# DIAGNOSIS AND CLINICAL ASSESSMENT: THE DSM-III

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## CONTENTS

## INTRODUCTION

The problems raised by the elaboration and use of methods of diagnosis and clinical assessment are basically theoretical; yet in surveys such as this the emphasis is of necessity on psychometric niceties and questions of test construction, reliability, etc. In concentrating our discussion on topics related to DSM-III, we have tried not only to look at the factual material

167

available, but also to raise some fundamental questions. Others we have been unable to deal with because of space limitation. The quantitative and test-construction related training of the psychologist has led to the creation of many devices which are meant to aid in diagnosis and clinical assessment; yet psychologists have been reluctant to question the truly important assumptions on which much of their work is based. Is it really sensible to work with tests designed for the purpose of assigning individuals to psychiatric categories when these categories are largely arbitrary, have no scientific status, cannot be reliably assessed, and contradict in their very conception the strong evidence pointing in the direction of a dimensional rather than a categorical system of measurement (Eysenck 1970)? Should we not, as independent scientists, work out a system of classification based on empirical evidence, psychological theory, and experimental support, rather than accept more or less blindly a medical system whose only virtue (if that be the right term) seems to be that it is based on some form of consensus? Can any system be acceptable to workers trained in scientific method where diagnosis (e.g. of schizophrenia) depends far more on the nationality of the person making the diagnosis than on any behavior shown by the patient (Cooper et al 1972)? Does the unreliability of psychiatric diagnosis perhaps indicate not so much a failure in the methods of clinical assessment used, but rather a fundamental fault in the whole conception of "mental disease"? These are the sorts of questions which readers should constantly have in mind when reading the evidence available on DSM-III. The system may be acceptable to psychiatrists, but in our view it is not acceptable in principle to psychologists, and no tinkering with it will solve the basic faults inherent in the general model constructed by generations of psychiatrists.

# RESEARCH AND CONCERNS LEADING TO DSM-III

The DSM-II (APA 1968) included definitions of 10 general areas of mental disorders. For each of the specific diagnoses, descriptive definitions were presented along with occasional examples of situations in which the diagnosis would or would not be appropriate. The DSM-II was designed to correspond with the ICD-8 (WHO 1968), although a few ICD-8 diagnoses were not included and several other ICD-8 diagnoses were split into more specific categories. The DSM-II also attempted to avoid implying causes in the names of the diagnoses unless the cause was critical to the diagnosis. For example, "Schizophrenic reaction" in the DSM-I was changed to "schizophrenia" in the DSM-II. Without specific criteria, diagnosis on the basis of DSM-II depended heavily on the judgement of the clinician. Neither reliability nor validity studies were reported in the manual.

Jackson (1970) criticized the DSM-II shortly after it was published. Problems with the DSM-II were lack of definition of terms such as symp-

tom and syndrome, classification of neurosis as a disease, and an inadequate section on childhood disorders. These criticisms have been addressed by the DSM-III, although not to the satisfaction of all critics.

Tarter et al (1975) evaluated the reliability of diagnosis using the DSM-II. Overall agreement between two of five experienced psychiatrists' diagnoses of 256 patients was 48%. The agreement for organic disorders was 72%, functional psychoses 55%, neuroses 46%, and personality disorders 48%. Depressive neurosis (Klerman et al 1979) was a particularly vague, unreliable, and overused category. This and similar neurotic categories were excluded from DSM-III.

McGuire (1973) reviewed the percentage agreements on diagnostic categories among psychiatrists in studies performed between 1949 and 1964. The modal percentage agreements for broad categories were in the 70s, and in the 50s for specific categories. These figures do not differ greatly from those presented in the DSM-III (APA 1980a).

Spitzer et al (1975) suggested the use of formal inclusion and exclusion criteria to improve the reliability of psychiatric diagnosis. Strauss (1975) considered a multivariable approach to diagnosis as another improvement over the simple typological system then in use in the DSM-II. The five variables he suggested are similar but not identical to the five axes finally adopted in DSM-III.

A problem with the DSM-II was that it included "borderline schizophrenia" in the category of schizophrenia, latent type (Spitzer et al 1979), while there was a large literature on borderline conditions. In an attempt to include all diagnoses that clinicians believe are of clinical importance and that can be reliably defined, criteria were developed for the categories Borderline Personality Disorder and Schizotypal Personality Disorder which discriminated these patients from a control sample of moderately or severely ill psychiatric patients with diagnoses other than psychosis or borderline categories.

Consensus of opinion among psychiatrists has been of central importance in determining whether any particular category was included in the DSM. An example of the difficulties presented when consensus was not achieved is shown by Stoller et al (1973) over the issue of including homosexuality. Professional consensus is still a critical criterion for inclusion of diagnostic categories in DSM-III (APA 1980a).

## THE DIAGNOSTIC AND STATISTICAL MANUAL OF MENTAL DISORDERS (DSM-III)

Two major systematic classifications in the USA antedate the development of the DSM-III. The DSM-I was published in 1952 and replaced the outdated mental illness section of the Standard Classified Nomenclature of

Diseases, the military and Veterans Administration's systems (Webb et al 1981a). The DSM-II was published in the USA in 1968 and was based on the mental disorder section of the International Classification of Diseases Eighth Edition (ICD-8). The DSM-II revision was based mainly on the systems of psychiatrists and was not field tested for reliability of diagnostic accuracy. The development of the DSM-III represents the efforts of a task force assembled in 1974 by the American Psychiatric Association (APA) to develop an improved psychiatric classification system. Besides general user dissatisfaction with the DSM-II, additional impetus for developing DSM-III was generated by plans of the World Health Organization (WHO) to create a revised International Classification of Disease (ICD-9) system. The ICD is a classification system containing numerous disease entities and is published for worldwide use in general by the WHO. Because the mental disorders section of the ICD-9 was unacceptable to many clinicians, it was modified to make it more compatible for use with the DSM-III in this country (Webb et al 1981a). This change resulted in ICD-9-CM (a clinical modification), which has been in effect since 1979. Some of the ICD-9-CM categories are not listed in DSM-III, but all DSM-III categories are listed in ICD-9-CM.

