

CLASSIFICATION IN MENTAL RETARDATION

Editor:

Herbert J. Grossman, M.D.

Contributors:

Michael J. Begab, Ph.D.
Dennis P. Cantwell, M.D.
James D. Clements, M.D.
Richard K. Eyman, Ph.D.
C. Edward Meyers, Ph.D.
George Tarjan, M.D.
Sue Allen Warren, Ph.D.

Production Editor:

Yvette Taylor, M.A.

Published by
American Association on Mental Deficiency
5101 Wisconsin Avenue, NW
Washington, DC 20016

The American Association on Mental Deficiency, founded in 1876, is a large national organization of professionals from many different disciplines who are concerned with mental retardation; its purposes include the development of a body of scientific literature about mental retardation and dissemination of information, as well as a variety of other activities on behalf of mentally retarded persons.

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Published by
American Association on Mental Deficiency
5101 Wisconsin Avenue, NW
Washington, DC 20016

Library of Congress Catalog Card Number: 83-8779
International Standard Book Number: 0-940898-12-8

Library of Congress Cataloging in Publication Data
Main entry under title:

Classification in mental retardation.

Includes index.

I. Mental deficiency—Classification. I. Grossman, Herbert J., 1923— II. Begab, Michael J. (Michael Jay), 1918— III. American Association on Mental Deficiency, [DNLM: 1. Mental retardation—Classification. WM 15 A509c] RC570.C515 1983 616.85'88'0012 83-8779
ISBN 0-940898-12-8

Printed in the United States of America

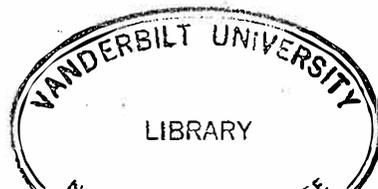


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the Stanford-Binet Intelligence Scale was in wide use to identify, classify, and plan for school children who were classified as retarded on the basis of this measure. The usefulness of these relatively brief, objective observations done in a standardized manner for predicting academic achievement led to the development of numerous other intelligence tests.

During the period from about 1920 to 1950, a number of workers (for example, Fernald, Edgar Doll, Porteus) became interested in the variability in everyday functioning of retarded persons of the same mental age or IQ. Porteus proposed a test of "planfulness," and Doll developed what he called "a measure of social maturity" (now called "adaptive behavior"). In addition, it became obvious that IQ was not immutable. After this was recognized, it became customary to be cautious in making long-term predictions from results of intelligence tests alone, particularly for individuals who were functioning in the upper range of retardation. The trend was toward emphasizing current level of intellectual and adaptive behavior functioning, and since the publication of the 1959 AAMD manual, it has been customary to view mental retardation in terms of current level of functioning in both intelligence and adaptive behavior.

Both the ICD-9 and the DSM-III medical classification systems have adopted the definition of mental retardation that was published in the 1973 AAMD manual. Many state laws now include variations of the AAMD definition of retardation in either their laws or regulations. Public Law (PL) 94-142 and other federal legislation now recognize the AAMD definition. The 1983 definition, slightly modified for clarity, was introduced in the 1959 manual; it is intended to represent the current status of scientific knowledge in the field and the current thinking about social issues associated with mental retardation. One may anticipate that as both knowledge and philosophy change, there will be modifications reflecting such changes in future manuals.

CHAPTER 3

DEFINITIONS

DEFINITIONS

Mental retardation refers to significantly subaverage general intellectual functioning resulting in or associated with concurrent impairments in adaptive behavior and manifested during the developmental period.

General intellectual functioning is operationally defined as the results obtained by assessment with one or more of the individually administered standardized general intelligence tests developed for that purpose.

Significantly subaverage is defined as IQ of 70 or below on standardized measures of intelligence. This upper limit is intended as a guideline; it could be extended upward through IQ 75 or more, depending on the reliability of the intelligence test used. This particularly applies in schools and similar settings if behavior is impaired and clinically determined to be due to deficits in reasoning and judgment.

