the 1950s that increased demand for technically sophisticated future workers led to shifts in classroom management strategies. Traditional control of school children became unfeasible, legally and fiscally, and medical social control emerged as a less expensive control strategy. Since the 1960s, the development of hyperactive behavior as a medically defined social problem has been shaped by economic factors, such as the intensifying fiscal crisis, and by further legal change, such as PL 94-142 and the recently developed diagnostic criteria for ADD from the American Psychiatric Association. These economic and legal determinants underlie the formation and evolution of medical strategies to control troublesome school children, and these factors provided the context in which interest group activity emerged.

Clignet (1981) observes that "natural history" investigations in social problems research tend to emphasize the "generic traits" common to social problems without appreciating the rich sociohistorical variability which characterizes the development of social problems. Clignet (1981:291) writes: "The theoretical search for the generic properties of social problems often tends to arbitrarily minimize the spatial and historical variability of their pattern." In comparison, it is only recently that hyperactivity has come to be treated as a social problem in Western Europe (Knights and Bakker, 1980).

A number of authors have observed that medical social control is here to stay and is expanding its jurisdiction. Illich (1976) discusses the "medicalization of life," Kitterie (1971) notes "the coming of the therapeutic state," and Pitts (1968) argues that medical control will become the principal form of social control. While medicalization is growing, there are also indications of demedicalization (Fox, 1977; Conrad and Schneider, 1980). Rather than assume that medical control is here to stay, it is more useful to investigate the political economy of social control. Where medical strategies are cheaper, social control will tend to be medicalized. If the cost of medical services do not increase productivity or do not lead to cost effective results, alternative practices will tend to develop (Doyal, 1981).⁹

In sum, the evidence presented in this paper suggests that the emergence and development of social problems must be located in a context of the political economy of social control. The enterprising work of interest groups and social control practices are in turn shaped by these structural, legal and economic factors.

FOOTNOTES

1. "Attention Deficit Disorder (ADD)" is the medical/psychiatric diagnostic label; "hyperactivity" is a behavioral symptom of ADD (American Psychiatric Association, 1980). ADD was the diagnostic label adopted by the American Psychiatric Association (APA) in its *Diagnostic and Statistical Manual (3ed)*, published in 1980. The *Diagnostic and Statistical Manual (2ed)*, published in 1968, used the diagnostic label "Hyperkinetic Reaction of Childhood," or "Hyperkinesis." Other labels associated with hyperactive behavior include "minimal brain dysfunction (MBD)," "Hyperkinetic Behavior Syndrome," and "minimal cerebral disorder," to name only a few. Clements, in 1966, identified 39 terms associated with hyperactive behavior.
2. National prevalence rates for ADD are not available. There have been local epidemiological studies on ADD (Cf. Sandoval et al., 1980). However, it is difficult to generalize from these local studies to national prevalence rates. In part the difficulty in gathering accurate data stems from ambiguities surrounding the term "hyperactivity." Technically, only physicians may cast an official diagnosis. Yet, school officials may label a child "hyperactive," take management action, and never refer the child to a physician. Or, the child may be referred to a physician, not receive a diagnosis, and still be labeled "hyperactive" in the school setting.
3. Still observed that children suffering from brain damage as a consequence of encephalitis or perinatal insult exhibited hyperactive behavior. Later, physicians observed hyperactive behavior in children who did not suffer from known brain damage. The dominant etiological explanation assumed brain damage in hyperactive children even if the neurological damage was not demonstrable.
4. Bradley observed that stimulants have a sedative effect on children which is the opposite effect found in adults. Hence the term "paradoxical effect." There is a controversy over the evidence; some researchers suggest that stimulants have a similar effect in children as in adults—stimulants in children cause children to focus on tasks at hand and so they *seem* more sedate.