The major goals of the DSM-III task force in revising the psychiatric nomenclature revolved around the general existing aim to reflect the many advances in the knowledge of psychopathology. Specifically, the task force focused on creating meaningful diagnostic categories that would allow treatment and management decisions in varied settings, reliable diagnostic categories, acceptability to clinicians and researchers of varying theoretical orientations, and consistency with research data bearing on the validity of diagnostic categories (DSM-III, APA 1980a). A number of rough drafts were constructed and examined in field studies using actual patients before the final manual was published. These numerous field studies were conducted to identify various problems with the system and to explore alternatives that were more satisfactory. According to Spitzer (APA 1980a, p. 5) "12,667 patients were evaluated by approximately 550 clinicians, 474 of whom were in 212 different facilities, using successive drafts on DSM—III." According to Spitzer, the majority of participants responded favorably to DSM-III.

The DSM-III (APA 1980a) is published in the form of a 494-page text that consists of an introduction, 3 chapters, 5 appendixes, and an index. The first chapter is simply a listing of the various diagnostic categories with concomitant code numbers. Chapter 2 describes how to use the DSM-III system. There is a detailed description of how to make use of the multiaxial system that serves as the system's foundation, and useful clinical examples are presented. The third chapter describes the psychiatric syndromes as well

as conditions not attributable to a mental disorder that are a focus of treatment or attention. The chapter also explains how to specify whether there is insufficient information to make a diagnosis. Each of the listed mental disorder categories in the chapter contains information about associated features, typical age at onset, course of illness, level of impairment, various complications, predisposing factors, prevalence, sex ratio, familial pattern, and differential diagnosis.

While the DSM-III manual contains lengthy information about the various disorders, it should be noted that the abbreviated 267-page pocket edition of the manual called the "Quick Reference" (APA 1980b) eliminates the lengthy discourses and provides the user with the vital information for making use of the system (e.g. decision trees for differential diagnosis, diagnostic criteria for the disorders). It has been recommended that the quick reference be employed for daily clinical use, with the manual used as a reference text (Webb et al 1981a). It is also suggested that the interested reader consult the DSM-III training guide (Webb et al 1981a), which is designed as a self-instructional guide in the use of the DSM-III system and can be used as an adjunctive aide in teaching and preparing professionals in the use of the DSM-III system. Additional training aides (e.g. videotape, slides) are available to assist educators in preparing professionals in the application of the new classification system. The training guide is concise (158 pages) and is divided into four sections with a total of 24 chapters. Section I describes the history and development of DSM-III, explains the rationale for the system, contrasts the gross differences between DSM-II and DSM-III, and outlines the relationship between the mental disorders sections of ICD-9-CM and DSM-III. Section II focuses primarily on the diagnostic criteria and describes the major classifications on their respective axes. Section III looks at specific disorders in some detail with case vignettes included to illustrate the various classifications. Section III is designed to present case examples and instructs the reader in the use of coding procedures. The authors state that the training guide could be used in conjunction with the DSM-III manual to "assist the clinician in accurately applying the new classification system to the diagnosis of patients and clients" (page xv, Webb et al 1981a). It should be noted, however, that the codes are not listed for each of the categories of DSM-III, so the "training guide" cannot be used exclusively in lieu of the DSM-III manual. Additional case material is presented by Spitzer et al (1981).

The DSM-III is described as atheoretical in nature in that the various diagnostic categories are descriptive and do not imply an etiological basis in the disorders. The nonetiological, atheoretical, and descriptive nature of the DSM was intentional so as not to alienate potential users from diverse theoretical orientations. The more than 200 disorders and conditions in-

cluded in DSM-III have been grouped into 18 distinguishable groups. These various groups or disorders are categorized on 2 of 5 axes used in the DSM-III system. Basically the 5 axes each represent a different class of information. Axis I represents the clinical psychiatric syndrome that is the focus of treatment or attention. Axis II represents the personality disorders which may be ascribed to adults, adolescents, or children, as well as specific developmental disorders for children and adolescents, and, in some cases, adults. Axis III is reserved for physical disorders that are relevant to either or both of the first two axes. Axis IV represents a coding of the severity of stressors judged to be precipitating or contributing to a disorder noted on either axis I or II. A basic 7-point continuum is used for deciding the severity level and is dependent upon the clinician's judgment. Axis V represents the highest level of adaptive functioning of the individual within a year of his/her presenting complaints and is used primarily for making a prognosis. Adaptive functioning refers to social relations, occupational functioning, and use of leisure time. Similar to Axis IV, a 7-point continuum is used on Axis V for ascertaining the premorbid functioning level of the individual.

The first two axes include the entire set of categories relevant to making a psychiatric diagnosis (including conditions which are not considered mental disorders but which are a focus of attention or treatment). The following 16 disorders or conditions are coded on Axis I:

1. Disorders Usually First Evident in Infancy, Childhood, or Adolescence
2. Substance Use Disorders
3. Organic Mental Disorders
4. Schizophrenic Disorders
5. Psychotic Disorders not elsewhere classified
6. Paranoid Disorders
7. Affective Disorders
8. Anxiety Disorders
9. Dissociative Disorders
10. Somatoform Disorders
11. Factitious Disorders
12. Psychosexual Disorders
13. Disorders of Impulse Control not elsewhere classified
14. Adjustment Disorders
15. Psychological Factors Affecting Physical Condition
16. Codes for Conditions Not Attributable to a Mental Disorder

The following two disorders are noted on Axis II: Personality Disorders and Specific Developmental Disorders. This listing does not follow the exact sequence of disorders as listed in DSM-III, but rather follows the schema

as Webb et al have it mapped out in their training guide. Webb et al state that "there is no simple, perfect flow in this sequence, but, in general, the classification begins with disorders arising in early years, then disorders with some organic element, then major (psychotic) disorders, followed by more and more minor classes of disorders and the two Axis II disorders."

The following brief synposis (taken in large part from Webb et al 1981a) of important features within each of the 18 listed major categories should help familiarize the reader with the major changes between DSM-III and DSM-II.

*Disorders Usually First Evident in Infancy, Childhood, or Adolescence:* Although diagnoses for children should first be checked in this section, it is possible that an adult diagnosis may be applicable. A childhood diagnosis may also apply to an adult (e.g. anorexia nervosa). The disorders in this section cover 5 general areas reflecting the basic area of disturbance. These five areas are: Intellectual, Behavioral, Emotional, Physical, and Developmental. The categories covered in these 5 areas are: Mental Retardation, Attention Deficit Disorder, Conduct Disorder, Anxiety Disorders of Childhood or Adolescence, Other Disorders of Infancy, Childhood or Adolescence (reactive attachment disorder of infancy, schizoid disorder of childhood or adolescence, elective mutism, oppositional disorder, identity disorder) eating disorders, stereotyped movement disorders, other disorders with physical manifestations, pervasive developmental disorders, and specific developmental disorders (which are coded on Axis II). This DSM-III category represents extensive modifications in classification that are beyond the scope of this paper, and the interested reader should consult the manual.

