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# 9

## The Mental Status Examination

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### Introduction

*The context and purpose of the MSE*

The Mental Status Examination (MSE) is a set of systematic observations and assessments undertaken by a diagnostician during the clinical interview. Properly conducted, the MSE provides a detailed and systematic description of the patient at that time, information essential for consolidating the patterns of clues and inferences required for diagnostic decision making. The MSE, guided by the hypothetico-deductive approach to diagnosis, is an essential part of the subsequent inquiry plan. This chapter deals comprehensively with the different components of the MSE. In regard to a particular patient and in accordance with the clinical context, background information, and psychiatric history, the clinician will apply the MSE tactically, pursuing brief, extensive, or discretionary lines of inquiry. These tactics are discussed in more detail at the end of this chapter.

*The need for standardization*

Since the MSE, like the psychiatric history, should involve routine and discretionary lines of inquiry, according to the diagnostic hypotheses being entertained, it should not be standardized as a whole; rather, the separate observations and assessments composing it should be standardized. The techniques of eliciting data should be formalized, the phenomena in question clearly defined, and the weight to be placed on each phenomenon clarified.

*Reliability*

The reliability of a test refers to the likelihood (usually expressed as a correlation) that similar results will be obtained on retesting (**test-retest reliability**) or that similar results will be obtained by different observers (**intertester reliability**). Test-retest reliability applies to such relatively stable characteristics as the use of language; it is not to be expected in such characteristics as mood that are changeable and often linked to the current situation. Wing, Birley, and Cooper (1967) report an attempt to train observers to reliability in the MSE.

*Validity*

When psychiatrists test for abstracting ability, for example, by asking subjects to explain proverbs in their own words, how certain can they be that the clinical test is a true measure of the ability in question? In other words, what is the **validity** of the test? Over the years, a number of techniques for informal mental state assessment have accumulated, but in some instances their validity is questionable. The validity of any clinical test described in this chapter is considered along with the mental faculties required for adequate performance on the test.

## Sections of the Mental Status Examination

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*A hierarchy of functions*

The sections of the MSE can be roughly graduated in a hierarchy from objective and observational to subjective and inferential. In more complex areas, such as the patient's capacity for insight, the clinician is attempting to be objective about somebody else's subjectivity. This is, at best, a relative matter.

The broad areas to be covered in the MSE are as follows:

- A. APPEARANCE AND BEHAVIOR
- B. RELATIONSHIP AND MOOD
- C. COGNITION
- D. LANGUAGE
- E. THOUGHT
- F. PHYSIOLOGICAL FUNCTIONS
- G. INSIGHT

These areas can be further subdivided as follows:

- A. Appearance and Behavior
  - 1. Appearance
  - 2. Motor Behavior
  - 3. Quality of speech
- B. Relationship and Mood
  - 1. Relationship to interviewer
  - 2. Affect and mood

- C. Cognition
  - 1. Level of consciousness and awareness
  - 2. Orientation, attention, and concentration
  - 3. Memory
  - 4. Information
  - 5. Comprehension
  - 6. Conceptualization and abstraction
  - 7. Judgment
  - 8. Combination tests of cognitive functioning
- D. Language
- E. Pathology of Thought
  - 1. Abnormalities of thought process
  - 2. Abnormalities of thought content
- F. Physiological Functions
  - 1. Sleep
  - 2. Appetite
  - 3. Libido
  - 4. Menstrual cycle
  - 5. Other physiological functions
- G. Attitude to Illness

Each assessment area is discussed in this chapter and pertinent clinical tests described.

## Appearance and behavior

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### Appearance

From the moment you first greet the patient, you will be aware of appearance. Try to describe it in detail before you draw inferences from it.

What is the patient's physique and habitus? Is there evidence of loss or gain of weight? Does the patient have any conspicuous marks or disfigurement? Describe the patient's face and hair. Does the patient look ill? What is the expression of the eyes and mouth? Does the patient appear to be in touch with the surroundings?

Is the patient clean and neat or are there deficiencies in personal hygiene revealed by poor grooming of skin, hair, and nails? How is the patient dressed? Is the clothing neat? Is it appropriate or are there peculiarities of dress? After you have described it to yourself, can you infer what kind of statement the patient is attempting to make with this ensemble?

*Physique*

*Facies*

*Grooming*

*Dress*

## Motor behavior

Activity  
Posture  
Coordination  
Movements  
Stereotypies

The clinician should note general overactivity, underactivity, abnormalities of tone, gait and posture, gross incoordination, or impairment of large muscle function. Note any abnormalities of movement and posture such as tremor, chorea, tics, fidgetiness, dystonia, or torticollis.

**Stereotypies** are organized repetitive movements or speech or perseverative postures. They are usually associated with schizophrenia, particularly of catatonic type. A striking variant of postural stereotypy is waxy flexibility, in which the patient will remain indefinitely in a position imposed by the examiner (standing on one leg, for example). Other disorders of movement associated with catatonia include a stiff, expressionless face; facial grimacing or contortions; stiff, awkward, or stilted body movement; and unusual mannerisms of expressive movement or speech. The latter should not be confused with the gracelessness of someone who is socially anxious.

Catatonia

Rituals  
Habits

Does the patient exhibit any **rituals**, such as a need to touch objects repetitively, as in obsessive-compulsive disorder, or **habits** such as nailbiting, thumbsucking, liplicking, yawning, or scratching?

## Quality of speech

Pitch, tone, and tempo

The examiner will attend to the accent, pitch, tone, and tempo of speech, paying particular attention to unusually high or low pitch and abnormal tone, as in the high-pitched squawking monotone sometimes encountered in children with early infantile autism.

Production

In **mutism**, which can occur in advanced brain disorder, severe melancholia, catatonia, somatoform disorder of conversion type, or in the elective mutism of negativistic children, the patient is unable or unwilling to utter anything. In conversion disorder, mutism is less common than **aphonia**, the patient being able to speak only in a hoarse whisper.

Phonation

Fluency

The rhythm and fluency of speech is disordered in **stammering**, the patient sometimes halting and struggling tonically to get the word out, and at other times or in other cases hesitating clonically on a sound or word at the beginning of an utterance.

## Relationship and mood

### Relationship to interviewer

The clinician infers the quality of the patient's relationship by how he or she behaves and what is said. The relationship may be constant, it may vary with the

topic being discussed, or it may be influenced by other factors. If these factors are unexpressed (for example, when the patient is privately amused by an auditory hallucination), they may remain obscure. If such is the case, it should be noted.

#### *Inference*

Aside from matters of inconstancy and obscurity, affective states are difficult to assess. The clinician draws on a number of behavioral clues to assess the quality of the patient's relationship and mood. As a rule, the more inferential the judgment, the more unreliable the conclusion. Clinicians often differ in their inferences concerning a patient's affect, especially when it is unstable, ambiguous, complex, or shielded by interpersonal caution.

#### *The influence of the interviewer*

It is inevitable that the examiner's behavior will affect the ebb and flow of the patient's feelings. The patient may be responding appropriately to the interviewer's friendly approach (or rudeness, for that matter). The patient will also be responding to highly idiosyncratic internal predispositions, as, for example, if harboring mingled anxiety and deference for somebody perceived as a threatening authority figure who must be placated.

#### *The fallibility of inference*

Given the fallibility of inference, it is wise to stick closely to observations and be able to cite them. This skill takes training. The beginner is overimpressed by brilliant intuitive leaps; the expert heeds intuition but realizes how unreliable it is. The beginner grasps for and holds firmly to an inference, sometimes in spite of contrary evidence. The expert makes the inference, cites the clues on which it is based, can offer alternative explanations, and is prepared to discard the inference for a better one if the evidence fails to support it.

### *Nonverbal behavior*

#### *Eye contact*

The quality of **eye contact** is important in gauging affective states. Negativistic patients, especially those with catatonia, may avert their gaze from the examiner. Children with early infantile autism characteristically demonstrate eccentricities of eye contact: staring through the examiner or averting their gaze. A delirious patient whose sensorium is impaired may stare into space; so may a melancholic or schizophrenic patient who is dominated by ruminations or preoccupations. Intermittent staring is a feature of different forms of epilepsy. Can the patient's attention be captured, albeit briefly? If not, suspect an organic brain disorder.

Some patients stare at the examiner intently. Distinguish the wide eyes of awe and fear from the narrowed slits of hypervigilant suspiciousness. Other patients make hesitant eye contact, particularly when they are embarrassed about what they are saying. Remember, however, that not all patients with shifty gaze are liars, and that some can prevaricate without batting an eyelid.

#### *Facies*

The impact of the eyes on interpersonal relations cannot be overestimated. The configuration of supraorbital, circumorbital, and facial musculature, the eyelids, palpebral fissure, gaze, depth of binocular focus, pupil size, and conjunctival moisture all combine to produce a range of social signals of great significance for (a) interpersonal dominance, competition, attraction, hostility, or avoidance, (b) the initiation and punctuation of conversation, and

(c) the feedback one requires to know how another person has responded to what one has said. Women make more eye contact than men and appear to be more likely to use eye contact to gauge when it is appropriate for them to break into a conversation. Women look at a man while speaking if they like him; men look at a woman more while listening if they are attracted to her. Same-sex pairs make more eye contact than do opposite-sex pairs (Argyle, 1967).

Eyes and face are combined with body posture and movement in a Gestalt. The face provides the clues to remoteness, bewilderment, and perplexity; the whole body is involved in tenseness (clenched fists, sweaty palms, stiff back, leaning forward, restlessness, preoccupation, boredom, and sadness).

*Posture*

### *Verbal behavior*

*Verbal communication*

The patient may be uncommunicative or, in the extreme, quite mute. On the other hand, the patient may be friendly and communicative, even loquacious or garrulous. Patients convey antagonism by hectoring, uncooperativeness, impertinence, condescension, or even by direct threat, criticism, or abuse. In contrast, by tone of conversation and demeanor, the patient can convey respect, deference, anxiety to please, or ingratiation.

*Attitudes*

Note and describe the following attitudes in the patient: shyness, fear, suspiciousness, cautiousness, assertiveness, indifference, passivity, clowning, interest in the examiner, clinging, coyness, seductiveness, or invasiveness.

### *Affect and mood*

*Affect*

**Affect** refers to a feeling or emotion usually in response to an external event or a thought. Affects are normally associated with feelings about the self or about other people who are of personal significance to the subject. Less usually, an affect is experienced without association, as though adrift from its reference point. Affect is the conscious component of a monitoring system signaling whether the individual is on track toward a personal goal, whether the individual is obstructed, frustrated, or prevented from achieving the goal, or whether it has already been attained. Compare, for example, the anticipatory pleasure at preparing to meet someone beloved; the anxiety and fear at seeing the beloved with a rival; the rage and despair of loss; and the exultation of reunion. Similar though more complex affects can attend mountain climbing, solving mathematical puzzles, or giving birth. Whatever the goal, its remoteness, proximity, loss, repudiation, attainment, or inaccessibility are all accompanied by self-monitoring affects.

*Affect as a monitor*

In contrast to affect, which may be momentary, **mood** refers to an inner state persisting for some time with a disposition to exhibit a particular emotion or affect. A mood of depression, for example, may not preclude the subject's deriving momentary amusement from a joke, but gloom, sadness, and desolation prevail.

*Mood*

Affects and mood are inferred from the patient's demeanor and spontaneous conversation. A general query, such as

How are you feeling now?

or

How have your spirits been?

can be helpful. Try to avoid such leading questions as

Do you feel depressed?

#### *Veiled affect*

Demeanor and affect usually coincide; but sometimes they do not. For example, a stiffly smiling exterior can mask anxiety or depression. If you suspect that this is the case, an indicating or clarificatory interpretation can help the patient recover suppressed emotion.

I notice that even though you speak of sad things, you smile.

or

It's hard to smile when you feel bad inside.

#### *Morbid affect or mood*

In a mental status report, the general qualities of a patient's emotional expression should be described. Particular morbid affects or moods should be noted. Is the patient affectively flat - that is, emotionally dull, monotonous, and lacking in resonance? This is characteristic of chronic schizophrenia and dementia. Is the patient emotionally **constricted**, with a narrow range of affect, as in obsessional or schizoid personality? Is the patient's affect **inappropriate** or **incongruous** in that it is out of keeping with the topic of conversation?