5. For example, the average computer system cost per 100,000 calculations was \$1.26 in 1952. By 1960, the cost was down to \$.65, and in 1970, it was \$.01 per 100,000 calculations (Office of Technology Assessment, 1981:120).
6. While student enrollments in elementary public school began to decline in 1971, the pupil to teacher ratio began to decline in the 1960s—from a high of 27.7:1 in the mid-1950s, the ratio fell to 25.4:1 by 1968, and in 1978, the ratio was 21.3:1 (National Center for Education Statistics, 1981:96). This decline in student-to-teacher ratio would seem to ease classroom management concerns. However, there was a concomitant decline, beginning in the early 1970s, in the number of support staff (i.e., teacher aides) available for classroom work. The fiscal crisis made it largely unfeasible for states to employ aides except in certain special education settings (United States Department of Education, 1980).
7. While teachers cannot legally cast a medical diagnosis, teachers are the most likely audience in a school child's social world to label the child "hyperactive" and to suggest referral to a physician. Teachers are ten times more likely than parents to identify a child as "hyperactive." This is especially important to consider since physicians rely heavily on teacher reports to cast a medical diagnosis.
8. Interestingly, Western Europe is undergoing a high technology revolution that the United States experienced some 15 or 20 years ago. This is especially true in Western Germany where high technology productivity is growing more rapidly than in the United States (National Science Board, 1982); and techniques developed in the United States for identifying and treating hyperactive school children are being imported by some Western Europe countries (Eichelseder, 1978).
9. The demise of prison therapeutic rehabilitation programs, for example, can be traced to the cost ineffectiveness of therapeutic control in the prison system.

REFERENCES

- Advisory Committee on Intergovernmental Relations
1981 Intergovernmentalizing the Classroom. Washington, D.C.: U.S. Government Printing Office.
- American Psychiatric Association
1968 *Diagnostic and Statistical Manual (2ed)*. Washington, D.C.: American Psychiatric Association.
1980 *Diagnostic and Statistical Manual (3ed)*. Washington, D.C.: American Psychiatric Association.

- Becker, H.
1963 *Outsiders*. New York: Free Press.
- Bowles, S. and H. Gintis
1976 *Schooling in Capitalist America*. New York: Basic Books.
- Childers, A.
1935 "Hyperactivity in Children Having Behavior Disorders." *American Journal of Orthopsychiatry* 5:227-243.
- Clements, S.
1966 *Task Force One: Minimal Brain Dysfunction in Children*. Washington, D.C.: U.S. Government Printing Office.
- Clignet, R.
1981 "Madam Bovary and Lady Chatterley's Lover as Social Problems: The 'Natural History' of Immoral Novels." *Social Problems* 28(3):290-307.
- Conrad, P.
1976 *Identifying Hyperactive Children*. Lexington, MA: Lexington Books.
- Conrad, P. and J. Schneider
1980 *Deviance and Medicalization*. St. Louis: Mosby.
- Doll, E., W. Phelps and R. Melcher
1932 *Mental Deficiency Due to Birth Injuries*. New York: Macmillan.
- Doyal, L.
1981 *The Political-Economy of Health*. Boston: South End Press.
- Dunn, L.
1973 "An Overview." Pp. 3-62 in L. Dunn (ed.), *Exceptional Children in Schools* (2ed). New York: Rinehart and Winston.
- Ebaugh, F.
1923 "Neuropsychiatric Sequelae of Acute Epidemic Encephalitis in Children." *American Journal of Diseases of Children* 25:89-97.
- Eichelseder, W.
1978 "The MBD/LD Problem as it is Seen in Munich." Pp. 237-250 in L. Oettinger and L. Majovski (eds.), *The Psychologist, the School and the Child With MBD/LD*. New York: Grune and Stratton.
- Fox, R.
1977 "The Medicalization and Demedicalization of American Society." Pp. 9-22 in J. Knowles (ed.), *Doing Better and Feeling Worse*. New York: Norton.
- Freedman, D.
1971 *Report on the Conference on the Use of Stimulant Drugs in the Treatment of Behaviorally Disturbed Young School Children*. (Office of Child Development: Department of Health, Education and Welfare) Washington, D.C.: U.S. Government Printing Office.