The *Substance Use Disorders* classification refers to the abnormal consumption of alcohol, drugs, and tobacco. A substance is identified and then the degree of use (abuse or dependence) is noted, followed by the pattern of intake (e.g. continuous, episodic). The DSM-II drug dependence category did not include tobacco and alcohol (coded separately), whereas the DSM-III subsumes them under the Substance Use Disorders.

*Organic Mental Disorders* replaces the DSM-II category title of Organic brain syndromes. In DSM-II Organic brain syndrome was essentially viewed as one syndrome with a specified number of manifestations; OBS was either classified as psychotic or nonpsychotic. This distinction is dropped in DSM-III as is the chronic vs acute classification. The DSM-III system includes 9 different organic brain syndromes: intoxication, withdrawal, delirium, dementia, amnestic syndrome, delusional syndrome, hallucinosis, affective syndrome, and personality syndrome.

The *Schizophrenic Disorders* category represents a refinement over the usually inconveniently used DSM-II concept of schizophrenia. Among the many changes in DSM-III regarding this category is the dropping of the

nonpsychotic type schizophrenias which have been labeled previously as latent schizophrenia, simple schizophrenia, and pseudoneurotic schizophrenia. A personality disorder diagnosis must now be made for such cases.

The restrictive criteria specified made schizophrenia a very serious illness, including aberration in a variety of mental functions. The use of inclusive and exclusive criteria for this disorder purportedly enables the clinician to identify a group that is more similar in regard to differential response to somatic therapy, familial pattern, a tendency toward onset in early adult life, recurrence, and severe functional impairment.

*Psychotic Disorders* not elsewhere classified covers the following four categories: Brief Reactive Psychosis, Schizophreniform Disorder, Schizoaffective Disorder, and Atypical Psychosis. What was termed in DSM-II as "acute schizophrenic episode" now covers the first two above-mentioned disorders. In Brief Reactive Psychosis, symptoms appear after a recognizable psychosocial stressor and last less than 2 weeks. Schizophreniform Disorder meets all of the criteria for schizophrenia but lasts more than 2 weeks less than 6 months. When a clinician is unable to differentiate between affective disorder and either schizophrenia or schizophreniform disorder, the category Schizoaffective Disorder is used. Atypical Psychosis is a residual category for cases in which there are psychotic symptoms that do not meet the criteria for any specific mental disorder (e.g. psychoses with mixed clinical features which do not permit a more specific diagnosis).

The *Paranoid Disorders* are psychotic states characterized by an organized delusional system in an otherwise well functioning individual. The four disorders within this classification are Paranoia, Acute Paranoid Disorder, Shared Paranoid Disorder, and Atypical Paranoid Disorder. Duration is the main differential defining feature between Acute Paranoid Disorder and Paranoia. Shared paranoid disorder is reserved for someone who has a relationship with someone who has a paranoid psychotic state of any class and through the relationship adopts the delusions of the paranoid person. In the past this has been traditionally labeled *Folie à deux.* Atypical Paranoid Disorder is a residual category for paranoid disorders not classified in any of the specific categories. While the paranoia classification is similar to the DSM-II category of paranoia, the other categories in this area represent new defining features in DSM-III.

The *Affective Disorders* category is reserved for disturbances in mood and is divided into three subclasses: 1. Major Affective Disorders: includes bipolar disorder and major depression. The major distinguishing features include a full affective syndrome and the presence or absence of any history of a manic episode. 2. Other Specific Affective Disorders: includes cyclothymic and dysthmic disorders and is described by a partial affective syndrome of at least 2 years duration. 3. Atypical Affective Disorders: includes atypi-

cal bipolar disorder and atypical depression, both of which are residual categories for individuals who cannot be classified in the above-mentioned categories. It should be noted that the new criteria for affective disorders enlarges the boundary definition for this condition and makes the diagnosis of Schizophrenic Disorders somewhat more restrictive than in the past.

*Anxiety Disorders* is characterized by those conditions whereby the individual directly experiences felt anxiety. In the DSM-II the concept of neurosis included conditions where anxiety was directly and indirectly experienced (e.g. hysterical neurosis, conversion type). Many of the DSM-II neurotic conditions are now under new separate headings. Some have been completely eliminated (e.g. hysterical neurosis) with multiple meanings of the term included within new categories (e.g. Somatoform and Dissociative Disorders). The DSM-III Anxiety Disorders are: Phobic Disorders (formerly phobic neuroses), Anxiety States (formerly anxiety neuroses) and Post-traumatic Stress Disorder.

*Dissociative Disorders* (formerly labeled hysterical neuroses, dissociative type in DSM-II) include the following subclasses: psychosis amnesia, psychogenic fugue, multiple personality, depersonalization disorder, and atypical dissociative disorder. Sleepwalking disorder is listed in the section "disorders usually first evident in infancy, childhood, or adolescence" and is defined as a disturbance of a particular stage of sleep.

*Somatoform Disorders* essentially represent somatic complaints without demonstrable organic findings or known physiological findings and the symptoms are not under voluntary control. This category includes somatization disorder, conversion disorder (formerly hysterical neurosis, conversion type), psychogenic pain disorder, hypochondriasis (formerly hypochondriacal neurosis), and atypical somatoform disorder.

*Factitious Disorders* is a new classification in DSM-III and is characterized by physical or psychological symptoms that are either self-inflicted or faked by the individual as a deliberate sham and are under voluntary control. Factitious Disorders with psychological symptoms has been previously referred to as Ganser syndrome, pseudo-psychosis, and pseudo-dementia. Chronic factitious disorders with physical symptoms involve the presentation of physical symptoms that are under voluntary control and include a history of multiple hospitalizations. This disorder has also been referred to as Munchausen syndrome, hospital hoboes, and hospital addiction. Atypical factitious disorder with physical symptoms is another residual category for those cases which do not conform to the specified criteria.