#### Case 9.1

■ When she was told that her aged mother had died, the chronic schizophrenic patient began to laugh. When asked how she felt, the patient abruptly answered, "Sad," then stopped laughing and began to stare straight ahead with pursed lips, rocking in her chair. ■

#### *Lability*

Does the patient show evidence of **lability**, suddenly changing from neutral to excited, or from one emotional pole to another? Lability is often associated with emotional **intemperateness**, an abrupt, unreflective expression of heightened emotion (excited anticipation, affection, or irritation, for example).

#### *Histrionic affect*

Note **histrionic affect**, the extravagant but shallow expression of emotion found in people who exaggerate their feelings in order to avoid being ignored and who seize or fear to lose the center of the interpersonal stage. Histrionic affect is characteristic of people with histrionic, narcissistic, or borderline personality disorder.

*Euphoria*

Morbid **euphoria**, an exorbitant sense of well-being expressed in inexorable good spirits, is encountered in hypomania or mania, and less commonly in schizophrenia and organic brain disorder. The frontal lobe dysfunction characteristic of neurosyphilis, disseminated sclerosis, and after lobotomy, may be associated with fatuous joking and lack of foresight. **Silliness** is sometimes encountered in histrionic or immature people overwhelmed by the enormity of a difficult situation. Morbid silliness is also characteristic of some disorganized schizophrenic patients (**hebephrenia**).

*Elation*

As it becomes exaggerated, euphoria merges into **elation** and **excitement**, although the manic patient commonly also exhibits irritation if obstructed or thwarted. An extreme and transcendent exaltation of mood can be seen in the rare **ecstatic states** that are associated with acute schizophreniform or schizophrenic disorders and epilepsy.

*Apathy*

**Apathy**, a pervasive lack of interest and **anergia**, a lack of drive, can be found in preschizophrenic, schizophrenic, depressive, and organic brain disorders. The apathetic patient has little or no enthusiasm for work, social interaction, or recreation. **Anergia** is usually associated with a decrease in sexual activity. **Anhedonia**, a subjective sense that nothing is pleasurable, is commonly associated with anergia and is found in preschizophrenia, schizophrenia, and melancholia. Excessive **fatigue**, which may be manifest as hypersomnia, is found in many physical disorders, organic brain disorder, schizophrenia, anxiety disorders, depressive disorders, and abnormal illness behavior.

*Fatigue**Depression*

When applied to an affect or mood, **depression** refers to a pervasive sense of sadness. Depression is often, but not invariably, related to a life event involving loss, rejection, defeat, disillusionment, or disappointment. It may be associated with tearfulness and anger about the event. In more severe depression or **melancholia**, the patient feels emotionally deadened or empty, the world stale and unprofitable, and the future hopeless. The patient is preoccupied with dark forebodings and agitated by persistent self-recrimination about past failures or misdeeds. Depressed affect and gloomy ruminations are characteristically accompanied by diminished concentration and a slowing of thinking and movement (**psychomotor retardation**); in some cases, however, **agitated depression** is associated with psychomotor restlessness. Severe depression has important somatic concomitants, with characteristic posture, facies, headache, irritability, precordial heaviness, gastrointestinal slowing, anorexia, weight loss, loss of sexual interest, and insomnia. Depression typically has a diurnal variation; dysphoria, hopelessness, and agitation are worse in the morning, and the patient brightens up by evening.

*Anger*

Open anger and irritability are readily recognized. They may be understandable if the patient's circumstances are appreciated. **Morbid anger** however, is defined by pervasiveness, frequency, disproportion, impulsiveness, and uncontrollability. Morbid anger is associated with organic brain disorder, usually in the form of **catastrophic reactions** to frustration, especially when the patient can no longer complete a familiar or easy task. Abnormal anger is also found in some forms of epilepsy, in personality disorders of aggressive,



antisocial, borderline, or paranoid type, in the attention deficit and conduct disorders of childhood, in drunkenness, in paranoid disorders, in hypomania or mania, and in intermittent or isolated explosive disorders.

#### *Controlled hostility*

**Controlled hostility** may be expressed as sullenness, uncooperativeness, superiority or mockery. It can be helpful to invite the patient to express anger or resentment directly and to define its origin. This is particularly the case with adolescents:

Whenever I ask you a question, you close up. Something about being here is making you pretty upset. Can you tell me what it is?

#### *Anxiety and fear*

**Anxiety and fear** refer to the subjective apprehension of impending danger, together with widespread manifestations of autonomic discharge (dilated pupils, cold sweaty palms, tachycardia, tachypnea, nausea, bowel hurry, urinary urgency, etc.). Fear has an object: the need to cope with uncertain odds, a charging bull or a near accident in an automobile, for example. Anxiety is associated with a threat to an essential value - being attached to someone beloved, not being a coward, being successful, or being highly regarded, for example. Fear can be eliminated by direct action - fight or flight - whereas the adaptive solution to anxiety is likely to require planning and persistence. Both affects - anxiety and fear - are biologically advantageous because they signal the need for a constructive response.

In **morbid anxiety**, affect is cast adrift from its moorings, either to float free or fasten on a substitute, phobic object, or situation (for example, on a particular animal, heights, elevators, enclosed spaces, or being fat). Morbid anxiety appears disproportionate or eccentric and is recognized as pathological by the patient and others. Many disorders of thought content (described later in this chapter) can be regarded as unconsciously determined, pathological mechanisms that detach anxiety from its object or block and divert it at origin. See also the section on ego defense mechanisms in chapter 5.

### Cognition

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The cognitive functions that can be assessed in a mental status examination are as follows:

1. Level of consciousness and awareness
2. Orientation, attention, and concentration
3. Memory
4. Information
5. Comprehension
6. Conceptualization and abstraction

7. Judgment
8. Combination tests of cognitive functioning

### Level of consciousness and awareness

#### *Coma*

#### *Stupor*

The psychiatrist may be asked to consult on a comatose or stuporous patient if a nonorganic cause is hypothesized. **Coma** is a state of nonawareness from which the patient cannot be aroused. Diminished awareness is called **semicoma** or **stupor**, the subject being temporarily rousable, by pain or noise for example, but reverting to stupor when the stimulus ceases. In stupor, eye movements become purposeful when the painful stimulus is applied and wincing or pupillary constriction may occur, but the patient remains akinetic and mute. Stupor and coma occur in primary neuronal dysfunction (as in Alzheimer's disease), secondary neuronal dysfunction (as in metabolic encephalopathy), supratentorial lesions (such as infarction, hemorrhage, and tumor), subtentorial lesions (infarction, hemorrhage, tumor, and abscess), and psychiatric disorder (dissociative disorder, depression, and catatonia).

#### *Psychogenic coma*

**Psychogenic coma** is suggested by normal vital and neurologic signs, resistance to opening the eyes, normal pupillary reactions, and staring (rather than wandering) eyes. Swallowing, corneal, and gag reflexes are usually intact, and electroencephalography and oculovestibular reflexes are normal. Intravenous barbiturate may increase verbalization in psychogenic stupor; it depresses awareness further in organic conditions.

#### *Torpor*

**Torpor** denotes a lowering of consciousness short of stupor. Awareness is narrowed and restricted; apathy, perseveration, and psychomotor retardation are found, but the more dramatic phenomena of delirium (illusions, hallucinations, agitation, etc.) are lacking. Torpor is associated with severe infection and multi-infarct dementia.

#### *Obtundation*

In **twilight** or **dreamy states**, restricted awareness (**obtundation**) is manifest as disorientation for time and place, with reduced attention and short-term memory. In addition, the subject may have the sense of being in a dream.

#### Case 9.2

■ A 15-year-old male jumped out of the window of a moving automobile, sustaining concussion and superficial lacerations. After admission to the hospital, he claimed to have had a vivid dream that portended his accident in every respect, except that in the dream his mother had not been in the emergency room to help him and he had felt abandoned by her.

His parents could not recall that he had spoken of a dream before the accident. The friends who drove the vehicle out of which he had jumped recalled that he had been highly excited on the way to the hospital, shouting about a dream and asking for his mother, who arrived in the emergency room shortly after he was transported there.

The most likely explanation for his 'dream' is that it never occurred but that his concussion was associated with a twilight state in which dream, false memory, and reality were interwoven. ■

Twilight states occur in dissociative disorders (especially psychogenic fugue), epilepsy and, rarely, schizophrenia.

*Delirium*

**Delirium**, a common condition in medical and surgical wards, is caused by a diffuse cerebral dysfunction of acute or subacute onset and fluctuant or reversible course. After prodromal restlessness and insomnia, delirium typically presents with obtundation, emotional lability, and visual illusions. The clinical features tend to worsen at night ("sundowning"), with insomnia, agitation, hallucinations, and delusions. It should be noted, however, that quiet deliria are common, with little more to note than **clouding of consciousness**, causing mild disorientation for time and place and reduced concentration. Restlessness, tremor, asterixis (irregular, asymmetrical jerking of the extremities), myoclonus, and disturbance of autonomic function are also common.

*Clouding*

Patients vary in their psychological reactions to delirium; depressive, paranoid, schizophreniform, anxious, and somatoform responses may be encountered. The patient may be fearfully or combatively hypervigilant, or torpid and apathetic.

*Illusions*

Visual **illusions** are characteristic of delirium, the patient misinterpreting the moving shadows, curtains, and surrounding bedroom furniture. Physical sensations may also be misperceived, the patient mistaking abdominal pain, for example, for the knives of malefactors, and tinnitus for radio waves. If poorly systemized delusional beliefs arise, the patient may act on them, seeking escape or defense. Visual **hallucinations** are more common in delirium than are auditory and vary in connotation: sometimes playful (animals romping, etc.), sometimes personal (the face of a dead relative, etc.), and sometimes horrible or threatening (dismembered bodies, accidents, etc.). Visual hallucinations are most evident at night and can be provoked when the eyes are closed, especially when the orbits are pressed on.

*Hallucinosis*

*Confabulation*

Attention and concentration wander in delirium, thinking becomes disconnected or incoherent and memory deteriorates. The patient sometimes **confabulates**, linking memories out of correct sequence (see Case 9.2).

Affect is often labile in delirium, but persistent blunting, anxiety, suspiciousness, hostility, depression, or euphoria may be encountered. The affect is usually congruent with the prevailing illusions or hallucinations.

*Dissociation*

Subtle restriction of consciousness often occurs during acute anxiety resulting in vagueness or amnesia for traumatic experiences. Sometimes amnesia is exaggerated, the patient wandering in a daze, to turn up in an emergency room unaware of name or address. This is known as **dissociative fugue state** and should be differentiated from epilepsy or postictal conditions.

**Orientation, attention, and concentration**

*Disorientation*

Disorders of orientation are most often found when the sensorium is clouded, as in torpor, obtundation, dreamy states, delirium, or fugue. Orientation is usually lost in the following order: time, place, person. Disorientation for time and place

**TABLE 9.1**  
**Clinical tests of orientation**

1. Time
  - Hour
  - Day
  - Date
  - Month
  - Year
2. Place
  - Building
  - City
  - State
3. Person
  - Name
  - Address and Telephone
  - Age
  - Occupation
  - Marital Status

usually indicates organic brain disorder. Disorientation for personal identity is actually rare and is associated with psychogenic or postictal fugue states, other dissociative disorders, and agnosia.

Orientation is assessed by asking the patient for the information in Table 9.1. The reliability of the clinical assessment of orientation is high, but its predictive validity is uncertain.

**Attention** is involved when a subject is alerted by a significant stimulus and sustains interest in it. **Concentration** refers to the capacity to maintain mental effort despite distraction. An inattentive patient ignores the clinician's questions, for example, or soon loses interest in them. The distractible patient is diverted from mental work by incidental sights, sounds, and ideas.

Simple clinical tests for attention and concentration are shown in Table 9.2. These tests have high reliability but little validity. Essentially, they test the ability to concentrate. Apart from concentration, however, arithmetical questions involve intelligence and schooling. Smith (1967) found that only 42% of 132 adults could complete the serial-sevens test without error, and only 26% of those over 45 years old could do so. Milstein, Small, and Small (1972) tested 325 hospitalized psychiatric patients and 50 age-matched nonhospitalized sibling

*Attention and  
concentration*

**TABLE 9.2**  
**Clinical tests of attention and concentration**

1. Subtract sevens or threes, serially, from one hundred.
2. Reverse the days of the week or months of the year.
3. Spell simple words backward.
4. Repeat digits (two, three, four, or more) forward and backward.
5. Perform mental arithmetic:
  - Number of nickles in one dollar, thirty five cents?
  - Interest on two hundred dollars at four percent for eighteen months?

controls. Errors were common and were related to psychiatric disturbance, socioeconomic status, intelligence, and the ability to cope with an interview situation. In summary, the procedure has little diagnostic specificity.