- Gallagher, C.
1970 "Federal Involvement in the Use of Behavior Modification Drugs on Grammar School Children." (Hearing: Subcommittee on Government Operations, U.S. House of Representatives, Ninety-first Congress) Washington, D.C.: U.S. Government Printing Office.
- Gault, In re
1967 387 U.S. 1.
- Hohman, L.
1922 "Post-encephalitic Behavior Disorders in Children." *Johns Hopkins Hospital Bulletin* 33:372-375.
- Huessy, H.
1973 "Minimal Brain Dysfunction in Children." *Drug Therapy* (September):52-63.
- Illich, I.
1976 *Medical Nemesis*. New York: Pantheon.
- Kahn, E. and L. Cohen
1934 "Organic Drivenness." *New England Journal of Medicine* 210:748-756.
- Kitterie, N.
1971 *The Right to Be Different*. Baltimore: Johns Hopkins University Press.
- Knights, R. and D. Bakker (eds.)
1980 *Treatment of Hyperactive and Learning Disordered Children*. Baltimore: University Park Press.
- Laufer, M., E. Denhoff and G. Solomons
1957 "Hyperkinetic Impulse Disorder in Children's Behavior Problems." *Psychosomatic Medicine* 19:38-49.
- Merton, R.
1957 *On Theoretical Sociology*. New York: Free Press.
- National Center for Education Statistics
1978 *Statistical Trends in Education: 1966/1967-1986/1987*. Washington, D.C.: U.S. Government Printing Office.
1980 *Statistics of Public Elementary and Secondary Day Schools (1978)*. Washington, D.C.: U.S. Government Printing Office.
1981 *Revenues and Expenditures for Public Elementary and Secondary Education 1977-1978*. Washington, D.C.: U.S. Government Printing Office.
- National Education Association
1979 *NEA Reporter*. (October).
- National Institute of Mental Health
1978 *Bibliography on the Hyperkinetic Behavior Syndrome*. Washington, D.C.: U.S. Government Printing Office.
- National Science Board
1982 *Science Indicators 1980*. Washington, D.C.: U.S. Government Printing Office.

- O'Connor, J.
1973 *The Fiscal Crisis of the State*. New York: St. Martin's Press.
- Office of Technology Assessment
1981 *Computer-Based National Information Systems*. Washington, D.C.: U.S. Government Printing Office.
- Pitts, J.
1968 "Social Control" in D. Sills (ed.), *International Encyclopedia of Social Sciences* (Vol. 14). New York: Macmillan.
- Public Law 93-112
1973 "The Vocational Rehabilitation Act (Amendments)." *Congressional Record*.
- Public Law 94-142
1975 "The Education for All Handicapped Children Act." *Congressional Record*.
- Robins, S. and J. Bosco
1973 "Ritalin for School Children: The Teachers' Perspective." *Journal of School Health* 43:624-628.
- Rosenbaum, J.
1976 *Making Inequality*. New York: Wiley.
- Ross, S. and D. Ross
1982 *Hyperactivity: Research, Theory and Action*. New York: Wiley.
- Rubin, L.
1976 *Worlds of Pain*. New York: Basic.
- Safer, D. and R. Allen
1976 *Hyperactive Children*. Baltimore: University Park Press.
- Sandoval, J., N. Lambert and D. Sassone
1980 "The Identification and Labeling of Hyperactivity in Children: An Interactive Model." Pp. 118-132 in C. Whalen and B. Henker (eds.), *Hyperactive Children: The Social Ecology of Identification and Treatment*. New York: Academic Press.
- Schrag, P. and D. Divoky
1975 *The Myth of the Hyperactive Child*. New York: Dell.
- Schur, E.
1980 *The Politics of Deviance*. Englewood Cliffs, NJ: Prentice-Hall.
- Shane, H. and J. Shane
1969 "Forecast for the '70's." *Today's Education* 58(1):29-32.
- Smith, G.
1926 "Cerebral Accidents of Childhood and Their Relationships to Mental Deficiency." *Welfare Magazine* 17:18-33.
- Spector, M. and J. Kitsuse
1977 *Constructing Social Problems*. Menlo Park, CA: Cummings.
- Spitzer, S.
1975 "Toward a Marxian Theory of Deviance." *Social Problems* 22: 638-651.
- Strauss, A. and N. Kephart
1955 *Psychopathology and Education of the Brain Injured Child* (2ed). New York: Grune and Stratton.

- Strauss, A. and L. Lehtinen
1947 *Psychopathology and Education of the Brain Injured Child*. New York: Grune and Stratton.
- Strecker, E. and F. Ebaugh
1924 "Neuropsychiatric Sequelae of Cerebral Trauma in Children." *Archives of Neurology and Psychiatry* 12:443-353.
- Tredgold, C.
1908 *Mental Deficiency* (Vol. 1). New York: Wood.
- United States Department of Education
1980 *Second Annual Report to Congress on the Implementation of Public Law 94-142*. Washington, D.C.: U.S. Government Printing Office.
- Warren, C.
1981 "New Forms of Social Control." *American Behavioral Scientist* 24(6):724-740.
- Whalen, C. and B. Henker (eds.)
1980 *Hyperactive Children: The Social Ecology of Identification and Treatment*. New York: Academic Press.