*Psychosexual Disorders* includes only those disorders in which psychological factors exert a major role; organic causes for physical dysfunction are not included here. They would be noted on Axis III. The psychosexual disorders are: gender identity disorders, paraphilias, psychosexual dysfunc-

tions, ego-dystonic homosexuality, and other psychosexual disorders not elsewhere classified (a residual category). This DSM-III category includes many new categories and terms not included in DSM-II.

*Disorders of Impulse Control* not elsewhere classified means exactly what is implied. That is, this is another residual category that includes disorders of impulse control which are not found in other categories. The six categories in this classification are: pathological gambling, kleptomania, pyromania, intermittent explosive disorder, isolated explosive disorder, and atypical impulse control disorder. This is another new category in the DSM-III.

The *Adjustment Disorders* category in DSM-III is more encompassing than its DSM-II predecessor. This category is reserved for those maladaptive reactions that are precipitated by a psychosocial stressor and which do not meet the criteria for another specific disorder such as anxiety or affective disorder. This category replaces the DSM-II classification of "transient situational disturbances." It also excludes transient reactions of psychotic proportions since they are classified elsewhere. The adjustment disorders are subtyped by the predominant symptomatology rather than by developmental stage as in DSM-II. It was thought that the symptom picture would be important in treatment planning. The various types of symptoms associated with adjustment disorders that represent distinct subcategories are: depressed mood, anxious mood, mixed emotional features, disturbance of conduct, mixed disturbance of emotions and conduct, work or academic inhibition, withdrawal, and atypical features.

*Psychological Factors Affecting Physical Condition* is a new category for the DSM-III and is reserved for those complex situations where there is a bona fide organic disease but psychological factors are thought to be significant in initiating, exacerbating, or maintaining the condition.

*Codes for Conditions Not Attributable to a Mental Disorder* that are a focus of attention or treatment is different than its DSM-II counterpart which was limited to "individuals who are psychiatrically normal but who nevertheless have severe enough problems to warrant examination by a psychiatrist." DSM-II was remiss in not defining normality. The following DSM-III categories can be applied to individuals with mental disorders as long as the condition itself is not attributable to a mental disorder: malingering, borderline intellectual functioning, adult antisocial behavior, childhood or adolescent antisocial behavior, academic problem, occupational problem, uncomplicated bereavement, noncompliance with medical treatment, phase of life or other life circumstance problem, marital problem, parent-child problem, other specified family circumstances, and other interpersonal problem.

The following personality disorders are coded on Axis II: paranoid, schizoid, schizotypal, histrionic, narcissistic, antisocial, borderline, avoidant, dependent, compulsive, passive-aggressive, and atypical, mixed, or other personality disorder. One of these personality disorders is assigned to an individual when personality traits become maladaptive, cause subjective distress, and result in significant impairment in social or occupational functioning. Whereas DSM-II permitted the clinician to find only one appropriate personality disorder to describe the individual, DSM-III allows for multiple diagnoses if an individual meets the criteria for more than one. New terms and concepts are introduced in the DSM-III regarding personality disorders (e.g. histrionic personality disorder and borderline personality disorder) and the interested reader is referred to Millon (1981) for further study.

## RESEARCH EVALUATING DSM-III

Research conducted during the development of the DSM-III was mostly concerned with the reliability of diagnosis and the acceptability of the proposed categories to clinicians. Reliability studies continue to be performed, along with studies on the effects of clinical experience and the use of formal interview schedules on the reliability of diagnosis. A few validity studies have also been done. These dealt with differential diagnosis of schizophrenia and other psychotic disorders, children's categories, and response to treatment and prognosis. One study compared DSM-III categories with MMPI codetypes.

### Reliability

The interrater reliabilities reported in the DSM-III field trials were generally higher than previously achieved (Spitzer et al 1979, Spitzer & Forman 1979). For Axis I diagnoses, the overall Kappa coefficient was .78 for joint interviews and .66 for separate interviews. For Axis II—personality disorders and specific developmental disorders—the kappas were .61 (joint) and .54 (separate). For Axis IV—severity of psychosocial stressors—the kappas were .62 (joint) and .58 (separate). For Axis V—highest level of adaptive functioning in the past year—coefficients of .80 (joint) and .69 (separate) · were reported. Reliabilities for Axis III—physical conditions—were not reported. The DSM-III also produced an overall kappa of .74 for the diagnoses of 95 adolescent inpatients (Strober et al 1981).

A study (Pfohl 1980) on the effects of clinical experience on rating DSM-III symptoms of schizophrenia compared the interrater reliabilities of 11 psychiatry staff physicians, 11 resident physicians, and 11 medical

students. After watching interviews of two patients by an experienced psychiatrist, the three groups were asked to rate symptoms from the DSM-III criteria for schizophrenia. None of the three groups produced significant interrater reliabilities on the symptoms. Webb et al (1981b), however, reported an overall 74% agreement between workshop participants and clinical faculty for diagnoses on a series of videotaped case vignettes.

Morey (1980) presented DSM-III symptoms of schizophrenia, mania, and dementia to 15 psychologists and 15 psychiatrists. The clinicians were asked to sort the symptoms according to their importance in reaching each of the three diagnoses. The median correlation among clinicians for these ratings was .55. There were only a chance number of significant differences between the psychologists and psychiatrists in their ratings of the symptoms.

Robins et al (1981) have presented a diagnostic interview schedule that permits lay interviewers or clinicians to make diagnoses according to DSM-III. All concordances between lay interviewers' and psychiatrists' diagnoses were greater than .4 and all but one were greater than .5. Raskin & Hall (1979) used DSM-III criteria to construct an 80-item inventory defining narcissistic personality disorder.

## Validity

Diagnosis of schizophrenia using DSM-III requires 6 months of illness. While this requirement is restrictive, one study (Helzer et al 1981) found that of 125 subjects diagnosed as schizophrenic by the DSM-III, none showed a change in diagosis over time.

Using DSM-III criteria, information from interviews with the families of acutely psychotic patients influenced the differential diagnosis of schizophrenia and mania (Braden, et al 1980). Symptoms of mania were reported by the family more frequently than by the patient. Sole reliance on interviews with the patient may lead to underdiagnosis of mania and overdiagnosis of schizophrenia. However, using DSM-III criteria altered the ratio of diagnosed schizophrenia to diagnosed manic-depressives from 12:1 to approximately 1:1 (Keisling 1981).