### Memory

#### *Short- and long-term memory*

Memory has several stages. Information must first be registered and comprehended. It is then held in short-term storage. If the material is to be retained beyond immediate recall, a more durable memory trace is formed. Memory traces in long-term storage either decay, consolidate or become simplified and schematized, partly as a result of subsequent experience. Long-term memories are retrieved or recalled from storage by tagging a pattern of sensory phenomena and matching it with long-term memory schemata (see chapter 4).

In clinical practice, abnormal memory is manifest as **amnesia** (memory loss) or **dysmnesia** (distortion of memory).

### *Amnesia*

**Psychogenic amnesia** occurs in several forms:

#### *Causes of psychogenic amnesia*

1. During and after severe anxiety, memory is likely to be defective.
2. Some people have the ability to repress unwelcome anxiety-laden ideas; their memory is thereby rendered patchy or selective.
3. In such dissociative disorders as psychogenic amnesia and fugue, the patient usually loses memory for a circumscribed period of time during which profoundly disturbing events took place. Less commonly, the amnesia is generalized (total) or subsequent (i.e., amnesia for everything after a particular time).
4. In psychogenic fugue, in addition to displaying generalized amnesia, the patient travels a distance from home and assumes a new identity. Not infrequently, in such cases, it is unclear whether one is dealing with unwitting self-deception or conscious imposture.

#### *Organic amnesia*

**Organic amnesia** occurs in acute, subacute, and chronic forms.

#### *Retrograde and anterograde amnesia*

After **acute head trauma**, there is likely to be **retrograde amnesia**, due to a disruption of short-term memory. The extent of **anterograde amnesia** following head trauma is an index of the severity of brain injury. Amnesia is also found in alcoholism (blackouts) and after acute intoxication, delirium, and epilepsy.

#### *The amnesic syndrome*

**Subacute amnesia** (the amnesic syndrome) occurs after Wernicke's encephalopathy, a disease caused by thiamine deficiency and encountered most commonly in alcoholics. Wernicke's encephalopathy is characterized by ophthalmoplegia, nystagmus, ataxia, and delirium. After the delirium clears, most

patients have a residual **Korsakoff's syndrome**, with disorganized memory in an otherwise clear sensorium. Korsakoff patients have difficulty in recalling events from before the onset of the encephalopathy. They also have a severe impairment of the ability to lay down new memories after the encephalopathy. The retrograde amnesia affects the ability to remember the precise order in which events occurred. The anterograde amnesia, however, tends to be even more marked, the most severely affected patients, for example, being unable to store new information. As a consequence, the patient is often disoriented for place and time and may confabulate to fill the memory gaps. Thus, the characteristic pattern of Korsakoff's syndrome is of amnesia, disorientation, confabulation, a facile lack of concern, and a tendency to get stuck in the one groove of thought.

**Chronic amnesia** as in dementing illnesses, extends back for years. Recent memory is lost before remote.

### *Dysmnnesia*

#### *Disorders of recognition*

Disorders of recognition include *déjà vu*, *déjà vécu*, and psychotic misidentification. *Déjà vu* and *déjà vécu* are common and normal, particularly in adolescents. They involve the sudden uncanny feeling that one has experienced the present situation or heard precisely the same current conversation on a previous occasion. These phenomena are associated with anxiety and less commonly with temporal lobe epilepsy. Delusional misidentification may occur in schizophrenia, the patient describing familiar people as strangers or claiming to recognize people never met before. In the delusional syndrome named for Capgras, the patient regards others as doubles of whom they claim to be.

#### *Disorders of recall*

Disorders of recall include **retrospective falsification** and **confabulation**. All people indulge at times in retrospective falsification – embellishing the past to present a more appealing, tragic, or amusing impression. Histrionic people sometimes invent such an extensive and impressive past that they are drawn into imposture, while depressives find sin, failure, and occasion for self-recrimination in their unexceptional lives. After recovery from psychosis, patients often repress their memories of illness and retain only bland or vague reminiscences of the acute disorder. It is generally inadvisable to ask them to recall their experiences in detail.

#### *Confabulation*

A **confabulation** is a false memory the patient believes is true. Confabulations can be quite detailed, but they are often inconsistent and fanciful. Confabulations commonly fill memory gaps, especially in the amnesic syndrome. Some schizophrenics confabulate, spinning complicated fantasies about such topics as telekinesis, ESP, and nuclear radiation. It is difficult to draw the line between confabulation and deception in the hysterical imposter or the dramatic abnormal illness behavior of the patient with Münchausen syndrome.

Table 9.3 sets out the clinical tests for immediate, recent, and remote memory.

→ **TABLE 9.3**  
**Clinical tests of memory**

*Immediate recall*

1. Repeat digits forward and backward.  
 Present digits at one-second intervals.  
 The average adult performance is up to six forward and four backwards.
2. Repeat unrelated words (apple, table, grass) immediately.
3. Repeat three-part phrases ("33 Park Avenue"; "brown mahogany table"; "twelve red roses").

*Recent memory*

4. Repeat the unrelated words after 1, 3, and 5 minutes.
5. Repeat the three-part phrases after 1, 3, and 5 minutes.
6. Recall events in the recent past.  
 For example: a chronological account of the present illness; the last meal; an account of how the patient got to the office; the names of the physicians and nurses who are caring for the patient in the hospital.
7. Repeat this sentence:  
 One thing a country must have to become rich and great is a large, secure supply of wood.
8. Recount the following story with as many details as possible:  
 William Stern / a 63-year-old / state representative / from Walton County / Utah / was planning his reelection campaign / when he began experiencing chest pain. / He entered Logan Memorial Hospital / for three days of medical tests. / A harmless virus was diagnosed / and he, his wife / Sandra, / and their two sons, / Rick and Tommy, / hit the campaign trail again.

The average patient should be able to reproduce 8 of the 15 separate ideas in this paragraph. Less adequate performance suggests defective recall of information requiring hierarchical analysis, short-term memory storage, and sequential recall.

*Remote memory*

9. Recall parents' names, date and place of birth, graduation dates, age and year of marriage, occupational history.

**Reliability and validity**

These tests have good test-retest and intertester reliability. Their validity is affected by intelligence and age and by such emotional states as depression and, to a lesser extent, anxiety. The most useful tests for detecting organic lesions appear to be orientation, delayed recall, sentence repetition, and general information (Hinton & Withers, 1971; Withers & Hinton, 1971).

**Information**

*General information*

The patient's fund of general knowledge depends on past education and current interest in contemporary affairs. A clinical test of information is provided in Table 9.4.

TABLE 9.4  
Clinical tests of information

1. Name the last four presidents starting with the current president.
  2. Name the mayor, state governor, and state senators.
  3. Name four large United States cities.
  4. Discuss four important current events.
  5. For what are these people famous?  
George Washington, Christopher Columbus, William Shakespeare, Albert Einstein.
- Organicity is suggested if the patient makes 12 (60%) mistakes or more.

### *Reliability and validity*

If administration is standardized, reliability is high. The test is quite useful as an estimate of organicity, although it does not assess a unitary cognitive function.

### **Comprehension**

#### *Comprehension*

Comprehension is assessed by the patient's grasp of the immediate situation. Does the patient know why he or she is at this particular location? Does the patient appreciate that he or she is ill or in need of treatment? Does the patient understand the purpose of the examination?

There are no tests for comprehension. It is assessed as the interview proceeds. Although comprehension is often disturbed in delirium and dementia, for example, there is no evidence that its assessment contributes to diagnosing organicity, beyond what is provided by other tests of the sensorium (orientation, concentration, and memory).

### **Conceptualization and abstraction**

#### *Similarities and differences*

Simple levels of conceptualization are assessed by testing the capacity to discern the similarities and differences between sets of words. The capacity to abstract is tested by asking the subject to discern the pith of well-known metaphorical statements (see Table 9.5).

### *Reliability and validity*

These tests have poor reliability and validity. They are affected by intelligence, educational level, culture, and age. They have little discriminating power and do not effectively detect organicity. Andreason, Tsuang, and Canter (1974) found that clinicians using these tests could not distinguish between manics,



TABLE 9.5  
Clinical tests of conceptualization and abstraction

1. How are the following pairs similar or alike?
  - A child and a dwarf
  - A tree and a bush
  - A river and a canal
  - A dishwasher and a stove
2. How are the following pairs different?
  - A lie and a mistake
  - Idleness and laziness
  - Poverty and misery
  - Character and reputation
3. What is the meaning of the following proverbs? (ask if they have been heard before)
  - A rolling stone gathers no moss.
  - People who live in glass houses should not throw stones.
  - Strike while the iron is hot.

Combination tests

schizophrenics, and creative writers. Such tests are most useful when they tap unmistakable formal psychotic thought disorder.

Case 9.3 ■ A young man with disorganized and accelerated thinking responds thus to the proverb, *People in glass houses should not throw stones*:

"Oh yeah. My California uncle passed the shotgun out the windows and started firing!"

To the proverb, *A rolling stone gathers no moss*, he answers:

"Put a few pebbles in your mouth when you're hiking. You'll go a few more miles." ■

Case 9.4 ■ Another young patient, who has the delusion that he is Christ, answers *Glass Houses*, thus:

"Those who know that it has been seen what they have done - and believe me it has all been seen - Let him who is without sin cast the first stone. Okay? That's what I believe it means."

~ The same patient responds to *Rolling Stone* in this way:

"If you can continue to move and always move and always follow yourself and no one else, you'll never have the evil one within yourself." ■

Unfortunately, the sample of thinking provoked is usually so small and its pathology so equivocal that the test is of dubious virtue.

## Judgment

Judgment is usually tested by asking the patient a question like the following:

What would you do if you found a stamped, addressed envelope in the street?

Why are there laws?

Why should promises be kept?

Good judgment requires intact orientation, concentration, and memory. There is no evidence that a finding of poor judgment adds anything to diagnosis beyond that provided by detecting deficits in the lower-order functions.

### Combination tests of cognitive functions

#### Combination tests

A number of standardized, quantifiable clinical assessments of organic brain disorder combine different mental functions in one test. The virtues of quantification and standardization are that reliability is thereby enhanced and baseline measures are available to detect deterioration or improvement. Several combination tests are described here.

#### *The Short Portable Mental Status Questionnaire (SPMSQ)*

Kahn et al. (1960) designed the Short Portable Mental Status Questionnaire (SPMSQ). As revised and refined by Pfeiffer (1975), it consists of 10 questions concerning orientation, memory, information, and calculation (see Table 9.6). Pfeiffer (1975) provided details for scoring the SPMSQ. The categories moderate or severe impairment coincide with the diagnosis of organic brain disorder in about 90% of cases. Test-retest reliability is excellent.

TABLE 9.6  
The Short Portable Mental Status Questionnaire

1. What is the date today?
2. What day of the week is it?
3. What is the name of this place?
4. What is your telephone number?  
or
- 4A. What is your street address?
5. How old are you?
6. When were you born?
7. Who is president of the U.S., now?
8. Who was the president just before him?
9. What was your mother's maiden name?
10. Subtract three from twenty and keep subtracting three from each new number, all the way down.

0-2 Errors: intact intellectual functioning

3-4 Errors: mild impairment

5-7 Errors: moderate impairment

8-10 Errors: severe impairment

*The Set Test*

Isaacs and Kennie (1973) introduced this instrument as a simple test of cognitive function. The patient is asked to name as many items as possible in each of four categories: colors, animals, fruits, and towns. One point is allotted for each correct item up to 10 in each category, to a maximum score of 40. Scores under 15 are abnormal and likely to be associated with dementia. Scores of from 15 to 24 have a low association with dementia, while over 24 there is no association. Physical illness and low social class, but not depression, may depress scores.

*The Cognitive Capacity Screening Examination (CCSE)*

The Cognitive Capacity Screening Examination, introduced by Kaufman et al. (1979), is a brief mental status questionnaire aiming to detect cognitive impairment. It consists of questions covering orientation, concentration, memory, and conceptualization. The total score is 30, one point for each correct answer. Scores below 20 are regarded as indicating cognitive impairment. A sample of neurological inpatients yielded relatively few false positives but a considerable number of false negatives. The CCSE is not sensitive to such specific deficits as aphasia or anosognosia. This test requires further refinement.