Impairments in adaptive behavior are defined as significant limitations in an individual's effectiveness in meeting the standards of maturation, learning, personal independence, and/or social responsibility that are expected for his or her age level and cultural group, as determined by clinical assessment and, usually, standardized scales.

Developmental period is defined as the period of time between conception and the 18th birthday. Developmental deficits may be manifested by slow, arrested, or incomplete development resulting from brain damage, degenerative processes in the central nervous system, or regression from previously normal states due to psychosocial factors.

Figure 1 illustrates possible combinations of measured intellectual functioning and adaptive behavior. Table 1 shows levels of mental retardation. Retardation may occur through physical

		MEASURED INTELLECTUAL FUNCTIONING	
		RETARDED	NOT RETARDED
ADAPTIVE BEHAVIOR	RETARDED	MENTALLY RETARDED	NOT Mentally Retarded
	NOT RETARDED	NOT Mentally Retarded	NOT Mentally Retarded

Figure 1. Possible combinations of measured intellectual functioning and adaptive behavior.

trauma or central nervous system deterioration at any age beyond the developmental period. When manifestations occur later, the condition is more properly classified as *dementia* (see DSM-III—Organic Mental Disorders).

The term *mental retardation*, as commonly used today, embraces a heterogeneous population, ranging from totally dependent to nearly independent people. Although all individuals so designated share the common attributes of low intelligence and inadequacies in adaptive behavior, there are marked variations in the degree of deficit manifested and the presence or absence of associated physical handicaps, stigmata, and psychologically disordered states. These variations greatly affect the needs of retarded individuals, the nature of the problems and services required by their families, and the burdens posed to community agencies and supportive systems. The differences are highly related to etiological factors, setting biologically damaged persons apart from psychosocially disadvantaged individuals on a number of significant dimensions: performance, problems, potentials, and prognosis.

Conceptually, the identifiable mentally retarded population can be divided into two distinct, albeit overlapping, groups. One group, approximately 25 percent of the total population, constitutes the "clinical types." Individuals of this group generally demonstrate

TABLE 1
LEVEL OF RETARDATION INDICATED BY IQ RANGE OBTAINED ON
MEASURE OF GENERAL INTELLECTUAL FUNCTIONING

Term	IQ range for level	(Code)
Mild mental retardation	50-55 to approx. 70	(317.0)
Moderate mental retardation	35-40 to 50-55	(318.0)
Severe mental retardation	20-25 to 35-40	(318.1)
Profound mental retardation	Below 20 or 25	(318.2)
Unspecified		(319.0)

Note. Levels of retardation are identified with the same terms as those used in previous AAMD manuals. The IQ ranges for levels are generally consistent with those suggested by the American Psychiatric Association in their *Diagnostic and Statistical Manual III*, but a narrow band at each end of each level was used to indicate that clinical judgment about all information, including the IQs, and more than one test, the information about intellectual functioning obtained from other sources, etc., is necessary in determining level. Thus, someone whose Full Scale Wechsler IQ is 53 might be diagnosed as either mild or moderate, depending on other factors, such as the relative difference in Performance and Verbal IQ or results of other tests. A psychometric explanation for the overlap in categories can be found in pages 56-57.

Procedure for determining level of retardation

1. Recognize that a problem exists (e.g., delay in developmental milestones).
2. Determine that an adaptive behavior deficit exists.
3. Determine measured general intellectual functioning.
4. Make decision about whether or not there is retardation of intellectual functioning.
5. Make decision about level of retardation as indicated by level of measured intellectual functioning.

some central nervous system pathology, usually have IQs in the moderate range or below, have associated handicaps or stigmata, and can often be diagnosed from birth or early childhood. Individuals of the second group, comprising the majority of the retarded population in the United States and elsewhere in the world, appear to be neurologically intact, have no readily detectable physical signs or clinical laboratory evidence related to retardation, function in the mildly retarded range of intelligence, and are heavily concentrated in the lowest socioeconomic segments of society. Often, they are identified as retarded only during the school years.

Neither of these groups represents "pure" entities. Children with central nervous system abnormalities can and do function within the mild range of intelligence, and many children from seriously disadvantaged homes are further handicapped by biological deficiencies. Nevertheless, the association of IQ and physical signs is very high, and the differentiation of the two groups by primary

etiological agents of biological versus social-environmental origin has meaningful implications for prevention, planning, and treatment.