The DSM-III identifies persecutory and jealousy delusions with paranoid disorders and all other delusions (in the absence of an affective disorder) with schizophrenia. Kendler (1980) points out that several reviews of empirical evidence do not support this distinction.

The presence and number of schizophrenic symptoms from DSM-III in manic patients were unrelated to a variety of demographic, clinical, historical, laboratory, and familial variables (Abrams & Taylor 1981). Schizophrenic symptoms do not play an important role in patients who satisfy diagnostic criteria for mania.

Evans & Elliott (1981) focused on the confusion about schizophrenia in deaf patients. Using a symptom checklist from DSM-III, six symptoms were identified as usual in psychotic and nonpsychotic deaf patients while nine symptoms were identified as useful for screening for schizophrenia in deaf patients.

Attention deficit disorder without hyperactivity as defined in the DSM-III characterized 17% of patients aged 7 to 14 seen in a child psychiatry service (Maurer & Stewart 1980). Of these, 80% had other psychiatric disorders. Attention deficit disorder without hyperactivity appears not to be an independent syndrome as suggested by the DSM-III.

A comparison of the description of the children's diagnostic categories in the DSM-III with first-order factors from several studies of children's behavior indicated that generally DSM-III categories are more specific than factors derived from behavior instruments (Dreger 1981). Of course, with the higher-order factors, the DSM-III categories had to be collapsed substantially to produce any correspondence with the empirical behavioral factors. This author notes that factor analytic work has apparently influenced the classification of children's disorders more than that of the adult disorders in the DSM-III. A comparison of adult behavioral factors and DSM-III categories would probably produce even less agreement than was the case for children.

Four studies published together consider the use of the DSM-III with childhood psychiatric disorders. The average rater agreement of 20 psychiatrists with the diagnosis the authors considered most appropriate was less than 50% (Cantwell et al 1979b). Average interrater agreement of DSM-III Axis I was about the same (but slightly lower) than that for DSM-II (54 vs 57%) (Mattison et al 1979). The multiaxial system of DSM-III produced more complete diagnoses for complex cases (Russell et al 1979) and is generally preferred over DSM-II (Cantwell et al 1979a).

While DSM-III does not use response to therapy in its system, this information actually is used to aid in diagnosis. Of 31 patients diagnosed as schizophrenic by DSM-III criteria, almost one-third (9) responded to a 2-week lithium trial (Herschowitz et al 1980). Most of the responders fit the criteria for schizophreniform disorder and for good prognosis schizophrenia. The response of these patients to lithium suggests that they should be considered cases of affective disorders with atypical schizophrenic-like features.

The DSM-III melancholia criteria correctly identified 77% of a sample of 123 inpatients into those with an autonomous syndrome and those who responded to psychosocial intervention without drug treatment (Nelson et al 1981). The melancholia criteria were more selective than were the primary affective disorder criteria.

Suicide attempts, mostly not serious, occurred in most (28 of 39) patients diagnosed as antisocial personality disorder (Garvey & Spoden 1980). These authors suggest that previous suicide attempts be considered as a potential addition to DSM-III criteria.

The DSM-III provides categories of stress response syndromes that were not included in DSM-II (Horowitz et al 1980). Intrusive ideas and feelings are prevalent in these patients.

Winters, Weintraub & Neale (1981) investigated the relationships between codetypes from the Mini-Mult [71 items from the MMPI (Kincannon 1968)] and diagnoses from DSM-II and DSM-III. For DSM-II depression, DSM-III unipolar depression, and DSM-III bipolar depression, concordances of greater than 70% between codetypes (Marks et al 1974) and diagnoses were obtained. The concordances were not significantly different from each other. The concordance between DSM-II schizophrenia and schizophrenic codetypes was 68%, while the concordance between these codetypes and DSM-III schizophrenia was only 37%.

## THEORETICAL ASPECTS OF DSM-III

The DSM-III was intended to be atheoretical and useful for clinicians who hold a variety of theories of psychopathology. Judging from several of the critical responses to the DSM-III, the committee of (mostly) psychiatrists who developed it allowed theoretical assumptions to influence their work, although not as much as other critics would have liked. Most reactions to the DSM-III focused on the "medical model" or categorical approach to mental disorders. The DSM-III was criticized by behavior therapists, dynamic therapists, and clinicans concerned with several specific categories.

On the positive side, Spitzer, Williams & Skodol (1980) discuss the major achievements of the DSM-III and compare it to the DSM-II. The process of developing the DSM-III took 5 years and included representation from various professional groups. Consensus was achieved on most controversial diagnostic categories. A definition of mental disorder that stresses the presence of either distress or disability was offered. Operational diagnostic criteria were included. Diagnostic reliability was generally improved over DSM-II. Finally, the DSM-III represents a multiaxial system of evaluation. The first three axes constitute the official diagnostic assessment, and the last two are available for research for special clinical purposes.

The DSM-III includes the category of ego dystonic homosexuality (Spitzer 1981a). This category avoids the issue of whether homosexuality is abnormal, which became highly publicized during the revision of DSM-

II. In the DSM-III, homosexuality is a disorder if the patient is distressed about it and not a disorder otherwise.

Murphy (1980) lists nine features of DSM-III and concludes that it is superior to its predecessors as a manual for community research. On a more critical note, Skinner (1981) considered the DSM-III simultaneously as a scientific theory that should be open to empirical falsification and as a diagnostic system that should be subjected to standards similar to those required of a psychological test. The different axes of the DSM-III imply different classification models. Both Axes I (clinical psychiatric syndrom) and II (personality or developmental disorder) have implicit hierarchical structures, mixing quantitative distinctions (levels of mental retardation) with clearly qualitative distinctions (sleepwalking vs eating disorder). Axes IV (psychosocial stressors) and V (level of adaptive functioning in past year) are quantitative ratings of severity of impairment. With regard to internal properties, particularly interrater reliability, the DSM-III appears to be a substantial improvement over earlier systems of diagnosis. The validity of DSM-III, on the other hand, seems to have been ignored, although it is far more researchable than its predecessors.