*The Mini-Mental State (MMS)*

Folstein, Folstein and McHugh (1975) proposed the MMS as a brief test of cognitive function (see Table 9.7). The first part of the test covers orientation, memory, and concentration; the second part deals with expressive and receptive language and the graphic reproduction of patterns.

The reliability of the MMS is high with little practice effect and is useful for following the patient's progress. It satisfactorily distinguishes dementia from depression with or without cognitive impairment. Scores of from 9 to 12 out of 30 indicate a high likelihood of organic impairment. Scores of over 25 predominate in normals and functional illness of neurotic or psychotic nature.

**Language***The function of language*

Language is a system used both for communication and as a tool of thought. Language facilitates thinking by hierarchically organizing ideas and concepts and by syntactically indicating the relationship between them. Language and thought are not inseparable, however; psychomotor thinking, for example, does not re-

TABLE 9.7  
The Mini-Mental State

Part I	
1. What is the (year) (season) (date) (day) (month)?	(5 points)
2. Where are we: (state) (county) (town) (hospital) (floor)?	(5 points)
3. Name 3 objects (1 second each). Ask patient to name all three after you have said them.	(3 points)
4. Serial sevens. 1 point for each correct. Stop after 5 answers.	(5 points)
5. Ask for the 3 objects repeated above.	(3 points)
Part II	
1. Name a pencil and a watch.	(2 points)
2. Repeat: No ifs, ands, or buts.	(1 point)
3. Follow a three-stage command: Take a paper in your right hand, fold it in half, and put it on the floor.	(3 points)
4. Read and obey this written instruction: CLOSE YOUR EYES	(1 point)
5. Write a sentence ( <i>not dictated</i> )	(1 point)
6. Copy a design ( <i>intersecting pentagons</i> )	(1 point)

quire words. Picture to yourself, for example, the way you execute a tennis backhand, or the Stars and Stripes fluttering from a flagpole.

#### Articulation

Language competence is assessed from the patient's speech during the interview. A history of spoken or written language difficulty or an observation of clumsy articulation, disordered rhythm, and difficulty in the understanding or choice of words should be noted and further investigated.

#### Syntax

#### Vocabulary

#### Comprehension

Language comprehension is tested by asking the patient to point to single objects and then to point to a number of objects in a particular sequence. The examiner may also ask the patient to perform a series of actions in an arbitrary sequence. A clinical test of language functions is provided in Table 9.8.

#### Expression

Expression is evaluated by asking the patient to repeat words, phrases, and sentences after you and to name correctly a number of objects. Expression and comprehension are evaluated by asking the patient to read a passage aloud and to answer questions about it. Graphic language is tested by asking the patient to take dictation. Note any errors and slowness in performance.

#### Aphasia

These tests are used if **aphasia** is suspected. The three most common forms of aphasia are all manifest as difficulty in repeating words or phrases. In **Broca's aphasia**, comprehension is relatively intact but expression dysfluent, sparse, telegraphic, and full of circumlocution. In **Wernicke's aphasia**, comprehension is affected. Expression, though fluent, rambles, lacks meaning, and is full of errors to which the patient seems oblivious. In **conduction aphasia**, comprehension is intact, expression fluent but full of errors and pauses, and repetition is difficult; but reading is relatively intact.

#### Muteness

Wells and Duncan (1980) contend that **muteness** is seldom found in neurological disease (except in the acute phase), in seizure disorder, or in advanced cerebral degeneration. The aphasic is never mute. Muteness is more

→ **TABLE 9.8**  
Clinical tests of language functions

- I. Comprehension
  1. Point to single objects (table, chair, book, etc).
  2. Point to objects in a specified order.
  3. Perform actions in specified sequence:  
Touch your nose with your right index finger, then point that finger at me, then put it behind your back.
- II. Expression
  4. Repeat single words:  
Bird  
Calumny  
Antidisestablishmentarianism
  5. Repeat separate phrases:  
Royal British Constabulary  
No ifs, ands, or buts
  6. Repeat separate sentences:  
You can't get there from here.  
These are the times that try men's souls.
  7. Name common objects:  
Pen, matches, book, tie, dictaphone.
- III. Combined and Cross Modality Functions
  8. Read a printed paragraph aloud:  

The Cowboy and His Dog

A cowboy from Arizona went to San Francisco with his dog, which he left at a friend's, while he purchased a new set of clothes. Dressed finely, he went back to the dog, whistled to him, called him by name, and patted him. The dog would have nothing to do with him in his new hat and coat but gave a mournful howl. Coaxing was of no effect, so the cowboy went away and donned his old garments, whereon the dog immediately showed his wild joy on seeing his master as he thought he ought to be.
  9. Answer questions about it:  
What is the gist of the story?  
Where did the cowboy come from?, etc.
  10. Take dictation:  
The quick brown fox jumps over the lazy dog.

commonly a sign of melancholia, stupor, catatonic stupor, somatoform disorder, dissociation, or negativism in children (elective mutism).

The main diagnostic problem is to differentiate schizophrenic language from the jargon of Wernicke's aphasia. Schizophrenic patients tend to be heedlessly bizarre in thought content; aphasics are more aware of their errors and more likely to use substitutions to overcome their language defects. The confused speech of schizophrenic patients is known as **word salad** or **schizophasia**. It may be so chaotic as to be barely comprehensible.

**Talking past the point** (*Vorbeireden*) or **paralogia** occurs when the patient gives erroneous answers that reveal a knowledge of the correct response. "How many legs has a cow?" asks the interviewer. "Five," says the patient. In the same vein, for example, a centipede has 200 legs, the United States is in the

*Aphasia vs. schizophrenic language*

*Paralogia*

Southern Hemisphere, and  $5 + 5 = 11$ . Talking past the point occurs in **Ganser Syndrome** (the syndrome of approximate answers), also known as **hysterical pseudodementia**. This syndrome is most likely to be found in patients who prefer hospitalization for insanity to incarceration for crime.

**Neologisms** are new words coined by the patient. They are often combinations of ideas (portmanteau words) that attempt to capture the ineffable.

#### Case 9.4

■ A 20-year-old man with accelerated thinking and some loose, paranoid concerns about being photographed has grandiose ideas of climbing the world's highest peaks and "dying on K2." He wants to be "the best conservation officer in the world." To him, the forest means: "pigs, predatory, and guts." The interviewee conjectures that *predatory* is a condensation of *pride*, *predatory*, and *purgatory*. ■

#### Word coinage

Neologisms are most typical of schizophrenia; they must be distinguished from the paraphasia and circumlocution to which the aphasic patient resorts in an attempt to overcome expressive difficulty. A neologism sometimes reveals that the patient has been derailed by the sound or sense of an associated word or idea. Sometimes, neologisms are a response to hallucinations or a defense (in a privacy test) against the intrusion by the examiner on the patient's privacy.

### Thought

#### Process and form

Pathology of thought can be found in the process, form, or content of thinking. The process and form of thinking may be disordered in terms of:

1. Tempo
2. Fluency
3. Continuity
4. Control
5. Logical organization
6. Intent

Normal thinking is characterized by reasonable but not excessive speed and a smooth, continuous flow from one idea to the next. Normal thinking has a clear goal-direction, organization, and consensual logic in the links between ideas in a sequence of its constituent ideas.

#### Problem-solving styles

In **convergent thinking** the problem solver, being governed by a single objective, keeps tight control over the linkage between ideas. In **divergent thinking**, the connections are more fanciful in the service of fun or creativity (lateral thinking). Nevertheless, the normal thinker perceives all thoughts as personally relevant and is consciously in charge of how tight, loose, or logical the associations are.

should be. Overall, if intending to communicate something, the normal thinker is concerned about whether the audience follows what is being said.

In psychological illness, particularly the turmoil associated with such psychoses as schizophrenia and mania, any or all of these characteristics may be disorganized. Pathological thinking can be sluggish, headlong, disconnected, meandering, halting, and prone to lose its track, wander off at tangents, or follow an illogical line.

*The subjective experience of abnormal thought process*

Abnormal thinking can be experienced by the thinker as invaded, inserted, or controlled by alien forces (**thought insertion**). It can also be sensed as leaking, stolen, lost, or broadcast from the mind into the outside world (**thought alienation and thought broadcasting**).

Finally, the psychotic thinker, oblivious to the need to make sense, may lose contact with the audience or use language as a mocking camouflage.

### Abnormalities of thought process

#### *Tempo*

*Acceleration of thought*

Thinking is accelerated in **flight of ideas**, which may reach such a pitch that goal direction is lost and the connection between ideas is governed not by sense but by sound or idiosyncratic verbal or conceptual associations. Alliteration, assonance, rhyme (**clang associations**), and punning may divert the torrent of ideas. Flight of ideas is usually associated with **pressure of speech** and may be experienced by the patient as racing thoughts.

#### Case 9.5

■ The patient has been asked why he has been admitted to the hospital. He responds with great intensity and pressure of speech:

"What do you want to know? My birth or my death? Ha ha! Because I'm rotten, begotten, because I make my needs known to personnel, because I sit in a wheelchair and scream. I'm dizzy, busy dizzy, dizzy busy dizzy. And I'm going to college, to be the best damned conservation officer in the world, and die, when I reach 100 or 200, on Mt. Everest, or K2, or one of the 48 high peaks. . . ." ■

Flight of ideas is characteristic of mania but can also occur in excited schizophrenic patients, especially those in acute catatonia. In hypomania, the flight of ideas is less marked, the tempo being accelerated but the associations less disorganized.

*Deceleration of thought*

The tempo of thinking may be slowed in **retardation of thought**, especially in major depression. The patient often complains of fuzziness, woolliness, and poor concentration. Response time to questions is increased. There are long silences, during which the patient may lose the thread. In the extreme, retardation becomes mutism or even stupor.

*Fluency**Circumstantiality*

In **circumstantiality**, although the goal direction of thinking is retained, associations meander into fruitless, overdetailed, or barely relevant byways. The listener may feel impelled to hurry the speaker along. Circumstantiality is said to be characteristic of some epileptic patients whose peculiar combination of pedantry, perseveration, religiosity, and cliché lend their thinking a viscous quality.

*Perseveration*

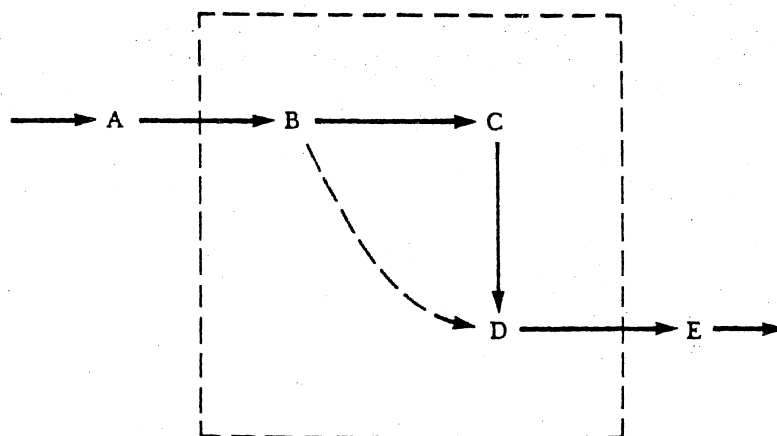
**Perseveration** refers to a tendency to persist with a point or theme even after it has been exhaustively dealt with or the listener has tried to change the subject. It is also seen, for example, when a child fixedly repeats one aspect of a drawing, leaving multiple lines or dwelling on the shading interminably.

*Continuity**Blocking*

In **thought blocking**, the patient's speech is abruptly interrupted by silences lasting for less than a second to much longer, even a minute or more. During the pause, the eyes may flicker, particularly if the patient is listening to an auditory hallucination, although sometimes the patient becomes blank mentally. Blocking can be precipitated by questions or ideas with personal significance, particularly if their import is threatening. Blocking is an uncommon but striking sign. It tends to be identified too often, the observer mistaking the retarded thinking of a depressed or preoccupied patient for the abrupt roadblock of the true phenomenon. It is almost pathognomonic of schizophrenia but must be differentiated from the absences of petit mal epilepsy, the hesitation caused by anxiety, and the peculiar mental fixity of amphetamine intoxication.

*Tangential thinking*

During the period of blocking, intermediate associations may be lost by the patient recommencing on an apparently different track (**tangential thinking**). This can give rise to a phenomenon known as the **knight's move in thought**: the listener can sometimes intuit how the patient got from A to E and realize that the unspoken intermediate associations (B, C, D) were quite indirect.

*The knight's move*



*Derailing*

On other occasions, thinking is subject to **derailing**, jumping the track to proceed on a different subject, particularly when a sore point has been touched on.