The complex of symptoms subsumed under the term *mental retardation* overlaps considerably with the legislative definition of *developmental disabilities* as contained in PL 94-103 and amended in PL 95-602, Title V. In the Developmental Disabilities Assistance and Bill of Rights Act, the term *developmental disabilities* refers to a severe, chronic disability that "is attributable to a mental or physical impairment or combination of mental and physical impairments" that are (a) manifested before age 22, (b) likely to continue indefinitely, and (c) result in substantial functional limitations in three or more areas of major life activity.

The areas of limitation clearly apply to the more severe forms of mental retardation and to some mildly retarded individuals during certain periods of their lives. For severely retarded people, nearly all of the defined areas of limitation are substantial and applicable: self-care, receptive and expressive language, learning, mobility, self-direction, capacity for independent living, and economic self-sufficiency. For mildly retarded individuals, many of whom achieve self-sufficiency in adulthood, the disability may be confined to impairments primarily in the areas of learning and possibly self-direction.

Other conditions embraced in the definitions of developmental disability that share some characteristics in common with mental retardation are cerebral palsy, epilepsy, and autism. Significant proportions of these populations function intellectually at retarded levels.

Developmental disabilities are therefore distinguishable from the milder forms of mental retardation and less severe conditions of cerebral palsy, epilepsy, and autism by the nature of the functional limitations described. In order to satisfy the definition, individuals must demonstrate *substantial* functional limitations that are age-specific. Although the term *substantial* is not explicitly defined, the requirement that these limitations reflect a need for services that are of life-long or extended duration and are individually planned and coordinated clearly delimits the target population.

The concepts of mental retardation and developmental disabilities, although parallel in many respects, reflect some marked differences. Both are developmental in origin and stress impair-

ment in adaptive behavior. Most clinical types of retardation involving central nervous system pathology and IQs below approximately 55 fulfill both the physical and mental criteria of developmental disability. For this subgroup in retardation, the handicap is permanent and "substantial." The differences between the two categories occur primarily at the upper end of the retarded intellectual range. *The AAMD definition carries no connotation of chronicity or irreversibility and, on the contrary, applies only to levels of functioning.* "Significantly subaverage" is precisely defined, if not precisely measured, and imposes as a guideline a ceiling for performance that is clearly higher than inferred under the newly defined term *substantial handicap*. The fact that psychosocially disadvantaged mildly retarded children often are functionally impaired in the school years only, have no demonstrable neurological disorders, and achieve some level of adult independence indicates that they fall outside the definition of developmental disabilities.

Children with autism, in particular, share many attributes with severely and profoundly mentally retarded children. Although there is considerable variation in the behavior patterns of the latter, many of them, like autistic children, fail to develop interpersonal relationships, have serious communication and receptive language deficits, and engage in repetitive and compulsive behavior. Approximately 70 percent of autistic children have IQs within the retarded range, and all have behavioral impairments that are manifested before 30 months of age.

Learning disabilities are defined in federal legislation (PL 94-142) as referring to children:

... who exhibit a disorder in one or more of the basic psychological processes involved in understanding or in using spoken or written language. These may be manifested in disorders of listening, thinking, talking, reading, writing, or arithmetic. They include conditions which have been referred to as perceptual handicaps, brain injury, minimal brain dysfunction, dyslexia, developmental aphasia, etc. They do not include learning problems which are due primarily to visual, hearing, or motor handicap, to mental retardation, emotional disturbance, or to environmental disadvantage.

In empirical studies of children with learning disabilities, a number of frequently occurring, though not universal, characteristics have been identified. These include deficiencies in academic achievement, information-processing problems, attentional

deficits, hyperactivity, uneven patterns of learning performance, and difficulties in social relationships. Since the latter have been noted especially in interactions with peers and teachers, these difficulties could stem from reactions to academic frustration and failure.