Cantor et al (1980) consider psychiatric diagnoses made with the DSM-III as examples of prototype categorization which they distinguish from classical categorization. Prototypes consist of larger sets of correlated features rather than selected defining features as in the classical. "Messy" aspects of diagnosis from a classical perspective, such as heterogeneity of category membership, borderline cases, and imperfect reliability, are seen as fundamental properties of the system from the prototype viewpoint. DSM-III diagnoses are more similar to prototype classifications than were DSM-II diagnoses. Depending on correlated features, prototype diagnoses are more similar to psychometric and factor analytic dimensions than to medical categories.

Woods (1979) sees the revision of the DSM as an opportunity to examine assumptions underlying classification systems. The change from listing typical features of classes as in DSM-II (e.g. class X has features A, B, C, and sometimes D) to presenting criteria in DSM-III (e.g. to diagnose X, A and B *must* be present and at least two of C, D, E, F, G) makes the boundaries between diagnostic classes clearer. Since disagreements among clinicians usually involve boundary or borderline cases rather than disagreements over the nature of the categories, agreement should be higher with the DSM-III. An additional axis for rating the environment is suggested.

McReynolds (1979) objects to the extension of the "medical model" to many new behavioral disturbances in the DSM-III. A similar criticism in the area of childhood disorders is presented by Garmezy (1978). The em-

phasis of the DSM-III on the medical model, closed categories, and artificial classifications will prevent it from being a standard research tool, although certain features of the DSM-III may improve clinical practice (Zubin 1977–78).

Schacht & Nathan (1977) focus on the potential negative consequences for psychologists of DSM-III. DSM-III considers mental disorders as a subset of medical disorders and requires a statement about nonmental medical disorders on Axis III to complete a diagnostic evaluation. These characteristics greatly enlarge the domain of psychiatry and diminish the domain of other mental health workers. Legislators and insurers may use the adoption of DSM-III to require that mental disorders be first diagnosed by physicians who would then decide whether psychologists would treat them.

Foltz (1980) presented the wary reaction of the Board of Directors of the American Psychological Association to the DSM-III. The DSM-III extended the definition of mental illness into areas not previously claimed by psychiatry. The weakest area of DSM-III was in child and adolescent disorders where a psychological system might be constructed to compete with DSM-III. The categories in DSM-III were said to be "created or deleted based on committee vote rather than on hard data." The DSM-III was also criticized for using a categorical rather than a dimensional model.

In an article defending the DSM-III against criticism from psychologists, Spitzer (1981b) pointed out that the motivation for DSM-III was not to establish psychiatric hegemony over the mental health professions but simply to coincide with the revision of the World Health Organization's International Classification of Diseases (ICD). He denies that the DSM-III is based on the "medical model" since this term is vague. Any expansion of the concept of mental disorders in DSM-III is in terms of specificity, not to increase the scope of mental disorders. He also suggests that psychologists might construct their own classification system that might supplement or compete with DSM-III. It will be difficult, however, for psychologists simply to ignore DSM-III.

In an article dealing with teaching the DSM-III system to clinicians, Skodal, Spitzer & Williams (1981) list the following as areas of ambiguity and controversy. Is assessing *dimensions* more useful than choosing diagnostic *categories?* Should psychodynamic material concerning the development of psychopathology be included in the system? How valid are the discriminations among the categories?

Although the DSM-III is intended to be atheoretical, it has been criticized from a psychodynamic orientation for attempting to draw a sharp and artificial line between classification and explanation (Frances & Cooper 1981). Descriptive categories in the DSM-III and psychodynamic explana-

tion overlap and are dependent on each other. Also from a psychodynamic viewpoint, Karasu & Skodol (1980) criticize the DSM-III for failing to make diagnostic discriminations needed to plan psychotherapy treatments. They recommend the inclusion of a treatment-oriented sixth axis for the DSM-III.

McLemore & Benjamin (1979) argue that functional mental disorders are implicitly diagnosed on the basis of interpersonal behavior. They hypothesize that an approach based formally on interpersonal diagnosis could compare favorably with the DSM-III.

Harris (1979) discussed the implications of DSM-III for children in the context of behavior therapy. The DSM-III is more detailed than the DSM-II, and the greater detail should contribute to the reliability of the system. Also, DSM-III avoids psychodynamic assumptions and focuses more on observable behavior. The two strongest reservations about DSM-III are that response to treatment and treatment recommendations are not included in the system and that previously nonmedical problems falling into the domains of speech therapists, educators, and counselors have been now defined as psychiatric/medical disorders.

Fox (1981) compares the DSM-II and DSM-III concepts of schizophrenia. The question of the appropriate classification of schizoaffective disorders is problematic for clinicians. The same seems to be true for nonclinicians (North & Cadoret 1981). All five popular published accounts of "schizophrenia" reviewed failed to meet the DSM-III criteria for schizophrenia. They usually met the criteria for affective disorders or a naturally remitting condition such as depression. Support for "cures" based on these accounts is misleading.

Lieberman (1979) criticizes the treatment of "schizoaffective" illness in DSM-III. These patients defy the validity of the schizophrenic-affective dichotomy on which current models of diagnosis are based.

On the other hand, Strauss (1979) discusses his view of the appropriate treatment of schizophrenia using the five axes of DSM-III. New DSM-III criteria and definitions of organic mental disorders should stimulate research on these neglected categories (Lipowski 1980a). Akiskal (1980) proposes that biological techniques be used to validate DSM-III diagnoses particularly in the area of affective disorders. Additional biological criteria might improve diagnostic accuracy in this area.

The DSM-III had been criticized (Tu 1980) for failing to include epilepsy in the nosological system while including 21 subcategories of sexual disorders.

Lipowski (1980b) considered the diagnosis of delirium using the DSM-III criteria. The criteria were criticized for including the vague terms "clouding of consciousness" and "speech that is at times incoherent" while leaving out

any reference to abnormal thinking and failing to require laboratory evidence of disordered cerebral function such as EEG slowing.

Frances (1980) discusses the low reliability of the personality disorders section of the DSM-III as compared with the other major sections. A problem with personality diagnosis is that continuous and correlated personality differences do not fit easily into a categorical system. Although the DSM-III does allow for multiple and mixed diagnoses and provides "schizotypal" and "borderline" categories, a dimensional rather than categorical system should receive increasing attention in the future.

In what appears to be a compromise between the dimensional nature of personality differences and practical pressures to state categorical diagnoses, Millon (1981) has discussed the personality disorders on Axis II. He views these as basically dimensional and shows how the categories on Axis II fit his dimensional view. Millon considers the relevance of Axis II information to Axis I diagnoses. He also provides recommendations for treatment which are completely excluded from DSM-III.