Patients are often aware of disturbances in the continuity of their thinking and will describe how their thoughts become paralyzed, interrupted, or jumbled.

*Control*

*The perception of loss of control*

Akin to these subjective phenomena is the patient's sense that speed, direction, form, or content of thought are out of control. Such complaints as "confused," "racing thoughts," "unable to concentrate," "scatterbrained," "jumbled," and "going crazy" often reflect the subjective perception of pathologically accelerated, dysfluent, or discontinuous thinking.

*Thought alienation*

Sometimes schizophrenic patients report their thinking is controlled by external forces or people, often by means of radio waves or other transmissions. Thinking may be perceived as directed by the external agency, or particular thoughts experienced as having been implanted by it. This is known as **thought insertion** or **thought alienation**.

Case 9.6

■ A former high school basketball star of 21 years who had never fulfilled his early promise as an athlete was disturbed by passers-by during pickup games. He was convinced that Linda and Paul McCartney had him under surveillance and that they interrupted his games by transmitting whispered messages that he was "a fag" and would never amount to anything. ■

*Thought deprivation*

In **thought deprivation** or **broadcasting**, the patient senses that ideas are leaking out of the mind, being stolen by others, or being broadcast via radio or television. The perception that the television picks up and repeats one's thoughts may lead to a grandiose or persecutory delusional misinterpretation.

*Logical organization*

*Pathology in the logical organization of thought*

Psychotic thinking may reflect a deterioration in the capacity to think formally or logically. The schizophrenic patient commonly uses a private logic, with **overpersonalized concrete symbols**. Bleuler (1950) described the **condensation**, **displacement**, and **symbol-formation** of schizophrenic thought, deriving his ideas from Freud's concept of the primary process.

*Private logic*

Condensation equates disparate ideas that have a common property. By this means, one idea can represent another with which it has little in common. Displacement refers to an abnormal fluidity wherein one symbol can readily stand for another despite its lack of similarity.

*Abnormal fluidity*

Der  
Om  
Dif

Lack of goal  
direction

Interpenetration of  
themes

Cameron (1938) refers to lack of goal direction and scattered associational flow as **asyndesis**. In **metonymic thinking**, the patient is satisfied with an erroneous, imprecise word that approximates the appropriate one. **Interpenetration of themes** is most often encountered when a rational line of discourse is interwoven with irrelevant fantasy.

- Case 9.7 ■ A patient could not converse with her doctor without giggling since she could not stop thinking how terrible he would look without clothes. ■

**Overinclusion** is another attribute of schizophrenic thought in which conceptual boundaries are blurred and conceptual thinking develops a metaphorical, overpersonal, and idiosyncratic quality.

- Case 9.8 ■ A 25-year-old man arrived unannounced at the door of a prominent citizen's home in order to hand the occupant a piece of paper on which he had inscribed matters of the greatest import. This document contained a number of cryptic and poorly spelled phrases alluding to cosmic problems. Among them were the following matters:

"The East is rising, 1,000,000,000."  
 "Z waves."  
 "The Dura Matter *[sic]*"  
 "Roman Catholic Confession"  
 "OPEC oil controls the West"  
 "Maui Wau"

He explained the connection between these phrases as follows:

China and Japan, with their teeming populations, are rising in influence. The West is in decline, controlled as it is by OPEC oil and by cosmic waves that penetrate the coverings of the human brain. The Roman Catholic Church of his parents is powerless to help. When he took a vacation in Hawaii, he enjoyed the local marijuana very much. ■

Schneider described the following features of schizophrenic thought disorder: **derailment** (see continuity), **substitution** (similar to Bleuler's concept of displacement), **omission**, **fusion** (the equivalent of Cameron's interpenetration), and **diffuseness**. In omission, a thought or part thereof drops out and leaves the statement puzzling or incoherent. Diffuseness refers to the blurring of a complex idea when its parts become muddled.

The following letter was received at a courthouse in Vermont. Look beyond the sense of grievance, grandiosity, and caricature of legalese to analyze closely the construction of ideas. Note the influence of alliteration on the headlong flow of associations. Note also the use of neologisms and the manner in which disparate ideas merge in a torrent of protest replete with asyndesis, metonymic thinking, overinclusion, and interpenetration of themes.

Derailment  
Omission  
Diffuseness

## METAPHYSICAL JUSTICE OF AMERICA, INC.

*The People's Ultimate Court of Metaphysical Law*

Sept. 1, 1982 A.D.

Criminal Docket No. *one etc.*

President John Paul II  
Metaphysical World Court  
Vatican, Nation

President J. M.  
Local Metaphysical Court  
(Address)  
Burlington, Vt.

Dear Sirs:

Matthew S. C. . . . , president of Metaphysical World and National Democratic Civil Social Justice of America, Inc., as of September 1, 1980 A.D. rules the World Court governmental officials guilty of the most heinously unconstitutional criminal world Court Cover-up Conspiracy Scandal in world court history.

Television, radio, newspaper, magazine, executive, judicial, U.S. Justice dept. officials, U.N. Justice dept. officials, civil attorneys, etc., worldwide and nationally, are immorally indebted to each other to criminally manage the social news in the interest to stonewall civil social constitutional justice and camouflage official criminal records from public knowledge. The abhorrent civil social misconduct of the civil citizen which is politically outlawed in the social interest of social order, harmony, peace and justice is doubly practiced with greater magnitude and intensity by executive and judicial officials, etc., ever scheming the distribution of their criminally social misjudgments and mispractices to all other members of the executive, judicial, etc. family gang members.

Social constitutional and general legal social justice is a criminally manipulated political and judicial, etc. social hoax in which said officials unitedly camouflage their criminal misrecords behind police, sheriff, FBI agents, etc. violence deliberately constructing a political criminal arsenal of militant political criminal misjudgements. The American taxpayers yield their tax dollars under political jail threats by judicial, attorney, police, FBI agents, IRS agents etc. militants, simultaneously governmental officials lawlessly and criminally burglarize the civil and taxpayers' treasuries to pay the cost to continue to militantly and criminally harass law abiding civil citizens.

Constitutional and social legal integrity and the so-called code of executive, judicial, attorney, etc. ethics is militantly bulldozed in the immoral interest to cover-up the executive, judicial, attorney, etc. criminal misjudgements records within the political and judicial family clan. The Richard Nixon Watergate cover-up dwarfs the present World Court and U.S. Supreme Court criminal cover-up misconduct of the James Carter, Richard Snelling [Vermont governor] and former American presidential, Vt. gubernatorial, judicial, etc. criminally, unconstitutionally, lawlessly, tyrannically, etc. political administrations. etc., etc. . . .

Here is another letter, received by a publishing company. Try to analyze it, bearing in mind the disorders of thought process already described.

The ( ) Press  
 Poetry  
 (Street)  
 New York, NY 10022

(Date)  
 (Address)

Dear Poetry Editor,

In the glimmer of my service to a form of servile ethics in Art, I have requested of the wife of my compilations, on the subject of my focus heart and soul of being published only on the West Coast, something more than the coy reply. My intuitions forming a coalition of tact will resound loyally, apparently where its tradition is served. Its party of one steering a course sticks to absinth *[sic]* and runs from nothing. I have mounted "a considerable press" feeling it important - not an elevator company. The children of this theory, behind a poet's place and his work, often, sadly, lurch, taking up every square inch of well-executed self-observation as if the class time were investment. Profits, their modular units, exist, to be sure, compensation for team work. When I at last know the infernal pitch by heart I will have already been scheduled with a publisher. With your patient in mind, I realize I am acting as though I owe my efforts something, which communication should yet weigh; whatever the answer it should not preclude prestigious handling, the ( ) Press the notion I have in mind.

The cosmic force behind music and dance of poetry detonates with any 'Scorpio rising,' and maybe this unfortunate menstrual niche teaches us of famine in the hemisphere; we want it to teach us of harmonics and celestial pregnancy. This touches the hard item of campaigning with Poetry: the odious comparison the addition of weight in exercises lacking the puberty and picnic ham of the festivity. Abuse has been much the judge, when a calm focus on Work is recommended because nothing else is required.

The philosophical parent has resisted going openface on rye because of accompanying photogenic fatality. Even as I reduce the hyperactivity, I still concern that how something is done (on whichever Coast a work is published) pursues the nimble honesty of its efforts. I think ( ) could handle the 75 poems in total, the few enclosed not so much the "naked proofs" as freedom from claustrophobic disaster. When last night I prepared the draft to this letter, the most popular of trends occurred to me - to be trends in anything; the best were queries, literal copies from *The Boston Globe*, e.g. The much-dedicated on the truth of David and John and Frank, professors or repairmen, we now have in the tight fists of the obtusely familial, with hints it is also sexual. I do not know. It sounds in Christmas allegorizing - with the few pieces I have sent along selected for the sending to represent a variant of emotional and intellectual equipment throughout, with still the best outstanding. That would be my feeling.

To open a personal bid should not just "telephone smiling"; I am particularly tough on how I want things done and ward of no outcome, bid bagels and taste.

Cordially,

(Signature)

poet, artist

*Intent of communication*

The conventional purpose of discourse is to communicate, but the clinician may be misled by the intentions of a schizophrenic patient. The schizophrenic patient may attempt to remain private or to deride the clinician subtly by conversing in an obscure, remote, supercilious, mocking, caricatured, or farcical manner. The following passage is translated from Kraepelin's (1905) *Lectures in Clinical Psychiatry*. Kraepelin regarded this patient's talk as "only a series of disconnected sentences having no relation whatever to the general situation" (p. 80).

*Mockery and caricature in schizophrenic communication*

The patient I will show you today has almost to be carried into the room, as he walks in a straddling fashion on the outside of his feet. On coming in, he throws off his slippers, sings a hymn loudly, and then cries twice (in English), "My father, my real father!" He is 18 years old, and a pupil of the Oberrealschule [higher-grade modern school], tall, and rather strongly built, but with a pale complexion, on which there is very often a transient flush. The patient sits with his eyes shut, and pays no attention to his surroundings. He does not look up even when he is spoken to, but he answers beginning in a low voice, and gradually screaming louder and louder. When asked where he is, he says, "You want to know that too? I tell you who is being measured and is measured and shall be measured. I know all that, and could tell you, but I do not want to." When asked his name, he screams, "What is your name? What does he shut? He shuts his eyes. What does he hear? He does not understand; he understands not. How? Who? Where? When? What does he mean? When I tell him to look, he does not look properly. You there, just look! What is it? What is the matter? Attend; he attends not. I say, what is it, then? Why do you give me no answer? Are you getting impudent again? How can you be so impudent? I'm coming! I'll show you! You don't whore for me. You mustn't be smart either; you're an impudent, lousy fellow, such an impudent, lousy fellow I've never met with. Is he beginning again? You understand nothing at all, nothing at all; nothing at all does he understand. If you follow now, he won't follow, will not follow. Are you getting still more impudent? Are you getting impudent still more? How they attend, they do attend," and so on. At the end, he scolds in quite inarticulate sounds. (pp. 79-80)

In a celebrated discourse, Laing (1960) pointed out that Kraepelin's vivid description of this patient belies his contention that the young man "has not given us a single piece of useful information." Laing suggests that the patient is carrying on a dialogue between a parody of the clinician ("What is your name? What does he shut . . . ?") and himself in an obdurate, rebellious mood ("How can you be so impudent?") He seems to resent being on show for an audience ("You don't whore for me") and being asked irrelevant, footling questions in the midst of his suffering. His communication can be evaluated in several ways: in one sense as a series of ideas too egocentrically and idiosyncratically organized to be readily comprehended (the signs of schizophrenia) and in another sense as a hostile, mocking caricature of an interrogation regarded by the patient as insensitive, authoritarian, critical, and heedless.

*Height and perception*

## Abnormalities of thought content

This section classifies and defines phenomena closely aligned with severe psychopathology. These salient clues are often the key features of a psychiatric disorder; in fact, several disorders are virtually defined by their presence. In many instances, the patient will complain of these phenomena (for example, a phobia of heights); in other cases, the patient appears to have accepted an eccentric idea (for example, the delusion of being a reincarnation of Christ) and to be acting accordingly. Sometimes, however, the patient is in two minds about the phenomenon.

### Case 9.9

■ Michael, a 26 year-old man who claims to be Jesus Christ in his third coming, speaks as though ex cathedra, in a manner replete with phrases from Revelations. Armageddon is imminent, he insists, but those who come unto him will be spared.