These characteristics do not discriminate learning disabled from mentally retarded populations. Both groups, for example, have a fairly high incidence of hyperactivity, an inability to modulate motor behavior appropriate to a given situation. Usually, such behavior is manifested when children are required to perform certain tasks in structured situations. Various subcategories of hyperactivity in learning-disabled children have been described, including: (a) aggressive, destructive, unpredictable, and impulsive behavior; (b) aimless and clumsy, but placid behavior; (c) highly verbal, talkative, and somewhat immature behavior. Mentally retarded children fall predominantly in the first category, reflecting perhaps their more extensive central nervous system pathology in relation to autistic children than to the learning-disabled group. Thus, on these traits, as in the others previously described, learning-disabled children are not readily distinguishable from children with other mentally handicapping conditions.

The most discriminating characteristic between learning disability and mental retardation is the level of measured intelligence. By definition, the former category specifically excludes mental retardation and, presumably, includes children of at least average intelligence. Conceptually, this difference is clear and significant. In practice, however, and in classification as well, this discriminating factor is not easily applied. Retarded children can be learning disabled, but the converse—by definition—is not possible.

The ambiguities of classification are particularly apparent with children whose measured intelligence is borderline or dull normal and who demonstrate the range of learning problems and characteristics alluded to in the discussion of learning disabilities. Under existing systems of classification and definition, these children, often called "slow learners," are neither mentally retarded nor learning disabled, yet their difficulties in school work and social relationships may be very comparable to these two groups. This classification dilemma remains to be resolved; the schools, however, classify many slow-learning children as learning disabled if they are not mentally retarded.

DISCUSSION

Uses and Misuses of Classification Systems

Uses of classification systems. The fundamental purpose of using classification systems is to provide an organized schema for the categorization of many kinds of phenomena relevant to the human condition. Such information, properly ordered and conceptualized, is essential (a) for the acquisition of knowledge in the prevention and control of disability and its manifestations and (b) in the promotion of physical, mental, and social well being. To satisfy these objectives as they relate to the complexities and origins of retarded mental performance, the system must include the identification of etiological agents and the specification of the psychological and cultural contexts influencing behavior and its measurement.

The 1983 classification system consciously addresses these two major objectives. The definition of mental retardation sets forth the criteria by which the target population can be identified, and the etiological section specifies the causes that, in most instances, are necessary precursors to studies in pathogenesis and ultimately to the development of preventive measures. The newly added axis on social-environmental variables not only takes cognizance of the important contributory role of these factors to impaired intellectual and behavioral functioning, but highlights areas for intervention and treatment in promoting a higher level of well being for retarded individuals.

The protection and promotion of the health and welfare of our citizens—including those who are mentally retarded—is an important function and responsibility of government. This function has been afforded even greater prominence in recent years as a consequence of judicial actions affirming the rights of mentally retarded persons to treatment and education. The classification of individuals and their environments is a tool of government, indispensable to the fulfillment of this responsibility. It is basic to the processes for acquiring data needed by human-service-delivery systems for planning and administering programs for the treatment and rehabilitation of affected persons for removing barriers to service utilization and for program evaluation.

In our prevailing system of categorical funding, the classification of persons is an essential process in determining eligibility for

various health, social, economic, educational, and training services as well as benefits under federal, state, and local laws. Commercial health insurance companies, too, apply classification criteria in assessing eligibility and evaluating claims for reimbursement. Even primitive societies apply some form of classification, largely informal, through class or caste structures, role assignment, status, and division of labor in influencing the lives of their citizens. Thus, classification of persons may be properly viewed as inherent in the regulation of societal activities.

Classification systems depend upon research, are fundamental to the definition of subject populations, and are a fruitful source for the generation of research hypotheses. The reliance on research in stipulating the properties of intelligence and behavior and in the discovery and description of clinical syndromes would seem to be fully supportable; however, in the classification of human populations in general, and mentally retarded persons in particular, sociopolitical and professional considerations exert great pressure on the system. Minority groups, for example, because of their overinclusion in the mentally retarded population, challenge the validity of assessment instruments and the criteria by which retardation is currently defined. Some of their leaders assert that the instruments employed to determine the level of tested intelligence fail to reflect the true level of intellectual potential. Some of these leaders would restrict the definition of mental retardation to persons having organic etiology.