## TOWARD DSM-IV

What are the pressures that will shape DSM-IV? A tentative answer to this question may be found by examining the pressures that led to DSM-III. First, it should be recognized that DSM-III is primarily a *professional* manual and only secondarily, if at all, a *scientific* manual. The strong pressures influencing the revision of the DSM are the practical concerns of communication within the profession and defining the legitimate boundaries of the profession. These concerns are best dealt with through consensus. The DSM-IV must be in at least general agreement with the next revision of the ICD. Consensus within the profession must be obtained even if it means voting on the abnormality of homosexuality. The willingness of government, patients, and especially third party payers to accept the manual must be respected, even if it means defining some conditions as normal because insurance companies might refuse to pay for them (Spitzer 1981b).

What about the influence of scientific research on the revision of the DSM? Scientific research cannot be completely ignored. Considerable effort went into demonstrating a marginal improvement in reliability for DSM-III. Nevertheless, some diagnoses were included simply because they were made by some group of psychiatrists. From reading DSM-II and DSM-III, one might think that less is known about etiology now than was known earlier. However, the absence of causal implications in diagnostic labels (e.g. reaction) does not come from empirical research but from an attempt to achieve professional consensus. Likewise, the absence of treatment recommendations is an attempt to achieve consensus among the various

"schools," whose members would certainly object if a competitor's treatment were recommended over their own.

Unfortunately, the route from scientific finding to professional application is long, taking perhaps 50 years (Eysenck & Eysenck 1979). This is certainly true of the relationship between scientific psychological research and professional application in a psychiatric setting. Diagnostic categories, for example, are a scientific anachronism, but professional consensus among psychiatrists and their need to justify themselves to other physicans as practicing a proper medical speciality treating categorical disease entities demand categories. The attacks of Szasz (1974) and Laing (1976) from within psychiatry intensify this "reaction."

Given these pressures, it should probably be recognized that recommendations from scientific research will have only gradual and belated impact on future revisions of the DSM. Nevertheless, some recommendations are offered.

First, categorical diagnosis must be replaced with dimensional assessment (Lang, 1978). Linnaean taxonomic systems (Rome 1979) are apparently appropriate for classifying different species when quantitative differences between them become relatively large. Large differences and adaptation to different environmental circumstances result in different noninterbreeding populations. "Borderline" cases between species are rare or nonexistent. Medical categorical diagnosis may be appropriate in those specialities in which each diagnosis can be matched with a specific causal species of pathogen. In other specialties involving specific causes that are not species of microorganism, such as major gene defects and specific dietary deficiencies, a categorical approach is useful.

Psychological problems, however, are not generally analogous to these medical specialties. (Of course, major gene defects such as Down's syndrome and the psychological consequences of infectious diseases such as syphillis are exceptions.) They are usually more extreme examples of behavior shown by unquestionably "normal" persons every day. The identification of certain behaviors as abnormal depends in some part on their infrequency. Since these infrequent behaviors form continua with more frequent "normal" behavior, any cutoff between normal and abnormal will necessarily produce more "borderline" cases than clearly abnormal cases. The necessity of large "borderline" categories in DSM-III attests to the inadequacy of a categorical approach to psychopathology.

The alternative to categorical diagnosis is dimensional assessment. The degree of a certain type of behavioral deficiency can be (and for most of this century, in the case of intelligence, has been) measured along a scale with known reliabilities and validities and communicated clearly. Even with intelligence, which is the best established behavioral dimension, the DSM-

III continues to provide several heterogeneous and arbitrarily defined categories when the single score on the intelligence dimension provides much clearer information. Even when adaptive behavior, which allows the cutoffs to be adjusted five points in either direction, is considered, simply communicating these two scores would provide clearer information than would the category label "mild retardation."

For the present, the candidates for behavioral dimensions for assessment include intelligence (Eysenck 1979) and its subfactors and the personality dimensions of extraversion, neuroticism, and psychoticism (Eysenck 1976, 1981). The literature on causes (Eaves & Eysenck 1975, Eysenck 1979, Fulker 1981) and consequences of these dimensions has expanded greatly during the last few years and promises to continue growing.

The second recommendation is that psychological assessments must be considered in interaction with treatment options (Cronbach & Snow 1977). Psychological research is still characterized by two parallel empirical approaches, one that predicts behavior and one that changes behavior. The separation of these two "disciplines" prolongs the time that we spend administering possibly effective treatments to inappropriate subjects. Some research has been done that attempts to match the right treatment with the right person to maximize treatment outcome for adults in counseling (DiLoreto 1971) and for children in educational settings (McCord & Wakefield 1981). An interaction between type of treatment (drug vs psychotherapy) and psychoticism has also been suggested for neurotic patients (Rahman & Eysenck 1978). A few manuals for employing empirical and theoretical interactions in treatment have become available (Goldstein 1976, Wakefield 1979, Wakefield & Goad 1982). Much more interactional research is required.

A third recommendation—that assessments be based on observable behavior rather than on subjective impressions of the clinicians—is, for the most part, no longer needed. Although several ambiguous criteria remain in the DSM-III, it is much more objective than was DSM-II and should be commended for this. Further improvements in this direction are encouraged in future revisions.

Another set of negative recommendations for future assessment practice involves ways in which assessment should not change. Several recommendations for future assessment practice have been made by psychologists representing fairly restricted viewpoints. Each of these viewpoints has something to offer assessment but has been presented as a replacement for current assessment procedures rather than as a supplement to them.

The first negative recommendation is not to replace assessment of a person's behavior with assessment of the person's situation (Mischel 1968). This approach has been found wanting (Eysenck and Eysenck 1980). Even

in cases in which situational variables have initiated or maintained problem behaviors, the behaviors themselves are the problems and assessment of the situation is assessment one step removed from the problem. Of course, appropriate analysis of situational variables can add a great deal to the effectiveness of treatment by allowing interactions between behavioral and situational variables to be studied and exploited. Research that identifies environmental factors and their interactions with behavioral factors is more promising than the current arbitrary task analysis approach. Unfortunately, factor analytic work with environments is more difficult.