As the interview proceeds and the interviewer continues to press questions about the patient's life, he first becomes agitated, then angry, and finally bursts into bitter tears, saying: "Don't ask me, judge yourselves! Can't you see - I'm just a man, and I've always been a man. I'm just Michael." ■

*Ego-syntonic and  
ego-alien symptoms*

Abnormalities of thought content, therefore, may be accepted by the subject, that is, *ego-syntonic* (for example, a fixed delusional belief); abnormal thoughts may be resisted as *ego-alien* (for example, a recurrent obsession); or they may be intermediate between the two (for example, when the patient is still unsure of the validity of a loose delusional system). Psychosis (at best, a vague notion) is defined in part by the fidelity of reality testing; for example, by the attitude taken by the patient to his or her own aberrant mentations.

Abnormal thought can be divided into the following categories:

1. Abnormal perceptions
2. Abnormal convictions.
3. Abnormal preoccupations and impulses.
4. Abnormalities in the sense of self.

## Abnormal perceptions

### *Abnormalities of the process of perception*

Perception is physical sensation given meaning, the integration of sensory stimuli to form an image or impression in a manner or configuration influenced by past experience.

Perception can be increased or decreased in intensity. **Heightened perception** occurs in delirium, mania, after hallucinogens, and in the rare ecstatic states occurring as part of acute schizophrenia or transported hysterical trances. **Dulled perception** occurs in depression and organic delirium.

*Heightened, dulled,  
and deviant  
perception*

In **derealization**, the external world seems different, changed, vague, unreal, or distant. This symptom is common in normal adolescence, usually in association with depersonalization. It is also found in anxiety or dissociative disorders, depression, schizophrenia, organic brain disorder, and after hallucinogens. In **synesthesia**, the subject perceives color in response, for example, to music. This is a common psychedelic experience.

### *The perception of time*

#### *Abnormalities of time perception*

Time may be experienced as **accelerated** under the influence of hallucinogens, in mania, or during an epileptic aura. Time may seem **slowed** or **stopped** in depression or epilepsy. In some conditions, time seems to **lack continuity** and the subject feels uninvolved in the temporal stream. This is particularly likely to be encountered in depersonalization, amnesic syndromes, depression, schizophrenia, or toxic-confusional states.

### *Illusions*

#### *False perception*

An **illusion** is sensory stimulation given a false interpretation, that is, a false perception. Illusions are most likely when the mind is under the sway of an emotionally determined ideational set (for example, vigilance for an intruder), when sensory clarity is reduced (for example, at night), or when both sets of circumstances are operating (as when a frightened elderly patient has both eyes bandaged following ophthalmic surgery).

#### *The modality of illusions*

Illusions are common in delirium, and may be **visual** (fluttering curtains seen as intruders), **auditory** (a slamming door interpreted as the report of a pistol), **tactile** (skin sensations thought to be caused by vermin), **gustatory** (poison detected in the taste of food), **kinesthetic** (flying), or **visceral** (abdominal pain thought to be caused by ground glass). Illusions can also occur in hysteria, depression, and schizophrenia, particularly when perception is subordinated to a delusional idea (for example, of guilt or persecution) or to an emotion of great force (for example, abandonment or erotic yearning).

### *Hallucinations*

#### *False perception without a stimulus*

A **hallucination** is a false perception occurring in the waking state in the absence of a sensory stimulus. It is not merely a sensory distortion or misinterpretation, and it carries a subjective sense of conviction. A true hallucination appears to the subject to be substantial and to occur in external objective space. In contrast, a mental image is insubstantial and experienced within internal subjective space. Intermediate between image and hallucination is the **pseudohallucination**, which the subject experiences as insubstantial and which seems to hover

#### *Pseudohallucination*

somewhere between internal and external space. Try to identify the following examples:

- Exalted by a night of love, the young man recalled the gentle touch of his girl, inhaled again the fragrance of her hair, and remembered the very words she spoke to him as they parted. ■
- Whenever she was tempted to shoplift, the middle-aged woman would hear an inner voice warning her to stop. The voice belonged to nobody in particular; in fact, she could not say whether it was male or female. ■
- On his worst days, the student would hear the voices, sometimes of men, sometimes of women, commenting mockingly on everything he did. Although he got rid of his television set and discontinued the telephone, the voices persisted. ■

Fish (1967) describes five circumstances conducive to **hallucinosi**s: (a) intense emotion, (b) suggestion, (c) disorder of peripheral sense organs, (d) sensory deprivation, and (e) central nervous disorder.

Melancholic patients may hear disconnected voices speaking to them in an accusatory or disparaging way ("you're rotten") in accordance with their delusions of guilt. Hallucinations may occur in situations of great stress:

- Cajoled, cast-down, and humiliated for a heinous crime, a young man heard a voice telling him that there was still a way out, provided he dedicated the rest of his life to Christ. ■

Hallucinations, usually visual, can spread by contagion, suggestion being very potent in situations of communal stress or privation. During World War I, many German and British troops saw an angel in the sky at Mons.

Deafness, tinnitus, or blindness, usually in association with dementia or delirium, may determine the modality of hallucinations. Sensory deprivation experiments have produced visual and auditory hallucinosi in many subjects. Hallucinosi and delirium following cataract operation probably acts by the same mechanism, especially in association with dementia.

Diencephalic and cortical disease may be associated with hallucinations (usually visual). Tumors of the olfactory or basal temporal regions may cause olfactory hallucinosi, for example as an aura. Hallucinations, especially visual (although sometimes vestibular or kinesthetic), are common in the delirium caused by toxins (drugs, hallucinogens, alcohol, toxins, and fever), cerebrovascular disease, and central degenerative disorders. Hallucinations may also be a prominent feature of the uncommon schizophrenia-like psychosis associated with epilepsy.

Aside from these circumstances, hallucinations are common and normal, especially in some people, when falling asleep (**hypnagogic**) or waking (**hypnopompic**). Severe sleep deprivation can cause a hypnagogic hallucinosi.

*Circumstances conducive to hallucinosi*



Having defined hallucinations and described the circumstances in which they appear, let us classify them by sensory modality and relate them to the psychiatric disorders of which they are most characteristic.

*The modality of hallucinations*

Hallucinations can be (a) auditory, (b) visual, (c) olfactory or gustatory, (d) tactile, or (e) somatic. In form, they may be amorphous, elementary, or complex. They may be experienced as emanating from inner or outer space, and, if from outside, from near or far. Hallucinations may be **unsystematized**, appearing to have no link to life circumstances, or **systematized** and part of a causally interconnected delusional world.

*Systemization*

*Varieties of hallucination*

**Auditory hallucinations** may be inchoate (humming, rushing water, inaudible murmurs, etc.), fragmentary (such words or phrases such as *fag, get him, beastly*), or complex. Typically, the schizophrenic patient locates complex hallucinations in inner or outer space, as a voice or voices speaking to or about him or her. The voice may be soothing, mocking, disparaging, or noncommittal. Sometimes the voice echoes the patient's thoughts or comments neutrally on actions ("Now he's getting up, . . . Now he walks to the door . . ."). Sometimes the voice orders the patient to perform actions or puts thoughts into his or her head, an experience verging on thought insertion. The voice may be perceived as coming from the radio or television, from outside the window, or even from a distant place. In alcoholic hallucinosis, usually, a conspiracy of threatening whisperers plan to injure the patient, provoking self-defense or flight.

**Visual hallucinations** vary from elemental flashes of light or color, as in disorders of the visual pathways and cortex, to well-formed scenes of people, animals, insects, and things. In delirium, insects or other small objects may be seen moving on the bed or in the surroundings. **Lilliputian hallucinations** (of little people on the bed, for example) occur in delirium and other organic brain syndromes. Complex audiovisual hallucinations may occur in temporal lobe epilepsy. In general, visual hallucinosis suggests acute brain disorder rather than functional psychosis and tends to occur in a setting of confusion or obtundation. Sometimes, however, a schizophrenic patient will report visual hallucinations (trips in flying saucers, for example) aligned with prevailing delusions. The visual hallucinations of hysteria or dissociative disorder have a pseudo-hallucinatory quality and sometimes reproduce a traumatic event, as when a war veteran relives a battle incident.

**Olfactory and gustatory hallucinations** may occur in epilepsy (burning rubber, steak and onions, etc.). Schizophrenic patients may perceive gas being pumped into their bedrooms by persecutors or taste malign substances in their food. Melancholic patients may be conscious of the stench of corruption rising from their unworthy bodies or complain of the changed metallic and tasteless quality of their meals.

**Tactile hallucinations** are characteristic of cocaine and amphetamine intoxication, the patient being distracted by the sensation of insects crawling on the skin (**formication**). Schizophrenic patients may detect the effect on the skin of radioactivity beamed at them from a hostile source.

**Somatic hallucinations** occur in schizophrenia as genital, visceral, intracerebral, or kinesthetic sensations, often being referred to the influence of persecutors or machines. The melancholic patient may have the sense of having no stomach, with food dropping from the throat into a void.

In schizophrenia or under the influence of hallucinogens, the patient may have the uncanny sense that somebody, a presence, is behind him or her. This can occur in states of extreme fear; it can also become a central feature of schizophrenia, in the guise of the *Doppelgänger* or *Horla*, a hallucinatory double of the self lurking just behind the periphery of vision.

### Abnormal convictions

*False belief*  
*Overvalued idea*

A **delusion** is a false belief not susceptible to argument and inconsistent with the subject's sociocultural background. Bordering on delusion is the **overvalued idea**, a notion that may be eccentric rather than false but that becomes a governing force in the patient's life. Consider the following situations:

- Case 9.10** ■ A 45-year-old woman, very guilty about a sexual affair she had had several years previously, became agitated and insomniac. One day she looked into her husband's eyes, perceived that he knew everything, and realized from his expression that the marriage was finished. All this she knew without a word passing between them on the matter of her guilty secret. ■
- Case 9.11** ■ A 30-year-old member of the counterculture identifies himself with the Hierophant on the tarot cards and tells the clinician that he knows he is a white wizard because he can sometimes communicate telepathically with his friends.
- Case 9.12** ■ A 40-year-old man spends much of his spare time writing letters to authorities, trying to organize a grass-roots movement and attending rallies carrying a banner. He aims to combat the fluoridation of water supplies. He is convinced that water fluoridation causes sterility and that evidence to the contrary has been suppressed by profluoridation forces. ■

*The characteristics*  
*of a delusion*

It is not always easy to draw the line between (a) a crank, (b) somebody holding unfamiliar views that are nevertheless consistent with a different sociocultural system, and (c) a deluded person. Indeed, some people drift across the misty boundaries between these categories. An active delusion, however, is rigid, unshakable, and self-evident. It dominates the subject's life, subordinating all other matters. It is private, idiosyncratic, ego-centered, and inconsistent with the common experience of people from the same background. A delusion, therefore, isolates the subject from others and alienates them.

*The origin of*  
*delusional thinking*

Scharfetter (1980) describes a number of situations that act as the soil in which delusions may take root and proliferate. Delusions affect people under the sway of such powerful emotion that they cannot entertain an alternative

perspective of their predicament. Delusions may arise from pathology of mood, in accordance with the prevailing euphoria or dysphoria. Manic patients develop delusions of grandeur, for example; melancholics have delusions of decay, death, disease, poverty, sin, damnation, punishment, or nihilism. A person in a life situation characterized by isolation, confinement, unspoken accusation, or intolerable loss of self-esteem may be predisposed to delusional thinking. Franz Kafka described this kind of insecurity in *The Trial*. The deaf, lonely, or elderly person may be subject to ideas of persecution, as may the immigrant alone in a strange new country. The querulous litigant who has been unsuccessful in a compensation case, for example, may be consumed by the need for redress; and the impotent alcoholic may suspect his wife of infidelity. Sometimes the delusion appears to compensate for personal failure.

## Case 9.13

■ An unemployed and isolated 20-year-old man, who had never fulfilled an early promise of intellectual superiority, was convinced he would make his fortune from a complicated board game he had adapted from the floor plan of the Temple at Karnak. The game had so many rules, however, and the directions and exceptions were so complicated that nobody but the inventor could follow it. After several manufacturers of board games rejected his invention, he became convinced that there was a conspiracy to rob him of his work. ■

Severe sensory deprivation, or exhaustion and physical privation, may lead to delusional misinterpretation, often associated with wish-fulfilling hallucinations. A delusion can act as a transcendental solution to an existential wasteland.