Some educators, by contrast, would set the intellectual parameters even higher than set forth here in the firm belief that marginally intelligent people have learning problems that require special or remedial educational efforts. Medical and vocational rehabilitation professionals would stress still different definitional criteria.

These conflicting pressures graphically illustrate the impossibility of developing a classification system that is responsive to different ideologies and that at the same time applies objective standards for identifying persons in need by virtue of intellectual and behavioral impairments. The 1983 classification system is based on empirical and scientific evidence and reflects the state-of-the-art on the relevant issues. Admittedly, knowledge is imperfect in several critical dimensions. We do not know precisely the relationship between intelligence and social competence, how much intelligence, as measured by tests, is needed in order for individuals to

adapt satisfactorily to societal demands, or the nature of intelligence and whether, in fact, it can be accurately assessed with existing instruments across diverse populations. Our ability to assess impaired behavior in a variety of cultural contexts and environmental settings is also limited, and clinical judgment depends heavily on the acumen and experience of clinicians. Similarly, the delineation of social-environmental variables most crucial to the developmental process awaits further refinement.

Despite these limitations, and others not noted here, an empirically based system is preferable to one dictated by the vagaries of litigation, political processes, and the pressure of special-interest groups. Every system of classification must be periodically upgraded to incorporate new discoveries and changing concepts. Conceivably, as we learn more about the adaptive capacities of individuals with limited intelligence, the parameters of our definition may require changes.

Among the many utilizations of classification systems for research, epidemiological studies are the most directly dependent, since they are concerned with the study of factors that influence the occurrence and distribution of various diseases and conditions. The distribution of any disease or defect clearly requires skilled clinical diagnosis to separate those who have the condition from those who do not. The lack of highly sensitive instruments for diagnosis and measurement and limited reliable methods for case-finding, although handicapping to accurate diagnosis, is more likely to operate at the individual case level than in population statistics. The descriptions of clinical syndromes and age-specific functional performance contained in this classification system are not only an aid in the identification of retardation but in specifying the classification and diagnosis to which individuals should be assigned.

We stress that classification systems deal with population groups (not individual cases), are fundamental to the study of any phenomenon, and form the basis for all scientific generalization. Clinicians deal with individual diagnoses that collectively provide *population* data; however, classification systems are concerned only with the latter. Population-based information provides the statistics on incidence, prevalence, and related conditions that are essential to program planning and service-delivery systems.

The 1983 classification system can be applied to a variety of

functions, including research and evaluation of service programs, as discussed in Chapter 6. To be fully useful, classification systems must embrace the entire age span; be simple enough to encourage wide application by practitioners, planners, researchers, and diagnosticians; and be compatible with other systems in use.

Misuses of classification systems. Much of the current concern regarding intelligence testing and the potentially stigmatizing consequences of labeling individuals as mentally retarded has in some quarters generated an anticlassification movement. Proponents of this view have failed to distinguish between classification and labeling. Although labeling—or more precisely, diagnosis—is essential to classification, each has distinctive purposes and uses.

As noted earlier, classification systems are population-based and usually impersonal. Any effort to categorize the totality of any individual, even by multiaxial indices, is clearly not possible. Especially at the upper levels of mental retardation, where discrepancies between adaptive behavior and measured intelligence are common, the determination of deficient performance and who should be classified is often confounded by sociopolitical considerations and processes.

Labeling, in contrast to classification, may be highly personal. Although the process is usually regarded as a formal administrative procedure applied by personnel in schools, institutions, clinics, and other settings for purposes of placement, treatment, or establishing eligibility for financial benefits, it also takes place informally, through interpersonal encounter. Individuals may perceive themselves as others see them. People are more likely to react to their awareness of the incompetence of retarded persons than to the formal label. Thus, the stigmatizing effects commonly attributed to special-class placement or institutionalization may, in fact, occur long before the label is applied because retarded individuals have been exposed to attitudes and reactions that make them feel inferior. Most children in special education begin school in regular classes. Academic failure and disruptive behavior in the early years of schooling result in teacher rejection and peer ridicule. These encounters may very well result in self-labeling, a process that is later confirmed and reinforced by subsequent special-class placement.