A related concern is "committed" environmentalism. Certainly environmental effects on behavior—either direct or through interactions—should be included in treatment planning. However, environmentalist propaganda serves no useful purpose and tends to cloud issues that might be seen clearly. For example, the term "medical model" has become so widely used as a derogatory term for psychiatric diagnoses that it has lost its clear meaning (Spitzer 1981b). Referring to categorical diagnoses, this term usefully indicates a severe conceptual problem with psychiatric labels. Used by committed environmentalists, this term includes the use of physiological or genetic information in assessment, as well as the use of dimensional systems of behavioral differences that suggest any limitations on environmental control. A biological basis for individual differences, however, does not require categorical diagnosis, as can be seen in the theoretical paper by Hendrickson & Hendrickson (1980).

Another unproductive suggestion has arisen from marriage counseling. This suggestion, in various forms, is that dyads, couples, families, or systems should be the unit for assessment. The marriage literature (e.g. Gottman 1979) has called for assessing and treating the couple or family as a unit. At least one large study (Eysenck & Wakefield 1981) calls this approach into question. Effects of one spouse on the other and effects of the couple as a unit which were not completely explained by their individual additive effects were small, while overall individual contributions of personality, attitudes, and especially sexual behavior on marital satisfaction were large. Even in marriage therapy, the appropriate unit for assessment is the individual person rather than some larger unit.

## OTHER DEVELOPMENTS IN CLINICAL ASSESSMENT

For assessment to have any clinical usefulness, there must be some theory linking the results of assessment to possible treatment options. The most clearly stated and widely researched theory is the model consisting of extraversion, neuroticism, psychoticism, and intelligence (Eysenck 1976,

1981). The variables in this model and their interactions with and prediction of learning (M. W. Eysenck 1981, Levey & Martin 1981), social behavior (Wilson 1981), and achievement variables (Wakefield 1979, McCord & Wakefield 1981) have been studied extensively. The underlying genetic (Eysenck 1979, Fulker 1981) and physiological determinants (Gray 1981, Powell 1981, Stelmack 1981) have been studied. Cultural factors have also been considered extensively (Al-Issa 1982). Several studies have focused on the relationship between this theory and the atheoretical MMPI (Wakefield et al 1974, 1975, Friedman et al 1982).

In the assessment of intelligence, Sattler's (1982) book on children's intelligence and abilities provides a counterpart for Matarazzo's (1972) book on adult intelligence. The heredity-environment debate (Eysenck & Kamin 1981) continues and has become the central paradigm of research in this area. Despite the premature claims of the death of this issue, the primary alternative, interactionism, appears not to be consistent with the data on intelligence (Eysenck 1979), although in personality assessment (Eysenck 1981) this approach is far more promising (Henderson 1982). In the year of Wechsler's death, the *Wechsler Adult Intelligence Scale* (Wechsler 1981) was revised. This revision consisted of fairly minor modifications in the content of the scale. The norms give IQs that are about eight points lower than before.

Neuropsychology has been the focus of considerable research recently. A particularly interesting development has been research on Luria's front-to-rear organization of abilities (Das et al 1979) and the practical measurement of abilities in this framework (Golden et al 1980, Golden 1981). Integration of this approach with the more widely publicized left-right organization has also received some attention (Golden 1981). Evidence that assessment generally aids treatment has also been forthcoming (Bradley et al 1979).

During the 1970s, a substantial literature developed around the term behavioral assessment (Hersen & Bellack 1976, Ciminero et al 1977, Haynes & Wilson 1979). The term behavioral assessment was used to distinguish treatment-related assessment procedures in behavior therapy from "traditional" assessment procedures. Behavioral assessment has been used variously to exclude only projective instruments or to exclude virtually all trait measures from the field. As it becomes more widely recognized that behavioral assessment is not exempt from properly demonstrated reliability and validity (Hartmann 1977, Lewin & Wakefield 1979, Wakefield 1980), behavioral assessment is gradually coming to terms with stable behavior traits (Eysenck & Eysenck 1980). Trait-like dimensions such as assertiveness, social skills, and fears have been (re)discovered in the behavioral assessment literature (Haynes & Wilson 1979). Older personality and intellectual traits are also frequently incorporated in behavioral assessment (Ciminero et al 1977). Projective devices, such as the Rorschach, are still firmly excluded,

although higher reliabilities for the Rorschach have been reported using Exner's (1978, Wiener-Levy & Exner 1981) scoring system than have been reported in the past.

## CONCLUSION

Our survey of the available evidence on the DSM-III leaves us with the impression that while an improvement on previous schedules, this new scheme is based on foundations so insecure, so lacking in scientific support, and so contrary to well-established facts that its use can only be justified in terms of social need. Psychologists may have to use the system because of social pressures of various kinds, but this should not blind them to the fundamental weaknesses of any such scheme based on democratic voting procedures rather than on scientific evidence. The fact that the categories of the scheme can be diagnosed only in a manner which results in unacceptably low reliabilities, thus giving us a criterion for test construction which hardly invites confidence, is only one of many indications of the weakness of current psychiatric theorizing, but it is not the most important. Psychologists tend to contrast in their minds the unreliability of psychiatric diagnosis with the supposititious accuracy of other types of medical diagnosis; this is wishful thinking. Medical diagnoses are extremely unreliable in all fields; when diagnoses of cause of death are compared with autopsy results, accuracy varies from 45% (Heasman & Lipworth 1966) and 47.5% (Waldron & Vickerstaff 1977) to a magnificent high of 61% (Cameron & McGoogan 1981a,b)! This is hardly better than psychiatric diagnoses! It is the absence of any indication of validity which is far more critical, as is the absence of any appreciation of the importance of scientific proof for schemes of this kind.

DSM-III includes many behaviors which have little or no medical relevance and belong properly in the province of the psychologist, e.g. gambling, malingering, antisocial behavior, academic and occupational problems, parent-child problems, marital problems, and the curious "substance use disorders," which apparently would bring almost any kind of behavior within the compass of psychiatry—drinking coffee, having sex, eating wiener schnitzel. Psychiatry has always been ill defined as a specialty (Eysenck 1975), but this is going well beyond the pale. It is the mixture of unlimited aspiration and practical failure to reach scientifically meaningful conclusions which has characterized so much psychiatric work in the past; DSM-III suggests that the aspirations have grown, if anything, while the performance of the scientific tasks implied by the scheme has badly lagged behind. Until the basic causes of this mismatch are attacked more energetically than they have been in the past, we are unlikely to see any real advance in this field.

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