## Case 9.14

■ His career a catalogue of failure, drug addiction, physical illness, accidents, and misery, a 25-year-old man suddenly conceives that there is a grand design behind the tortured path he has trodden. His life is a sacrifice for errant humanity; he has returned again as Christ, to receive the penitence of those who accept him. But he will not be betrayed; he will not spare those who again seek to sell him out. ■

This is the ground from which cosmic, messianic, redemptive delusions grow.

European psychiatrists have propounded the concept of the **primary delusion**, thought to be characteristic of schizophrenia. In this situation, the patient has a sense of something obscure but important and threatening, occurring all around. A sudden delusional revelation solves the puzzle.

Primary delusion

## Case 9.15

■ Aware that something is amiss, the subject looks about the dining room and suddenly realizes that the layout of the cutlery has been tampered with in such a way as to indicate that the CIA has his family under surveillance. ■

It is contended that the new primary delusional interpretation of the environment cannot be understood as an extension of the patient's premorbid personality or current mood state. Primary delusions, therefore, are characterized by

sudden, revelatory onset, discontinuity with previous personality or mood, and a transcendent quality.

*Different kinds of delusion*

*Persecutory*

The most prevalent delusions are of persecution, jealousy, love, grandeur, disease, poverty, and guilt. Delusions of persecution are most frequently encountered in schizophreniform disorders or schizophrenia, paranoid disorders, organic mental disorder (especially alcoholic hallucinosis, amphetamine delirium, or delusional disorder, other hallucinogenic syndromes, epilepsy, and all forms of delirium) and less commonly in melancholia or in transitory psychotic breaks in the life-course of borderline personality. The patient may perceive others as talking conspiratorially about him or her (delusions of reference) or spying. External agencies (communists, FBI, freemasons, etc.) are regarded as acting in concert and disconcerting the subject with radiation, poisonous gases, radio and television, intruders, or assassins. Tape recorders, cameras, and other surveillance paraphernalia are often alluded to. Delusions of poisoning, particularly by the spouse, are sometimes encountered.

*Referential*

*Jealous*

Delusions of jealousy occur in the same syndromes as delusions of persecution but are especially likely in association with alcoholism in men. In that case, delusions of marital infidelity (possibly related to alcoholic impotence) are characteristic, and the wife and her effects are closely scrutinized for evidence of adultery.

*Grandiose*

Delusions of grandeur occur in mania, schizophrenia, paranoid disorders, and organic delusional syndromes (for example, neurosyphilis). In mania and organic grandiosity, the patient's megalomania (of being God, the governor, the Virgin Mary, Napoleon, etc.) are consonant with the general high spirits. In schizophrenia and paranoid disorders, an inflated sense of importance may be reinforced by admiring auditory hallucinations and ideas of persecution may lead to grandiosity. Why else, thinks the subject, would important agencies (e.g., the FBI, Vatican, or PLO) be persecuting me?

*Erotic*

Erotic delusions (erotomania) are more common in female schizophrenic or paranoid patients. A lonely person develops a crush on somebody, often a celebrity or prominent citizen. Fantasies evolve into delusions, and the subject bombards his or her heart's desire with telephone calls and messages. The failure of the loved one to reciprocate is ascribed to conspiratorial forces standing in the way of destiny. In schizophrenia, the patient may receive erotic hallucinations (e.g., of auditory and genital type) from the beloved.

*Somatic*

Somatic delusions, usually of disease or ill health, occur in many psychiatric disorders. Schizophrenic patients may have bizarre complaints, possibly in an attempt to explain somatic hallucinatory experiences (e.g., of blood running backward in the head, of radiation being trained on the genitals by an outside agency, or of objects placed inside the body by malign forces). In melancholia, the patient may have delusions of being dead (no blood in the body), of internal organs rotting away, or of the brain destroyed by syphilis, in retribution for an unpardonable sin. The boundary between hypochondriasis, disease phobia, and disease conviction, on the one hand, and somatic delusions on the other may be difficult to define.

*Poverty* Melancholic patients are also prone to **delusions of poverty and nihilism**. The future is hopeless, the present desolate, and the patient rendered destitute by a malign fate. Depressive patients may also complain of inordinate guilt, and that the most extreme punishments are warranted for unremarkable ancient transgressions.

*Nihilistic*

*Primitive*

### Abnormal preoccupations and impulses

The following abnormal preoccupations are often associated in psychiatric disorder: phobias, obsessions, and compulsions.

#### *The quality of phobia*

A **phobia** is a morbid, irrationally exaggerated dread that focuses on a particular object, situation, or act. Phobias differ from generalized anxiety in their focused quality, although a diffuse anxiety state sometimes precedes a phobic disorder. The patient is aware of the exaggerated, irrational nature of a phobia and regards it as symptomatic. The patient often tries to avoid the phobic situation or is compelled to perform actions (such as hand washing) in order to eradicate the object of the fear or atone for tabooed action.

Many objects, situations, or acts can be foci for phobias. The custom of designating each of them with a Greek prefix is now obsolete. A few of these terms, however, are still in use: claustrophobia (fear of enclosed spaces), zoophobia (fear of animals), acrophobia (fear of heights), and agoraphobia (fear of open spaces).

#### *Types of phobia*

**Agoraphobia** is common and serious enough to be classified as a separate disorder in DSM-III (see chapter 10). In this condition, the patient fears being alone, incapacitated, and unaided in public places (streets, supermarkets, public transport) and, as a consequence, stays home. The childhood equivalent of agoraphobia is **school phobia**, a condition in which a fear of going to school is the superficial aspect of a fear of leaving the parent. In this condition, parental psychopathology is intricately intertwined with the child's disorder.

**Social phobia** involves the fear and avoidance of social groups, as in restaurants, where the patient fantasizes losing self-control in a humiliating way while under public scrutiny.

Phobias occur as a normal part of childhood development. In adults, they occur after actual trauma (the car driver who fears driving after an accident, for example) or as displaced, projected, symbolized derivatives of unconscious conflict in anxiety disorders.

#### *Obsessions and compulsions*

An **obsession** is a persistent idea, desire, image, phrase, or fragment of music cutting into the stream of conscious thinking. The patient recognizes the alien nature of the obsession and attempts to resist it, but without success. The obsession often presses the subject to perform **compulsive acts**, on pain of anxiety. The key characteristics of obsessions are their persistent, irresistible, imperative nature, ego-alien quality, and repetitiousness.

- Case 9.16** ■ When scantily clad women appeared on the television screen, a very religious 13-year-old boy would become highly anxious lest impure thoughts come into his head. To ward them off, he would repeat several Hail Mary's. So often did he pester the priest at confession with dubious transgressions that the priest told his mother he had "scruples" and needed psychiatric help. ■
- Case 9.17** ■ To avoid microbial contamination, the 30-year-old housewife cleaned the door-knobs and toilet daily and abraded the skin of her hands by frequent scrubbing with a hard brush. ■
- Case 9.18** ■ An 18-year-old woman with a new baby began to avoid using knives. Whenever she saw one, she had a frightening impulse to stab the infant. ■

Obsessional symptoms have been reported after encephalitis. They occur in the premonitory phase of schizophrenia or as part of a major depression (for example, persistent ruminations that old tax returns were in error and ruin will result). Obsessive-compulsive symptoms are most characteristic of the anxiety disorder with the same name.

### *Impulsions*

**Impulsions** differ from compulsions in that they are less likely to be resisted and they are episodic rather than repetitious, although the distinction may be blurred at times. Impulsions tend to occur in externalizing personalities, whereas compulsions are more typical of inhibited, constricted people. Impulsions cause difficulty for others and may lead to legal entanglements. Impulsive acts often spring from an emotional setting of anger, anxiety, frustration, rejection, sadness, or humiliation, particularly when the subject is disinhibited by alcohol.

Common impulsions include: physical assault, sexual assault, fast driving, drinking, eating, gambling, sexual exhibitionism, shoplifting, stealing, and setting fires. Sudden, episodic, if not explosive, onset is the hallmark of these phenomena. The subject does not or cannot exercise inhibition or self-control. Feeling short-circuits thought, leading to action without reflection. The subject may feel dazed, relieved or numb after the impulsive action.

### **Abnormalities of the sense of self**

The normal person has a sense of selfhood composed of these elements: a sense of distinction between self and outside world; a sense of existing and of being involved in one's own body and activity; a sense of temporal continuity between one's past, present, and future; a sense of personal integrity.

### *Depersonalization*

In psychiatric disorder, any or several of these phenomena may be disturbed; for example, the individual may feel uninvolved in his or her own body or actions, like a spectator looking at another person (**depersonalization**); the sense of temporal continuity may be dislocated, past and future seeming remote,

### *Discontinuity*

and the present but a series of disconnected scenes; the ego may feel as though it is falling apart, shedding, fragmented, or split in two; and the difference between the self and other persons or objects may have become blurred.

*Derealization*

The sense of depersonalization, often associated with **derealization**, the perception that the external world is unreal or remote, occurs in adolescence, epilepsy, dissociative disorders, schizophrenia, and depression. Adolescents in severe emotional turmoil (**identity diffusion**) sometimes develop a sense of **discontinuity**, **disintegration**, and **dedifferentiation**. These symptoms are common after ingestion of hallucinogens (in which they may be reexperienced as flashbacks), and in reactive psychosis and schizophreniform disorders.

*Disintegration*

## Physiological functions

### Sleep

Sleep disturbances are often encountered in psychiatric practice. Sleep deprivation may precipitate or accentuate psychiatric disorder. Sleep disturbance may be a prodrome, a symptom, or a sequel of psychiatric disorder. Many psychopharmacologic agents also affect sleep (see chapter 5).

*Insomnia*

**Insomnia** is a common symptom. Worry, fear, and anxiety are likely to prevent the patient from falling asleep or create restless, light sleep with frequent waking. Mania and acute schizophreniform disorders are often associated with insomnia. Early morning wakening, when the patient's mood and energy are at their lowest ebb, is associated particularly with major depression and less commonly with dementia or delirium.

*Hypersomnia*

Psychogenic **hypersomnia** (excessive sleep) occurs in anxiety disorders, dissociative disorder, dysthymic personality, and major depression. It should be differentiated from the sleep disturbances of encephalitis, myxedema and brain tumor, abscess, or hemorrhage. The diurnal hypersomnia of the Pickwickian syndrome is thought to be due to obstruction of the upper airways, causing nocturnal cerebral anoxia. The hypersomnia of the Pickwickian syndrome and sleep apnea tend to occur in the obese, though this is not necessarily the case with sleep apnea. Narcolepsy causes episodic attacks of hypersomnia, hypnagogic hallucinations, sleep paralysis, and cataplexy, though not all of these features need be present. The Kleine-Levin syndrome most often afflicts adolescent males, causing prolonged hypersomnia and intermittent waking with hyperphagia and apparent confusion.

*Sleepwalking*

**Sleepwalking** tends to occur in Stage III or IV sleep. The somnambulist engages in automatic activities and may even be capable of brief conversation but afterward is amnesic for the episode. Though the condition is probably a normal physiological variant, it is likely to be accentuated by waking anxiety or stress. In this, it is akin to **night terrors** in children (with which it may be associated), the

*Nightmares*

child waking and screaming in fright for some time, making little sense, and eventually going back to sleep after being comforted.

**Nightmares** occur in REM sleep and are remembered on waking, at least for a time, in contrast to night terrors. They occur in normal people, anxiety disorders, early schizophrenia, delirium, and posttraumatic stress disorder. After medication suppressing REM sleep (such as tricyclic antidepressants) is withdrawn, the patient may experience transient REM rebound, with an increase of vivid dreaming.

**Appetite***Increased appetite*

Appetite may be increased in depression (especially dysthymic personality) and after psychotropic drug medication. Eating binges (not necessarily determined by increased appetite) may occur in **bulimia** as a condition separate from, in alternation with, or following, **anorexia nervosa**. Bulimia is often associated with forced vomiting.

*Anorexia*

Anorexia and weight loss can occur in almost any stress condition but are particularly likely in major depression, paranoid schizophrenia, somatoform disorders, alcoholism, drug addiction, and, of course, **anorexia nervosa**. A comprehensive physical screening is always required when anorexia and weight loss are salient.

**Libido***Increase of libido*

Sexual desire may be increased in mania, in some forms of acute schizophrenia, and in narcissistic or borderline personality under stress. Sexual behavior may be disinhibited after alcohol or drugs, in delirium, and in organic dementia. **Nymphomania** is a male fantasy about female insatiability; insofar as it exists at all, it is probably related to the sensual clinging of a dependent person.