Communication about individuals or categories of individuals is not possible without labels for the conditions they manifest. Un-

fortunately, when labels are assigned pejorative meanings by the public, they generate images and stereotypes of labeled persons, thus concealing their differences and individualities. Blindness, deafness, and delinquency are not meaningless terms, but they are immediately associated with “disability” or “badness,” which describe but a single and sometimes less critical facet of the total personality. The concept of mental retardation in the public view tends to be associated with dependency and physical stigmata. In fact, the majority of persons who are mentally retarded are mildly retarded. The large majority of mildly retarded people have no physical stigmata and are capable of considerable independence in adulthood.

Clearly, labels are not a substitute for a complete diagnostic profile; however, used as a signal that children may require special help and as a stimulus to in-depth evaluation, potentially harmful effects can be avoided. In brief, labels are not inherently evil, although they can be disadvantageous.

The Assessment Process, Diagnosis, and the Need for Services

Identification of persons as mentally retarded implies that they are unable to perform many of the functions carried out by their age peers, and hence they may require special services and protections. An assessment that leads to the diagnosis of mental retardation enables arrangements to be made for special habilitation, education, and other services, perhaps a protective residential placement.

Such an assessment is typically arranged because the person's general development appears to be impaired. Perhaps slowness in the acquisition of speech and language was observed, together with a failure to make expected adaptations in everyday living. If the impairment is general, early, and severe, the assessment and diagnosis will come as early in life as infancy; however, children who have only mild mental impairment are typically not observed to be different from “normal” until school age, when academic failures are experienced. Early clinical assessment should be encouraged in order to minimize the child's experience of failure in school. A comprehensive assessment of children's functioning in various areas determines whether the problems may be described as mental retardation or attributed to other causes. If the presence of mental

retardation is determined, the children are provided with the special services afforded to mentally retarded populations. If, however, the diagnosis of retardation is not made because the symptoms have some other etiology, then other treatment and services may be provided.

Problems in Identification of a Person as Mentally Retarded

As indicated in Chapter 5, mental retardation consists of two general categories. The first is associated with more or less specific biomedical signs and symptoms leading to specific diagnoses such as Down syndrome. In these so-called "clinical types," the existence of the mental retardation condition is generally obvious, for it is usually of a lower level: moderate, severe, or profound, although the level could be mild. Ambiguities in diagnosis typically do not occur with retardation of this type, although differential diagnosis of etiology may be difficult.

The second type of mental retardation is found among people who exhibit no particular biomedical sign or symptom associated with retardation or causative of it. Functioning that does not depend upon the use of intelligence tends to be near normal, as with the previously mentioned children whose impairments are not evident until school-age. For such people, the level of mental retardation is most often mild. Obviously, some ambiguities may occur when differentiating the highest level of mild retardation from borderline intelligence (not mentally retarded). Diagnosis therefore requires the careful clinical consideration of all available information, including test scores. It is necessary for clinicians who are making diagnoses in such instances to employ some specified highest level or *degree* of impairment of intelligence and adaptation to serve as the maximum level of inclusion.

Upper IQ Limit for Mental Retardation

The upper limit of IQ 70 has been arrived at by professional consensus, after consideration of the consequences of setting a higher or lower value. The maximum specified IQ is not to be taken as an exact value, but as a commonly accepted guideline. It is true that legislation, the courts, and service agencies often employ exact IQ values to determine eligibility for services, but the consistent point of view of AAMD and of professionals serving mentally

retarded populations is that clinical assessment must be flexible. Therefore, the judgment of clinicians may determine that some individuals with IQs higher than 70 will be regarded as mentally retarded and others with lower IQs will not. For that reason, the recommended ceiling may be extended up through IQ 75, particularly in school settings where intellectual performance is a prerequisite for success and special educational assistance may be required.

It has become increasingly clear through research and experience that most individuals with IQs below 70 are so limited in their adaptive competence that they require special services and protections, particularly during the school years. Although this need is also evident for some people with IQs above 70, it is less critical and less frequent.

In previous AAMD manuals, an equivalent but slightly different upper limit IQ for such identification was recommended, namely, an IQ "under two standard deviations below the mean." This meant IQ 67 for the Stanford-Binet Intelligence Scale and other scales having a standard deviation of 16 and IQ 69 for the Wechsler Intelligence Scale for Children, the Wechsler Adult Intelligence Scale, and other scales having a standard deviation of 15. The IQ of 70 has been substituted for "under two standard deviations" for several reasons. The employment of the two specific numbers, 67 and 69, implied a degree of precision in IQ assessment that was not intended. The use of the statement "IQ approximately 70" avoids the implication of such precision.

The use of exact standard deviation sizes to determine the levels of retardation also led to problems. Many users tended to ignore differences in standard deviations of tests. Many schools employed their own classification systems. The level of 70 maintains a conceptual continuity with the previous "minus two standard deviations" and hence incurs no shift in the implied prevalence of mental retardation. Finally, the use of IQ 70 is consistent with the laws or regulations in the United States and with world-wide practice, as represented by the World Health Organization (ICD-9).

Setting the cut-off IQ at 70 appears to be the best solution for most of the problems encountered with the diagnosis of mental retardation of people who are in the "gray area" of retardation-average. Treating the IQ with some flexibility permits the inclusion of persons having higher IQs than 70 who truly need special education or other programs. It also permits exclusion of those

with somewhat lower IQs than 70 if the complete clinical judgment is that they are not mentally retarded. Marginal persons who are determined not to be mentally retarded would, as a rule, not be entitled to services intended for the retarded group. Such people probably have problems that require attention, given that they had been brought into the clinical assessment process. Excluding these people from services for mentally retarded individuals should make them eligible for services intended for some other classification, but some gaps in provision of services to needy persons may exist.

The Obtained IQ and the Zone of Uncertainty

Any measurement is fallible. An obtained IQ should be used as one value within a probable band of IQs. It is customary to think of an obtained IQ as surrounded by a "standard error of measurement" of approximately 3 (Wechsler) or 4 (Stanford-Binet) points; in other words, if the test were repeated, the new IQ should be within 3 or 4 points of the initially obtained value two-thirds of the time and within about 6 to 8 points 95 times out of 100. Hence, an IQ of 70 is considered to represent a band or zone of about 66 to 74 (2/3 probability) or 62 to 78 (95/100 probability). Consider an 8-year-old student who is not coping adequately in his daily life and is experiencing failure in schoolwork. The intelligence test yields a professionally determined IQ of 73, at the boundary of borderline intelligence. A diagnosis of mental retardation will depend on the extent to which all other clinically derived information and the case history provide a picture of impaired behavior of mild degree or of a mentally slow but nonretarded person whose judgment and reasoning in daily life appear to be adequate, but whose behavioral problems have some principal etiology other than mental retardation.

The effect of raising the upper limit beyond 70 or lowering it below 70 should be considered also as raising or lowering the band of uncertainty. Increasing the upper limit to IQ 75 would make more people eligible for special education, job training, and other habilitation services; however, such an increase also adds to the number of false positives, that is, individuals who are not, in fact, retarded and for whom special-class placement and other services might be inappropriate. This risk of misidentification is small, but real. Similarly, to lower the recommended maximum to 65 would

reduce the already small risk of misdiagnosis but would deny services to many who need them. The proposed ceiling appears to be the best compromise between over and under identification and most likely to ensure access to services for those who need them.

The Use of Adaptive Behavior Appraisal in Diagnosis

Our previous discussion has involved IQ and the problems attendant to its interpretation. We have assumed that the "full clinical study" stressed throughout our discussion of diagnosis includes the appraisal of the adaptive functioning of the individuals who are brought into the assessment process. Measurement of such functioning may involve observation or informal interview or the employment of a standardized scale of adaptive functioning, such as the AAMD Adaptive Behavior Scale. (These issues are explored further in Chapter 4.)