*Decrease of libido*

Sexual desire is decreased by any debilitating disorder, by anxiety, worry, tiredness, age, poor nutrition, and by lack of affection for the partner. It can be reduced by depression, schizophrenia, alcoholism, substance abuse, and by neuroleptic, antihypertensive, and antidepressant medication.

**Menstrual cycle***Amenorrhea*

Absent, irregular, infrequent, and scanty menstrual periods (**amenorrhea** or **oligomenorrhea**) may occur in psychiatric disorder, particularly in depression, **anorexia nervosa**, anxiety disorders, schizophrenia, and substance abuse. Any condition reducing total body fat to below 14% in the female produces anovulation and amenorrhea.



*Dysmenorrhea and pelvic pain*

Dysmenorrhea, dyspareunia, vaginismus, and other pelvic complaints are common in somatoform disorders and in abnormal illness behavior generally, but a discretionary physical screen is required before a stress-related condition is diagnosed.

**Other physiological functions***Hyperdynamic and hypodynamic states*

Any or all body systems can be accelerated in the hyperdynamic states of anxiety, delirium, mania, and catatonic excitement or slowed in the general hypomotility of depression, organic dementia, and hypothyroidism.

*Anergia*

The level of energy, or fatigue, may also be affected by disorders with accelerated or sluggish mental processes. In somatoform disorders, anergia, weakness, or obscure bodily discomfort are frequently encountered.

**Attitude to illness**

The patient's attitude or insight into the illness has several aspects. Does the patient recognize a personal problem? Is the problem identified as personal and psychological in nature? Does the patient understand the nature and cause of the illness? Is help wanted and, if so, what kind of help?

*Lack of insight*

Hypomanic patients have no problems. They feel very well: high-spirited, amusing, energetic, expansive, and optimistic. The manic or schizophrenic patients may view the problem as external - other people or agencies are stupidly obstructive or malevolent. Many patients with externalizing personality disorders (borderline, antisocial and narcissistic, for example) blame others for their predicaments.

*Intellectual insight*

Sophisticated patients, particularly those who have undergone previous treatment, may have considerable knowledge of the formal diagnosis and the theoretical or actual causes of their disorder. This sometimes causes problems in treatment; other mental health professionals who develop psychiatric illness are notoriously difficult to manage for this reason.

*Rejection of psychiatric treatment*

The patient may be aware of having a problem but want no help or want help of a particular sort or from a particular kind of clinician. Whenever the latter is reasonable and feasible, it should, of course, be arranged. The patient's desires should be respected as far as possible in the negotiation phase of the clinical process.

**Summary: the tactics of the Mental Status Examination**

The clinician will seldom if ever need to turn over every stone and pebble in this chapter. What is required is a set of criteria to decide (1) when a brief screening

MSE is indicated; (2) when a more comprehensive screening MSE is essential; and (3) when to pursue a discretionary MSE.

### The brief screening MSE

When a patient has been referred to an ambulatory clinic for a situational or personality problem and none of the indications for a comprehensive screening examination pertain, a brief, informal screen is sufficient.

The brief MSE is completed during the inception, reconnaissance, and detailed inquiry of psychiatric history-taking. In particular, note is taken of the patient's general appearance, motor behavior, quality of speech, relationship to examiner, and mood. From the patient's demeanor, conversation, and history, the clinician draws inferences about consciousness, orientation, attention, grasp, memory, fund of information, general intellectual level, language competence, and thought process. Abnormal thought content will not be investigated unless clinical clues or alerts indicate the need for such discretionary inquiry (for example, into hallucinations, obsessions, depersonalization, etc.). Physiological functions (sleep, appetite, libido, menstrual cycle, energy level) and insight should always be assessed.

### The comprehensive screening MSE

The clinician should be alerted to the need for a comprehensive screen whenever there is a reasonable possibility that the patient has psychosis or has primary or secondary brain dysfunction. The settings and clues listed here mandate a comprehensive MSE:

1. The patient is seen in a hospital emergency room or crisis clinic, or is being managed on a nonpsychiatric ward and has been referred for consultation, or is being admitted to a psychiatric unit.
2. The patient is over 40 years of age.
3. The patient has a history of psychiatric disorder, substance abuse, organic brain disorder, or physical disorder that could affect brain function.
4. The patient's personal habits, memory, concentration, or grasp have recently deteriorated.
5. The patient or other informant presents clinical clues suggesting current mood disorder, psychosis, or organic brain dysfunction (for example: persistent or intermittent depression, withdrawal, elation, overactivity, bizarre ideation, hallucinations, delusions, ideas of influence and reference, headaches, loss of memory and grasp, disorientation, disordered language, seizures, motor weakness, tremor, or sensory loss).
6. The physical examination indicates or suggests brain dysfunction.
7. In forensic referrals, when mental competence or legal insanity are in question.

In summary, if you have any doubts, complete the comprehensive screen.

The comprehensive screen notes the same phenomena as in the brief screening MSE: appearance, behavior, speech, quality of relationship, and language; the physician also should ask specific questions about current or past periods of depression, sadness, irritability, alienation, withdrawal, and high spirits.

Cognitive functions should be investigated in detail. These clinical tests are recommended:

1. Observation of level of consciousness and awareness
2. Tests of orientation (see Table 9.1)
3. Tests of attention and concentration (see Table 9.2)
4. Tests of memory (see Table 9.3)
5. Tests of general information (see Table 9.4)
6. Tests of language function (see Table 9.6)

Tests for abstraction and conceptualization (Table 9.5), and judgment are of dubious validity, add little if any discriminating power, and are better avoided.

If there is any evidence or suggestion of vagueness, disorientation, lack of attention, or deterioration of memory, consider using one of the combination tests providing a composite, quantified result. For rapid assessment, the Short Portable Mental Status Questionnaire (see Table 9.6) is convenient. If there is a suggestion of disorder in central language function, the Mini-Mental State Examination (see Table 9.7) is recommended. These portmanteau tests provide a baseline score that enables the clinician to follow progress; for example, as delirium clears, as pseudodementia lifts when depression is treated, or as brain function deteriorates in the course of degenerative disease.

The tempo, fluency, continuity, control, logical organization, and communicative intent of expressed thought will become apparent during natural interchanges with the patient, although the tests for abstraction previously criticized (see Table 9.5) are sometimes useful in flushing out bizarre thoughts or disorganized thinking.

Illusions, hallucinations, delusions, phobias, obsessions, compulsions, disorders of the sense of self, and impulses should be inquired about. It is better to ask indirectly about such matters at first and then move to more precise questions. Try not to ask the following questions in a doctrinaire, unspontaneous way. Modify them to fit your natural style and the patient's cultural background:

1. *Illusions and hallucinations*

Have you had any unusual or strange experiences lately?

Have you noticed or heard anything unusual or troublesome lately?

Have you heard or seen anything out of the ordinary lately?

Have you had any vivid imaginations lately?

Have you noticed lately any unusual:

- feelings in your head or body?
- smells or tastes?
- visions?
- voices, when you are alone?

Do you think many people have these experiences?

Why do you think they are happening to you?

2. *Delusions*

Has anyone been interfering with your life?

Does anyone or any group of people seem to be against you or want to harm you?

Have you had the sense that people are talking about you or laughing at you behind your back?

Why are these people so interested in you?

Have you noticed any other evidence that (. . .) is the case?

Has anyone been trying to influence you in anyway? How?

Have you noticed any change in the way you think? Any confusion? Any difficulty keeping to the point?

Have you had the sense that thoughts, or ideas, or pictures are put into your head? How? By whom? Why?

Have you had the sense that thoughts escape from your head? That other people can read your thoughts? That you can send messages to other people? How?

Do you think your spouse is loyal to you?

Have you ever had the sense that you were a very important person?

Do you think your face or body are changing in anyway?

Were you ever worried that there might be something wrong with your body? That your body might have some sort of disease?

Do you ever feel terribly guilty? About what?

Do you worry a lot about money?

3. *Phobias, obsessions, compulsions, impulses*

Do you have any excessive fears?

Are there any situations, actions, things you are excessively fearful of?

Do you have any recurring thoughts, ideas, or words you cannot get out of your mind?

Are there any things you just have to do even though they seem foolish or unnecessary?

Do you ever have impulses to do unwise things?

Do you ever give in to those impulses?

What kind of impulses do you have? Violent? Gambling? Sexual? Suicidal?

Risk-taking?

4. *Disturbances in the sense of time and self*

Does time seem different (changed) to you?

Does the past (the future) seem different to you?

Do you ever feel unreal?

- Do you ever feel as though you were in a fog?  
Does the world around you ever become remote, seem different, or appear unreal to you?  
Do you ever feel as though you were a spectator of your own actions? As though you were not involved in what is going on?  
Do you ever feel that things (you) are falling apart?

In a comprehensive screen, as in the brief screening MSE, physiological dysfunction and attitude to illness must be ascertained.

### The discretionary MSE

The initial pattern of salient clues and clinical inferences obtained from the history and MSE is like an incomplete jigsaw puzzle. The configuration of the pieces allows the diagnostician to generate hypotheses about what the complete picture will be like. Alternative hypotheses suggest a plan of inquiry allowing the clinician to go beyond routine screens (brief or comprehensive) to investigate more deeply aspects of the MSE of particular relevance to the hypotheses in question.

As with the physical examination, therefore, there can be no standardized discretionary examination. Consider the following case example:

#### Case 9.19

■ A 20-year-old man was admitted to a psychiatric ward because his diagnosis was in doubt. He had been unemployed and at home for more than four months, cutting himself off from all outside social contact. On the evening of admission, he had become enraged while watching television, got into an altercation with his mother and sister, and damaged a door by punching and kicking it.

By the time he was interviewed, the patient was a calm, softly spoken, well-built young man who gazed downward, making little eye contact with the examiner. His mood was withdrawn, subdued, and moderately depressed, but constant and never incongruous. He was capable of smiling sheepishly, but appropriately, when he spoke of how fearful he was that he might sound foolish. As the interview progressed, rapport grew between patient and interviewer.

The patient's sensorium was quite clear, he appeared to be of average intelligence, and his thought processes were normal in tempo, flow, and organization. His past health was good, he did not take drugs, and his physical examination was normal.

He told the examiner he had lost his temper because he heard noises from above, while watching television in the basement of the family home. The question of whether these noises were auditory hallucinations became the subject of a detailed discretionary inquiry. Were they of human quality? If so, how formed were they? Were the noises directed to him? Was this a recent or sudden phenomenon?

The noises were loud footsteps. They emanated from the ceiling of the basement, which was also the floor of the family kitchen above the television room. He interpreted the footsteps as those of his mother and sister, who were annoyed by his failure to seek work and his unwillingness to help with such household chores as washing up after meals.

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Neither his sister nor his mother remembered deliberately ma-  
upset the patient, but they freely admitted their extreme annoyance  
not pulling his weight in the house financially, an issue that had been  
several family quarrels.

The clinical significance of the noises and subsequent outbur-  
withdrawn, depressed young man cannot be underestimated. Diagn-  
the direction of depression in a schizoid personality and a treatm-  
designed accordingly. ■

### Selected Readings

Until the revival of concern for reliable diagnosis, as reflected in the diag-  
DSM-III, American psychiatry had lost interest in the mental status exam-  
trast, following the clinical tradition of Kraepelin and Bleuler and in  
phenomenological existentialism of Heidegger, Binswanger and Jaspers.  
psychiatry continued to emphasize the detection, classification, and  
psychopathological phenomena.

The term *psychopathology* reveals the essence of the European approach.  
great clinicians of the 19th century had identified the syndromes and mor-  
physical disease, the psychopathologist proposed to define the signs of  
functioning, compile syndromes of clinical features, and hunt for the unde-  
that caused them.

The classic text on psychopathology is *Allgemeine Psychopathologie*  
*pathology*) by Karl Jaspers (1913, 1962). A modern introduction to the Euro-  
is Scharfetter's (1980) *General Psychopathology*. Volume I of the *Handbo-*  
(Shepherd & Zangwill, 1983) is a British version of the classical approach.  
American text by Ludwig (1980), *The Principles of Clinical Psychiatry*. Ludwig  
the mental status examination to clinical reasoning.

The recently introduced scored combination tests of mental func-  
useful for following the progress of patients with organic brain disorder.  
described in chapter 9.

The reader would be well advised to refer to a dictionary or glossary  
terms, as in DSM-III or Hinselwood and Campbell's (1970) *Psychiatric Dictiona-*