Currently, there has been less experience with the use of adaptive behavior scales than with intelligence tests. Furthermore, scales differ in the types of behavior measured and the scoring systems applied.

Expectations of adaptive behavior vary for different age groups; DEFICITS IN ADAPTIVE BEHAVIOR will vary at different ages. These may be reflected in the following areas:

During INFANCY AND EARLY CHILDHOOD in:

1. Sensorimotor Skills Development
2. Communication Skills (including speech and language)
3. Self-Help Skills
4. Socialization (development of ability to interact with others)

During CHILDHOOD AND EARLY ADOLESCENCE in Areas 1 through 4 and/or:

5. Application of Basic Academic Skills in Daily Life Activities
6. Application of Appropriate Reasoning and Judgment in Mastery of the Environment
7. Social Skills (participation in group activities and interpersonal relationships)

During LATE ADOLESCENCE AND ADULT LIFE in Areas 1 through 7 and/or:

8. Vocational and Social Responsibilities and Performance

During infancy and early childhood, sensorimotor, communication, self-help, and socialization skills ordinarily develop in a

sequential pattern reflective of the maturation process. Delays in the acquisition of these skills represent potential deficiencies in adaptive behavior and become the criteria for mental retardation.

The skills required for adaptation during childhood and early adolescence involve complex learning processes. This involves the process by which knowledge is acquired and retained as a function of the experiences of the individual. Difficulties in learning are usually manifested in the academic situation, but in evaluation of adaptive behavior, attention should focus not only on the basic academic skills and their use, but also on skills essential in coping with the environment, including concepts of time and money, self-directed behavior, social responsiveness, and interactive skills.

In the adult years, vocational performance and social responsibilities assume prime importance as qualifying conditions of mental retardation. These are assessed in terms of the degree to which individuals are able to maintain themselves independently in the community and in gainful employment as well as by their ability to meet and conform to community standards.

It is these deficiencies in adaptive behavior that usually determine the individuals' needs for programs or services and/or legal action.

In infancy and early childhood, deficits in sensorimotor development, in acquisition of self-help and communication skills, and development of socialization skills point to the needs for medical services, early childhood education, or family guidance.

During childhood and early adolescence, deficits in learning and coping skills indicate needs for specialized educational, prevocational, and recreational programs.

In the late adolescent and adult years, deficits determine the needs for vocational training, placement, and a variety of supportive services.

Within the framework of the definition of mental retardation, an individual may meet the criteria of mental retardation at one time in life and not at some other time. He or she may change status as a result of changes or alterations in intellectual functioning, adaptive behavior, or societal expectations, or for other known and unknown reasons. The decision to classify an individual as mentally retarded at any given time should always be made in relation to behavioral standards and norms and in comparison to the individual's own chronological age group.

CHAPTER 4

ASSESSMENT OF INTELLIGENCE, ADAPTIVE BEHAVIOR, AND SOCIAL-ENVIRONMENTAL FACTORS

INTELLIGENCE

Intelligence refers to the ability that enables people to learn, remember information and use it appropriately, obtain insights, solve problems, acquire and employ language, exercise good judgment, find similarities and differences, use abstractions, and so forth. Intelligence refers, then, to the use of the "mind" or mental process in making adaptations. Intelligence is an inference made about people's adaptations; it can be known or measured only through observations of behavior. Intelligent behavior can be and often is exhibited by people who lack coordination in movement or who are blind or deaf. In order to appraise that behavior for the purpose of inferring intelligence, it is necessary to distinguish between performance limitations that are due to sensory or motor impediments and those that are due to impaired intelligence.

Intelligence develops as children grow. Individual differences occur in intelligence just as they occur in weight, stature, motor coordination, and other characteristics. Individual differences in intelligence tend to be stable, particularly after the preschool years. Differences in intelligence among people are due in unknown proportion to both genetic and environmental factors. Both physical and psychosocial factors can influence the development of intelligence. Examples of physical factors operating prenatally or postnatally to impair brain structure or function are drugs, infections, and injuries. Similarly, examples of psychosocial factors that adversely influence intelligence are either understimulating or overstimulating home environment, inappropriate instruction, and poor mental health or motivation.